

Dynamics of Emotional Responses and Emotion Regulation during Multi-Stage Waits

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ABSTRACT

When consumers have to wait during a multi-stage service delivery process, consumers' emotional responses to the waiting may evolve over the course of interaction with services. Extant literature offers limited understanding of dynamic emotional response during multi-stage waiting. The current study examines the salience of specific types of negative emotions at each stage of waiting and the effect of emotion regulation strategies on encounter satisfaction. The moderating effect of regulatory focus on emotion regulation strategies is also examined. Implications for scholars and service managers are then discussed.

Keywords: multi-stage waiting, emotional responses, emotion regulation strategies, regulatory focus theory, encounter satisfaction

INTRODUCTION

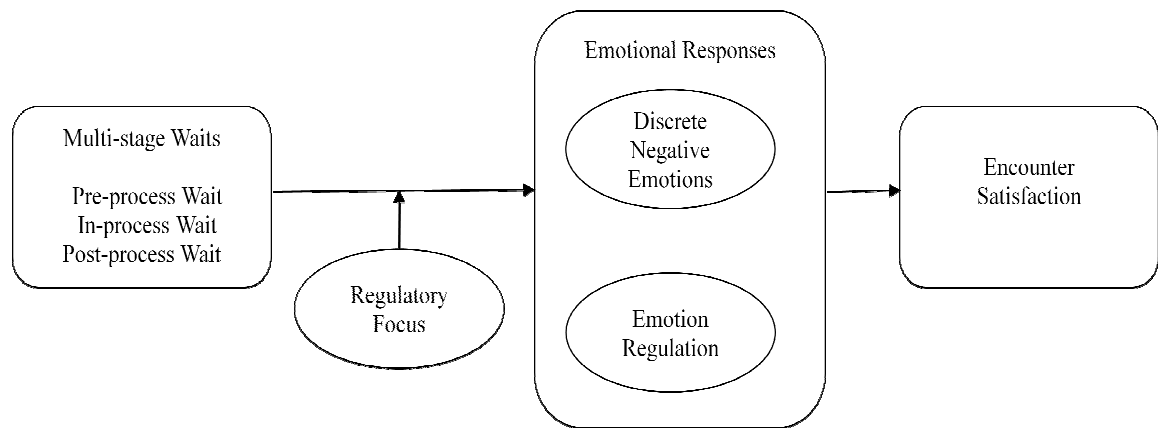
Consumers often need to wait to receive services such as dining or banking. They wait before, during, and after a purchase or a transaction (Dubé-Rioux, Schmitt, & Leclerc, 1989). Waiting is an unwanted and sometimes stressful situation with which consumers have to cope. Accordingly, waiting is an important issue for both service providers and consumers since it involves both service providers' operation capabilities, consumers' satisfaction and emotions (M. M. Davis & Vollmann, 1990; Taylor, 1994). Consumers view most service encounters in terms of a sequence of events that unfolds over time. Many services consist of multi-stage waiting in which consumers have to wait more than once during their experience (Hensley & Sulek, 2007). Previous research about waiting suggests that waiting creates negative emotions such as anxiety, anger and regret (Landman, 1993; Voorhees, Baker, Bourdeau, Brocato, & Cronin Jr, 2009). Although each type of negative emotion tends to elicit different behavioral responses to service (M Zeelenberg & R Pieters, 2004), extant literature about waiting tends to treat negative emotions triggered by waiting as static and stable. However, during multi-stage waiting, emotional responses tend to be dynamic and evolve over the course of waiting. As consumer goals at different stages of waiting differ, more than likely a certain type of negative emotion is more salient than others at a particular stage. Extant literature offers limited understanding about the dynamics of emotional responses during multi-stage waiting. Therefore, the current study explores the salience of specific types of negative emotions at different stages of situations that require waiting. The researchers also examine how consumers regulate negative emotions during multi-stage waiting. The effect of dynamic changes in emotional responses and regulatory strategies on encounter satisfaction is examined as well. Finally, the present study explores the relationships between consumers' emotion regulation strategies and encounter service

satisfaction with multi-stage waiting at service firms.

Literature Review

The conceptual framework is presented in Figure 1. In this section, the research presents the conceptual background and hypothesis development.

Figure 1 Conceptual Model



Service Waiting Times

Previous research defines types of service waiting time from three perspectives: objective, subjective (that is perceived) and psychological. Objective waiting time refers to the objective elapsed time as measured by as a stopwatch by consumers before being served (M. M. Davis & Vollmann, 1990). Perceived waiting time is the consumers' estimation or perception of time waited. Perceived waiting time also includes the consumers' evaluation of the wait as being or not being acceptable, reasonable, tolerable (Durrande-Moreau, 1999) as being short or long (Pruyn & Smidts, 1998). The psychological aspect of waiting consists of emotional responses to waiting such as frustration, boredom, anxiety, anger, unsettledness and regret (Hui & Tse, 1996; Voorhees et al., 2009).

In consumer marketing research literature, many studies have examined waiting for services such as in hospitals and banks (G. Antonides, Verhoef, & van Aalst, 2002). In these disciplines, researchers identified the relationship between objective and perceived waiting times and the effect of service waiting times on consumers' satisfaction for waiting for service (K. L. Katz, Larson, & Larson, 2003). Generally, negative relationships were found between waiting time duration and evaluation of service. The discipline of operation management focuses on reducing a temporal factor such as actual waiting time by using a queuing theory whereas marketing as a discipline pays attention to managing situational factors such as the physical environment to reduce the perception of consumers' service waiting time (Durrande-Moreau, 1999). In the discipline of psychology, researchers suggest that a distinction between objective and subjective waiting time is somewhat vague in that objective waiting time is psychologically transformed into perceived waiting time from the perspective of consumers (Gerrit Antonides, Verhoef, & Aalst, 2002). No matter how well the service organization either provides service by modifying their service delivery system (Hui & Tse, 1996) or takes actions to reduce the negative effects without changing the real waiting duration, reducing objective or consumer perception of waiting times is mainly determined by psychological attributes such as emotional responses. Pruyn & Smidts (1998) assert that

this psychological waiting time forms the appraisal of service waiting time. Psychological evaluation of the wait is critical in that perception of objective waiting time is derived from consumers' judgmental evaluation resulting from their experience of emotional responses in the service encounter (Voorhees et al., 2009).

Multistage Waits

Waiting for service refers to the time when consumers are ready to receive service after service starts (Taylor, 1994). Waiting can be defined as the point of time at which the wait occurs. In particular, consumers often think of a visit to a service organization in terms of three temporal distinct stages: the pre-process wait which before service delivery; the in-process wait during service delivery and the post-process waits after service delivery (Dubé-Rioux et al., 1989). In a restaurant, for instance, the pre-process wait occurs when a consumer enters a restaurant and prior to being seated; the in-process wait occurs when ordering and consuming the meal; the post-process wait occurs prior to receiving and paying the bill (M. Davis & Maggard, 1990).

Pre-process waiting can be further distinguished by two types: the scheduled wait, and the unscheduled wait. The scheduled wait refers to the wait consumers made at an appointment before visiting the destination. This type of wait occurs consumers arrive either early or late at the scheduled time. For example, consumers will experience a 30minute pre-scheduled wait when they arrive at 6:30 pm for a 7:00 meal reservation at a restaurant. An unscheduled wait refers to the wait consumers experience at a service organization without an appointment. For example, consumers will experience various wait durations based on operational capabilities of a service organization. Queue wait is often considered as an unscheduled wait by managing a waiting line based on a first-come-first-served principle (Houston, Bettencourt, & Wenger, 1999). However, this categorization is not exhaustive when applying spatial factors such that the service organization provides different waiting environments by making consumers wait either at the service setting (e.g., waiting in a nice waiting room) or elsewhere (e.g., waiting outside of the service setting) (Taylor, 1994).

To date, relatively little research has been conducted about the multistage approach to service consumption within a single operation. According to common consensus regarding this issue, pre-process waiting can significantly affect the customers' overall evaluation of service. Maister (1985) contended that pre-process waits are felt to be longer than in-process waits and post-process waits at an airport. Dube, Schmitt, & Leclerc (1991) asserted that preprocess and post-process waits are more determinant for service evaluation than in-process waits by using the scenario of a restaurant visit. Davis & Vollmann (1990) empirically studied two-stage waits of the restaurant and found that preprocess waits such as the amount of time consumers wait before placing an order have more effect on the service evaluation than in-process waiting. Considering they do not include psychological aspects of consumers' evaluation of the wait, results are expected to derive a different outcome from previous research. Voorhees et al.(2009) recently examined the effects of waiting time on both anger and regret in four service industries (banking, hairstyling, sit-down dining, and oil changing service centers). The results are skeptical due to the nature of consumers' dynamic and subtle emotional responses in a specific situation because they used a survey questionnaire by requiring the respondents to recall within 30 days.

Emotional Responses during Multi-Stage Waiting

A number of psychology research insists that specific emotions lead to particular evaluation and interpretation of situations (Roseman, Spindel, & Jose, 1990). For instance, two individuals with different emotions or the same individual with different emotions at different times will lead to different evaluations of the event. In marketing literature, researchers recently suggest that specific negative emotions have a direct effect on service dissatisfaction (M Zeelenberg & R Pieters, 2004). By identifying the nature of specific emotions during a specific waiting situation, researchers may be able to explain how a variety of waiting situations can generate the same emotions and they may be able to explore distinct variability among people with emotional responses to the same situations.

Previous research suggests that waiting evokes negative emotional responses such as anxiety, boredom, unsettledness, anger, irritation, helplessness, annoyance, and regret (Dubé-Rioux et al., 1989; Gardner, 1985; K. Katz, Larson, & Larson, 1991; Maister, 1985; Osuna, 1985). Consumers may feel these emotions at the same time, but there must be one dominant emotion. Individual factors such as personal expectation and certain goals influence consumers' emotional responses during waiting.

Individual's behavior is goal-oriented and waiting is a barrier that prevents the individual from immediately reaching his/her goal (Houston et al., 1999). Such barriers are sources of anger and other negative emotions. When the individual is near the region of the goal, pressure is relieved and any barrier produces negative emotions. On the other hand, when the individual is outside the region, tension exists either because the individual strives for the goal (as is the case before goal achievement) or because the individual has been satiated and strives for new goals (as is the case after goal achievement) (Noone & Mattila, 2009). This demonstrates the field theory of Lewin's (1943) that when the wait occurs from the goal state of the service encounter or subsequent to goal achievement than when close to the goal state, people have more negative emotion and feel as though the wait is longer. Waiting should be regarded differently based on different stages in the service firms since consumers have different goals at each stage (Noone & Mattila, 2010).

As noted earlier, researchers view the service experience with respect to three temporally distinct stages: the pre-process wait, the in-process wait and the post-process wait. Consumers may experience a specific type of discrete emotion at different stages of waiting. Previous research suggests that waiting generates three general types of negative emotions: 1) anxiety responses and associated feelings of uncertainty, uneasiness unsettledness; 2) anger responses and associated feelings of annoyance, irritation and frustration and 3) regret (Connolly & Zeelenberg, 2002; Taylor, 1994; Voorhees et al., 2009).

Consumer Anxiety during Multi-Stage Waits

Consumers often do not know how long they have to wait to receive service when they visit service organization other than for scheduled wait. Research on anxiety suggests that the key factor behind consumers' anxiety is uncertainty (Cole, Barrett, & Zahn-Waxler, 1992). For example, consumers have a negligible wait when they wait for 5 minutes to receive service in a restaurant. As the waiting continues to 30 minutes, consumers have concerns about the consequences of their wait due to unforeseeable outcomes of service. Consumers with anxiety tend to have limited responses due to the unknown consequences of the intangible nature of service. Previous research suggests that providing duration information reduces the perception of waiting in that it reduces uncertainty regarding how long they must wait for service (Maister, 1985). Even if consumers are informed with

duration information, but disconfirmation between informed duration and actual wait duration are mismatched, consumers have greater uncertainty about the waiting (M. M. Davis & Heineke, 1998). Such uncertainty leads consumers to anticipate a negative experience in the future.

Unexplained waits also lead to uncertainty (Maister, 1985). As unexplained waiting is prolonged, the possible set of reasons of waiting increases so that anxiety would intensify. In a restaurant, for instance, other guests who visit right before someone receive service, but he or she experiences a 20-minute wait without any explanation for the wait. Then the guest would experience uncertainty during waiting. Guests waiting for 5 minutes to receive service may consider that a minor problem, whereas consumers waiting for 20 minutes regard that time loss as a major problem; then they would experience discontent which may result in anxiety.

During pre-process waiting, consumers are not in the region of the main goal such as having a meal at a restaurant. Since they are not in the system and do not know how long and why they have to wait, ambiguity resulting from uncertainty will lead to higher anxiety. Consumers who first experience waiting in the pre-process stage of service, right after visiting the service organization, feel a sense of uncertainty about the length of the wait and personal consequences of the wait escalates. This uncertainty may make consumers feel unsettled; this tension may increase anxiety. Anxiety is also derived from the discrepancy resulting from when the consumer service experience does not meet expectations. Consumers also expect a desirable service experience before visiting a service organization (Choi & Mattila, 2008). In such a context, they would experience a discrepancy between expectation of the anticipated service experience and the actual service experience during pre-process waiting. In particular, when the service organization does not provide both duration time and reasons of waiting, the discrepancy will lead to more salient anxiety than other types of negative emotions such as anger or regret. Accordingly, the present study proposes the following hypothesis:

H 1: During the pre-process wait, anxiety is more salient than other types of negative emotions such as anger and regret.

Consumer Anger during Multi-Stage Waits

Consumers often experience violation of their goal while waiting for service (Taylor, 1994). Thus, many consumers will experience anger and its associated feelings of frustration, irritation and annoyance. They have a specific goal or multiple goals when visiting a service organization. In a restaurant, for example, consumers having a goal about satisfying their hunger and any interventions that prevent them from achieving this goal, will cause goal incongruence and lead them to feel angry. Anger also results from both the negative situation and the service provider control in terms of the failed service encounter. They appraise waiting as harmful and frustrating due to another person, an institution or self. In a restaurant, for instance, angry consumers interpret waiting accountable to the service provider's poor operation management or self (Bitner, Booms, & Mohr, 1994) in that they appraise waiting as harmful and frustrating due to circumstances beyond consumer control.

Anger is "one of the most powerful emotions, if we consider its profound impact on social relations as well as effects on the person experiencing this emotion" (Lazarus, 1991). Angry consumers have aggressive, violent and hostile behaviors towards the service

organization (Berkowitz, 1990), whereas consumers with anxiety show limited responses to the service provider. Much research in consumer psychology considers that anger may be a powerful predictor of consumers' behavioral responses resulting from a failed service encounter such as waiting. Researchers further state that consumers tend to complain, to engage in negative word-of-mouth (WOM) or fail to purchase service again due to increased anger (Marcel Zeelenberg & Rik Pieters, 2004).

During the in-process wait, consumers are more likely to feel anger because achieving a primary goal is the reason for consumers to visit the service organization. This goal incongruence leads to an intense negative emotion such as anger. Since consumers also see service operation during the in-process wait in that they are in the main region of the service organization (e.g., dining room in a restaurant), they may interpret waiting by blaming service providers' poor operation system, employees, or the self. This study poses the following hypothesis:

H 2: During the in-process wait, anger is more salient than other types of negative emotions such as anxiety and regret.

Consumer Regret during Multi-Stage Waits

Consumers often feel regretful with a decision to visit a service organization which provides lower service than they expect. Regret is derived from the discrepancy resulting from when the service experience does not meet expectations (Tsiros & Mittal, 2000). Consumers expect a desirable service experience since they pay money for service (Bolton, 1998). They have the belief that they should be duly processed in service. In this context, consumers may experience a discrepancy between expectation of receiving merited service and actual service experiences. Consumers who invest money or time in the service setting may be more likely to blame their decision for alternatives such as visiting elsewhere.

Unlike with anger and anxiety towards blaming others or situations, regret stems from blaming themselves because of their wrong decision they already made (Connolly & Zeelenberg, 2002). Regret elicits consumers' action from a specific situation and then they compare their action with their inaction in a given situation (Landman, 1987). In the service marketing domain, regret directly affects whether or not consumers switch to another service organization (Marcel Zeelenberg & Rik Pieters, 2004). Conversely, regret may influence consumers' likelihood to return to the service provider and to recommend a provider. Regret indirectly influences complaining and spreading negative WOM as well.

During the post-process wait, consumers could imagine an alternative decision which may lead to a better service experience. Specifically, they have already experienced the service process; they are able to assess the value of service experience. Consumers may be sensitive to feel regret during the post-process wait in that this process includes paying the bill (Shiv, Carmon, & Ariely, 2005). Therefore, the present study poses the following hypothesis:

H 3: During the post-process wait, regret is more salient than other types of negative emotions such as anxiety and anger.

Emotion Regulation Strategies

According to Thompson (1994), emotion regulation refers to “the extrinsic and intrinsic processes responsible for monitoring, evaluating and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (p. 27).

Gross & Thompson (2007) proposed five emotion regulation strategies that occur sequentially during the process of emotion generation: (1) selection of situations, (2) modification of situations, (3) attentional deployment, (4) cognitive change (re-appraisal), and (5) response modulation. The first four emotion regulation strategies are considered *antecedent-focused*; they take place before appraisals give rise to fully blown emotion response tendencies (Gross & Thompson, 2007). The fifth is regarded as *response-focused* emotion regulation, which occurs after the responses are generated (Gross & Munoz, 1995).

As for antecedent emotion regulation strategies, situation selection refers to approaching or avoiding certain stimuli in order to regulate emotions (Gross & Thompson, 2007). Situation modification refers to “problem-focused coping” which concerns modifying external physical environments rather than modifying “internal” environments such as cognitions (Gross & Thompson, 2007). Attentional deployment refers to influencing emotional response by redirecting attention within a given situation (Gross, 1998). Cognitive change refers to selecting which of the many possible meanings one may use in a specific situation (Gross & Thompson, 2007). Considering the context of the present study, the researchers focus on consumers’ cognition and behaviors in multi-stage waiting. Accordingly, the researchers disregard both situation selection and situation modification as antecedent emotion regulation. Thus, the researchers use attentional deployment and appraisal to operationalize antecedent emotion regulation strategy.

As for response-focused emotion regulation, it occurs late in the emotion-generative process after behavioral response has been triggered (Gross & Thompson, 2007). For example, consumers may use expressive suppression by attempting to decrease ongoing emotion-expressive behavior (Gross & John, 2003). On the other hand, consumers might use the strategy of expressing negative emotion by verbally showing their negative emotion.

As noted earlier, in pre-process waiting for service delivery, consumers are not in the process of service consumption. Thus, service providers tend to provide them with a variety of distractions such as television and newspapers (Dijkstra, Pieterse, & Pruyn, 2006). Consumers are more likely to take advantage of using these distractions to keep their positive emotions or to reduce their negative emotions towards service firms prior to getting involved in service consumption. In-process waiting entails core-consumption which means the consumers’ goal is high as compared to other stages of waiting. Appraisal is highly associated with the degree by which the goal is accomplished during the service encounter (Han, Lerner, & Keltner, 2007). After achieving a primary goal in the service stage, consumers may wait to pay for their service consumption. Consumers with negative emotions show two particular responses by either keeping or expressing their emotion to the service providers, especially when they pay the bill (Shiv et al., 2005). Accordingly, the following hypotheses are presented:

H 4: During pre-process waiting, consumers are more likely to rely on attentional deployment to minimize negative emotions.

H 5: During in-process waiting, consumers are more likely to rely on reappraisal to minimize negative emotions.

H 6: During post-process waiting, consumers are more likely to rely on response-focused emotion regulation to minimize negative emotions.

Moderating Effect of Regulatory Focus on Emotion Regulation Strategies

Regulatory Focus Theory

Regulatory focus theory defines how people engage in self-regulation by proposing two different regulatory systems that are concerned with acquiring either gain or loss through goal attainment (Idson, Liberman, & Higgins, 2000). When promotion-focused, people's ideal goals and eagerness to attain them motivate individuals to be concerned with gain or lack of gain in a given situation. When prevention is the focus, people's ought goals and vigilance motivates them to try to concern with loss or lack of loss in a specific situation. In a stressful situation such as waiting, while one pursues a positive emotion, one also suffers increasing negative emotion: While one tries to avoid negative emotion, one is also losing positive emotion. Therefore, promotion-oriented individuals concentrate on pleasure and making an attempt to get the best out of a given situation, while prevention-oriented individuals are concerned with pain and avoiding stressful situations (Spiegel, Grant-Pillow, & Higgins, 2004).

As noted earlier, individuals that employ an attentional deployment strategy regulate their negative emotions through distractions. Accordingly, one can suggest that individuals with a prevention focus tend to use antecedent-focused emotion regulation. Conversely, individuals who reappraise are apt to react negatively in a situation so that they are more action oriented than those individuals with attentional deployment to achieve the best outcome in a given situation. Therefore, a positive relationship is suggested between promotion focus and reappraisal. Similarly, suppression-oriented individuals tend to cope with their negative emotion which requires them to avoid a given stressful situation. Disclosure-oriented individuals tend to express their negative emotion which motivates them to engage in a given situation. Hence, the following hypothesis is presented:

H 7: Consumers' regulatory focus would moderate the relationship between the waiting stage and emotion regulation, such that consumers with a promotion focus are more likely to employ a reappraisal strategy than consumers with a prevention focus. Conversely, consumers with a prevention focus are more likely to employ attentional deployment and suppression strategies than consumers with a promotion focus.

Impact of Emotion Regulation on Encounter Satisfaction

Gross and John (2003) argued that antecedent-focused emotional regulation is more effective than response-focused regulation in that it alters the trajectory of an emotion early in the emotion generation process. In the context of a potentially stressful situation, antecedent-focused emotion regulation might take the form of understanding the emotional situation by decreasing its emotional relevance (e.g., Beck, 1991; Scherer, 1984). Individuals who typically regulate their emotions through use of antecedent-focused report more positive emotion, less negative emotion and greater psychological well-being than others (Gross & Thompson, 2007). On the other hand, individuals who typically regulate their emotions through use of response-focused strategy report less positive emotion, more negative emotion, less social support and more depression (Gross & Thompson, 2007).

Taken together, individuals with an antecedent-focused strategy reconsider a stressful event and, thus, they may perceive the event from a different vantage point. As a result, they are more likely to have less negative emotion compared to those with a response-focused strategy. Individuals with response-focused strategy may experience psychological stress because response-focused emotion regulation is evoked after an event already has been appraised in emotional terms and thus has triggered emotional responses. As a result, individuals will experience more negative emotions than individuals using the antecedent-focused strategy. Therefore, the researchers suggest the following hypothesis:

H8: After controlling for the effect of emotional responses on encounter satisfaction, consumers who use antecedent-focused emotion regulation strategies are more likely to report greater encounter satisfaction than those who use response-focused emotion regulation strategies.

METHODOLOGY

Research Design

The present study will employ an online simulation by using a virtual restaurant in Second Life. Although using real consumption situations would be more preferable, lack of controls for other variables in the field situation prevent this. Virtual experience is known to let users respond to the computer-generated 3D environment in a similar way to how they respond in a real environment (Bierbaum et al., 2008). There is considerable evidence that within a research setting, people disclose more about themselves online compared to offline equivalents and such disclosure is more candid (Mertens & Allen, 2008). To simulate waiting in real life, the researchers will use a virtual full-service restaurant in Second Life, 3D virtual world where users as avatars interact with people, businesses and organizations. The study will employ 3 (Multi-stage waiting: pre-process, in-process and post-process) x 2 (Regulatory Focus: promotion and prevention) full-factorial experimental design. In the simulated experiment, the waiting stage will be manipulated and the regulatory focus will be measured.

Pre-tests

Before conducting the main study, the researchers will conduct several pre-tests to make a virtual restaurant suitable in terms of operation management for this study. During this stage, all efforts will be made to maintain realism of the virtual restaurant setting by conducting several pre-running tests with technicians who have expertise in Second Life. Since respondents who are not familiar with using second life may have negative emotion resulting from inconveniences using Second Life rather than waiting itself, the researchers will use subjects who are current users of Second Life software. Since the communication features in Second Life simulate real world communication, participants can publicly or privately chat with each other either through voice or text tools in Second Life. Subjects also come with various common human gestures during conversation. The researchers will recruit hostess or wait staff who will serve as subjects during the pilot study and then closely work together to run simulations as a real restaurant. The researchers will not be part of the simulation. Furthermore, researchers will prepare pre-determined scripts in advance and put these scripts into the system of Second Life; the simulation has participants experience waiting in a restaurant in Second Life.

Control Variables

Based on the literature review, several factors with no interest in the study are controlled to account for their influence on emotional responses and emotion regulation in multi-stage waits. The physical environment, duration information and causes of waiting, justification of the wait and server attentiveness all are kept constant in Second Life. For the physical environment, there are bots (not real consumers, but looks real) in a restaurant to make the restaurant appear crowded and suitable for the waiting situation. Music and lightening are controlled as well. Duration information and causes of waiting are not provided across all respondents by staff in the restaurant. For justification of the wait and server attentiveness, each designated hostess or waiter properly serves under the supervision of researchers.

Sample and Procedure for the Pilot Study

Qualified participants are randomly enrolled in one of the three experimental conditions in Second Life (i.e., condition 1: pre-process waiting, condition 2: in-process waiting and condition 3: post-process waiting). Respondents should not experience any inconveniences in Second Life, which may have them negative emotion rather than the waiting itself. Based on pre-assigned experimental scripts based on the scenario, a recruited hostess and staff will perform their tasks individually. They will serve the subjects differently in each condition as assigned during pre-running tests. Both staff and subjects all interact with each other as in a real restaurant by chatting with talks or texts. During participation, subjects will be asked to type everything they are thinking or feeling into the chat-box. The researchers, the experimental administrators, will capture either private or public conversations among host, wait staff and guests. After experiencing each stage of waiting at a virtual restaurant, subjects will respond to a set of items measuring both emotional responses and emotion regulation strategies.

Measures

Mixed methodology of qualitative and quantitative studies will be used to measure the subjects' evaluation of their waiting experience in Second Life. The first measure is a question asking respondents to express how they are thinking or feeling during a waiting by using the text tools of Second Life. The second measure is online survey questions after experiencing each waiting in Second Life. The first measure is concerned with the subjects' emotional responses to the wait; the second is to measure both emotional responses and emotion regulation strategies to multi-stage waits. The purpose of the first measure is to obtain written narratives with respect to subjects' thoughts and feeling about waiting itself. All measures used in the present study are based on previously validated scales.

In the second measures of the questionnaire, items for *specific negative emotions during multi-stage waits* are developed for anxiety (Oliver, 1997), anger (Richins, 1997) and regret (Oliver, 1997; Tsiros & Mittal, 2000; Voorhees, Brady, & Horowitz, 2006). Items for *emotion regulation strategies to multi-stage waits* are obtained from Gross & John (2003), the most recent Emotion Regulation Questionnaire (EQR) and Schutte and Manes, & Malouff (2009). Items for *regulatory focus* are adapted from Semin, Higgins, de Montes, Estourget, & Valencia (2005). Items for *encounter satisfaction* are derived from Wirtz & Lee (2003).

To measure *specific negative emotions during multi-stage waits*, the following

question is asked: “When people wait to receive services, the following emotions are typically experienced. Please pick three intensive emotions and prioritize the top three emotions out of ten”. Anxiety-items are associated with uncertainty, unsettledness, anxiety and uneasiness. Anger-items include frustration, anger, irritation and annoyance. Regret-items include regret and disappointment. After choosing three intensive emotions, respondents are asked to indicate the extent to which each of the following emotions describes how they were feeling in the restaurant. Responses are based on a 7-point, Likert-type scale with responses from 1 (not at all) to 7 (extremely).

To measure *emotion regulation strategies to multi-stage waits*, the following question will be asked: while you were waiting to receive service in a restaurant in Second Life, please indicate the extent to which you were engaging in the following behaviors. A total of eleven sub-questions will be asked by the participants in the study. Seven questions out of ten are adapted from EQR (Gross & John, 2003) including reappraisal and suppression. Four questions out of 6 are derived from the study of Schutte et al. (2009) including attentional deployment and disclosure. Five questions are excluded since these questions were developed for positive emotions so that these are not appropriate in a stressful waiting situation. The researchers slightly modified questions to make them suitable for a waiting situation such that “I kept my emotions to myself in the waiting or, to feel less negative emotion in a waiting situation, I changed what I’m thinking about”. The responses are based on a 7-point, Likert-type scale ranging from 1 (did not do this at all) to 7 (did this a lot).

To measure *regulatory focus*, the researchers will ask the following question: When you pursue goals in your daily life, how often will you react to the following statements? The questions consist of sub-questions such that “How often have you accomplished things that got you “enthusiastic” to work even harder? Do you break rules to reach your goals?” The researchers chose all of twelve questions including both promotion focus and prevention focus from the study of Semin et al. (2005). The responses are based on a 5-point, Likert-type scale with responses from 1 (never) to 5 (very many).

To measure *encounter satisfaction*, the following question will be asked: Please indicate your level of agreement with the following statements. The responses are based on a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree).

In the next to the last section of the questionnaire, respondents are asked to answer the following questions based on their waiting experience in a virtual restaurant in Second Life. The researchers will check degrees of compatibility between real waiting and virtual waiting since the perception of waiting in the two contexts may be different. For example, they are asked to respond to the following statements: rate the waiting time you spent in the virtual restaurant on a 7-point bipolar-type scale ranging from 1 scale (very short) to 7 scale (very long); How the realism of your waiting experience in a virtual restaurant as compared to the one in a real restaurant on a 7-point bipolar-type scale ranging from 1 scale (very unrealistic) to 7 scale (very long). In the last section, the respondents will be asked demographic information including gender, age, education and occupation.

Data Analysis

Qualitative analysis will be used to examine subjects’ emotional responses and emotion regulation in three experimental designs. Content analysis will be used to interpret meaning from the content of text data gathered from subjects. MANOVA will be used to

measure emotional responses and examine emotion regulation strategies between six experimental designs. Simple t-test and chi-square will be used to examine the effect of regulatory focus on emotion regulation and the effect of demographic information (i.e., gender, age, education and occupation).

CONTRIBUTIONS

Theoretical Contributions

The present study examines consumers' emotional responses in multi-stage waiting. While previous research has focused on extrinsic antecedents of overall negative emotions of waiting, this study examines intrinsic antecedents of discrete emotions of multi-stage waiting. By identifying emotion-causing patterns of specific situations with the concept of emotion regulation strategies, the present researchers can explain how individuals generate specific emotions in a variety of waiting situations. Considering individual differences of emotion generative processes, individual difference variables of regulatory focus theories are examined. Since this study represents the first attempt to investigate consumers' emotion regulation that influences service firms, this theory may explain downstream variables such as service quality, price, values, word-of-mouth, repurchase and attitude. Furthermore, this study is the first to employ a 3D virtual restaurant in Second Life, although researchers often use scenario-based methodology to examine the high sensitivity of dealing with people's subtle emotions. Employing virtual environment in hospitality research should be further examined. This study could act as a stimulus for additional research to develop more integrative theories about explaining consumers' dynamic emotions with service delivery.

Practical Contributions

The present study has several managerial implications for service organizations. First, the findings will allow service providers to better understand how consumers' negative emotions are generated in multi-stage waiting. Accordingly, service providers can strategically approach consumers to effectively relieve consumers' negative emotions in each stage of waiting. For example, service managers can develop training programs to help customer contact employees better communicate with their guests at various stages of waiting. By doing this, service organizations can develop good long-term relationships with customers. Second, the findings suggest that various emotion regulation strategies can lead to different degrees of encounter satisfaction during each stage of waiting. Service organizations can allocate resources necessary to meet consumers' desired emotions during a specific stage of waiting. Service managers can assess the relative importance of waiting stages and design ideal variables before re-configuring a service to raise consumer evaluations of service performance. Then the managers can avoid wasting resources on reconfiguration that does not significantly influence consumer satisfaction.

References

- Antonides, G., Verhoef, P. C., & Aalst, M. v. (2002). Consumer Perception and Evaluation of Waiting Time: A Field Experiment. *Journal of Consumer Psychology, 12*(3), 193-202.
- Berkowitz, L. (1990). On the formation and regulation of anger and aggression: A cognitive-neoassociationistic analysis. *American Psychologist, 45*(4), 494-503.
- Bierbaum, A., Just, C., Hartling, P., Meinert, K., Baker, A., & Cruz-Neira, C. (2008). *VR Juggler: A virtual platform for virtual reality application development*.
- Bitner, M., Booms, B., & Mohr, L. (1994). Critical service encounters: the employee's

- viewpoint. *The Journal of Marketing*, 58(4), 95-106.
- Bolton, R. N. (1998). A Dynamic Model of the Duration of the Customer's Relationship with a Continuous Service Provider: The Role of Satisfaction. *Marketing Science*, 17(1), 45-65.
- Choi, S., & Mattila, A. (2008). Perceived controllability and service expectations: Influences on customer reactions following service failure. *Journal of Business Research*, 61(1), 24-30.
- Cole, P., Barrett, K., & Zahn-Waxler, C. (1992). Emotion displays in two-year-olds during mishaps. *Child Development*, 63(2), 314-324.
- Connolly, T., & Zeelenberg, M. (2002). Regret in decision making. *Current directions in psychological science*, 11(6), 212.
- Davis, M., & Maggard, M. (1990). An analysis of customer satisfaction with waiting times in a two-stage service process. *Journal of Operations Management*, 9(3), 324-334.
- Davis, M. M., & Heineke, J. (1998). How disconfirmation, perception and actual waiting times impact customer satisfaction. *International Journal of Service Industry Management*, 9(1), 64-73.
- Davis, M. M., & Vollmann, T. E. (1990). A framework for relating waiting time and customer satisfaction in a service operation. *Journal of Services Marketing*, 4(1), 61-69.
- Dijkstra, K., Pieterse, M., & Pruyn, A. (2006). Physical environmental stimuli that turn healthcare facilities into healing environments through psychologically mediated effects: systematic review. *Journal of Advanced Nursing*, 56(2), 166-181.
- Dubé-Rioux, L., Schmitt, B. H., & Leclerc, F. (1989). Consumers' Reactions to Waiting: When Delays Affect the Perception of Service Quality. [Article]. *Advances in Consumer Research*, 16(1), 59-63.
- Dube, L., Schmitt, B., & Leclerc, F. (1991). Consumers' Affective Response to Delays at Different Phases of a Service Delivery1. *Journal of Applied Social Psychology*, 21(10), 810-820.
- Durrande-Moreau, A. (1999). Waiting for service: ten years of empirical research. *International Journal of Service Industry Management*, 10(2), 171-194.
- Gardner, M. P. (1985). Mood States and Consumer Behavior: A Critical Review. *The Journal of Consumer Research*, 12(3), 281-300.
- Gross, J. (1998). Antecedent-and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of personality and social psychology*, 74(1), 224-237.
- Gross, J., & John, O. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of personality and social psychology*, 85(2), 348-362.
- Gross, J., & Munoz, R. (1995). Emotion regulation and mental health. *Clinical Psychology: Science and Practice*, 2(2), 151-164.
- Gross, J., & Thompson, R. (2007). Emotion regulation: Conceptual foundations. *Handbook of emotion regulation*, 3, 24.
- Han, S., Lerner, J., & Keltner, D. (2007). Feelings and consumer decision making: The appraisal-tendency framework. *Journal of Consumer Psychology*, 17(3), 158.
- Hensley, R., & Sulek, J. (2007). Customer satisfaction with waits in multi-stage services. *Managing Service Quality*, 17(2), 152-173.
- Houston, M. B., Bettencourt, L. A., & Wenger, S. (1999). The relationship between waiting in a service queue and evaluations of service quality: a field theory perspective. *Psychology and Marketing*, 15(8), 735-753.
- Hui, M. K., & Tse, D. K. (1996). What to tell consumers in waits of different lengths: an integrative model of service evaluation. *The Journal of Marketing*, 60(2), 81-90.

- Idson, L. C., Liberman, N., & Higgins, E. T. (2000). Distinguishing Gains from Nonlosses and Losses from Nongains: A Regulatory Focus Perspective on Hedonic Intensity. *Journal of Experimental Social Psychology, 36*(3), 252-274.
- Katz, K., Larson, B., & Larson, R. (1991). Prescription for the waiting-in-line blues: entertain, enlighten, and engage. *Sloan Management Review, 32*(2), 44-53.
- Katz, K. L., Larson, B. M., & Larson, R. C. (2003). PRESCRIPTION FOR THE WAITING-IN-LINE BLUES. *Operations management: critical perspectives on business and management, 44*, 160.
- Landman, J. (1987). Regret and Elation Following Action and Inaction: Affective Responses to Positive. *Personality and Social Psychology Bulletin, 13*(4), 524-536.
- Landman, J. (1993). *Regret: The persistence of the possible*: Oxford University Press New York.
- Lazarus, R. (1991). *Emotion and adaptation*: Oxford University Press, USA.
- Lewin, K. (1943). Defining the 'field at a given time'. *Psychological review, 50*(3), 292-310.
- Maister, D. H. (1985). The psychology of waiting lines. *The Service Encounter, Lexington Books, Lexington, MA*, 113-123.
- Mertens, R., & Allen, J. (2008). The role of psychophysiology in forensic assessments: Deception detection, ERPs, and virtual reality mock crime scenarios. *Psychophysiology, 45*(2), 286-298.
- Noone, B., & Mattila, A. (2009). Consumer Goals and the Service Encounter: Evaluating Goal Importance and the Moderating Effect of Goal Progress on Satisfaction Formation. *Journal of Hospitality & Tourism Research*.
- Noone, B., & Mattila, A. (2010). Consumer Goals and the Service Encounter: Evaluating Goal Importance and the Moderating Effect of Goal Progress on Satisfaction Formation. *Journal of Hospitality & Tourism Research, 34*(2), 247.
- Oliver, R. (1997). *Satisfaction: A behavioral perspective on the consumer*: McGraw Hill, New York.
- Osuna, E. (1985). The psychological cost of waiting. *Journal of Mathematical Psychology, 29*(1), 82-105.
- Pruyn, A., & Smidts, A. (1998). Effects of waiting on the satisfaction with the service: Beyond objective time measures 1. *International Journal of Research in Marketing, 15*(4), 321-334.
- Richins, M. (1997). Measuring emotions in the consumption experience. *Journal of Consumer Research, 24*(2), 127-146.
- Roseman, I., Spindel, M., & Jose, P. (1990). Appraisals of emotion-eliciting events: Testing a theory of discrete emotions. *Journal of personality and social psychology, 59*(5), 899-915.
- Schutte, N., Manes, R., & Malouff, J. (2009). Antecedent-Focused Emotion Regulation, Response Modulation and Well-Being. *Current Psychology, 28*(1), 21-31.
- Semin, G., Higgins, T., de Montes, L., Estourget, Y., & Valencia, J. (2005). Linguistic signatures of regulatory focus: How abstraction fits promotion more than prevention. *Journal of personality and social psychology, 89*(1), 36-45.
- Shiv, B., Carmon, Z., & Ariely, D. (2005). Placebo effects of marketing actions: consumers may get what they pay for. *Journal of marketing research, 42*(4), 383-393.
- Spiegel, S., Grant-Pillow, H., & Higgins, E. (2004). How regulatory fit enhances motivational strength during goal pursuit. *European Journal of Social Psychology, 34*(1), 39-54.
- Taylor, S. (1994). Waiting for service: the relationship between delays and evaluations of service. *The Journal of Marketing, 58*(2), 56-69.
- Thompson, R. A. (1994). Emotion Regulation: A Theme in Search of Definition. *Monographs of the Society for Research in Child Development, 59*(2/3), 25-52.

- Tsiros, M., & Mittal, V. (2000). Regret: A model of its antecedents and consequences in consumer decision making. *Journal of Consumer Research*, 26(4), 401-417.
- Voorhees, C., Baker, J., Bourdeau, B., Brocato, E., & Cronin Jr, J. (2009). It Depends: Moderating the Relationships Among Perceived Waiting Time, Anger, and Regret. *Journal of Service Research*, 12(2), 138.
- Voorhees, C., Brady, M., & Horowitz, D. (2006). A voice from the silent masses: an exploratory and comparative analysis of noncomplainers. *Journal of the Academy of Marketing Science*, 34(4), 514.
- Wirtz, J., & Lee, M. (2003). An examination of the quality and context-specific applicability of commonly used customer satisfaction measures. *Journal of Service Research*, 5(4), 345.
- Zeelenberg, M., & Pieters, R. (2004). Beyond valence in customer dissatisfaction: A review and new findings on behavioral responses to regret and disappointment in failed services. *Journal of Business Research*, 57(4), 445-455.