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# The Relationship Between Personality Traits (Extraversion and Neuroticism), Emotions and Customer Self-Satisfaction

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## Abstract

In this study we enlarge in three ways the concept of customer satisfaction in the context of services which are characterized by a high extent of customer participation: first we consider that customer satisfaction in settings with high customer participation is strongly influenced by the customer's satisfaction with the own performance (self-satisfaction); second we integrate affective antecedents that impact the formation of customer self-satisfaction. And third, the affective response to a consumption situation and the evaluation of the own performance are determined by individual, personality-related predispositions of customers. The authors present the results of a study with participants of the Transalp Crossing, which is a mountain bike tour crossing the Alps on marked routes. This is a consumption situation where the co-production factor of participants is very high, i.e. customers use the facilities provided by the operator (maps, guides, etc.) but to a very high extent the performance of the service is determined by the customer him- or herself (by biking).

**Key words:** customer self-satisfaction, emotions, personality traits, customer participation.

## Introduction – Customer Participation

Customer participation has been defined as “the degree to which the customer is involved in producing and delivering the service” (Dabholkar 1990, p. 484). Meuter and Bitner (1998) extended this view and identify three different types of customer participation: *firm production*, where the product is produced entirely by the firm and its employees, *joint production*, which means that the firm and its employees interact with the customer in the production, and finally, *customer production*, which is a situation where the product is produced entirely by the customer with no participation by the firm or its employees (Bendapudi and Leone, 2003). In the case of our study, which has been undertaken in the setting of an organized mountain bike tour, the extent to which customers produce the service themselves is very high and the authors argue that this type of product can be subsumed under the category of joint production with some tendency towards customer production. What distinguishes our type of service from mere customer production is the degree to which the event is organized by tour operators and accompanied by mountain bike guides. The tours are addressed to people who are looking for a special experience and some adventure away from the usual mountain biking routes and who are seeking to ride the Alps with organized small groups. Tour operators offer inn-to-inn tours of easy or epic caliber as well as anything in between and assist in determining the right level by evaluating individual competencies. Interested bikers may choose from 3-day to 12-day tours and opt for partial or complete traverses of the Alps in any of the alpine countries. Depending upon the shelter the package contains transportation from and to the start and finish of tour destination(s), necessary transfers during the course, organization of accommodations, food catering, first aid, route descriptions, maps and preparations as well as professional guides who lead the tour. While these basic conditions are organized by tour operators, the core part of the service to be consumed is undoubtedly created by the customer him- or herself by crossing the Alps with his/her bike. Taking into account the high degree of customer participation in our study we argue that also the concept of customer satisfaction might be conceptualized differently from classic producer-consumer contexts.

## Customer satisfaction

Customer satisfaction has become a central metric in market oriented management (e.g., Fournier and Mick, 1999). Numerous theoretical and empirical studies investigate the

antecedences of customer satisfaction and its behavioural outcomes (for a review see Szymanski and Henard, 2001). In the last years, many researchers have been studying the processes by which delivering high-quality goods and services influences profitability through customer satisfaction (Anderson et al., 1994; Oliver, 1997; Reichheld and Sasser 1990; Rust et al., 1995; Stahl et al., 2003). It is widely agreed that customer satisfaction leads to repurchase intentions, cross selling, reduced price sensitivity and positive word-of-mouth (e.g. Anderson et al., 1994; Zeithaml, 2000). Numerous empirical studies could find a positive relationship between customer satisfaction and profitability (Anderson et al., 1994) and customer satisfaction with sports events and profitability.

The most widely accepted model for explaining the phenomenon of customer satisfaction is the Confirmation-Disconfirmation-Paradigm (Oliver, 1980) which dates back to early job satisfaction studies from Porter (1961). It has been dominating the literature in satisfaction research for more than two decades (Erevelles and Levitt, 1992; Fournier and Mick, 1999; Oliver, 1997). According to this paradigm consumers are satisfied when perceived performance meets or exceeds expectations. For services customer satisfaction is considered to be mainly dependent on service quality, which derives from various performance factors. In case of services with a high degree of customer participation, like in the present study, the satisfaction perceived with the entire service (and therefore also the post-purchase behaviour) might be strongly dependent on the satisfaction with the own performance. This issue, to our knowledge, has not been treated in literature so far, as most studies in customer satisfaction focus on the performance measurement of various attributes which then, in a second step, are regressed on overall satisfaction in the form of aggregated factors. This procedure lacks an evaluation of the customer's own contribution to the whole consumption process and, as mentioned above, for the type of active participation in a sporting event this contribution is very high. Therefore, within this study, we regard it as particularly insightful to centre exclusively on customers' evaluation of the own performance; we conceptualize satisfaction as the satisfaction with the own performance and re-name it self-satisfaction.

A further critical point of the traditional confirmation-disconfirmation-measurement in customer satisfaction is the strong reliance on cognitive evaluation processes. The comparison of pre-purchase expectations and post-consumptive quality appraisals requires an active information processing and ignores affective responses to consumption experiences (Oliver, 1993). Indeed, apart from a few contributions (e.g. Mano and Oliver, 1993; Mooradian and Olver, 1997; Westbrook and Oliver, 1991), emotional and personality-related antecedents in customer satisfaction research have been neglected. Although some recent contributions in the marketing literature take into consideration personality traits and emotions, their relevance and impact on customer satisfaction, especially in service settings, are yet only little understood (Tan et al., 2004).

We therefore provide a short literature review on the research undertaken on emotions and personality traits in customer satisfaction research in general and especially in the service context.

## **Emotions and Satisfaction**

Westbrook (1987) is credited to be the first who introduced the issue of emotions in explaining customer satisfaction. In his study he was able to confirm the emergence of the two basic dimensions of positive and negative affect, that contributed significantly to the explained variance of satisfaction with paid cable TV services. Furthermore, he found that feelings relate directly to product satisfaction judgments, complaining behavior and of word-of-mouth in the post-purchase period.

Later, Westbrook and Oliver (1991) showed that a more complex structure of consumption-based emotions might exist and proposed a structure consisting of 5 different clusters, composed of the basic emotions, suggested by Izard (1977). In both these studies the Differential Emotion Scale (DES) of Izard (1977) was used as measurement instrument, which comprises the following emotions: interest, joy, surprise, sadness, anger, disgust, contempt, fear, shame and guilt, and thus emphasises discrete emotions. The authors found dimensions of hostility, pleasant surprise and interest to be significantly related to various satisfaction measures in a regression model, indicating statistically independent effects.

Mano and Oliver (1993) applied a more comprehensive scale for measuring emotions, in combining the PANAS-scales (Watson et al., 1988) and Russell's circumplex model (Russell,

1980). In their model satisfaction is “... a complex human response with both cognitive and affective components” (p. 465).

Oliver (1993) investigated the joint operation of product influences and emotion on satisfaction. In his study, attribute satisfaction was measured and related to Izard’s DES scale (Izard, 1977) and it was shown that attribute satisfaction and dissatisfaction were drivers of positive and negative affect and that overall satisfaction was a function of attribute satisfaction and affect. Further studies in service environments corroborate the separate influences of positive and negative affect on satisfaction. Evrard and Aurier (1994) find parallel positive and negative affects on the satisfaction of French movie patrons. Price et al. (1995), in their study about river rafting trips in the Colorado River Basin, found a strong relationship between performance and affective responses which contribute directly and significantly to customer satisfaction. However, they did not find a significant path between performance and satisfaction, concluding that the effect of performance on satisfaction is fully mediated through positive affective response.

Further studies investigating the relationship between affects and satisfaction in the service context had been carried out by Liljander and Strandvik (1996) and Bloemer and de Ruyter (1999). While the formers found especially negative emotion clusters to have impact on satisfaction with labour force agencies, Bloemer and de Ruyter (1999) were able to evidence the effect of positive emotions as enhancer for loyalty in high involvement service settings.

Commonly speaking, a considerable amount of research has been undertaken regarding the structure of emotions and two dominant emotional dimensions of affect have consistently emerged: positive affect (PA) and negative affect (NA) (Watson and Tellegen, 1985). These two dimensions have been shown to be stable across cultures, gender and age groups (DePaoli and Sweeney, 2000) and underlay also most of the emotional dimensions in satisfaction research aforementioned. PA and NA are to be considered as independent, i.e. orthogonal and represent two independent dimensions. According to Watson (1988) “PA reflects the extent to which a person feels enthusiastic, active, and alert” (p. 1063). High PA is a state of high energy, pleasurable engagement and concentration, whereas low PA is expressed by sadness. NA is the dimension for general distress and includes emotions like anger, disgust, guilt and fear, with low NA being the state of calmness and serenity (Watson et al., 1988). The same authors also developed and validated the scales for measuring positive and negative affect in providing the Positive and Negative Affect Schedule (PANAS). It consists of 10 descriptors for positive and negative affect respectively and presents an instrument quiet economically accomplishable.

To summarize, from the existing literature it can be concluded that customer satisfaction is influenced by positive or negative emotions, thus we hypothesize:

*H1: Customer self-satisfaction is a function of positive or negative emotions.*

Emotions have many sources (Oliver, 1997). In this paper we investigate especially one driver of emotions: personality traits.

## **Personality traits and emotion**

The factor structure of personality has been hotly debated without being able to grant consistent results for a long time. As in the early 60s five fundamental traits had been identified (Tupes and Christal, 1992), growing consensus was emerging that these were the fundamental dimensions of personality (McCrae and John, 1992). These five broad factors of higher order constitute the pattern of traits across individuals: Neuroticism, Extraversion, Agreeableness, Openness and Conscientiousness<sup>1</sup>. Numerous researchers from many traditions were able to replicate the findings, thereby sustaining the theory of five basic dimensions of personality. The Big Five taxonomy received considerable evidence over the last decades across different theoretical frameworks, measures, occupations, cultures, and sources of ratings (e.g. De Raad and Doddema-Winsemius, 1999; John and Srivastava, 1999; Liao and Chuang, 2004).

In psychology, a number of studies have aimed at correlating personality traits with affective states (e.g. Larsen and Katelaar, 1991; Rusting and Larsen, 1997). Especially two of the personality traits, namely extraversion and neuroticism, had been linked theoretically and

<sup>1</sup> The five fundamental dimensions are also known as “the Big Five”.

empirically to the fundamental affective states of positive and negative affect respectively. Costa and McCrae (1980) found that the neuroticism trait strongly correlates with negative affect and that extraversion traits correlate strongly with positive affect. As mentioned above, PA and NA provide a basic taxonomy of affect at a higher order level that mirrors the role of the five-factor model in personality (Watson and Clark, 1984). In particular, neuroticism and negative affect have been linked so closely that some researchers proposed to re-label it into negative affectivity (Watson and Clark, 1984).

For the purpose of our study, we outline the factors of extraversion and neuroticism which have been found to correlate strongly with customer satisfaction and post-purchase behaviour in a study on consumers' feelings, attitudes and behaviour toward automobiles (Mooradian and Olver, 1997). High scores on neuroticism represent individual differences in the tendency to experience distress, nervous tension, depression, guilt, low self-esteem, poor control of impulses and somatic complaints. Extraversion is distinguished by venturesomeness, affiliation, positive affectivity, energy, ascendance and ambition. It is necessary to point out, that extraversion (E) and neuroticism (N) are not opposites but rather orthogonal dimensions. So people who are cheerful, enthusiastic and energetic (high scores on E) are not necessarily low in anxiety or depression – that depends on their level on the N-scale (McCrae and John, 1992). Mooradian and Olver's (1997) findings were based on a study with automobile users. Little is known to what extent personality traits are related to emotions in a service setting. This question, however, is of particular interest as due to the dyadic and reciprocal character of a service setting customers can affect service delivery processes and outcomes (e.g. Lovelock and Young, 1979; Normann, 1991). Therefore, it can be proposed that customer characteristics in general and personality traits in particular play a role in the service experience (Tan et al., 2004).

Therefore, we suggest the following hypothesis:

*H2: Negative emotions are significantly influenced by the personality trait of neuroticism, whereas positive emotions are influenced by extraversion.*

## Study

### *Sample*

The empirical investigation has been undertaken at the ending points/ lodges of several mountain biking tours. 417 participants had been interviewed, of which 92% lying between 21 and 60 years. Our sample showed a slight tendency to a more educated sample with 68% having a high school degree or more. The analysis was computed by using structural equation modeling with AMOS 5.0.

### *Measures*

Personality traits were measured by using the German version of the NEO-FFI, originally developed by Costa and McCrae (1992) and translated and validated into the German language by Borkenau and Ostendorf (1993). From the NEO-FFI-questionnaire the subscales capturing extraversion and neuroticism were chosen measuring the items on a five-point Likert scale (from "strong approval" to "strong disapproval").

To measure positive and negative emotions the standardized German version of the 20-items PANAS<sup>1</sup> from Watson and Clark (Watson et al., 1988) was used (Krohne et al., 1996), phrased to measure "How would you describe your feelings you had at this mountain bike tour". Again the questions have been assessed on a five-point Likert scale (from "very slightly" to "extremely"). To assess self-satisfaction<sup>2</sup> with the entire biking tour we inserted 2 items on a 7-point Guttman-type scale with a reliability of  $\alpha = .72$ .

First an exploratory factor analysis was employed for the N and E scales. The exploratory factor analysis did not yield exactly the expected results according to the standardized scales

<sup>1</sup> The PANAS consists of 10 items for positive and negative affect respectively. The items for positive affect are: interested, excited, strong, proud, enthusiastic, alert, inspired, determined, attentive and active. For negative affect: distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery and afraid.

<sup>2</sup> "How satisfied are you with your personal performance at this biking tour" and "Was your performance better, worse or just as you expected it to be".

(Borkenau and Ostendorf, 1993) and the scales had to be adjusted by excluding some of the items when testing the scale reliability with Cronbach's Alpha and item-to-item-correlations. Some items had to be removed due to low (<0.4) or "wrong" loadings, making up the scales with remaining 5 items on the Neuroticism-scale ( $\alpha = .68$ ) and 5 on the Extraversion-scale ( $\alpha = .69$ ). These findings and the necessary modifications are not surprising, as other researchers reported similar results of the NEO-FFI scales computed in confirmatory factor analysis (Renner, 2002).

Finally, an exploratory factor analysis was employed to the scales measuring positive and negative emotions, which resulted in two factors. Items that increased Cronbach alpha when deleted were excluded, yielding a Cronbach alpha for the negative emotions scale of  $\alpha = .74$ , and a Cronbach alpha of  $\alpha = .80$  for the positive emotions scale.

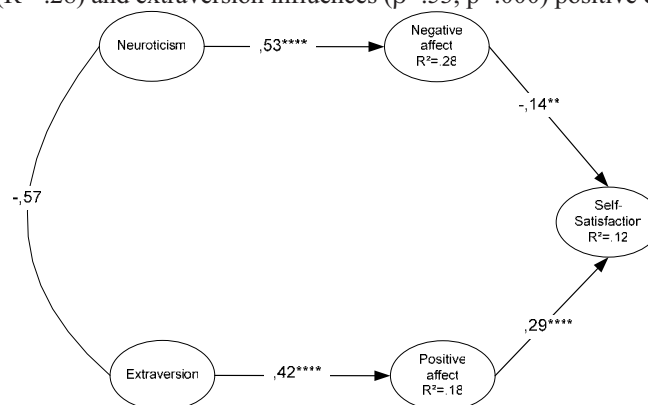
### Model fit

The overall fit of the model is excellent, as all the global fit-indices (GFI and AGFI) clearly meet the required cut-off criteria of 0.9 suggested by the literature. The Chi-square test yielded a value of 385,19 (DF 242) and was significant, thereby indicating a poor overall model fit. However, literature suggests that chi-square significance is only recommended with moderate samples (Hu and Bentler, 1999), e.g. 100 to 200 (Tabachnik and Fidell, 1996), as with larger sample sizes, trivial differences become significant.

A more appropriate fit index is the RMSEA. It evaluates approximate rather than exact fit of the model and it attempts to correct for the tendency of the Chi-square statistic to reject any model with a large sample size. Recently the RMSEA has been recognized as one of the most informative criteria in covariance structure (Byrne, 2001) with values less than .08 being acceptable. In our model, the value of .038 therefore clearly indicates a superior model fit and even meets stricter recommendations, whereby the RMSEA should be <.05 (Hu and Bentler, 1999). Our measurement model showing a CFI value of .938 well exceeds the lower bound of .90 and therefore can be considered as an indicator for good model fit. Also the Tucker-Lewis index (TLI = .929) and the incremental index of fit by Bollen (IFI = .939) yield a corroborating value for good model fit. Summarizing, the hypothesized model can be regarded as to fit the sample data.

### Regression Paths

Figure 1 displays the results of the analysis. All regression paths are highly significant and the model shows that customer self-satisfaction is a result of positive and negative emotions. Positive emotions have a highly significant influence ( $\beta = .29$ ,  $p = .000$ ) on self-satisfaction ( $R^2 = .12$ ) and negative emotions reduce ( $\beta = -.14$ ,  $p = .037$ ) customers' self-satisfaction. Thus, hypothesis 1 is supported. Also hypothesis 2, which suggests that emotions are a function of personality traits, is well supported by our model. Neuroticism has a highly significant impact ( $\beta = .42$ ,  $p = .000$ ) on negative emotions ( $R^2 = .28$ ) and extraversion influences ( $\beta = .53$ ,  $p = .000$ ) positive emotions ( $R^2 = .18$ ).



Notes: CMIN = 385.19; DF = 242;  $p = .000$ ; GFI = .928; AGFI = .910; CFI = .938; TLI = .929; IFI = .939; RMSEA = .038; \*\*\*\*  $p = .000$ , \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .10$

Fig. 1. Model and results



## Discussion

In contexts which are characterized by high customer participation, in our view it is necessary to attach importance to the psychological procedures at the customers' side, which might affect customer satisfaction and in consequence also post-purchase behaviour like positive word-of-mouth and loyalty. We introduced the concept of self-satisfaction, as with growing extent of customer participation it is likely that customers evaluate their own performance and that overall satisfaction with a service therefore builds on self-satisfaction. Furthermore we investigated emotional responses that impact the formation of self-satisfaction and which in turn are predicted by customers' individual predisposition. Our model linking personality traits, consumption-based emotions and self-satisfaction was generally supported. Extraversion was directly related to positive consumption emotions and neuroticism predicted negative consumption-based emotions. In accordance with other studies (Larsen and Katelaar, 1991; Mooradian and Olver, 1997) we found that the neuroticism – negative emotions relationship was slightly stronger than the extraversion – positive emotions connection. Positive emotions in turn seem to have a stronger impact on self-satisfaction than negative emotions.

The demonstrated relationships among personality, consumption-based emotions and satisfaction offer insight into fundamental and stable differences in how consumers process consumption experiences. They not only confirm previous findings that emotions play a crucial role in satisfaction, but also reveal their dependence on customers' individual predisposition. Our study evidences that a direct relationship between personality and self-satisfaction does exist, over the mediating system of emotions.

The limitations of our study consist in the non representative data. The data collection has been undertaken in specific moments (at the ending points of mountain bike tours) and on selected tours, and might therefore be subject to several other influences.

For managers of sporting events these results are highly interesting, as the impact of positive and negative emotions on self-satisfaction is clearly demonstrated. Actions that enhance the elicitation of positive emotions should be fostered. In this context it would be useful to undertake research effort to what extent self-satisfaction is connected to attributional processes (Bendapudi and Leone, 2003). According to attribution theorists, people tend to accredit successful outcomes to their own capabilities whereas disappointing consumption situations are rather attributed to the offering firm (Folkes, 1984; Folkes et al., 1987).

Furthermore research should be addressed to investigate whether people, based on personality traits, also share common value patterns which would allow a segmentation approach on personality traits. Thereby managers could avoid attracting people, who are predisposed to be unsatisfied with their own performance and in consequence also with the entire service.

With our findings we aim at coming up to criticism that emotions in explaining satisfaction in general and especially in the service setting have been fairly neglected. Given the growing attention of emotions in consumer behaviour we were able to integrate them with recent differential-psychological findings.

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