

# An Assessment of the Relationship Between Service Quality and Customer Satisfaction in the Formation of Consumers' Purchase Intentions

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*Service quality and customer satisfaction are widely recognized as key influences in the formation of consumers' purchase intentions in service environments. However, a review of the existing literature suggests that the specific nature of the relationship between these important constructs in the determination of consumers' purchase intentions continues to elude marketing scholars (c.f. Bitner and Hubbert 1994; Bolton and Drew 1994; Gronroos 1993; Rust and Oliver 1994). The study reported here was designed to aid in the understanding of these relationships by empirically assessing the nature of the relationship between service quality and consumer satisfaction in the formation of consumers' purchase intentions across four unique service industries. The results of the current research, coupled with the weight of the evidence in the emerging services literature, suggest that consumer satisfaction is best described as moderating the service quality/purchase intention relationship. The managerial and research implications of the reported study are also discussed.*

The preponderance of evidence in the existing literature on the marketing of services has identified the critical roles of service quality and satisfaction in the formation of consumers' purchase intentions. However, despite the great strides made in recent years, our understanding of the specific nature of the relationship between service quality and consumer satisfaction, as well as how these two constructs combine to impact consumer purchase intentions, continues to perplex marketing scholars (Gronroos 1993; Rust and Oliver 1994). Thus, the purpose of this study is to investigate the nature of the relationship between service quality perceptions and consumer satisfaction judgements in the formation of consumers'

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purchase intentions. Specifically, the current research empirically assesses whether a moderating model of the relationship between service quality and consumer satisfaction can more adequately account for variations in consumers' purchase intentions than efforts to date which have largely focused on mediating effects.<sup>1</sup>

The importance of the research objective cannot be overstated. Rust and Oliver (1994) argue that an understanding of these relationships is essential to effective management. Bitner and Hubbert (1994) identify how the drive for quality in products and services is apparent worldwide, and that customer satisfaction is increasingly becoming a corporate goal. Similarly, Bolton and Drew (1994) argue that the majority of research in services marketing has relied almost exclusively on customer satisfaction and perceived service quality to characterize customer assessments of services. In short, the development of a better understanding of how service quality perceptions and consumer satisfaction judgments interact and/or influence one another in the formation of consumers' purchase intentions appears a key challenge currently facing the services marketing discipline.

This article is organized in five sections. First, a review of the research to date directed toward ascertaining the nature of the service quality/consumer satisfaction relationship relative to the formation of consumers' purchase intentions is presented. The review concludes that conflicting evidence is apparent as to the nature of the service quality/satisfaction relationship in the formation of consumers' purchase intentions. Second, the research hypothesis and corresponding support is presented. Third, the methods employed in a study that tests the research hypothesis are explained. Fourth, the results of the study are presented and discussed. Finally, the managerial and research implications of the reported research are explicated.

### SERVICE QUALITY AND CONSUMER SATISFACTION IN THE EXISTING LITERATURE

The purpose of this section is to: (1) provide support for the assertion that service quality and satisfaction should be conceptualized as distinct constructs; and (2) review the research to date addressing the nature of the relationship between service quality and satisfaction in the formation of consumers' purchase intentions.

Holbrook (1994) recently characterizes service quality research as *wallowing in a sea of confusion*. A review of the emerging literature, however, suggests that there does appear to be relative consensus among marketing researchers that service quality and consumer satisfaction are separate (i.e., unique) constructs that share a close relationship (c.f. Bitner and Hubbert 1994; Cronin and Taylor 1992; Oliver 1993a; Patterson and Johnson 1993).

Rust and Oliver (1994, p. 2) most recently describe the dominant model of customer satisfaction in the services literature as follows:

"In brief, customer satisfaction is a summary cognitive and affective reaction to a service incident (or sometimes to a long-term service relationship) Satisfaction (or dissatisfaction) results from experiencing a service quality encounter and comparing that encounter with what was expected (Oliver 1980) "

This conceptualization is consistent with Oliver's (1993a) arguments that consumer satisfaction was first viewed as the consumer's fulfillment response. However, Oliver (1993a) further argues that satisfaction also: (1) involves states that are not limited to mere satiation; and (2) can be described as a process. Oliver (1993b) recently extends this argument by presenting and empirically validating a model of consumer satisfaction that captures this broadening definition of the domain of the satisfaction construct in the recent services literature. In short, Oliver's (1993b) model of consumer satisfaction demonstrates that satisfaction judgements are influenced by: (1) both positive and negative affective (i.e., emotional) responses; and (2) cognitive disconfirmation.

Service quality, on the other hand, is consistently viewed in the literature as a unique construct from customer satisfaction. To this end, a number of authors have recently supported Parasuraman, Zeithaml and Berry's (1988) *conceptual* definition of the service quality construct as adequately representing the core of what service quality may mean, that is, a comparison to excellence in service encounters by the customer (Rust and Oliver 1994, Taylor and Cronin 1994). Such a distinction also appears consistent with Bitner and Hubbert's (1994, p. 77) recently proposed definition of service quality as: "The consumer's overall impression of the relative inferiority/superiority of the organization and its services."<sup>2</sup>

Further evidence has recently emerged that adds support for the distinction between the conceptual domains of service quality and consumer satisfaction. For example, Rust and Oliver (1994), based on Oliver (1993a), identify a number of key elements that distinguish service quality from consumer satisfaction (also see Patterson and Johnson 1993, or Taylor 1993).

- The dimensions underlying quality judgements are rather specific, whereas satisfaction can result from any dimension (whether or not it is quality related).
- Expectations for quality are based on ideals or perceptions of excellence, whereas a large number of nonquality issues can help form satisfaction judgements (e.g., needs, equity, perceptions of "fairness").
- Quality perceptions do not require experience with the service or provider whereas satisfaction judgements do.
- Quality is believed to have fewer conceptual antecedents than does satisfaction.

Thus, the weight of the evidence in the services literature supports the position that service quality and consumer satisfaction are best conceptualized as unique constructs that should not be treated as equivalents in models of consumer decision making. The conclusion that service quality and satisfaction are unique constructs naturally begs the question, "What then is the specific nature of the relationship between these constructs in the formation of consumers' purchase intentions?"

The relationship between purchase intentions and customer satisfaction has been addressed in several studies, including Bearden and Teal (1983), Oliver (1980), and Oliver and Swan (1989). LaBarbera and Mazursky (1983) investigate the relationship between actual purchase behavior and customer satisfaction. There have also been a number of recent empirical attempts to validate the specific nature of the relationship between service quality and consumer satisfaction in the formation of consumers' purchase intentions (c.f. Bitner 1990; Cronin and Taylor 1992; Woodside et al. 1989). Unfortunately, the evidence to date has demonstrated conflicting results. For example, Woodside et al. (1989) propose one of

the first models specifically assessing the relationships between service quality perceptions, consumer satisfaction judgements, and behavioral intentions in the marketing literature and report empirical results suggesting that consumer satisfaction is an intervening variable that mediates the relationship between service quality judgements and purchase intentions (i.e., service quality → satisfaction → purchase intentions).

Bitner (1990) investigates the service quality and consumer satisfaction perceptions of 145 travelers at an international airport. The basis of Bitner's model is an attempt to reconcile Oliver's (1980) disconfirmation of expectations paradigm with attribution theory. Bitner hypothesizes that consumer attributions mediate disconfirmation and satisfaction judgements. Service quality judgements, in turn, are hypothesized to mediate consumer satisfaction judgements and consumers' behavioral intentions. Thus, Bitner suggests an alternative ordering of the service quality and satisfaction constructs (i.e., satisfaction → service quality → behavioral intentions). Bitner's fully recursive path analysis results appear to support her hypothesized model and thus contradict the causal order reported by Woodside et al. (1989).

Cronin and Taylor (1992), in a nonrecursive structural model, present the first simultaneous test of both of the aforementioned relationships. Although Cronin and Taylor hypothesize a priori that satisfaction is an antecedent of service quality, the empirical results of their LISREL-based analyses indicate the opposite. In addition to being the first to simultaneously assess both of the possible relationships between service quality and satisfaction, Cronin and Taylor also are the first to use a multi-industry sample in their investigation of these research questions. Specifically, these authors directly assess the service quality/consumer satisfaction relationship across four industries: banking, pest control, dry cleaning, and fast food. For each of the four service industries they investigated, Cronin and Taylor's results support Woodside et al.'s (1989) conclusion that service quality appears to be a causal antecedent of consumer satisfaction.

Thus, the results of empirical efforts to validate the specific nature of the relationship between service quality, consumer satisfaction, and purchase intentions have supported both possible relationships between the constructs (i.e., service quality → satisfaction → purchase intentions, satisfaction → service quality → purchase intentions). This conflicting empirical evidence supports the need for the research reported here.

## THE RESEARCH HYPOTHESIS

The literature review identifies the conflicting nature of the empirical results to date. It should be noted, however, that researchers have also failed to agree on what the *conceptual* nature of the service quality/satisfaction relationship should be. The conceptual nature of the relationship is perhaps best explicated by Rust and Oliver (1994). These authors take the perspective of Cronin and Taylor (1992) that satisfaction is superordinate to quality—that is, quality is only one of many potential service dimensions factored into consumer satisfaction constructs. However, these authors continue by suggesting that satisfaction may also indirectly reinforce quality perceptions.

Perhaps more importantly, however, is that the most recent conceptualizations of the relationship between service quality and consumer satisfaction that form the basis for Rust

and Oliver's (1994) arguments have incorporated the additional dimension of *level of aggregation*. In short, a number of recent authors have supported the position that both service quality and consumer satisfaction exhibit both global and encounter-specific forms (c.f. Anderson and Fornell 1994; Bitner and Hubbert 1994; Rust and Oliver 1994). Rust and Oliver (1994, p. 7) characterize this position as follows.

“Thus, we view service quality as affecting service satisfaction at the encounter-specific level. Later, separate service encounter experiences can be aggregated into overall perceptions of quality (and satisfaction, Bitner and Hubbert, chap. 3). As can be seen, the aggregation level plays a critical role in researching and understanding the meaning of these two concepts (Anderson and Fornell, chap. 11)”

The authors of the current research suggest that the conflicting empirical results reported in the literature are to some extent due to the fact that the models reported have been constrained to tests of the main effects of service quality and satisfaction on purchase intentions. Furthermore, based on the arguments presented above, we believe that it is reasonable to assert that multiple levels of aggregation explicating the conceptual domains of both service quality and consumer satisfaction suggest that the *interactions* between the constructs may explain more variance in consumers' purchase intentions than do the simple main effects (see Equation 1).

$$\text{Purchase Intentions} = a + b \text{ SATISFY} + c \text{ QUALITY} + d \text{ INTERACT} \quad (1)$$

where:        a =    intercept term  
                SATISFY =    Consumer Satisfaction judgements  
                QUALITY =    Service Quality perceptions  
                INTERACT =    Interaction between SATISFY and QUALITY

The contribution of the current research is to consider for the first time whether the interaction of service quality and satisfaction at the global level of analysis can explain more of the variance in consumers' purchase intentions than traditional assessments based only on the main effects of the constructs. Accordingly, the following research hypothesis is presented:

**H1:** *The interaction between service quality and consumer satisfaction will explain more of the variance in consumers' stated purchase intentions than the direct influences of either service quality or satisfaction alone.*

## METHODS

In this section a discussion of the sample, the operationalizations of the measures, and the analytical procedure of a study designed to test the research hypothesis are presented and discussed.

## The Sample

A total of 426 completed questionnaires were collected for the current research by trained interviewers using a convenience sample. The data were collected via personal interviews with individuals chosen through mall intercepts in seven cities geographically dispersed throughout the United States. The goal of the surveys were to capture individual perceptions relative to four service industries; (1) health care; (2) recreation (amusement park) services; (3) transportation (airlines); and (4) communications (long-distance telephone) services.

The questionnaire specifically examines two firms from each industry (for a total of eight firms) that are nationally known and familiar to the individuals surveyed.<sup>3</sup> Assessments of demographic variables such as age, gender, income and education reflected no unexpected differences between the samples geographically.

## Operationalizations of the Measures

In order to test the research hypothesis, three constructs must be operationalized: service quality, consumer satisfaction, and purchase intentions. Appendix A presents the measures employed in the current research. Consumer satisfaction is operationalized in the current research by four direct (i.e., global) measures, service quality with three direct measures, and purchase intentions with three direct measures. The measures employed in the current research are similar to those used by Cronin and Taylor (1992), Bitner (1990), and Bolton and Drew (1991) for purposes of comparison. One contribution of the current research is the utilization of multiple indicators that are summed-and-averaged for purposes of analysis rather than the single-item measures which have traditionally been used in previous research.

TABLE 1

Correlation Matrix of the Research Variables<sup>1</sup>

Variable	PB1 <sup>A</sup>	PB2	PB3	SAT1 <sup>B</sup>	SAT2	SAT3	SAT4	SQ1 <sup>C</sup>	SQ2
PB2	.827								
PB3	.848	.869							
SAT1	.625	.580	.608						
SAT2	.617	.584	.584	.901					
SAT3	.588	.566	.577	.832	.842				
SAT4	.527	.519	.527	.722	.703	.720			
SQ1	.446	.408	.424	.624	.615	.632	.628		
SQ2	.643	.596	.618	.790	.789	.780	.727	.656	
SQ3	.592	.561	.571	.789	.784	.765	.796	.671	0.826

Notes 1. Correlation values for the pooled data using the scale items presented in Appendix A.

A Purchase Intentions

B. Satisfaction

C Service Quality

TABLE 2

## Reliability of the Derived Measures

Variables	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
<b>Purchase Intention</b>	Coefficient Alpha = .9434				
PB1	8.0258	16.7923	.8661	.7518	.9301
PB2	7.9718	15.6227	.8832	.7850	.9169
PB3	8.0446	15.6804	.8984	.8080	.9046
<b>Satisfaction</b>	Coefficient Alpha = .9367				
SAT1	15.0845	20.1528	.8952	.8372	.9025
SAT2	15.1056	20.3441	.8909	.8394	.9040
SAT3	15.2887	20.5870	.8655	.7560	.9123
SAT4	15.3662	20.2421	.7513	.5690	.9478
<b>Service Quality</b>	Coefficient Alpha = .8840				
SQ1	10.0892	9.8814	.6935	.4825	.8997
SQ2	10.2981	8.5627	.8012	.7010	.7944
SQ3	10.1338	9.6738	.8202	.7112	.7917

Table 1 presents a correlation matrix of the pooled data to allow the investigation of the convergent and discriminant validity of the obtained measures.<sup>4</sup> The primary concern relative to the validity of the measures of service quality and consumer satisfaction is that of discriminant validity (Cronin and Taylor 1994; Peterson and Wilson 1992). The results of the correlations analysis in Table 1 demonstrate that discriminant validity is apparent between the service quality and consumer satisfaction constructs if the variables SAT4 and SQ1 are deleted from subsequent analysis (c.f. Anderson and Gerbing 1988, also see the following section entitled Limitations). The reliability of the derived measures used in the following analyses are reported in Table 2 and appear adequate given Nunnally's (1978) standard: (1) the purchase intention subscale has an associated coefficient  $\alpha = .943$ ; (2) the satisfaction subscale with the SAT4 variable deleted has an associated coefficient  $\alpha = .948$ ; and (3) the service quality subscale without the SQ1 variable has an associated coefficient  $\alpha = .900$ . Consequently, the reliability and validity of the measures used in the current research appear adequate to assess the research hypothesis for the type of preliminary analysis proposed herein.

### Analysis Procedure

As noted previously, the research investigates the hypothesis that including the interaction of satisfaction and service quality in models of the formation of consumers' purchase intentions will add to our ability to explain consumer decision making processes. For purposes of the current research, we follow the consensus position most recently explicated by Rust and Oliver (1994) that satisfaction is superordinate to service quality in the formation

of consumers' purchase intentions.<sup>5</sup> However, it is important to recognize that it is the role of the *interaction* between service quality and consumer satisfaction that is of interest in the current research.

Tests of whether an interaction term is significant essentially refer to whether a variable (in this case satisfaction) *moderates* the relationship between two other variables (service quality and purchase intentions). As pointed out earlier (see end NOTE 1), a moderator variable is one which interacts with a predictor variable to jointly affect a criterion variable. Sharma et al. (1981) present a comprehensive typology of moderator variables as well as a method to determine: (1) if a moderating relationship exists; and (2) specifically what type of moderating relationship, if any, does exist. The MRA (moderator regression analysis) framework consists of fitting three regression equations and comparing the change in  $R^2$  among them which allows the determination of exactly what type of moderating effect is occurring. Due to the exploratory nature of this study, as well as the relatively inconsistent findings reported in the services literature, we are unable to hypothesize the exact type of moderator we expect satisfaction to be. Therefore, the analysis procedure will more closely follow that presented by Covin and Slevin (1988; 1989), McClelland and Judd (1993), and Slater and Narver (1994) which consists of fitting the regression equation shown below:<sup>6</sup>

$$y = \alpha + \beta_1x + \beta_2z + \beta_3xz \quad (2)$$

where:

- $y$  = dependent variable
- $\alpha$  = intercept term
- $\beta_i$  = regression coefficients
- $x$  = independent variable
- $z$  = moderator variable
- $xz$  = independent variable/moderator variable interaction

A significant beta coefficient for the "xz" cross-product term would indicate that satisfaction acts to moderate the service quality → purchase intentions relationship. As has been pointed out by a number of authors (Aiken and West 1991; Arnold and Evans 1979; Cohen 1978; Cronbach 1987) it is imperative that the test be hierarchical. In other words, the "x" and "z" terms must be entered prior to the "xz" cross-product term in order to control for the effects of "x" and "z" in the cross-product term.

As has been pointed out previously, although service quality and satisfaction are best conceptualized as distinct constructs, they are nevertheless closely related. This, along with the fact that equation [2] includes the interaction of the constructs, raises the possibility of multicollinearity. In order to minimize the effects of multicollinearity, service quality and satisfaction have been "mean-centered" (by subtracting the corresponding variable mean from each value) as suggested by Aiken and West (1991), Cronbach (1987), and Yi (1989).

## RESULTS

Table 3 presents the test of the hypothesis for each industry. As can be seen, for three of the industries (communications, travel, and recreation) the regression coefficient for the satis-



TABLE 3

Test of Hypothesis for the Four Service Industries					
Model	Variable	$\beta$	t-value	Significance	R <sup>2</sup>
<b>Communications Services</b>					
1	Quality ( $\beta_1$ )	.92	10.63	.000	.52
2	Quality ( $\beta_1$ )	.39	2.86	.005	.60
	Satisfaction ( $\beta_2$ )	.71	4.73	.000	
3	Quality ( $\beta_1$ )	.48	3.84	.000	.68
	Satisfaction ( $\beta_2$ )	.78	5.67	.000	
	Interaction ( $\beta_3$ )	.20	4.93	.000	
<b>Transportation Services</b>					
1	Quality ( $\beta_1$ )	.77	8.88	.000	.45
2	Quality ( $\beta_1$ )	.24	1.64	.104	.54
	Satisfaction ( $\beta_2$ )	.72	4.38	.000	
3	Quality ( $\beta_1$ )	.34	2.28	.025	.56
	Satisfaction ( $\beta_2$ )	.70	4.38	.000	
	Interaction ( $\beta_3$ )	.10	2.28	.025	
<b>Recreation Services</b>					
1	Quality ( $\beta_1$ )	.77	7.15	.000	.34
2	Quality ( $\beta_1$ )	.39	2.08	.040	.38
	Satisfaction ( $\beta_2$ )	.47	2.98	.015	
3	Quality ( $\beta_1$ )	.44	2.38	.019	.40
	Satisfaction ( $\beta_2$ )	.56	2.94	.004	
	Interaction ( $\beta_3$ )	.12	2.05	.044	
<b>Health Care Services</b>					
1	Quality ( $\beta_1$ )	.62	7.46	.000	.33
2	Quality ( $\beta_1$ )	.12	0.64	.522	.38
	Satisfaction ( $\beta_2$ )	.57	2.96	.004	
3	Quality ( $\beta_1$ )	.24	1.19	.237	.39
	Satisfaction ( $\beta_2$ )	.52	2.67	.009	
	Interaction ( $\beta_3$ )	.07	1.45	.149	

faction/service quality interaction term is significant. Only in the health services industry is a non-significant interaction effect found. Based on these results, the research hypothesis is provided with some degree of support. That is, it appears that models of consumer decision making which include the interaction of satisfaction and service quality provide a better understanding of consumer purchase intentions than do models which simply include main effects of satisfaction and service quality in some service industries.

Although the results reported in Table 3 confirm the research hypothesis, we caution readers that the obtained results are exploratory in nature and should be viewed accordingly, especially given the relatively small magnitude of the regression coefficients for the interaction terms. However, the fact that significant interactions were found in three of the four industries studied is noteworthy. This is especially true in light of research presented by McClelland and Judd (1993) which concludes that for field studies of the type reported here:

“detection of statistically reliable interactions. . . will be difficult. This does not mean that researchers should not seek interactions in such conditions; however, they should be aware that the odds are against them” (p. 388).

## Discussion

A great deal of discussion has occurred within the services literature regarding the appropriate causal relationships between satisfaction and service quality with regard to their individual effects on purchase intentions. The current research contributes to this discussion by demonstrating that, for some service industries, conceptualizing satisfaction and service quality as acting jointly to impact purchase behavior increases our ability to explain more of the variance in consumers' purchase intentions than existing models. This hypothesis is tested in the current research utilizing the MRA technique and data from four unique service industries. For three of the industries, the results indicate that the inclusion of the interaction term between service and quality and satisfaction significantly adds to the explanation of purchase intentions.

We suggest that these results indicate that satisfaction appears to moderate the relationship between service quality and purchase intention in a relatively generalizable fashion in models of the formation of consumers' purchase intentions. Thus, marketers might wish to explore moderating effects in the development of future models of consumer decision making in service environments. In addition, in each of the three industries where significant moderating effects were found, the beta coefficients for the interaction term are positive. This indicates that the positive influence of service quality on purchase intentions is greater when satisfaction is also greater. In other words, the highest level of purchase intentions appear observed when **both** service quality perceptions and satisfaction judgements are high.

That higher levels of service quality and higher levels of satisfaction result in higher levels of purchase behavior should not be surprising to most managers of service organizations. However, the significance of the results concerns the fact that a full understanding of consumers' purchase decisions in service environments appears to require an extension in marketers' perceptions beyond viewing service quality and consumer satisfaction as simple intervening specification variables to viewing the constructs as largely moderating variables. Further, consistent with our previous arguments, such an empirical strategy appears more consistent with the emerging models of service quality and consumer satisfaction in the literature, especially the levels of aggregation arguments recently summarized by Rust and Oliver (1994).

## RESEARCH AND MANAGERIAL IMPLICATIONS

The results of the preceding exploratory study identify a number of research and managerial implications. First, the results suggest that the conceptual and empirical treatment of the service quality and consumer satisfaction constructs in marketing models of consumer decision making should consider moving toward considering these constructs as moderating

variables. The literature review demonstrates that existing empirical models do not appear to account for the results of the current research, that is, for the possibility that service quality and consumer satisfaction enjoy an interactive relationship. Given the apparent direction of conceptual models of service quality and consumer satisfaction (c.f. Bitner and Hubbert 1994; Cronin and Taylor 1992, 1994; Rust and Oliver 1994; Taylor 1993), assessing potential interactive relationships between service quality perceptions and consumer satisfaction judgments in future research efforts appears warranted.

Second, the failure of the data to support the research hypothesis in the health services sector implies that the form of the service quality/consumer satisfaction relationship may vary across service industries. That is, it may be possible that service quality and consumer satisfaction represent unique forms of specification variables across different service industries. Such a finding appears to add support for Taylor and Cronin's (1994) assertion that consumer behaviors in health services may resist explanations using models, theories, and scales generalized from validation in other service settings. Further research should investigate this possibility.

Similarly, other moderating influences may be in operation which are not captured in the current research model. For example, what is the role of involvement in the relationships between service quality, consumer satisfaction, and purchase intentions? Can multiple levels of moderating effects be in operation? Can higher-level moderators change the form of lower-level specification variables? As is the tradition of basic research, the results reported herein appear to raise more questions than they answer.

Finally, a managerial implication that emerges from the reported research is the appearance of support for the position that service quality judgements (as long-term attitudes) are moderated (i.e., influenced) by shorter-term consumer satisfaction judgements (c.f. Cronin and Taylor 1994; Oliver 1993a; Taylor 1993). The reported research also appears to support Oliver's (1993a) argument that ensuring consumer satisfaction should be of as great a concern in the practice of services marketing as eliciting positive service quality judgements. Specifically, the results of the current research suggest that service marketers should generally: (1) first practice enough communications to ensure a broad-based level of awareness among their target audience (particularly with new product introductions); and (2) then measure both short-term, service encounter-specific levels of consumer satisfaction as well as longer-term service quality attitudes. The basis for these recommendations derive from the finding reported herein that ensuring *both* consumer satisfaction with every service encounter and positive service quality attitudes appears the surest route to ensuring purchase intentions in the firm's target audience. These managerial recommendations are consistent with emerging calls in the marketing literature for minimizing service inadequacies, and taking extraordinary steps to correct problems that do arise (c.f. Berry and Parasuraman 1991; Heskett, Sasser and Hart 1991; Quinn 1992).

## LIMITATIONS

The preceding exploratory study raises some interesting issues based on the reported results. However, we caution readers to interpret the reported findings as tentative because, as is so

often the case with initial research, the reported study suffers from a few limitations. First, the operationalization of the measures employed in the research assessed global perceptions and judgements. While the study uses multiple indicators in garnering these values for the first time in the emerging literature, Peterson and Wilson's (1992) recent arguments concerning the efficacy of such direct predictors should be considered. Second, the reported study should be replicated with additional samples from additional service settings. Third, the measures in the current study exhibit marginal discriminant validity, a finding which is consistent with the majority of empirical studies discussed herein. One of the key challenges facing services marketers in operationalizing these constructs is the identification of a reliable *and valid* set of direct predictors for the relevant constructs. Finally, the changes in  $R^2$  values noted in the current research, while statistically significant, are modest.

However, in spite of the limitations in the measures employed in this reported study as well as previous studies investigating this issue, we argue that the results are not insignificant because they clearly indicate the potential problems associated with the current exemplars that universally treat service quality and consumer satisfaction as intervening forms of specification variables. Given the importance of this issue to the discipline, we hope that this study can foster further discussion of these issues and assist in the eventual resolution of the issues identified herein.

## APPENDIX A

### The Measures

1 ——— 2 ——— 3 ——— 4 ——— 5 ——— 6 ——— 7  
 Strongly Disagree Strongly Agree

### Purchase Intentions

- PB1 The next time I need the services of a \_\_\_\_\_, I will choose XYZ.
- PB2 If I had needed the services of a \_\_\_\_\_ during the past year, I would have selected XYZ
- PB3 In the next year, if I need the services of a \_\_\_\_\_ I will select XYZ.

### Satisfaction

SAT1 If I needed \_\_\_\_\_ services, I believe that I would be satisfied with XYZ's services.

SAT2 Overall, in purchasing \_\_\_\_\_ services, I believe that I would be pleased with XYZ's services.

SAT3 I believe that purchasing services from XYZ is usually a satisfying experience.

SAT4 My feelings toward XYZ's services can best be characterized as

(VERY DISSATISFIED) 1—2—3—4—5—6—7 (SATISFIED)

### Service Quality

SQ1 I believe that the general quality of XYZ's services is low.

SQ2 Overall, I consider XYZ's services to be excellent.

SQ3 The quality of XYZ's services is generally

(POOR) 1—2—3—4—5—6—7 (EXCELLENT)

### NOTES

\*The order of the authors was randomly selected to reflect equal contributions to the manuscript. Dr. Baker was an Assistant Professor of Marketing at The University of Akron when this paper was written.

1. Sharma, Durand and Gur-Arie (1981, p. 291) define a moderator variable as one "which systematically modifies either the form and/or strength of the relationship between a predictor and a criterion variable." Essentially, a moderator variable is one which interacts with the predictor variable to jointly influence the dependent variable in some fashion.

2. Readers should be aware of recent arguments concerning the *operationalization* of the service quality versus satisfaction constructs (c.f. Cronin and Taylor 1992, 1994; Parasuraman, Zeithaml and Berry 1994; Teas 1993). However, given the page length

limitations inherent in journal articles, we constrain the discussion of these alternative positions as arguably outside the scope of the current discussion.

3. The only exception concerns the hospitals assessed in the health services portion of the study. The two largest hospitals in the cities under investigation (one a for-profit and one a not-for-profit) were assessed. All respondents were screened prior to participation in the study to ensure that they had used the service they assessed within the last forty-five days.

4. Correlation matrices for individual industries are available from the lead author.

5. This assumption is important because it makes no *empirical* difference in the analytical procedure employed herein which variable is labeled the predictor and which variable is labeled the moderator. The question of which variable should be treated as the moderator is a conceptual question that must be made based on the weight of the evidence in the literature.

6. Future research and efforts to replicate the results reported herein could rely on structural equation analysis as an alternative method which affords the benefits of modeling correlated measurement errors or creation of a method factor.

## REFERENCES

- Aiken, Leona S and Stephen G. West (1991). *Multiple Regression Testing and Interpreting Interactions*. London: Sage.
- Anderson, Eugene W. and Claes Fornell (1994). "A Customer Satisfaction Research Prospectus." Pp. 241–268 in *Service Quality: New Directions in Theory and Practice*, Roland T. Rust and Richard L. Oliver (Eds.). London: Sage.
- Anderson, James C. and David W. Gerbing (1988). "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin*, **103**(3): 411–423.
- Arnold, Hugh J. (1982). "Moderator Variables: A Clarification of Conceptual, Analytic, and Psychometric Issues," *Organizational Behavior and Human Performance*, **29**(April): 143–174.
- Arnold, Hugh J. and M. G. Evans (1979). "Testing Multiplicative Models Does Not Require Ratio Scales," *Organizational Behavior and Human Performance*, **24**: 41–59.
- Bearden, William O. and Jesse E. Teel (1983). "Selected Determinants of Consumer Satisfaction and Complaint Reports," *Journal of Marketing Research*, **20**(February): 21–28.
- Berry, Leonard L. and A. Parasuraman (1991). *Marketing Services: Competing Through Quality*. New York: The Free Press.
- Bitner, Mary Jo (1990). "Evaluating Service Encounters: The Effects of Physical Surrounding on Employee Responses," *Journal of Marketing*, **54**(2): 69–82.
- Bitner, Mary Jo and Amy R. Hubbert (1994). "Encounter Satisfaction versus Overall Satisfaction versus Quality." Pp. 72–94 in *Service Quality: New Directions in Theory and Practice*, Roland T. Rust and Richard L. Oliver (Eds.). London: Sage.
- Bolton, Ruth and James H. Drew (1991). "A Multistage Model of Customers' Assessments of Service Quality and Value," *Journal of Consumer Research*, **17**(March): 375–384.
- (1994). "Linking Customer Satisfaction to Service Operations and Outcomes." Pp. 173–200 in *Service Quality: New Directions in Theory and Practice*, Roland T. Rust and Richard L. Oliver (Eds.). London: Sage.
- Cohen, Jacob (1978). "Partialled Products Are Interactions; Partialled Powers Are Curve Components," *Psychological Bulletin*, **85**(4): 858–866.

- Cronbach, Lee J. (1987). "Statistical Tests for Moderator Variables: Flaws in Analyses Recently Proposed," *Psychological Bulletin*, **102**(November): 414–417.
- Cronin, J. Joseph Jr. and Steven A. Taylor (1992). "Measuring Service Quality: A Reexamination and Extension," *Journal of Marketing*, **56**(July): 55–68.
- . (1994). "SERVPERF versus SERVQUAL. Reconciling Performance-Based and Perceptions-Minus-Expectations Measurement of Service Quality," *Journal of Marketing*, **58**(1): 125–131.
- Covin, Jeffrey G. and Dennis P. Slevin (1988). "The Influence of Organization Structure on the Utility of An Entrepreneurial Top Management Style," *Journal of Management Studies*, **25**(May): 217–234.
- . (1989). "Strategic Management of Small Firms in Hostile and Benign Environments," *Strategic Management Journal*, **10**(January): 75–87.
- Gronroos, Christian (1993). "Toward a Third Phase in Service Quality Research: Challenges and Future Directions." Pp. 49–64 in *Advances in Services Marketing and Management: Research and Practice*, Vol. 2, Teresa A. Swartz, David E. Bowen, and Stephen W. Brown (Eds.). Greenwich, CT: JAI Press.
- Heskett, James L., W. Earl Sasser, Jr. and Christopher W. L. Hart (1990). *Service Breakthroughs: Changing the Rules of the Game*. New York: The Free Press.
- Holbrook, Morris B. (1994). "The Nature of Customer Value." In *Service Quality: New Directions in Theory and Practice*, Roland T. Rust and Richard L. Oliver (Eds.). London: Sage.
- LaBarbera, Priscilla A. and David Mazursky (1983). "A Longitudinal Assessment of Consumer Satisfaction/Dissatisfaction. The Dynamic Aspect of the Cognitive Process," *Journal of Marketing Research*, **20**(November): 393–404.
- McClelland, Gary H. and Charles M. Judd (1993). "Statistical Difficulties of Detecting Interactions and Moderation Effects." *Psychological Bulletin*, **114**(2): 376–390
- Nunnally, Jum (1978). *Psychometric Theory*. New York: McGraw-Hill.
- Oliver, Richard L. (1980). "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions," *Journal of Marketing Research*, **17**(November): 460–469.
- . (1993a). "A Conceptual Model of Service Quality and Service Satisfaction: Compatible Goals, Different Concepts." Pp. 65–85 in *Advances in Services Marketing and Management: Research and Practice*, Vol. 2, Teresa A. Swartz, David E. Bowen, and Stephen W. Brown (Eds.). Greenwich, CT: JAI Press.
- . (1993b). "Cognitive, Affective, and Attribute Bases of the Satisfaction Response," *Journal of Consumer Research*, **20**(December): 418–430.
- Oliver, Richard L. and John E. Swan (1989). "Consumer Perceptions of Interpersonal Equity and Satisfaction in Transactions: A Field Survey Approach," *Journal of Marketing*, **53**(April): 21–35.
- Parasuraman, A., Valerie A. Zeithaml and Leonard L. Berry (1988). "SERVQUAL. A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing*, **64**(1): 12–40.
- . (1994). "Reassessment of Expectations as a Comparison Standard in Measuring Service Quality: Implications for Future Research," *Journal of Marketing*, **58**(1): 111–124.
- Patterson, Paul G. and Lester W. Johnson (1993). "Disconfirmation of Expectations and the Gap Model of Service Quality: An Integrated Paradigm," *Journal of Consumer Satisfaction, Satisfaction, and Complaining Behavior*, **6**: 90–99
- Peterson, Robert A. and William R. Wilson (1992). "Measuring Customer Satisfaction: Fact and Artifact," *Journal of the Academy of Marketing Science*, **20**(1): 61–71.
- Quinn, James Brian (1992) *Intelligent Enterprise*. New York: The Free Press.
- Rust, Roland T. and Richard L. Oliver (1994) *Service Quality. New Directions in Theory and Practice*. London: Sage.
- Sharma, Subhash, Richard M. Durand and Oded Gur-Arie (1981). "Identification and Analysis of Moderator Variables," *Journal of Marketing Research*, **18**(August): 291–300.

- Slater, Stanley F. and John C. Narver (1994). "Does Competitive Environment Moderate the Market Orientation-Performance Relationship?," *Journal of Marketing*, **58**(January): 46-55.
- Taylor, Steven A. (1993). "The Roles of Service Quality, Consumer Satisfaction, and Values in Quinn's (1992) Paradigm of Services," *Journal of Marketing Theory and Practice*, (Fall): 14-26.
- Taylor, Steven A. and J. Joseph Cronin, Jr. (1994). "Modeling Patient Satisfaction and Service Quality," *Journal of Health Care Marketing*, **14**(1): 34-44.
- Teas, R. Kenneth (1993). "Expectations, Performance Evaluation, and Consumers' Perceptions of Quality," *Journal of Marketing*, **57**(4): 18-34.
- Woodside, Arch G., Lisa L. Frey and Robert Timothy Daly (1989). "Linking Service Quality, Customer Satisfaction, and Behavioral Intentions," *Journal of Health Care Marketing*, **9**: 5-17.
- Yi, Youjae (1989). "On the Evaluation of Main Effects in Multiplicative Regression Models," *Journal of the Market Research Society*, **31**(1): 133-138.



