Unserved' Interpretations of Service Satisfaction

Sangeeta Singh¹ and Lola C. Duque²

Abstract

Satisfaction with services has traditionally been explained with the help of service attributes. While these attributes have been good predictors of satisfaction, the relationship could possibly be better explained with the inclusion of additional variables. We draw on the literature in consumer behavior where situational variables in combination with product and consumer characteristics have been shown to be better predictors of consumers' behavior than consumer or product characteristics by themselves. Studies in consumer behavior have also established a direct link between affective state and consumers' behavior, the argument being that different states prime different goals, thus affecting the importance of attributes relevant under different situations. This is the basis of our study to show that situation-related affective state moderates the effects of service characteristics on satisfaction and the resulting outcomes of such satisfaction. A model incorporating the effects of situation-related affective state in the existing relationship between service characteristics and satisfaction is developed and tested to not only demonstrate the moderating role of situational emotions in the relationships but also its impact on the strength of these relationships.

Keywords: services marketing; satisfaction paradigm; consumer behavior; situation; affective state

¹ The authors would like to thank Tor W. Andreassen for his help on early stages of conceptualizing the idea and during the data collection process. They also acknowledge the feedback received on the presentation made at the 17th Frontiers in Service Conference held in Washington in 2008. This study has been partially funded by the Spanish Ministry of Education and Science (project SEJ2007-65897).

¹ Associate Professor, Department of Marketing, Norwegian School of Management BI. Phone: +47-46410567, Email: sangeeta.singh@bi.no

² Assistant Professor, Department of Business Administration, University Carlos III of Madrid. Phone: +34-916248971, Email: lduque@emp.uc3m.es
Introduction

Consumer satisfaction has been central in services marketing and most of the research in this area has been based on the works of Oliver (1997, 1989). His perspective (1989) was guided by the ‘variety of human experience’, suggesting that individuals may mean different things when they claim to be ‘satisfied’. He provided three reasons for this. Firstly, consumers react differently to the same situation because of temperament or mood. Second, the meaning attached with a consumption situation varies from person to person. Third, the same consumer’s reaction to the same stimulus may change over time because of changes in the consumption experience. Fournier and Mick (1999) proposed a similar paradigm that outlined five critical issues to be considered when conceptualizing satisfaction. Satisfaction according to them changed over time, was context dependent, had a strong social dimension, was connected to the meaning of consumption itself and consisted of emotions related with this consumption. The two paradigms are very similar. Both of them emphasize that (i) satisfaction may not be as consistent across situations as conceptualized and measured by most researchers in services marketing because the same consumer can experience different levels of satisfaction from the same service at different times as consumption experience changes (ii) there is an affective component of satisfaction in the form of mood and emotions.

Despite these characteristics of satisfaction having been pointed out almost two decades ago, little effort has been made to study satisfaction in the recommended manner. And even when situation and affective state are accounted for in explaining satisfaction, there is no agreed framework. The roles of situation and affective state on product evaluations have long been recognized in the consumer behavior literature (Belk 1974, 1975) and a framework adopted that incorporates their
influences on product evaluations. We believe that much can be learnt from the advances made in the field of consumer behavior therefore, we visit this literature to understand how situation and affective state are defined and how they influence product evaluations. One of the primary goals of our paper is to use the established relationships in consumer behavior to incorporate the influence of situation and affective state in explaining service satisfaction. In the process of developing this framework, we clarify what situation and affective state may mean in a services setting. This is done by first organizing and integrating the satisfaction literature in services marketing to present how situation and affective state have been used in explaining satisfaction. The existing literature is appraised critically to identify gaps in it. We then review the consumer behavior literature and draw parallels to propose ways to bridge these gaps. This results in hypothesized relationships between service satisfaction, situation and affective state which are used to develop a model. The hypothesized relationships are tested in an empirical study conducted in the police services setting.

Situation, Affective State and Evaluations in Services Marketing

Customer satisfaction has been the most widely used metric for evaluating services (Zeithaml et al. 2006) with most of the studies developed around the framework that identifies its antecedents and consequences (Chiou and Droge 2006; Luo and Homburg 2007; Spreng, MacKenzie and Olshavsky 1996; Szymanski and Henard 2001). It has either been conceptualized as a cumulative phenomenon based on all previous experiences with the service or at the encounter level where its antecedents and consequences are studied for a specific transaction. Majority of the studies have been about identifying antecedents that fit a particular service better rather than
integrating the paradigms proposed by Oliver (1989) and Fournier and Mick (1999): the role of situation and emotions in determining satisfaction. The following sections provide a review of the studies that have incorporated situation and emotions in explaining satisfaction.

**Situation**

Oliver (1997) pointed out that consumers evaluate the service encounter based on the situation they are in when approaching the service and that this situation determines the consumers’ orientation towards the service encounter. The orientation primes the specific consumption goals for that particular service encounter and the benefits sought, both of which act as antecedents to customer satisfaction (Chitturi, Raghunathan and Mahajan 2008; Heitmann, Lehmann and Herrmann 2007). However, neither consumption goals nor the benefits sought have been properly integrated into a comprehensive framework that would allow for a better understanding of consumer satisfaction in relationship with situational consumption and even when done, only one of the orientations (delight) has been included and that too partially (Chitturi, Raghunathan and Mahajan 2008; Oliver 1997; Rust and Oliver 2000).

In addition to consumption goals, the circumstances that the consumer is in conditions the evaluation of a service encounter. Consumer evaluations of the same service have been shown to be different for different customers: different service attributes have a varying degree of impact on customers’ satisfaction (Mittal, Kumar and Tsiros 1999). That is, the relative importance of the antecedents of satisfaction changes depending on the situation that the consumer is in.
Isolated studies that have accounted for the role of situation in consumer satisfaction have not agreed on how situation is to be defined or even been clear as to if the studied category relates more to a temporary situation than to a personal characteristic of the consumer. For instance, situation has been categorized based on the pleasure derived from consumption (Jiang and Wang 2006), involvement with the service (Prenshaw, Kovar and Burke 2006; Shaffer and Sherrell 1997), or consumer expertise with the service (Kekre, Krishnan and Srinivasan 1995).

Even when situation has been incorporated in modeling customer satisfaction, its relationship with the construct has been ambiguous. It has been related with satisfaction either as a moderator (Kekre, Krishnan and Srinivasan 1995; Prenshaw, Kovar and Burke 2006), or as antecedents and moderators at the same time (Jiang and Wang 2006). There is evidence linking different types of situation with consumer satisfaction but what is not clear, from the mixed findings, is the way in which situation impacts the evaluation of services.

**Affective State**

Affective state in the form of emotions may manifest in services in a variety of ways and should be studied under different situations, with different types of services and in different user contexts (Liljander and Strandvik 1997). They can either have a neutral or a high arousal state and both positive and negative valence (Mano and Oliver 1993; Oliver 1993). Studies on consumer satisfaction have usually been related to positive emotions, paying attention to negative ones only when studying service recovery (Schoefer and Diamantopoulos 2008). Negative emotions such as stress, anxiety, hostility or fatigue brought by the consumer to the service context may be critical in the evaluation of the service. Dealing with consumers in these
conditions in a wrong way can bring negative consequences to the service provider since it has been proved that there are asymmetries in the relationships between satisfaction and its antecedents and consequences (Anderson and Mittal 2000), the effects being stronger for negative encounters (e.g. negative word of mouth spreads faster and in bigger size than positive word of mouth).

The impact of emotions on service satisfaction has been studied in a very fragmented way, producing mixed findings. This could possibly be a result of no agreed definition of emotion or how it should be incorporated to explain satisfaction. The literature in services marketing has not been successful in defining the construct of emotion properly or in differentiating it from other states like affect and mood, the terms being used inconsistently in the literature (Bagozzi, Gopinath and Nyer 1999). Bagozzi et al (1999) perceive the three slightly differently. According to them, affect is the more general umbrella that includes emotions and moods. Emotions are elicited during an encounter, based on the encounter's appraisal and goals achieved whereas moods are a ‘temporal emotion’. The critical difference between emotion and mood is that emotion is intentional while mood is a more diffused non-intentional feeling.

Emotions have been integrated in the evaluation of services in as many ways as situation has been: as an antecedent, a moderating variable, or both (Bigné, Mattila and Andreu 2008; Jiang and Wang 2006), and a feeling experienced during the service (Mano and Oliver 1993; Oliver 1993). Typically, studies have operationalized emotion as an outcome of the service consumption, whether intentional or not (called reactive emotions), but have not accounted for the preexisting emotions that the consumer brings to the service context in the form of mood or as an affect resulting from the specific circumstance the consumer is in. It is
these affective orientations that Oliver (1997) expects to color judgments, pointing that they are not controllable by marketers. Therefore, preexisting emotions are external to the service encounter and are particular to every customer. The specific service attributes—tangibility, reliability, responsiveness, assurance and sympathy (Parasuraman, Berry and Zeithaml 1991)—are common to all customers and are controllable by the service provider, being in fact the specific antecedents of service satisfaction. Yet, it is necessary to account for the preexisting emotions in order to understand the overall satisfaction response so that service providers may better adapt themselves to the specific customers’ predispositions.

Summary

So far we have discussed the relationship between situation and satisfaction and emotions and satisfaction. But what about the relationship between situation and emotions— are the two related and if so, how? The field of consumer behavior has long acknowledged the impact of both situation and emotions on product evaluations. However, the way both these constructs are defined and incorporated in the model are far more systematic and theoretically founded than in services marketing. First of all, situation is very clearly distinguished by the characteristic that it is something external to the consumer and the stimulus object (that is, the product). Second, there is a difference between situation and context (studies in services marketing confound the two). Third, emotions are considered part of a broader term affective state where affective state refers to different kinds of feelings that the consumer might experience. Last, affective states are conceptualized as specific to a circumstance that the consumer is in prior to the consumption experience and not produced by the
consumption experience itself. Let us visit the consumer behavior literature to shed more light on these issues.

**Situation, Affective State and Evaluations in Consumer Behavior**

Individual differences have been the traditional method to predict consumers’ behavior but many of the reported results show weak relationships (Carman 1970; Farley 1968; Monroe and Guiltinan 1975) suggesting that factors exogenous to the consumer could potentially be predictors of behavior (Mattson 1982). Researchers now recognize consumer choice to be a function of consumer characteristics, product attributes and the situation the product is to be consumed in (Belk 1974; Dickson 1982). Behavior has been shown to be specific to situation and individuals display far less consistency in their behavior across situations than has been assumed earlier (Mischel 1968). Empirical results have established the role of situation as a moderator of an individual's consumption and shown a combination of individual differences and situation to be a better predictor of behavior than just individual differences or situational differences by themselves (Belk 1974; Sandell 1968). Situational main and interaction effects together provide nearly half of the explained variance in consumers’ preferences (Belk 1974) and incorporating situation specific measures in attribute-based models improves the models’ ability to predict subsequent behavior (Miller and Ginter 1979).

Given this considerable evidence from consumer behavior that has not only established the role of situation as a moderator but also its importance in improving predictability of models, we propose
Hypothesis 1: The level of satisfaction resulting from a service consumption is moderated by the situation in which the service is availed.

Usage situation not only primes different goals but also imposes constraints on the problem solving processes and the possible solutions. The situation might represent the problem in terms of the benefits that should be sought in the given usage situation and thus limit the set of solutions (Warlop and Ratneshwar 1993). Mattson (1982) showed that the quality of the store, returns policies and preference for prestigious brands were more important attributes in a gift-shopping setting than in a self-shopping one implying that even the attributes considered for evaluation vary by situation. It has been established that the satisfaction with a service is primarily dependent on the evaluation of different service attributes however, it has been assumed that all of the attributes are considered for evaluating the service at any time. ServQual, the commonly used scale for measuring evaluations of service quality, uses all of the five attributes of tangibles, reliability, responsiveness, assurance and empathy of services to evaluate any service encounter (Parasuraman, Berry and Zeithaml 1991). Findings from the consumer behavior literature, however, suggest that all attributes of a consumption might not necessarily be important in determining the evaluations all of the time. Number of benefits and attributes triggered vary by the situation because the situation shifts the utility consequences of alternative choices between shopping context (Dellaert, Arentze and Timmermans 2008; Mattson 1982). Therefore, we propose

Hypothesis 2: The service attributes important in determining satisfaction are dependent on the situation in which the service is availed.
Our review of the services literature has highlighted the lack of agreement on the definition of situation so we turn to the field of consumer behavior to understand, define and accept a terminology for the concept that would be suitable for services marketing. The term “situation” has been described in varying manners by different researchers and perhaps the most comprehensive (and possibly the most widely accepted) definition in consumer behavior is one offered by Belk (1974). He provides a general definition of situation as "something outside the basic tendencies and characteristics of the individual, but beyond the characteristics of the stimulus object to be acted upon." According to this definition, situation excludes characteristics of the individual that he or she may be presumed to possess for a reasonable period of time e.g. traits, personality, general skills, and intellect. Characteristics that are attributable to an individual as a source of decision influence (e.g. traits, personality) are not considered a part of the situation. Consumer involvement and expertise that have been used as ‘situation’ in services marketing would then not be considered as such because these are inherent traits of the consumer. Characteristics of the stimulus object refer to the attributes of a particular product or brand, which are relatively constant and therefore may not be regarded as situational. The pleasure derived from the service that has been used as situation (hedonic or utilitarian) is a characteristic of the stimulus object itself, thus not a situation by this definition. These exclusions and clarifications narrow the definition of situation to "those factors particular to a time and place of observation which do not follow from a knowledge of personal and stimulus attributes, and which have a demonstrable and systematic effect on current behavior" (Belk, 1974). This definition then includes the individual's perceptions of the situation.
In addition to providing a definition of situation, Belk (1975) also described five groups of situational characteristics that synthesized the various taxonomy used by different researchers. **Physical surroundings** are the most plainly visible attributes of the situation that include décor, lighting, aromas, location, etc. **Social surroundings** refer to other persons present, their characteristics and roles, and interpersonal interactions taking place at the time of the consumption. **Temporal perspective** of situation is measured in units of time which may be time of day, year, relative to some past or future event, and time constraints. **Task definition** is the purchase intent or requirement for a special or general occasion that reflects different buyer or user roles foreseen by the purchaser/consumer. An example would be whether the product is being bought as a gift or for personal use. **Antecedent states** are momentary moods or conditions like anxiety, stress, excitation, hostility, fatigue, etc. that precede the consumption situation and which the individual brings to it rather than they being a result of the current situation.

The first two characteristics that qualify as ‘situational’ for products might not necessarily do so for services, according to the conceptualization of situation by Belk. To reiterate his definition, situation is something **beyond** the characteristics of the stimulus object. Physical surroundings in services, servicescape, are considered an integral part of the service itself and shown to influence the evaluations of services received (Bitner 1992). Social surroundings, or those involved in the service encounter e.g. service personnel, other customers, are also considered a part of the service that directly impact its evaluation (Dolen, Ruyter and Lemmink 2004). Since both of these characteristics are part of the stimulus object, the service encounter, they can not be considered situational by definition, which leaves us with the last three characteristics that could be situational in case of a service encounter: the
temporal perspective, the task definition, and the antecedent states. We focus on one of these situational characteristics, the antecedent state, in our study.

Antecedent states are momentary moods or affective conditions like anxiety, stress, excitement that the consumer brings to the consumption experience (Belk 1975). Different affective conditions have been shown to prime different goals in consumers and to convey distinct types of information to the decision maker (Raghunathan and Pham 1999; Raghunathan, Pham and Corfman 2006). For example, anxiety may steer preferences towards risk reduction and uncertainty avoidance goals. Affective states especially impact the evaluation of service encounters because of the interpersonal nature of services (Gardner 1985).

Although Oliver (1989) does not explicitly account for situation or antecedent states, he distinguishes between various types of satisfaction responses that depend on the psychological processing the consumer goes through in evaluating the service. They are called satisfaction as contentment, as pleasure, as relief, as novelty and as surprise. These types of satisfaction represent the coping approach consumers follow to deal with the antecedent state associated with the service encounter. We focus on two types of satisfaction: as contentment and as relief. Satisfaction-as-contentment is a response to the service searched for a consumer who is in a neutral affective state and is common for continuous repeat buying. This affective state is characterized by disinterest. Satisfaction-as-relief occurs when the consumer is in a negative aroused affective state and as a consequence searches to eliminate the aversive state to get back to neutrality by means of the service. These two types of satisfaction differ from one another based on presence or absence of expectations and level of arousal. A repeat buying situation is characterized by low levels of arousal and absence of expectations whereas a negative reinforcement
situation (reducing or eliminating an unpleasant state) by moderate to high level of arousal and actively processed expectations (Oliver 1989). Higher expectations are more likely to result in higher disconfirmation: performance is less likely to meet the high standards. The resulting satisfaction, based on the difference between the expectations and performance, is therefore likely to be lower. The opposite is going to be true for the repeat buying case where there are no expectations. Any level of performance will suffice and therefore result in a higher level of satisfaction. It has also been shown that individuals in a positive state mood evaluate stimuli more positively than those in a neutral or a negative mood state. Although there is no evidence for differences in evaluations between neutral and negative mood state, we believe the neutral state to be between positive and negative mood states and expect the evaluations of a stimuli in a neutral affective state to be better than in the negative affective state.

**Hypothesis 3:** Satisfaction resulting in a neutral affective state is going to be higher than that in an aroused affective state

Typical consequences or consumer responses to satisfaction studied have been complaint, word-of-mouth referrals and repeat purchase. The more satisfied customers are, the greater the impact of satisfaction on its outcomes ought to be. Anecdotal evidence from the industry suggests otherwise: 65-85% of defectors surveyed reported to be ‘satisfied’ or ‘very satisfied’ with their former supplier (Reichheld 1996). Many satisfied customers fail to participate in referrals or even remain loyal. Post-purchase communications and related behavior like purchase of more services is believed to follow from satisfaction but empirical studies provide
mixed results (Verhoef, Franses and Hoekstra 2002). Other studies have acknowledged the emotional determinants like the saliency of an affective state in post-purchase behavior, specifically showing that aroused affective state to affect the amount of word-of-mouth transmitted (Westbrook 1987). On the other hand, a neutral affective state is not only one of low arousal but is also characterized by no attribution processing, a general unemotional response to the service experience where satisfaction may mean a lack of dissatisfaction (Oliver 1989). The post-purchase response in this case is either low or non-existent (Oliver 1989). Therefore we expect:

**Hypothesis 4:** The impact of satisfaction on resulting outcomes is stronger for the aroused affective state than for the neutral affective state

The proposed model summarizing the hypotheses is presented in Figure 1. The traditional chain antecedents-satisfaction-outcomes is moderated by the three types of situations. In the next section we test the proposed model for one type of situation: the antecedent state.

**Methodology**

**Selection of Situations**

The testing of hypotheses required that we either use a service setting that would offer a natural occurrence of neutral and high arousal affective state situations or we manipulate it in an experiment. We opted for the former because it offers a more realistic representation of the phenomena being examined. The next step was to decide which antecedent state (situation) we wanted to study. It was important to
select an antecedent state that would not only have a neutral and high arousal affective state but would occur naturally in a service setting. This decision was made hand-in-hand with the selection of the service setting as the two are very much dependent on each other. After careful consideration of different services, the police services were chosen to compare satisfaction resulting from assistance sought in an emergency situation (high arousal affective state) versus in a routine situation (neutral affective state).

The police deliver a wide variety of services that can represent different levels of consumer needs, arousals and circumstances ranging from purely routine to emergency encounters. When citizens are assisted by the police in emergency situations, their satisfaction response is very likely to be influenced by a variety of emotions, anxieties and stress that might have been brought to the service situation. This stressful situation is going to have a high arousal affective state and receiving assistance from the police will result in relief from the stressful situation. Satisfaction resulting from the services thus received is naturally going to be very different from that experienced in a routine situation e.g. renewing a passport. Availing routine services would then qualify as a neutral affective state.

We are not the first to study service satisfaction with the police. It has been linked to confidence in the organization (Flanagan, Johnston and Talbot 2005), compared to satisfaction with other public services (Roch and Poister 2006) and been a part of a more complex model leading to citizens’ satisfaction (Ryzin, Muzzio, Immerwahr, Gulick and Martinez 2004).

Data Collection
A professional marketing research firm was hired to collect data in two different districts (later analysis showed the two districts to be comparable in terms of age, educational level and household income) by administering the questionnaire over phone. Each telephone interview lasted for approximately eight minutes. The questionnaire was addressed to people that had been in contact with the police at least within the last 12 months to facilitate encounter recalling (Westbrook and Oliver 1991). The response rate was higher than 50 percent.

A total of one hundred and forty eight respondents were in contact with the police within the last 12 months and one hundred and forty one (141) of them reported information about the specific situation they contacted the police for. From this sample fifty one (51) people reported some degree of stress when in contact with the police, while ninety (90) did not perceive any degree of stress at all. Respondents who did not report any stress at all when in contact with the police were classified in the neutral affective situation while the ones reporting some or more degree of stress into the high arousal affective one.

Measures

The measurement model is depicted in Figure 2 and the items comprising the measures listed in Table 1.

Antecedents of Satisfaction

The measures of antecedents of satisfaction with police services are based on a previous study (Tewksbury and West 2001) that found four attributes of the consumer-police contact to be highly correlated with the satisfaction derived from the service encounter. These are courtesy of officers/police personnel, service helpfulness of the contact, the concern shown for the customer and the speed with
which the issue at hand was resolved. They used a general question for each attribute and we elaborated by adding more items to capture each attribute. We measured courtesy using six items, whereas helpfulness, concern and speed were measured with three items each. Respondents answered on a Likert scale ranging from 1 to 10 to indicate how strongly they disagreed or agreed to the given statement.

**Satisfaction**

Satisfaction with the service received was measured using the conventional single-item question on a scale of 1 to 10. The item relates to an overall evaluation of the last encounter with the police.

**Consequences of Satisfaction**

Consequences of satisfaction have traditionally been based on the ‘exit, voice and loyalty’ theory (Hirschman 1970). When a consumer is dissatisfied with a service, he or she can change provider, make a complaint (public voice), tell friends and family (private voice) or remain loyal (by choice or because there is no way to leave). Since our study is set in a public service that is a ‘monopoly’, the private voice in the form of word-of-mouth seems to be the most likely response both in case of satisfaction and dissatisfaction with the service encounter. Yet another consequence of satisfaction (or dissatisfaction) with a public service is trust towards it since trust in public institutions are indicators of good governance and achievement of a democratic mission (Bouckaert and Walle 2003; Heintzman and Marson 2005). Trust was measured using six items, whereas word of mouth was measured through the conventional one item.

**Situation**
Two alternative perspectives to measure situation have been offered: a psychological one (Lutz and Kakkar 1975) and an objective one (Belk 1975). Psychological measurements of situations rely on the subjects’ perceptions of the situation and are based on the premise that the way an individual interprets a situation should be more important to behavior than the inherent features of the situation itself. Objective measurements of situations are based on the rationale that consumers bring their subjectivity to an interpretation of the situation, thus making aggregation and manipulation of consumption situations difficult. To remove biases, the situation is defined as it exists before subjects’ interpretations.

We employed a combination of the psychological and objective measures of situation. The respondents were first asked to indicate on a scale from 1 to 10, the level of stress felt under the situation for which they contacted the police. This measure captured the subjects’ psychological perception of the situation. We then classified the subjects into two groups of no stress (neutral affective state situation) or some stress (high arousal affective state situation), based on their responses on this measure.

**Missing Data**

Initial analysis of the data set revealed some missing values for certain items so we examined it to first determine the reasons underlying these missing values and then to decide how to deal with it. Since the missing data processes were unknown, we tried to identify any patterns that would characterize the missing data process. The two primary issues of concern were (i) if the missing data were scattered randomly throughout the observations or there were distinct patterns identifiable (ii) how prevalent were the missing data.
We found that the missing data were scattered randomly and that some items related to a latent variable were not answered while other items were. The various items used to measure a latent variable are seen as a set of reflective measures of the same construct so we expect all the items of a latent variable to be highly correlated. One of the approaches of dealing with missing data is replacing it with mean substitution. Mean substitution is one of the most widely used methods where the mean value of the item based on all the valid responses replaces the missing value. However, in our sample, it made more sense to substitute the missing value with the mean value of other items by latent variable for each individual rather than with the mean of all the valid responses in the sample. Reliability analysis was run on the measures after the missing values were replaced, the results of which are presented in Table 2.

Data Analysis and Hypotheses Testing

Analysis of variance (ANOVA) was used to verify that satisfaction was moderated by situation (H1) with satisfaction as the dependent variable and the two different situations as the independent factors. A significant difference between the level of satisfaction was found between the two situations of neutral affective state (non stress) and high arousal affective state (stress) with an F value of 9.16 (p< .05). Thus hypothesis 1 is supported

The second hypothesis had proposed that the attributes determining satisfaction are going to be dependent on the consumption situation. Two complementary analyses were combined to test this. First, the Chow test was used to identify if the attributes had a different relationship with satisfaction under the two situations and second, a multiple regression analysis to evaluate the relative importance of the attributes in determining satisfaction in each situation.
The Chow or stability test (Chow 1960) indicates if a regression estimation (coefficients and constant term) is different in two subsets of the data and if they are, the implication is to maintain separate regressions for the two groups. This test is the most popular way of testing whether or not the regression estimation associated with one data set are the same as those associated with another data set. We use the test to evaluate if the situation makes a difference in consumers’ perceptions (attributes and their processing for forming satisfaction). The Chow test statistic is presented in equation 1.

$$\frac{(SSR_C - (SSR_1 + SSR_2))/k}{(SSR_1 + SSR_2)/(N_1 + N_2 - 2k)}$$  \hspace{1cm} (equation 1)

where:
- $SSR_C$: sum of squared residual of entire sample
- $SSR_1$ and $SSR_2$: sum of squares from first and second group
- $N_1$ and $N_2$: observations in each group (90 and 51)
- $k$: total number of parameters

This Chow test statistic follows the F distribution with $k$ and $N_1 + N_2 - 2k$ degrees of freedom and was above the critical value of 3.06 ($F [2, 137]$, $p < .05$) for all the four antecedents. Thus, we reject the equivalence hypothesis. This means that courtesy, helpfulness, speed and concern are seen and processed in a different way if the consumer is in a high arousal affective state (stress) or in a neutral affective state (non-stress) situation. In general, constant terms were found to be higher for the neutral affective state situation and each of the antecedents significantly related to satisfaction. Next, we examined the relative importance of the attributes as a set.

Table 4 summarizes the results for the combined regression analysis. The Chow statistic of 2.55 was above the critical value of 2.28 ($F [5, 131]$, $p < .05$), thus we reject the equivalence hypothesis for the combined regression also. That is, the model estimation is different for each data set. In the pooled regression three out of
the four antecedents of satisfaction are significant. But when we examine the regression analysis for the two situations, we find that the most important attributes in the neutral affective state are courtesy and speed whereas in the high arousal affective state the only significant attribute is helpfulness which has such a strong impact that it makes courtesy irrelevant. These results support our second hypothesized effects.

Satisfaction in the neutral affective state situation was expected to be higher than in the high arousal affective state one. Analysis of variance was used to test this. We know from the test for hypothesis 1 that the satisfaction levels in the two different situations are significantly different from one another. The mean for satisfaction in the neutral affective state situation is 8.4 whereas in the high arousal affective state situation it is 7.2 (Table 5). This gives support for hypothesis 3.

Hypothesis 4 was tested following a similar process as the one used for testing hypothesis 2 (see Table 6). In this case we reject the equivalence hypothesis for the relationship between satisfaction and word-of-mouth (Chow statistic of 4.06 above the critical value of 3.06, F [2, 137], p<.05). Service satisfaction under the two different situations produces different reactions in the comments to third persons and this reaction is stronger in the high arousal affective state situation. The hypothesis of equivalence could not be rejected for the impact of satisfaction on trust (Chow statistic of 1.36 below the critical value of 3.06, F [2, 137], p<.05) so we shall assume there is no difference in the influence of satisfaction on trust between the two situations, although the effects are significant. Thus, Hypothesis 4 is partially supported.

Discussion of Results
Our paper has conceptualized satisfaction according to the paradigms suggested by Oliver (1989) and Fournier and Mick (1998) by incorporating situation and affective state in explaining satisfaction. The primary purpose of the study has been to demonstrate the moderating role of situation and affective state in explaining service satisfaction. The results from our empirical study confirm our hypothesis that situation does make a difference in consumers’ evaluation of the service experience: not only is the level of satisfaction derived from the services different under the two different situations of interest, but so is the relative importance of attributes that contribute to it. In addition, the neutrality and arousal of the affective state impacts both the level of satisfaction and the post-consumption reactions of this satisfaction.

Intuitively, one would expect consumers in a state of pain to be extremely pleased to be rid of the adverse situation they are in, resulting in a high level of satisfaction. However, we find that the satisfaction in a neutral affective state is higher than in the high arousal one. The expectations of people in a neutral affective state are low therefore the satisfaction derived is high even if the service provided might not be of very high performance. Individuals availing routine services are satisfied as long as it fulfills the required purpose. In case of a high arousal affective state, the expectations from the service are high and hence the satisfaction from its performance lower. This is in keeping with the suggestions of Oliver (1989), where higher expectations in a negative affective state of being relieved from the stressful situation leads to a lower level of satisfaction as well as Bagozzi et al (1999) assertion that evaluations of stimuli in a positive (or non-negative) affective state are better as compared to those in a negative affective state.

We also found that the service attributes contributing to service satisfaction are different for the two situations. Moreover, more attributes go into determining
satisfaction in the case of the neutral affective state. In the neutral affective state, courtesy and speed were the two attributes that were relevant for satisfaction whereas helpfulness was the only feature of the service experience important for the high arousal affective state. This is possibly a result of the difference in arousal levels of the two groups of respondents. Literature in persuasion has shown both higher pleasantness and lower arousal states to result in a greater degree of stimuli elaboration (Mano 1997). The negative affective state in our study corresponds to a high arousal situation which is unpleasant as compared to the neutral situation. Therefore, respondents in this state focus on fewer service attributes: receiving help that resolves their problem.

Even though the level of satisfaction in the high arousal affective state, satisfaction-as-relief, is lower than satisfaction-as-contentment, the post-consumption reactions in terms of word-of-mouth referral are stronger. No significant differences in the effect of satisfaction on trust were found although it is significant as an outcome of satisfaction for both the situations. One explanation for this could be that trust is a very general attitude that is based on previous experience and that just one (the last) encounter might not be sufficient in making a big change while word-of-mouth is more transaction based: even one favorable (or unfavorable) encounter gets the consumer talking about it. In addition, the role of the affective or emotional part of satisfaction on word-of-mouth has been more convincingly established in empirical studies than it has been for trust (Hagenbuch, Wiese, Dose and Bruce 2008; Westbrook 1987).

The results indicate that along the service attributes-satisfaction-outcomes chain, there are significant negative asymmetric effects and that the mediating role of satisfaction varies from zero to full mediation. This confirms the concerns expressed
in the literature about oversimplifying the satisfaction chain (Anderson and Mittal 2000; Kumar 2002). Further, and most important, this paper shows that the links in the satisfaction chain display significant differences across different customer segments and therefore suggests that studies on the impact of service quality on customer relationship maintenance should avoid aggregating customers (Anderson and Mittal 2000).

Managerial Implications
Firms expecting stronger positive behavioral intentions from its customers must take into account the situation in which the customer is served in, particularly by handling special situations. This constitutes a win-win relationship since a good service in a high arousal affective state situation will have a strong and positive impact on behavioral intentions which will benefit the firm.

Firms must realize that different service attributes will differentially affect satisfaction depending on the situation and affective state the consumer is in. The foremost goal in such circumstances then is to identify the attribute(s) that are more relevant to the customer’s particular requirements rather than focusing on all of the service attributes. This will not only prove to be more efficient for the service provider but also provide better results in terms of satisfaction and behavioral intentions. Additional value lies in the investigation of satisfaction at an attribute level, which can improve the identification of different customer needs under different situations.

An interesting implication for marketers is that a new typology of segmentation based on situation may be developed. But we still need more empirical testing for the proposed framework.
Limitations and Future Research

Our model incorporates situation in the traditional antecedents of satisfaction-satisfaction-consequences of satisfaction framework yet tests for only one of the three situations, antecedent state, and in particular the stress brought to the service experience. This study is a small, but important, step towards accounting for the role of situation in determining satisfaction. The findings from this study are encouraging so there is a need to test the remaining two situations- task definition and temporal perspective. Temporal perspective as measured by repeat purchase is especially important in services setting as it captures cumulative satisfaction. Approaching a service with time constraints (another example of a temporal perspective) may make the customer evaluate the service in a different way than when there are no time constraints (plenty of time). The implications will be similar to the ones we found: a situation will activate or deactivate the importance of some service attributes.

The task definition reflects the goal the consumer is seeking from the service encounter and is critical for providers so as to offer a more customized service. An interesting study would be to evaluate if a service encounter is related to social or individual intentions. For instance, a consumer can just have the need to eat or can go with colleagues/friends slightly changing the goal to not only eat but also to interact with others. How will the service evaluation be in the two different goal situations? If the service is basically the same, will the same antecedents and consequences of satisfaction work in the same manner in both situations?

A bigger challenge would be to analyze various types of situations simultaneously, which would be closer to reality. For instance, buying a present when under time constraints as well as anxious about getting the right gift. Or asking for a quick loan from the bank: this is a situation that is marked both by stress/anxiety and
have a time constraint because the money is needed for buying something that is urgent.

Affective state was operationalized as a categorical variable which though useful in understanding differences between customer segments, misses out on the nuances of emotions brought to the service experience. Therefore, we suggest using affective state as a continuous variable when the goal is to understand finer distinctions in the affective state rather than groups of consumers.

The setting for our study has been the police services which is a monopoly condition and typically a responsibility of the public sector where the perceptions of the service can be biased or conditioned by general attitudes towards the government. Thus, other service settings should be used, particularly private ones, to validate the initial findings of our study. Some useful settings would be airlines and insurance companies where both neutral and high arousal affective states occur naturally. In addition to confirming the findings of our study in other settings, the study could be validated in an experiment. An experiment would not only allow for the manipulation of the affective state in more than two categories but also the ability to manipulate more than one situation type, thus giving room for interaction effects. Manipulating situation in an experiment would also allow for using first an objective measure and then a psychological one of the affective state- we did the opposite, using a psychological measure first followed by objectively categorizing subjects based on their responses on it.

We examined the neutral and high arousal of the same affective state. Research in consumer behavior shows that consumers in any particular situation might experience more than one emotion and that, emotions of the same valence might be related with each other (e.g. happiness, excitement). Too much attention
has been given to studying the opposites of the same emotion (e.g. happiness, sadness).

The satisfaction in this study was conceptualized at the transaction level, which is more linked to service attributes. Empirical research should be extended to cumulative satisfaction since variables at a more general level can lead to different weights. A more meaningful conceptualization of the relationship between service attributes and overall satisfaction would help understand why this relationship is strong or weak in different circumstances.

'Serving' Service Satisfaction

Our proposed framework synthesizes the literature to identify three types of situation (temporal perspective, task definition and antecedent state) relevant for services marketing that capture the paradigms of satisfaction outlined by Oliver (1989) and Fournier and Mick (1998). To reiterate, Oliver (1989) perceived mood at the time of consumption, the meaning attached with the consumption, and changes in consumption experience over time to be responsible for differences in satisfaction. The first type of situation, temporal perspective, represents changes in the consumption experience over time which will condition an individual's orientation towards the service and thus its evaluation and ensuing satisfaction.

The second type of situation, task definition, covers the consumption goals (Heitmann, Lehmann and Herrmann 2007), the benefits sought from the service (Chitturi, Raghunathan and Mahajan 2008) and also the meanings the service consumption has for different consumers. As noted before, the orientation toward the service will prime what attributes to evaluate as well as different standard appraisals to use as reference for assessment. Here, the satisfaction prototypes outlined by
Oliver (1997) (contentment, pleasure, surprise, delight, tolerance, relief) as well as by Fournier and Mick (1999) (awe, trust, helpfulness, resignation, love) will prove helpful in characterizing and interpreting the different types of task definition the consumers seek from a service encounter. These prototypes can implicitly capture the meaning that a service has for the overall consumer well-being and life satisfaction.

The third type of situation, antecedent state, the one we focused on in our study, represents the preexisting moods consumers have when approaching the service context. These predispositions are key to understanding the consumer arousal during the service encounter and in determining the best way to offer the service. Various affective states have been outlined by Belk (1975) (e.g. anxiety, excitation, hostility, fatigue) which will definitely condition the overall service assessment, especially those that put the consumer in a high arousal state.
Figure 1: General model

- Service encounter attributes
- Service evaluation
- Service Outcomes

Service situation:
- Temporal perspective
- Task definition
- Antecedent state

Figure 2: Measurement Model

- Service encounter attributes
  - Helpfulness
  - Courtesy
  - Speed
  - Concern

- Service evaluation
  - Service satisfaction

- Service Outcomes
  - Word of mouth
  - Trust

Service situation:
Antecedent state:
- High arousal affective state
- Neutral affective state
Table 1: Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>COURTESY (strongly disagree / strongly agree)</td>
<td>The police were very courteous when they helped me&lt;br&gt;They listened to me carefully&lt;br&gt;They were very empathetic to me&lt;br&gt;They were willing to help me&lt;br&gt;They treated me with respect&lt;br&gt;They made no inappropriate or rude remarks while they attended me</td>
</tr>
<tr>
<td>SPEED (strongly disagree / strongly agree)</td>
<td>The police were very courteous when they helped me&lt;br&gt;They listened to me carefully&lt;br&gt;They were very empathetic to me&lt;br&gt;They were willing to help me&lt;br&gt;They treated me with respect&lt;br&gt;They made no inappropriate or rude remarks while they attended me</td>
</tr>
<tr>
<td>CONCERN (strongly disagree / strongly agree)</td>
<td>They were very pleasant to be around and easy to talk to&lt;br&gt;They were very polite and respectful&lt;br&gt;They were very helpful and provided the information I needed&lt;br&gt;They were very patient and understanding&lt;br&gt;They were very considerate and understanding</td>
</tr>
<tr>
<td>HELPFULNESS (strongly disagree / strongly agree)</td>
<td>They were very helpful and provided the information I needed&lt;br&gt;They were very willing to help me&lt;br&gt;They gave me important information that helped me to better deal with my situation&lt;br&gt;They went out of their way to help me</td>
</tr>
<tr>
<td>SATISFACTION (very dissatisfied / very satisfied)</td>
<td>Thinking back on your last contact with your district police, how would you rate your overall satisfaction?</td>
</tr>
<tr>
<td>TRUST (strongly disagree / strongly agree)</td>
<td>The police will treat all people in the same respectful manner&lt;br&gt;Policemen/women are trustworthy&lt;br&gt;Policemen/women have an ethical conduct in everything they do&lt;br&gt;I have confidence in investigations performed by my district police&lt;br&gt;Information provided to them will be treated with confidentiality&lt;br&gt;I have confidence that they will attend or help me if I need them again</td>
</tr>
<tr>
<td>WORD OF MOUTH (very negative / very positive)</td>
<td>If you have talked to anyone about your last contact with your district police, were your comments negative or positive?</td>
</tr>
<tr>
<td>STRESSFULNESS LEVEL (non-stressful at all / very stressful)</td>
<td>If it was related to a stressful situation, how would you rate the intensity of that situation?</td>
</tr>
</tbody>
</table>

Table 2: Cronbach’s Alpha for the Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Neutral</th>
<th>High arousal</th>
<th>Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helpfulness</td>
<td>0.896</td>
<td>0.927</td>
<td>0.911</td>
</tr>
<tr>
<td>Concern</td>
<td>0.865</td>
<td>0.913</td>
<td>0.884</td>
</tr>
<tr>
<td>Courtesy</td>
<td>0.924</td>
<td>0.939</td>
<td>0.932</td>
</tr>
<tr>
<td>Speed</td>
<td>0.890</td>
<td>0.906</td>
<td>0.897</td>
</tr>
<tr>
<td>Trust</td>
<td>0.917</td>
<td>0.884</td>
<td>0.906</td>
</tr>
</tbody>
</table>
Table 3: Individual Regression Analysis for Antecedents on Service Satisfaction

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Neutral</th>
<th>High arousal</th>
<th>Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.102</td>
<td>*** 1.310</td>
<td>2.653</td>
</tr>
<tr>
<td>Helpfulness</td>
<td>0.564</td>
<td>*** 0.731</td>
<td>*** 0.656</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>31</td>
<td>52.5</td>
<td>42.7</td>
</tr>
<tr>
<td>Constant</td>
<td>1.352</td>
<td>-2.784</td>
<td>* -0.760</td>
</tr>
<tr>
<td>Courtesy</td>
<td>0.546</td>
<td>*** 0.665</td>
<td>*** 0.612</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>29</td>
<td>43.1</td>
<td>37</td>
</tr>
<tr>
<td>Constant</td>
<td>4.541</td>
<td>*** 2.261</td>
<td>* 3.558</td>
</tr>
<tr>
<td>Speed</td>
<td>0.538</td>
<td>*** 0.520</td>
<td>*** 0.523</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>28.1</td>
<td>25.5</td>
<td>26.9</td>
</tr>
<tr>
<td>Constant</td>
<td>4.545</td>
<td>*** 2.684</td>
<td>** 3.746</td>
</tr>
<tr>
<td>Concern</td>
<td>0.554</td>
<td>*** 0.518</td>
<td>*** 0.528</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>30</td>
<td>25.4</td>
<td>27.4</td>
</tr>
</tbody>
</table>

Dependent variable: overall satisfaction

*** significant at 0.01 level, ** at 0.05 level, * at 0.10 level

Table 4: Combined Regression Analysis for Antecedents of Service Satisfaction

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Neutral</th>
<th>High arousal</th>
<th>Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helpfulness</td>
<td>0.178</td>
<td>0.554*</td>
<td>0.397</td>
</tr>
<tr>
<td>Courtesy</td>
<td>0.246**</td>
<td>0.256</td>
<td>0.246*</td>
</tr>
<tr>
<td>Speed</td>
<td>0.276**</td>
<td>0.095</td>
<td>0.208**</td>
</tr>
<tr>
<td>Concern</td>
<td>0.099</td>
<td>-0.123</td>
<td>-0.06</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>41.1</td>
<td>52.3</td>
<td>47.3</td>
</tr>
</tbody>
</table>

Dependent variable: overall satisfaction

*** significant at 0.01 level, ** at 0.05 level

Table 5: ANOVA Results and Means

<table>
<thead>
<tr>
<th>Variable</th>
<th>Neutral n=90</th>
<th>High arousal n=51</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helpfulness*</td>
<td>8.2</td>
<td>7.4</td>
</tr>
<tr>
<td>Courtesy*</td>
<td>9.0</td>
<td>8.5</td>
</tr>
<tr>
<td>Speed</td>
<td>7.9</td>
<td>7.6</td>
</tr>
<tr>
<td>Concern</td>
<td>7.5</td>
<td>7.3</td>
</tr>
<tr>
<td>Satisfaction***</td>
<td>8.4</td>
<td>7.2</td>
</tr>
<tr>
<td>Trust</td>
<td>7.3</td>
<td>7.4</td>
</tr>
<tr>
<td>Word-of-mouth</td>
<td>7.4</td>
<td>7.0</td>
</tr>
</tbody>
</table>

*** significant at 0.01 level, ** at 0.05 level, * at 0.10 level
Table 6: Regression Analysis for Service Satisfaction on Outcomes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Neutral</th>
<th>High arousal</th>
<th>Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>0.281***</td>
<td>0.511***</td>
<td>0.350**</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>6.8</td>
<td>24.6</td>
<td>11.6</td>
</tr>
<tr>
<td>Dependent variable: trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.587***</td>
<td>0.896***</td>
<td>0.740**</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>33.7</td>
<td>79.9</td>
<td>54.4</td>
</tr>
<tr>
<td>Dependent variable: word-of-mouth</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** significant at 0.01 level, ** at 0.05 level, * at 0.10 level
References


