THE EFFECTS OF SATISFACTION AND CONSUMPTION EMOTION ON ACTUAL PURCHASING BEHAVIOR: AN EXPLORATORY STUDY

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ABSTRACT

Studying the role that consumption emotion plays in influencing post-consumption behavior is a key to improving our understanding of the satisfaction framework. Though satisfaction research has started examining the role of affective influences, most studies view emotion merely as an antecedent to satisfaction. This study models satisfaction as a consumption emotion and hypothesizes those consumption emotions such as happiness, anger and sadness will have significant effects on both behavioral intentions and actual behavior, over and above the effects of satisfaction. This exploratory study uses data from real customers making actual purchase decisions to verify the hypothesis. Implications for satisfaction research are discussed.

INTRODUCTION

While early research on customer satisfaction concentrated on the role of cognitive influences, more recent investigations have begun looking at what role consumption emotions play in the traditional satisfaction/ dissatisfaction framework, and how consumption emotions and satisfaction might combine to influence post purchase behaviors. The growing importance of the study of emotions in this field is reflected in Woodruff's (1993) call to make the study of emotions, as it relates to CS/D&CB, a research priority. This was further highlighted by Hunt's (1993) remarks that "CS/D&CB are emotion driven, not cognition driven" and that "emotion is the critical element in CS/D&CB."

Satisfaction and Emotion

In keeping with the exploratory nature of this study, the following literature review will be limited to a few key articles. Westbrook (1987) showed that positive and negative affect were significant predictors of satisfaction over and above the traditional expectancy disconfirmation evaluations. This antecedent role of positive and negative affect was also to be found in Oliver's (1989, 1993) models of satisfaction. Empirical evidence for the influence of affect on satisfaction also comes from Dube-Rioux (1990) and Evrard and Aurier (1994). Westbrook and Oliver (1991) argued that the common uni-dimensional satisfaction continuum coexisted with many affective experiences that influenced the judgment of satisfaction.

However, there is growing evidence that indicates that satisfaction is itself a consumption emotion, not merely a consequence of other consumption emotions. The conceptualization of satisfaction as an emotion is not new. Day (1983, p. 113) defined satisfaction as an 'emotional response manifested in feelings' while Sirgy (1984) viewed satisfaction as an emotional state resulting from the combination of cognitive evaluations. Hunt (1977, 1991) has consistently argued that consumer satisfaction is emotion and not cognition.

Various dimensional models of emotion such as the PAD model by Mehrabian and Russell (1974), the circumplex models by Russell (1980), and Watson and Tellegen (1985) include 'satisfied' as an emotional word right next to words such as 'pleased' and 'happy'. Shaver et. al. (1987) included satisfaction as a subordinate of the joy category. Bagozzi (1992) modeled satisfaction and dissatisfaction along with anger, sadness, joy, fear etc., as emotional reactions to the consumers' appraisal processes. Hausknecht (1990) in reviewing the various scales used to measure satisfaction found that satisfaction has often been measured using scales based on emotion words such as 'pleased', 'delighted' and 'contented'. Nyer (1997 a, b) found that satisfaction and happiness were too highly correlated to enjoy discriminant validity. Similarly, Babin et. al. (1994) found that satisfaction and positive affect were best modeled as one construct. All of these point to the possibility of satisfaction being an emotion. Customer satisfaction's relevance to both academicians and practitioners is because of its ability to influence post-consumption behaviors such as repurchase, W.O.M., complaining behavior and retention/ brand loyalty (see Yi 1991 for a review of some early work in this field). If satisfaction is a consumption emotion, then given

that satisfaction has significant effects on various post-consumption behaviors, do other consumption emotions such as anger and sadness also have significant influences on the post-consumption behaviors? More specifically, do these other emotions have any effects on post-consumption behaviors over and above the influence of satisfaction?

Nyer (1997 a, b) found that emotions such as anger, sadness and shame significantly contributed to the prediction of W.O.M. intentions and usage intentions, over and above the predictive ability of satisfaction. However these studies involved laboratory experiments conducted on student volunteers and therefore their external validity can be questioned. Moreover, the post-consumption *behaviors* studied were W.O.M. *intentions* and usage *intentions* - not actual behaviors. Since emotions are short-lived affective reactions, will the influence of consumption emotions such as happiness, anger and sadness be limited to intentions measured concurrently with the emotions, or will their effects last long enough to influence actual behaviors that occur many days later? Readers should bear in mind that it is very likely that many factors such as the involvement and experience of the consumers will influence the impact that different emotions have on various behaviors. This study attempts to take a step towards a better understanding of the role of emotion on behavior by studying the impact of a few emotions on purchasing behavior in the context of one product category. Similar studies done across many product categories, and using many different emotional constructs will be necessary to better understand the effects of emotions on behavior.

Based on previous empirical findings (Nyer 1997 a, b), it is hypothesized that:

> *Consumption emotions such as happiness, anger and sadness will have significant effects on post-consumption behaviors (both behavioral intentions and actual behaviors) over and above the effects of satisfaction on these behaviors.*

METHOD

Subjects were 156 adults who took advantage of a two week long promotional offer for a free one-day trial membership at a newly opened independently managed fitness center. The promotion was offered by the fitness center in an effort to increase awareness and trial. Subjects were given the questionnaire when they checked in for their one-day trial membership, and were instructed to complete the questionnaire at the conclusion of their visit to the fitness center. Completed questionnaires also served as entry forms for a drawing for two free annual memberships. After a period of three months the list of new members was examined to determine how many of the 154 participants had actually enrolled for membership (the two subjects who won the lottery for the free annual memberships were eliminated from the study).

Measures

Of the many variables included in the questionnaire, the ones relevant to this paper are the measures of satisfaction, happiness, anger, sadness and intention to enroll for membership. Subjects were instructed to mentally review their experience at the fitness center. They were then asked to indicate the extent to which they had experienced satisfaction, happiness, anger and sadness, each of which was assessed with three 7 point unipolar measures ranging from 'not at all' to 'very much'. The number of scales on the questionnaire had to be limited to ensure high response rates. Further, given the small sample size, the number of free parameters had to be restricted to ensure reasonably accurate parameter estimation. Consequently the number of emotions (apart from satisfaction) that could be included in this exploratory study was limited to three. Happiness, anger and sadness were chosen since they were distinct and commonly experienced consumption emotions.

The measures used were 'satisfied', 'dissatisfied' and 'contented' (satisfaction); 'happy, 'joyful' and 'pleased' (happiness); 'angry', 'irritated' and 'frustrated' (anger); 'sad', 'sorrowful' and 'miserable' (sadness). The measures for the consumption emotions were based on previous studies on measures of emotions (Holbrook and Batra 1987, Plutchik 1980, Richins 1997, Russell 1980 and Shaver et. al. 1987). The

'dissatisfied' scale was reverse coded before analysis. Intention to enroll was assessed using two measures. The question 'How likely are you to sign up for membership in the next few weeks?' had a 7 point response scale ranging from 'not at all likely' to 'very likely'. The question 'Do you intend to become a member soon?' required responses on a 7 point scale ranging from 'not at all' to 'very much'. Finally, actual membership enrollment behavior was measured on a dichotomous (0, 1) scale by determining if the subject had signed up for membership in the three months following the trial. Among the 38 subjects who became members (24.7% of the sample), most did so within two weeks of the trial, and none signed up for membership after 45 days. The analyses reported in the following section are based on data collected from all 154 subjects.

Analysis

The measures used in this study are ordinal and furthermore the measure of actual behavior is dichotomous. While it is usual practice to treat data measured on 5 and 7 point scales as being continuous, Joreskog and Sorbom (1996) insist that such data (including dichotomous variables) are best studied using a polychoric correlation matrix and an asymptotic covariance weight matrix. According to them, these matrices should then be analyzed with the generally weighted least-squares (WLS) option in LISREL8 rather than with the more traditional maximum likelihood (ML) estimation of the Pearson correlation matrix/ covariance matrix. However the accurate calculation of asymptotic covariance matrices require larger sample sizes than were available for this study. Consequently, all the analyses in this article were conducted using both the WLS and the ML options as outlined above and the results were found to be roughly similar. While both sets of results are presented in this article, in the interest of saving space only the correlation matrix is presented in Table 1.

Results

A confirmatory factor analysis was conducted on the measures of satisfaction, happiness, anger and sadness. Table 2 represents the correlations between the various latent variables from the Φ matrix in the confirmatory factor analysis (CFA). The latent variables satisfaction and happiness were too highly correlated ($r = 0.99$, standard error $= 0.02$) to exhibit discriminant validity. To formally test the hypothesis that the correlation between satisfaction and happiness is 1.0 (i.e. to test the hypothesis that they form one factor), a second CFA was conducted. This time the correlation between the two latent variables satisfaction and happiness was fixed at 1.0. Since this restricted model is nested within the previous model, a χ^2 difference test can be performed to test if the imposition of the restriction has significantly reduced the model fit (see Bollen 1989 or Hayduk 1987 for more details on the testing of nested structural equation models). The fit statistics for the full and restricted CFA models are presented in table 3. The χ^2 difference test clearly indicates that the restricted model is not significantly inferior to the full model ($p > 0.50$). In other words, fixing the correlation between satisfaction and happiness to 1 has not adversely affected the fit of the model. Thus the hypothesis that satisfaction and happiness are perfectly correlated cannot be rejected. This finding is similar to those of Nyer (1997 a, b), providing further support for the claim that satisfaction is an emotion, and perhaps a variation of joy/ happiness. Consequently, the measures of happiness and satisfaction were combined to form a new latent variable called 'Hap-Sat'. The analyses reported in this paper were also performed using the satisfaction construct (the happiness measures were excluded) and the results were very similar to what was obtained with the 'Hap-Sat' construct. In the interest of brevity, only the latter results have been reported here.

The structural equation model presented in Figure 1 was estimated. All factor loadings exceeded 0.70 and the composite reliability for the three emotional constructs were: hap-sat 0.91, anger 0.83, and sadness 0.81. The direct effect of sadness on actual enrollment was not significant in either the WLS or the ML estimation and therefore that path was dropped. Figure 1 includes both the WLS and the ML parameter. χ^2 statistics and other fit measures for this model (the full model) are provided in Table 4 and they indicate that the model in Figure 1 is an excellent representation of

Table 1
Pearson Correlation Matrix

Int1	Int2	Join	Hap1	Hap2	Hap3	Sat1	Sat2	Sat3	Ang1	Ang2	Ang3	Sad1	Sad2	Sad3
1.00														
0.61	1.00													
0.25	0.23	1.00												
0.22	0.21	0.25	1.00											
0.24	0.23	0.16	0.61	1.00										
0.33	0.24	0.18	0.65	0.67	1.00									
0.23	0.30	0.25	0.62	0.60	0.61	1.00								
0.20	0.19	0.32	0.67	0.56	0.67	0.64	1.00							
0.30	0.24	0.27	0.63	0.67	0.71	0.64	0.65	1.00						
-0.20	-0.24	-0.25	-0.25	-0.19	-0.23	-0.26	-0.19	-0.21	1.00					
-0.26	-0.19	-0.31	-0.18	-0.13	-0.21	-0.25	-0.29	-0.20	0.62	1.00				
-0.22	-0.18	-0.20	-0.22	-0.16	-0.20	-0.23	-0.16	-0.15	0.66	0.61	1.00			
-0.13	-0.10	-0.15	-0.16	-0.08	-0.07	-0.19	-0.15	-0.05	0.11	0.14	0.17	1.00		
-0.14	-0.12	-0.07	-0.10	-0.10	-0.10	-0.19	-0.07	-0.10	0.05	0.07	0.14	0.62	1.00	
-0.04	-0.05	-0.09	-0.04	-0.06	-0.05	-0.07	-0.06	-0.06	0.07	0.20	0.15	0.58	0.56	1.00

N = 154. The polychoric correlation matrix and the asymptotic covariance matrix can be obtained from the author.

Table 2
Correlation Matrix of the Latent Variables from Confirmatory Factor Analysis

	Happiness	Satisfaction	Anger	Sadness
Happiness	1.00			
Satisfaction	0.99 (0.02)	1.00		
Anger	-0.43 (0.07)	-0.45 (0.06)	1.00	
Sadness	-0.18 (0.08)	-0.17 (0.08)	0.18 (0.07)	1.00

N = 154. Data is from the WLS analysis. Data from ML estimation is similar. Numbers within parentheses represent the standard errors.

Table 3
Fit Statistics for the Full and Restricted Confirmatory Factor Analysis Models

	WLS Estimates		ML Estimates	
	Full Model	Restricted Model	Full Model	Restricted Model
χ^2, d.f.	52.79, 48	53.02, 49	51.67, 48	51.72, 49
$\Delta\chi^2$, Δd.f.	0.23, 1 ($p > 0.50$)		0.05, 1 ($p > 0.70$)	

the data. Since it was hypothesized that consumption emotions such as anger and sadness would be significant predictors of behavior over and above the effects of satisfaction, it is necessary to compare the full model in Figure 1 with a more restricted model in which the paths from anger and sadness to intention and actual behavior are fixed at zero. In other words, this restricted model would imply that anger and sadness have no effects on enrollment intention or actual enrollment behavior once the effect of satisfaction (and in this case the joint happiness-satisfaction construct) has been accounted for. Since the restricted model is nested within the full model, it is possible to conduct a χ^2 difference test to examine whether fixing certain parameter values to zero has significantly reduced the model fit. The χ^2 statistics for both the full and the restricted model are presented in table 4 along with the results of the χ^2 difference test. This test of the nested models indicates that the restricted model is significantly inferior to the full model ($p < 0.01$).

Figure 1
Standardized Solution of the Full Model

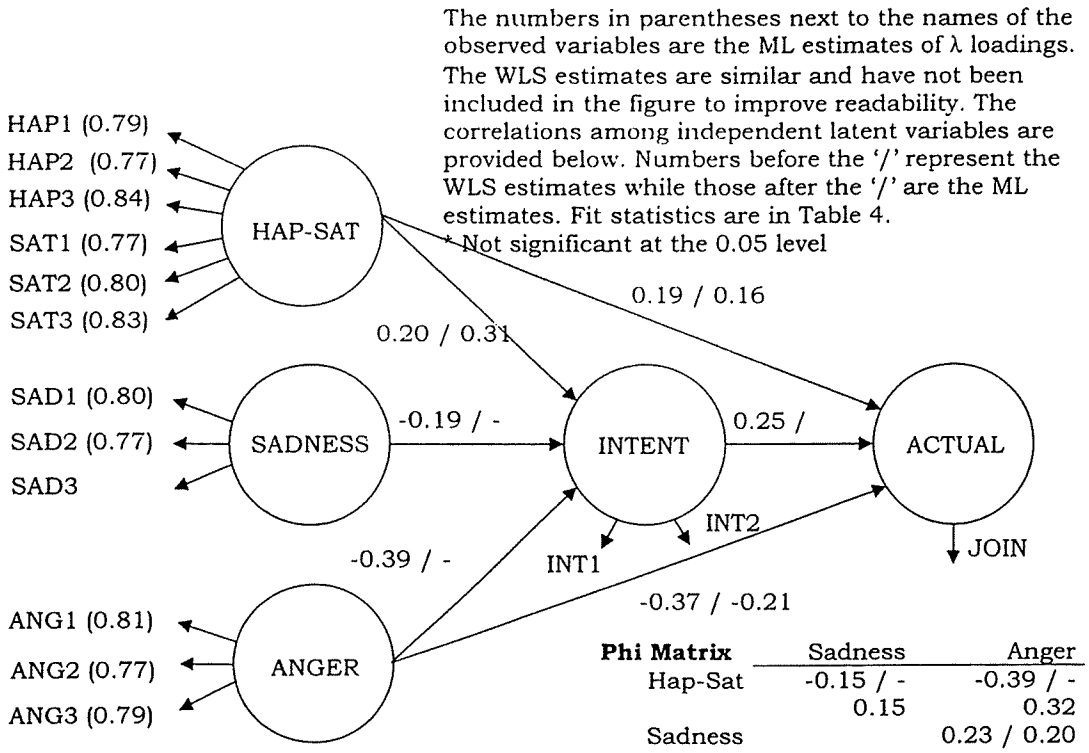

Table 4
Fit Statistics for the Full and Restricted Models

	WLS Estimates		ML Estimates	
	Full Model	Restricted Model	Full Model	Restricted Model
χ^2, df, p	97.94, 82, 0.11	130.72, 85, 0.00	82.51, 82, 0.44	94.78, 85, 0.22
GFI, AGFI	0.98, 0.98	0.98, 0.96	0.93, 0.90	0.92, 0.89
RMSR	0.06	0.09	0.04	0.06
R^2 Intent	0.33	0.30	0.21	0.16
R^2 Actual	0.42	0.35	0.17	0.13
$\Delta\chi^2$, Δd.f.	32.78, 3 ($p < 0.01$)		12.27, 3 ($p < 0.01$)	

DISCUSSION

The analysis clearly demonstrates that the full model, which includes the effects of anger, sadness and Hap-Sat (the combined happiness-satisfaction construct) on behavior intentions and actual behavior, is significantly superior to the more restricted model, which only includes the effects of Hap-Sat on the dependent variables. This finding provides further support to the claim that post-consumption behaviors such as W. O. M., complaining behavior and repurchase should be modeled by using a broad range of emotional measures, and not just satisfaction.

Satisfaction is only one of the many different emotions that consumers experience and there is ample evidence to believe that different emotions have different effects on behaviors. For example

Lazarus (1991) provides a detailed set of action tendencies that accompany many emotions, and these action tendencies tend to be different across emotions. Thus rather than use satisfaction as an only measure of post-consumption affective reaction, researchers should use a broader range of emotional measures. However, the list of emotions that consumers experience include not only satisfaction, happiness, anger and sadness, but also fear, guilt, shame, pride, gratitude and hope among others. Does this mean that academicians and practitioners should measure all these emotions when studying post-consumption affective reactions? Clearly, not all emotions are experienced in all consumption situations. Some emotions are more common than others (Richins 1997). In the interest of parsimony, the number of emotions measured should be limited to those that are most common in a given context and to those that have the most influence on a specific behavior, such as word-of-mouth, repurchase or brand loyalty. Thus a very fruitful line of future research would be to investigate the relative influence of various emotions on the many post-consumption behaviors.

Nyer (1997 a, b) used a laboratory experiment to show that emotions had a significant effect (over and above the effect of satisfaction) on W.O.M. intentions and repurchase intentions. The present study extends Nyer's findings by showing that emotions exert their influence not only on behavioral intentions but also on actual behaviors that take place many days after the emotions are experienced. Furthermore, these findings are based on actual purchase decisions made by real consumers. However, the analysis reported in this paper is based on data from 116 'non-buyers' and a mere 38 'buyers', and as such the findings should be viewed as exploratory work. Further research using larger samples would be needed to validate these results.

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