eService Customer Retention: An Affective Events Theory Perspective

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ABSTRACT

Currently, one stream of online customer behaviors research focused on the quality of the systems in determining systems success, whereas another stream of research focused on the effects of online incidents including online waiting interruptions and service failures on consumer behaviors. The study attempts to bridge the two streams of research and to explain e-service customer post-adoption behaviors in a unified model from the perspectives of affective events theory. Findings support the proposed model positing that e-service customer retention behaviors were determined by perceived site quality and cognitive appraisal of incidents handling. Post-adoption behaviors investigated in the study include continuance intention, complaint intention, and recommendation intention. Practical implications were also suggested.

Keywords
Affective events theory, customer retention, e-service, word-of-mouth, cognitive appraisal of incidents handling, post adoption behavior

INTRODUCTION

For e-service providers, retaining customers with a customer-centric strategy is important. Unfortunately, anecdotal evidence suggests that retaining customer has been a major challenge for e-service providers because competitors are only a mouse click away. Although the advantages of customer loyalty and customer-centric strategy are generally recognized, only few studies to date examine the behaviors of online customer in the post-adoption stage. Most studies of online customer retention focus primarily on the determinants of satisfaction and/or continuance intention from cognitive perspectives based on either technology adoption model or expectancy confirmation theory (ECT). Other post-adoption behaviors like complaint and recommendation behaviors are largely under-explored. With the recent popularity of online social-oriented systems, including blogs, social networking, and consumer review forums as media for online customers to spread word-of-mouth and complaints, a better understanding of other post-adoption behaviors, such as word-of-mouth and complaint behaviors and their determinants is needed because the findings can help practitioners engineer better online services. Thus, the antecedents of the three post adoption behaviors (complaint and recommendation behaviors and word-of-mouth) are of interest of current study.

The objective of the study is to examine online customer behaviors. Specifically, we investigate the relationships among perceived web site quality, cognitive appraisal of incidents handling, customer affective experience, and customers’ post-adoption behaviors. Currently, two research streams made substantial contribution to our understanding of the online customer behaviors (i.e., Delone and McLean, 1992; Nah, 2004; Ryan and Valverde, 2006). The current study attempts to bridge the two streams of research and to better explain e-service customer post-adoption behaviors in a unified model. To enrich customer retention literature, we provide a fresh perspective by adopting the affective events theory and by linking the theory to perceived site quality, cognitive appraisal of incidents handling, affective reactions, and three post-adoption behaviors.
LITERATURE REVIEW

Affective Events Theory Applied to e-Service Context

Affective events theory (AET) has been popularized in the organizational literature (e.g., Weiss and Cropanzano, 1996; Fisher, 2002). The theory explains the relationship between employees and their emotional reaction to events that happen to them at work. It posits that momentary work events cause concurrent positive and negative affective states. Figure 1 depicts the major constructs in affective events theory and the relationships among them. Other studies on the roles of affects in customer behavior in service settings employ appraisal theory of specific emotions (e.g. Gelbrich, 2009), expectancy confirmation theory (e.g. Bhattacharjee, 2001), and affective complementarity (e.g. Giardini and Frese, 2007). We argue in the subsequent sections that AET is also an appropriate theory to explain this phenomenon.

![Figure 1. Affective Events Theory](image)

Perceived Site Quality as Web Features

Poor web site quality has been identified as the culprit of unfavorable attitude toward a Website (Doll and Torkzadeh, 1988). The concept of perceived site quality can be traced from the previous research on quality of online systems, given that a website is a type of online system. There were at least four different streams of research on the quality of online systems: (1) referring to web site quality as information quality, system quality, and service quality (Delone and McLean, 1992; Moon and Kim, 2001; Liu and Arnett, 2000); (2) focusing on the functionality and content quality (Bauer and Scharl, 2000; Johnson and Misic, 1999); (3) highlighting the service quality as the most important aspect of web site quality (Cai and Jun, 2003; Santos, 2003; Webb and Webb, 2004); and (4) emphasizing the user perception of site quality (McKnight, Choudhury and Kacmar, 2002; Ethier, Hadaya, Talbot and Cadieux, 2006). Among these different research streams, the last one is related to the concept of perceived site quality that is addressed in current study. In current study, perceived site quality is operationalized as web features.

Online Incidents Compared to Work Events

Waiting time, service failure, and recovery efforts have been prevalent in traditional service setting due to the nature of encounter in service consumption. Likewise, current literature also suggested that incidents also happen in the online environment; however, previous studies don’t always make clear distinction between them. These incidents can be categorized into three types: online waiting, online interruption, and online service failure, based on the level of negative effects that users have experienced (Dellaert and Kahn, 1999; Nah, 2004; Rose, Meuter and Curran, 2005; Rose and Straub, 2001; Ryan and Valverde, 2006; Weinberg, 2000). Second, online interruptions refer to predatory pop-up offering, online...
customer survey, plug-in installation, and other undesirable unexpected events associated with the use of e-service (Ryan and Valverde, 2005). Finally, service failure refers to a more serious group of incidents which might include a situation where customer is totally denied from using a service, web site doesn’t fulfill a transaction, or customer loses opportunity to do business. The latter has been happening in the financial e-service where time is critical, for instance, an online brokerage site fails to fulfill the transaction.

**Affective Reactions**

Affect is often regarded as two-dimensional concept and it has a “circumplex” structure (Russell, 1980; Watson and Tellegen, 1985). Other studies on affect, however, question the composition of the two dimensions. Watson and Tellegen (1985) proposed a second perspective by rotating the axes of the pleasantness/activation space by 45 degree to form another two-dimensional affect, namely, positive affect (PA) and negative affect (NA). This perspective has been attested and validated by numerous studies in consumer behavior (e.g., Mano and Oliver, 1993; Mooradian and Oliver, 1997). Given the results of these studies suggested that an individual can experience both positive affect and negative affect simultaneously due to the complexity of human emotion, we adopt this perspective.

Affect can be a state that accumulated over time. Affective states are formulated by the appraisal of work events accumulated during a period of time (e.g., Weiss and Cropanzano, 1996; Fisher, 2002). This means that the affective states in AET are the emotion at work that is directed at certain pleasant and unpleasant events in the work place. Similarly, in the context of online service the affective reactions resulted from the cognitive appraisal of the way the e-service site is handled, or more precisely the way that the incidents in on the site are resolved. This state contributes to the level of satisfaction to e-services. Nevertheless, both affect states and cognitive judgment determine the user satisfaction. Previous studies have attested this argumentation (Weiss and Cropanzano, 1996; Loewenstein, Weber and Hsee, 2001; Bagozzi, 1982; Loewenstein et al., 2001). For instance, the affective events theory in organizational behavior, the risk-as-feelings hypothesis in psychology (Loewenstein, Weber and Hsee, 2001) and Bagozzi’s extended volitional model in marketing (1982). These theories posit that cognitive evaluation and affective experience act in concert to determine specific behaviors.

**Satisfaction**

Investigators of customer satisfaction fall into two groups, those who believe that satisfaction and dissatisfaction are different constructs (e.g., Maddox, 1981) and those who believe that satisfaction is a single construct representing the overall cognitive/affective response to product/service usage (e.g., Mooradian and Oliver, 1997; Oliver, 1997). The practices of previous research in customer retention treated satisfaction as a one-dimensional construct (Bhattacherjee, 2001; Khalifa and Liu, 2003; Mooradian and Oliver, 1997; Oliver, 1997; Westbrook, 1987). Therefore, we also use satisfaction as a one-dimensional construct in this study.

**Post-adoption Behaviors**

Word-of-mouth communication (i.e., complaint and recommendation) in today’s online service environment has become even more important than in the traditional service setting. Complaint and recommendation are affect-driven behaviors. Affective events theory (AET) posits that affective reactions in the workplace determine affect-driven behaviors (Weiss and Cropanzano, 1996). In AET, positive affect fostered helping behavior by coworkers. Recommendation behavior is similar to helping behavior in that both produce selfless acts in which individuals assist others. Thus it can be reasonably argued that recommendation is also determined by positive affect. Similarly, complaint was found to be related to negative affect (Bougie et al., 2003).

**PROPOSED MODEL AND HYPOTHESES**

In this section we list all the hypotheses in our proposed model that is depicted in the figure 2.
ECT suggested that satisfaction is a major determinant of continuance intentions (Bhattacherjee, 2001; McKinney, Yoon and Zahedi, 2002; Oliver, 1994). On-line service customers’ satisfaction with e-service use was a significant predictor of their continuance intention (Bhattacherjee, 2001). Thus, we hypothesize that:

**H1:** Customer satisfaction with e-service use is positively associated with their intention to continue to use the e-service.

Customer loyalty literature has focused on how satisfaction affects continuance, recommendation, and complaint behaviors (Bougie et al., 2003; Mooradian and Oliver, 1997; Richins, 1982; Blodgett, Wakefield and Barnes, 1995; Bearden and Teel, 1983). However, researchers rarely include all three aspects of post-adoption behaviors in a single model. According to previous literature (Bougie et al., 2003; Mooradian and Oliver, 1997; Richins, 1982, 1983; Singh, 1988; Mooradian and Oliver, 1997), we hypothesize that:

**H2:** Customer satisfaction with e-service is negatively associated with the complaint intention.

**H3:** Customer satisfaction with e-service is positively associated with the recommendation intention.

Based on consumer behavior literature (Mano and Oliver, 1993; Mooradian and Oliver, 1997; Oliver, 1993; Phillips and Baumgartner, 2002; Westbrook, 1987) and psychology literature (Mano and Oliver, 1997; Zajacek, 1980; Bagozzi, 1982; Phillips and Baumgartner, 2002; Westbrook, 1987), we hypothesize that:

**H4a:** Customers’ level of positive affective reaction to e-service is positively associated with their satisfaction with e-service use.

**H4b:** Customers’ level of negative affective reaction to e-service is negatively associated with their satisfaction with e-service use.

Roseman’s appraisal theory of emotion (1984) is consistent with the hypothesis of AET in suggesting that people encountering a situational state (event) that can be either motive-consistent or motive-inconsistent will experience certain emotional states (positive emotion and negative emotion, respectively). Previous research on affect in the consumer behavior literature also recognized the dual experience of negative and positive affect in consumption (Mano and Oliver, 1993, Mooradian and Oliver, 1997; Oliver, 1997). Therefore, cognitive appraisal of incidents handling determine both positive and negative affective reactions.
H5a: Cognitive appraisal of incidents handling is positively associated with the level of positive affective reaction to e-service use.

H5b: Cognitive appraisal of incidents handling is negatively associated with the level of negative affective reaction to e-service use.

According to AET, affective experiences in the workplace determine the affect driven behaviors, like helping behavior (influenced by positive affect) or job-incompatible behaviors (influenced by negative affect) (Weiss and Cropanzano, 1996). Complaint behavior and recommendation behaviors are both affect driven. A positive affective reaction in an e-service setting might also relate to recommendation behavior. Similarly, a negative affective reaction in an e-service setting might also relate to complaint behavior (Mooradian and Oliver, 1997; Chebat, Davidow and Codjovi, 2005, 2005; Singh, 1988; Chea and Luo, 2008). The relationship between positive affect and recommendation behavior was also supported by previous studies (Mooradian and Oliver, 1997; Chea and Luo, 2008). Therefore:

H6a: Customers’ level of positive affective reaction is positively associated with their e-service recommendation intention.

H6b: Customers’ level of negative affective reaction is positively associated with their e-service complaint intention.

The stimulus-organism-response (S-O-R) paradigm and consumer literature suggested that store atmospheric quality works as stimuli on customer affect was confirmed (Bitner, 1992). Researchers adopted the S-O-R paradigm in a web environment (Eroglu, Machleit and Davis, 2001; Ethier et al., 2006) and suggested that elements of a site, such as color, background patterns, typestyles, shopping recommendation agents, and online communities, could act as stimuli affecting cognitive appraisal of emotional states of online customer. Specifically, Ethier et al. (2006) found that web site quality affect customer cognitive appraisal of situational state during online shopping episode. Hence, we hypothesize that:

H7: The perceived site quality is positively associated with customer cognitive appraisal of incidents handling.

Separating cognitive antecedents from emotional antecedents of satisfaction is both valuable and necessary for modeling consumer behavior in a service setting (Westbrook, 1987; Mano and Oliver, 1993; Oliver, 1997; Wirtz et al., 2000; Smith and Bolton, 2002). Perceived site quality is customer post-adoption belief about the level of quality of e-service web site. It includes both hedonic and utilitarian beliefs about the web site. The relationship between post-adoption cognitive evaluation and satisfaction (Bhattarcherjee, 2001) was attested, so did the relationship between post-adoption cognitive evaluation and customer continuance intention (Bhattarcherjee, 2001; Chea and Luo, 2008) found that perceived usefulness affected customer satisfaction. Perceived site quality and perceived usefulness are both post-adoption beliefs about the performance of a web site. If perceived usefulness is related to satisfaction and customer continuance intention, it is reasonable that perceived web site quality is also related to satisfaction and customer continuance intention.

H8: The perceived site quality is positively associated with customer satisfaction.

H9: The perceived site quality is positively associated with customer continuance intention.

METHOD
Measurement

Table 1 presents the definitions of constructs and measurements adapted in our proposal model. Major constructs use measurements developed and validated in previous studies. The choices of these measures are based on known reliability and validity in previous studies.
Table 1. Measurements of the Model

<table>
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<tr>
<th>Constructs</th>
<th>Definition</th>
<th>Measurements</th>
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<tbody>
<tr>
<td>Negative Affect</td>
<td>Customer’s subjective distress toward the site which subsumes a broad range of aversive mood states, including distressed, nervous, afraid, angry, guilty, and scornful.</td>
<td>20-item PANAS Scales (Watson, Clark and Tellegen, 1988) including 10 items for PA and 10 items for NA.</td>
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<tr>
<td>Positive Affect</td>
<td>Customer's level of pleasurable experience with the online service. High PA is composed of terms reflecting enthusiasm (e.g., excited, enthusiastic), energy (e.g., active, energetic), mental alertness (e.g., alert, attentive), and determination (e.g., strong, determined).</td>
<td>5-item perceived site quality adapted from McKnight et al. 2002</td>
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<tr>
<td>Perceived Site Quality</td>
<td>Perception toward the quality of the site attributes.</td>
<td>3-item adapted from Roseman et al. (1996)</td>
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<td>Cognitive appraisal of incidents handling</td>
<td>Customer’s cognitive evaluation of how well the web incidents were handled by the service provider.</td>
<td>6-item satisfaction scale adapted from Oliver (1997)</td>
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<td>Satisfaction</td>
<td>The consumer’s fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over fulfillment (Oliver, 1997, pp. 13).</td>
<td>6-item scale (Bhattacherjee, 2001)</td>
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<td>Continuance intention</td>
<td>Customer’s intention to continue using the online service.</td>
<td>4-item scale (Bhattacherjee, 2001)</td>
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<td>Recommendation</td>
<td>Customer’s intention to spread positive word-of-mouth.</td>
<td>3-item scale (Bougie, Pieters and Zeelenberg, 2003)</td>
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<td>Complaint</td>
<td>Customer’s intention to engage in negative word-of-mouth includes intention to complain to the service provider and to a third-party.</td>
<td>6-item scale (Bougie, Pieters and Zeelenberg, 2003)</td>
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Procedures

A focus group composed of 6 undergraduate students and 3 Ph.D. students were consulted. The purpose of the focus group study was to elicit their opinion about the incidents handling in e-service, and how these handleings affect their emotional reaction. The study employed an on-line survey. Data were collected from a sample of undergraduate students in four sections of an introductory statistics class in the college of business administration of a U.S. university. Totally there were 126 participants in the study. The e-service reported includes online banking, online course management, online video sharing, social networking sites, online gaming, online music and other e-services such as portal site and online news.

Participants were asked to think of the time(s) in the past three months that they have encountered critical incidents on their online service web sites including the incidents that delayed, interrupted, or prohibited them from getting the service from the site. They then were asked to rate the three items of cognitive appraisal of incident handling that starts with a statement in bold ‘Although there were some incidents when using my online service in the past three months’. The three
items include: 1) They were a good example of what is expected when using online service; 2) The site still gave me opportunities to accomplish the tasks required; 3) Overall, the service level provided by my online service provider was better than expected.

RESULTS AND DISCUSSION

Many studies in PLS determine the required sample size by applying the regression heuristic of “ten times” rule. However, a recent study challenged the “ten times” rule and suggested that Cohen’s power analysis for regression was a better way to determine the sample size of a PLS study (Cohen, 1988). Cohen’s table (pp. 448–455) suggests that the sample size required for a multiple regression with four predicting variables with a power of 0.80 (at alpha = 0.05) to detect a medium effect size is 84 (Cohen, 1988). Thus, the sample size of 126 in the present study is sufficient for structural equation modeling with PLS according to both Cohen’s power and the “ten times” rule. Note that Cohen also argued that most studies in behavioral science aim at detecting the medium effect size (Cohen, 1988), as is also the case for the present study. We also use SAS/STAT 9.0 to calculate the power of multiple regression with three independent variables with power of 0.90 and medium effect size and alpha of 0.05, the sample size required is 81.

Construct Reliability and Validity

Table 2 reports the ICR, square root of AVE (diagonal elements), and inter-construct correlations. Construct reliability is acceptable in PLS when the internal composite reliability (ICR) of each construct is above 0.70 (Thomson, Barclay and Higgins, 1995; Chin, 1998) and the AVE for each construct is above 0.50. ICR is analogous to the Cronbach’s alpha, which is a measure of construct reliability. From table 2, the ICR of all the constructs was larger than acceptable level of 0.70. This was consistent with the reliability levels reported by previous studies that used the constructs. Furthermore, the AVE values of all the constructs were above 0.50. Thus, construct reliability was achieved. The loadings of questionnaire items from the sample of 126 subjects range from .61-.91 with p value smaller than .001. All the items loaded on their assigned constructs with relatively smaller cross-loadings; both criteria of construct validity were achieved (Gefen et al., 2000; Nunnally, 1967; Stevens, 1986).

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Table 2. Correlation of Constructs, AVE, and ICR

Notes: ICR = Internal Composite Reliability; diagonal elements (in bold) are the square root of average variance extracted (AVE); off–diagonal elements are correlations between latent constructs.

Structural Model

A bootstrapping technique (200 iterations) was used to obtain the corresponding t-value for each hypothesized path coefficient. All the proposed relationships were significant at p < 0.05 (Figure 3).
LIMITATIONS AND IMPLICATIONS

It is necessary to point out that the study has certain limitations. Since it uses a cross-sectional survey method of data collection, the results presented here comprise a snapshot of the post-adoption behaviors of e-service users, neglecting possible time-lag effects of affective response. Also, most of the e-services reported were business-to-customer e-services. The results might not be applicable to other forms of e-services, such as customer-to-customer and business-to-business. Finally, some degree of caution is required because the study is “recall” based some covariates/factors may have affected the results.

This study has several implications for e-service customer retention practice. First, keeping the web site quality up to or better than industry standard in e-services is an important aspect to keep customer satisfied. Second, satisfied customers not only intend to continue the patronage of e-service but also help spread positive word-of-mouth and intend to complaint less to friends and third-party. Finally, practitioners need to take customers’ affect into account when engineering e-service offering. The goal is to maximize customer positive emotional experience and minimize their negative emotional experience through better handling of web incidents to make the e-service meets customers’ expectation to ensure their satisfaction with e-service use. Special attention needs to be paid to the negative customer affect. Thus, recovery efforts from incidents on the web site need to be immediate and right at the first trial to avoid carryover effect of negative affect.

REFERENCES


