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A CRITICAL REVIEW OF CONSUMER SATISFACTION

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Abstract

Consumer satisfaction is a central concept in modern marketing thought and practice. Realization of this importance has led to a proliferation of research on consumer satisfaction over the past decades. Existing studies, however, are divergent with regard to key concepts and their interrelationships, and there is a need for integrating these diverse studies. This paper provides a critical review of the research on consumer satisfaction in three areas: 1) definition and measurement, 2) antecedents or determinants, and 3) consequences of consumer satisfaction. An emphasis is placed on providing a conceptual basis for understanding existing research and suggesting potential future research.

A CRITICAL REVIEW OF CONSUMER SATISFACTION

INTRODUCTION

Consumer satisfaction (CS) is a central concept in modern marketing thought and practice. The marketing concept emphasizes delivering satisfaction (not just products) to consumers and obtaining profits in return. As a result, overall quality of life is expected to be enhanced. Thus, consumer satisfaction is crucial to meeting various needs of consumers, business, and society. The realization of this importance has led to a proliferation of research on consumer satisfaction over the past two decades. Attempts to make significant contributions toward understanding this important area have been made, including numerous studies and annual conferences on consumer satisfaction/dissatisfaction and complaining behavior (e.g., Day and Hunt 1979, 1982, 1983; Hunt and Day 1980, 1982, 1985).

Out of this empirical research has come the confirmation/disconfirmation paradigm whereby consumer satisfaction is hypothesized to result from a process of comparison. According to the confirmation/disconfirmation framework, consumers compare their perceptions of product performance with a set of standards (e.g., expectations or some other norm of performance). Confirmation results when the perceived performance matches standards, whereas disconfirmation results from a mismatch. Confirmation and disconfirmation are expected to determine consumer satisfaction or dissatisfaction. Though many studies accept this paradigm, they hold different views as to comparison standards and interrelationships among the key variables (e.g., Oliver 1980a; Cadotte, Woodruff, and Jenkins 1987), suggesting a need for integrating these diverse studies.

The purpose of this paper is to provide a critical review of the research on consumer satisfaction. Specifically, theoretical and methodological issues of past studies are discussed in three areas: 1) definition and measurement of consumer satisfaction, 2) antecedents or determinants of consumer satisfaction, and 3) consequences of consumer satisfaction. An emphasis is placed on

providing a conceptual basis for understanding current research and suggesting ideas for future research.

DEFINITION AND MEASUREMENT OF CS

Definitions of CS

There are two types of definitions that differ in terms of emphasizing consumer satisfaction either as an outcome or as a process. Some definitions construe consumer satisfaction as an *outcome* resulting from the consumption experience. These definitions include: “the buyer’s cognitive state of being adequately or inadequately rewarded for the sacrifices he has undergone”(Howard and Sheth 1969, p. 145); “an emotional response to the experiences provided by, associated with particular products or services purchased, retail outlets, or even molar patterns of behavior such as shopping and buyer behavior, as well as the overall marketplace” (Westbrook and Reilly 1983, p. 256); and “the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer’s prior feelings about the consumption experience” (Oliver 1981, p. 27).

Consumer satisfaction has also been defined as “an evaluation rendered that the (consumption) experience was at least as good as it was supposed to be” (Hunt 1977, p. 459), as “an evaluation that the chosen alternative is consistent with prior beliefs with respect to that alternative” (Engel and Blackwell 1982, p. 501), and as “the consumer’s response to the evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product as perceived after its consumption” (Tse and Wilton 1988, p. 204). These definitions suggest that an evaluative process is an important element underlying consumer satisfaction. This process-oriented approach, rather than outcome-oriented approach, seems useful in that it spans the entire consumption experience and points to an important *process* which may lead to consumer satisfaction, with unique measures capturing unique components of each stage. This approach seems to draw more attention to perceptual, evaluative, and psychological processes

that combine to generate consumer satisfaction. The process approach has been adopted by many researchers (e.g., Bearden and Teel 1983; Day 1984; Oliver 1980a)

CS definitions also differ in their level of specificity. Commonly employed levels include consumer satisfaction with a product (Churchill and Surprenant 1982; Oliver and Linda 1981; Swan and Trawick 1981; Westbrook 1980a), with a consumption experience (Bearden and Teel 1983; Fisk and Young 1985; LaTour and Peat 1979; Oliver 1980a,1981; Westbrook and Reilly 1983; Woodruff, Cadotte, and Jenkins 1983), with a purchase decision experience (Kourilsky and Murray 1981; Westbrook and Newman 1978; Westbrook, Newman and Taylor 1978), with the salesperson (Swan and Oliver 1985), with a store (Oliver 1981), with an attribute (Bettman 1974), and with a pre-purchase experience (Westbrook 1977). Furthermore, some studies often classified as consumer satisfaction research have examined product performance rather than consumer satisfaction (Anderson 1973; Cardozo 1965; Oliver 1976,1977; Olshavsky and Miller 1972; Olson and Dover 1976,1979).

Measurement of CS

Methods of Measurement

Direct survey methods are the most widely used means of measuring consumer satisfaction. Their primary advantage is directness; the purpose is clear, the responses straightforward, and the corresponding rules between consumer satisfaction and measures are unequivocal. The major disadvantage of survey methods is, however, reactivity; that is, responses might be influenced by the act of measurement itself. Other problems such as selection bias, interviewer bias, and nonresponse bias also provide threats to the validity of the survey data..

Other methods of measuring consumer satisfaction include collecting data on consumer complaints and repeat purchases. These indirect methods are important since complaint and repeat purchase behaviors are germane to satisfaction, important to both firms and consumers, and relatively unobtrusive, resulting in reduced reactivity. There are, however, some problems with these methods. First, the corresponding rules between the concept and the measures are ambiguous and imperfect due to confounding factors. Repeat purchase is affected not only by

consumer satisfaction but also by other factors such as promotional activities, brand availability and brand loyalty. For example, a consumer might feel dissatisfied with the brand but repurchase it solely because of unavailability of other brands or special promotions for the brand (e.g., coupons). That is, these methods can be said to measure both satisfaction and other extraneous factors. Also, these measures may sample from the tails of the distribution and fail to capture the typical consumer's satisfaction. For example, consumers who are assertive or have extreme experiences may be most likely to voice their opinions with complaints.

Since the two types of methods have different strengths, they can be best considered as complements rather than replacements to each other. The usefulness of these measures seems to depend on the intended purpose of the study. For example, direct survey methods might be appropriate for the study of satisfaction processes, whereas repeat purchase and complaint rate measures might be useful for corporate product satisfaction monitoring and public policy purposes. Thus, the measures should be chosen by considering the intended purpose of the study and the degree of potential reactivity among respondents.

Reliability and Validity of Measures

Single-Item Measures. Many researchers have used rather simple, single-item scales of several (e.g., four to seven) points reflecting 'very satisfied' to 'very dissatisfied' responses (Andreasen and Best 1977; Ash 1978; Kourilsky and Murray 1981; Oliver 1976, Olshavsky and Miller 1972; Olson and Dover 1979; Swan and Martin 1981; Westbrook 1980a). Despite the obvious advantage of simplicity, the single-item scale can be criticized on a number of grounds. The single-item scale cannot provide information on components, cannot assess separately various dimensions, and thus may not entirely capture the complexity of consumer satisfaction. Variance due to a random error, a specific item, or a method factor cannot be assessed or averaged out, and it is difficult to assess the reliability of the measures. The only estimate of reliability is test-retest reliability, which can be confounded with a true change in consumer satisfaction (rather than random errors) and/or memory bias.

One study compared the test-retest reliability of several single-item scales: the Delighted-Terrible, percentage, need S-D, and content analytic scales (Westbrook 1980b). The Delighted-Terrible scale, which has been widely used in sociological studies of well-being (Andrews and Withey 1976), turned out to be the most reliable among these scales (.65-.84). For descriptions and reliabilities of each scale, see Table 1. Most of the reliability estimates are low to moderate, suggesting that caution is needed in using the single-item measures.

Table 1 about here

Validity of measures has rarely been investigated in studies using a single-item scale. Westbrook (1980b) examined the convergent, discriminant and nomological validity of several measures by using the multitrait-multimethod (MTMM) matrix. The study indicated that the Delighted-Terrible (D-T) scale is reasonably valid. For example, we can examine the correlations between the D-T scale and other scales for convergent validity. The correlations ranged from .65 - .85 with the percentage scale, to .48 -.81 with the need S-D scale, to .73 -.78 with the content analytic scale. Discriminant validity was established by showing the satisfaction rating for a given product is independent of ratings for other products obtained by the same scale. Evidence showed also nomological validity by the relationships of the D-T scale to its antecedents and effects.

Multi-Item Measures. In contrast to earlier studies, recent studies have tended to use multi-item measures (Bearden and Teel 1983; Churchill and Surprenant 1982; Oliver 1980a; Oliver and Bearden 1983; Oliver and Linda 1981; Swan and Trawick 1981; Westbrook and Reilly 1983). Westbrook and Oliver (1981) compared five multi-item scales: i.e., verbal, graphic, Likert, semantic differential, and inferential measures. According to the multitrait, multimethod analysis, semantic differential measures had the highest reliability (with the alpha coefficients .91 and .95) and convergent and discriminant validity. Inferential measures were the least reliable, with the alpha ranging from .46 to .72 (see Table 2 for a summary of results). Some other studies show that multi-item measures are substantially reliable, compared with the single-item measures; e.g., the alpha coefficients are .93 -.95 (Bearden and Teel 1983), .90 -.93 (Churchill and Surprenant

1982), .82 (Oliver 1980a), .92 (Oliver and Bearden 1983), .94 (Oliver and Linda 1981), etc.

Therefore, it would be desirable to use multi-item measures of consumer satisfaction.

Table 2 here

Factor Structure of CS

Does consumer satisfaction have a single factor or multiple factors? Many studies have assumed that consumer satisfaction is unidimensional, and they have not examined the possibility of multidimensionality. Only a few studies have investigated the factor structure of consumer satisfaction (e.g., Czepiel, Rosenberg and Akerele 1974; Leavitt 1977; Oliver and Westbrook 1982; Swan and Combs 1976; Maddox 1981). The most frequently proposed theory is a dual factor theory, which is similar to the Herzberg's two-factor theory of job satisfaction (Herzberg, Mausner and Snyderman 1959). According to the two-factor theory, satisfaction and dissatisfaction are different constructs, which are caused by different facets of interaction between a product and a consumer. Since the two constructs are unrelated, one's level of satisfaction can be independent of the level of dissatisfaction. For example, an individual can be both very satisfied and very dissatisfied with a product, according to the dual factor theory. This approach can be contrasted with the one-factor theory postulating that satisfaction and dissatisfaction are opposites on a single, bipolar continuum.

Czepiel, Rosenberg and Akerele (1974) claimed that consumer satisfaction has a dual factor: "For any level of satisfaction, these facets may be of two types; maintainers which must exist in order for dissatisfaction to be avoided, and satisfiers which truly motivate and contribute to satisfaction." Swan and Combs (1976) modified the dual factor theory and suggested two different factors-- instrumental performance and expressive performance. Instrumental performance refers to physical aspects of the product which are means to a set of ends, while expressive performance refers to psychological aspects. They argued that only the expressive dimensions produce satisfaction. Unsatisfactory performance along the instrumental dimensions can lead to dissatisfaction, but acceptable instrumental outcomes will not produce satisfaction.

That is, acceptable levels of the instrumental performance is a necessary, but not a sufficient, condition for satisfaction, while acceptable levels of expressive performance can lead to increased satisfaction. By collecting descriptions of consumers' experiences with clothing employing a critical-incident methodology, Swan and Combs found support for their modified two-factor theory. Leavitt (1977), however, has failed to find support for the two-factor hypothesis, and Maddox (1981) found only mixed support for the two-factor notion.

These findings indicate a need for clarifying research to identify underlying dimensionality differences. Future research might focus more on identifying the conditions under which consumer satisfaction is unidimensional and when it is bi- or multidimensional. The dimensionality issue is important since it has several implications for marketing theory and practice. If consumer satisfaction is a single factor, the often-stated goal of maximizing consumer satisfaction would be appropriate, and short, global scales may be preferred for CS measurement. If satisfaction and dissatisfaction are independent concepts, managers need to pursue two goals simultaneously: i.e., maximization of satisfaction and minimization of dissatisfaction. In this case, comprehensive scales, including items assessing each of the dimensions, are preferable to measure consumer satisfaction/dissatisfaction.

Issues in Definition and Measurement

Need for A Clearer Conceptualization

For the field of consumer satisfaction to develop further, a clear definition of consumer satisfaction is needed. Several questions may be raised on this issue. Is consumer satisfaction a global evaluation, a component evaluation, or a global one constructed on the basis of component evaluations? Is consumer satisfaction directed toward a product, a purchase decision process, or a consumption experience? What does consumer satisfaction mean to consumers? For example, satisfaction may mean minimum acceptability to some consumers, but mean near perfection to others. Before more studies are done, an effort should be made to clarify the concept of consumer satisfaction.

Discriminant Validity of CS

Another issue that needs further attention is whether or not consumer satisfaction is conceptually distinct from other concepts such as attitudes, product performance, and emotions. Let us first consider the relationship between attitude and satisfaction. A few researchers have looked at consumer satisfaction as an attitude; "Given that attitude and satisfaction are both evaluative responses to products, it is not clear whether there are any substantial differences between the two. In fact, it may be more parsimonious to consider satisfaction measures as post-consumption attitude measures." (LaTour and Peat 1979, p. 434), and "Consumer satisfaction is an attitude in the sense that it is an evaluative orientation which can be measured. It is a special kind of attitude because by definition it cannot exist prior to the purchase or consumption of the attitude object" (Czepiel and Rosenberg 1977, p. 93).

However, several studies show that satisfaction is conceptually different from attitude (Oliver 1980a, 1981; Westbrook and Reilly 1983; Wilton and Tse 1983). Oliver (1981) distinguished the two concepts with the following theoretical arguments. According to Oliver, consumer satisfaction is related to disconfirmation as a central concept (which is in turn a function of surprise), relatively transient, and consumption-specific. In contrast, attitude is a consumers' relatively enduring affect toward an object or experience and does not involve surprise as a central concept. Attitude is therefore measured in terms more general to a product or experience and less situationally oriented. Westbrook and Oliver (1981) argued that satisfaction is an evaluation of the totality of the purchase situation relative to expectations, whereas attitude is a liking for the product which lacks the element of comparison. Thus, it is expected that satisfaction and attitude diverge especially when expectations and product performance differ (i.e., disconfirmation).

Oliver's (1980a) empirical work supports this distinction in that satisfaction was found to precede and influence post-purchase attitude in a path-analytic model. Wilton and Tse (1983) also showed empirically that satisfaction and attitude are separate by analyzing their relationships with other variables. The underlying argument is that if there is no difference between the two constructs, they should have the same determinants and consequences. In particular, satisfaction

and attitude differed in their ability to explain the attribution process and compensatory behaviors. Also, the analyses of consequences indicated a clear distinction between the two constructs.

Many studies have used product performance ratings as a proxy for consumer satisfaction (e.g., Anderson, 1973; Cardozo, 1965; Olshavsky and Miller 1972; Olson and Dover 1976). Though high correlations are often found between satisfaction and performance ratings (Churchill and Surprenant 1982; Trawick and Swan 1980), we should distinguish consumer satisfaction from performance ratings. Swan and Combs (1976) conceptually distinguished the two concepts and examined the effect of performance on consumer satisfaction. Churchill and Surprenant (1982) also showed that measures of satisfaction and performance did have discriminant validity, suggesting that they are two separate concepts. See also Oliver and Desarbo (1988) and Tse and Wilton (1988).

Satisfaction is also not an emotion itself, but has been suggested to be the evaluation of an emotion (Hunt 1977). It is not just the pleasantness of a consumption experience, but the evaluation that the experience is as pleasurable as it was supposed or expected to be. For example, one could have a pleasant experience, but one would still feel dissatisfied if it is below one's expectations. Thus, it is possible to get dissatisfaction without having a negative emotion.

In sum, existing evidence tends to suggest that consumer satisfaction is different from, though similar or related to, other concepts such as attitudes, product performance, and emotions. But studies are ambiguous on this issue. Consumer satisfaction can be investigated separately only after it is shown to be distinct from other concepts. Therefore, it is necessary to clearly show the discriminant validity of consumer satisfaction in the framework of consumer behavior.

Factor Structure of CS

Further research is also needed on determining the factor structure of consumer satisfaction. Is consumer satisfaction unidimensional or multidimensional? Or under what conditions is consumer satisfaction multidimensional? If consumer satisfaction is bidimensional with one positive (satisfaction) factor and one negative (dissatisfaction) factor, what is the relative importance of each

factor? Will the relative importance of each factor differ across consumers or product types?

These questions are relevant to understanding the structure of consumer satisfaction.

Measure Validation

Few studies have examined the construct validity of consumer satisfaction (cf. Oliver and Westbrook 1982; Westbrook 1980b; Westbrook and Oliver 1981). Although many of the multi-item scales have shown promising results, they need further validation. Existing studies differ in the scales used to assess consumer satisfaction, timing of assessment, methods of contacting respondents (in-person, mail, or phone), sources of evaluation (consumer initiated, or firm initiated), and the extent to which non-responses are pursued (no, some, or considerable follow-up). For example, consumer data are collected by firms through two primary channels. In the first, consumer responses are solicited as part of marketing research, which is initiated by the firms. In the second form, consumers might voluntarily contact the organization with messages of complaint, compliment, or information, which can be called "consumer-initiated" communication (Ross and Oliver 1984). Ross and Oliver (1984) showed that the two types of data have systematic differences on a number of important dimensions. This finding suggests that the method of data collection might affect the observed relationships among variables.

The differences in results of the studies might have been due to the differences in these methods. Thus, the influence of a specific method must be controlled for in a consumer satisfaction study. Evidence suggests that employing a common method elevates the estimates for the path coefficients (Tse and Wilton 1988). It would therefore be important to assess the observed relationships by taking into consideration the shared method variance. Structural equation modeling (e.g., via LISREL) can be helpful for examining the amount of variance which is due to various methods and measurement errors. Alternatively, experimental methods can be employed to force independence across predictors (Oliver and Desarbo 1988; Wilton and Tse 1983). Also, structural equation modeling can be combined with experimental methods (Bagozzi and Yi 1989).

In order to rigorously test the validity of consumer satisfaction scales, we need measures that rely on dissimilar methods; for example, we should not rely exclusively on self-reports. Scales are needed that are based on other unobtrusive methods such as archive records. Using less structured methods of measurement such as open-ended questions may also be helpful (Westbrook and Oliver 1981). To the extent that consumers consider who will see the data and how their responses will affect the future practices or products of the firms, consumer responses are likely to be biased. Few studies have examined the effect of method variance on consumer satisfaction measures. Such a study would be helpful for comparing the results of previous studies based on different methods.

It is also important to examine such properties as response interval sizes, factor purity, response skewness and sensitivity, since differences between findings are often due to such factors (e.g., Tse and Wilton 1988). A frequent criticism in measuring consumer satisfaction is that the baseline response is too high (Westbrook and Reilly 1983). Lack of variability in response can cause problems in statistical analysis as well as in theoretical analysis. These problems include:

- (1) The face validity of the data may be impaired, especially when other indicators (e.g., complaints or sales decrease) suggest different things.
- (2) Statistical analysis may become spurious because of the lack of variability, which results in a non-normal distribution.
- (3) A ceiling effect might be introduced so that the scales are insufficiently sensitive to detect variations in consumer satisfaction.

A review of the literature reveals that the distribution of some consumer satisfaction scores suggests a lack of variability. For example, in Westbrook and Newman's (1978) study, approximately 60% of buyers gave a 0-1 interval response, but only less than 10% gave a 4-10 interval response on the 0-10 scale. In fact, there was not a single response for the 9-10 interval, and the mean response was 1.49 out of 10. These results indicate that there might have been a clumping of responses.

In future studies, appropriate measures should be taken in order to maximize variability and avoid clumping. These might include employing the scales that cover various aspects of consumer satisfaction, using items with multiple response alternatives, compiling composite scores, and

reducing reactivity. However, one should not overdo such measures so as not to produce artificial variability.

Need for a Common Scale

It is imperative to develop a common scale for the measurement of consumer satisfaction for valid comparisons across studies. Especially for national monitoring of consumer satisfaction, one may need to aggregate consumer satisfaction measures over time or across products, firms, or industries. Such developments would aid in the advancement of the area of consumer satisfaction.

ANTECEDENTS OF CS

Key Variables

Some studies have examined demographic or socio-psychological characteristics of consumers as determinants of consumer satisfaction (e.g., Mason and Himes 1973; Pfaff 1972; Pickle and Bruce 1972; Westbrook and Newman 1978). Consumer satisfaction has been found to increase with age (Pickle and Bruce 1972) and personal competence (Westbrook and Newman 1978), and to decrease with education (Pickle and Bruce 1972) and total family income (Mason and Himes 1973). There is also evidence that consumer satisfaction is related to race (Pfaff 1972) and marital status (Mason and Himes 1973). However, other investigations fail to find such relationships with age (Mason and Himes 1973) or education (Gronhaug 1977). Overall, support for relationships between consumer satisfaction and these factors seems to be weak (Westbrook and Newman 1978).

Other studies have focused on post-purchase evaluation of product performance by relating it to cognitive processes such as confirmation or disconfirmation of expectations (Anderson 1973; Cardozo 1965; Cohen and Goldberg 1970; Deighton 1984; Hoch and Ha 1986; Oliver 1976,1977; Olshavsky and Miller 1972; Olson and Dover 1976,1979). In these studies, expectation (or some other comparison standards) and confirmation/disconfirmation have consistently been found to be key variables affecting evaluation of product performance. To date, this approach has been more fruitful than attempts to find demographic factors and appears to be promising.

It has been found that raising expectations may enhance consumer ratings of product performance (Anderson 1973; Olshavsky and Miller 1972). However, the effects of expectations on consumer satisfaction seem to be more complicated than for perceived product performance. While raising expectations about a product may enhance perceived product performance, it may also increase the magnitude of disconfirmation.¹ Thus, raising consumer expectations will yield both an increase (due to the increase in perceived product performance) and a decrease in consumer satisfaction (due to the increase in disconfirmation).

We can conceptually distinguish between perceived product performance and objective product performance. Objective performance of a product is the actual level of product performance which is assumed to be constant across consumers. As a result, only one level of objective performance exists for a product. However, perceptions of product performance may vary across consumers, depending upon their expectations. That is, several different levels of perceived performance may exist among consumers for a product. Therefore, there are two types of disconfirmation, which is defined as the disparity between expectations and performance, depending upon the type of performance. In this paper, the discrepancy between expectations and objective performance will be called “objective disconfirmation,” whereas the discrepancy between expectations and perceived performance will be referred to as “subjective disconfirmation.” See Oliver and Bearden (1985) and Swan and Trawick (1981) for more discussion on these concepts. Figure 1 illustrates the relationships among these variables.²

Other studies have sought to find the determinants of consumer satisfaction per se (Bearden and Teel 1983; Churchill and Surprenant 1982; Fisk and Young 1985; Kourilsky and Murray 1981; LaTour and Peat 1979, 1980; Oliver 1980a, 1981; Oliver and Bearden 1983; Oliver and Linda 1981; Swan and Martin 1981; Swan and Trawick 1981; Westbrook 1980a, b; Westbrook and Reilly 1983). Key variables that have been found to affect consumer satisfaction include expectation, disconfirmation, perceived performance and prior attitudes. Figure 2 clarifies the sequence of these relationships.

Figures 1 & 2 here

Many studies have investigated the antecedents of consumer satisfaction. Next we will examine several theories that have guided these studies rather than reviewing each study. We will distinguish between the research focusing primarily on product performance and the research examining consumer satisfaction. However, they are closely related within the overall consumer satisfaction framework in that perceived performance is an important mediator of consumer satisfaction. Therefore, they are reviewed together in this paper.

Studies of Product Performance

In this section we review several theories that have been suggested to explain expectation and disconfirmation effects on perceived product performance. They differ in predicting the effects of expectations and disconfirmation, and in specifying the conditions under which the effects are likely to occur. Table 3 summarizes the predictions and the moderating conditions for each theory (see also Anderson 1973; Oliver 1980a). Table 4 provides a summary of the results from selected studies that have empirically tested these theories.

Tables 3 and 4 about here

Contrast Theory

The contrast theory presumes that when product expectations are not matched by actual performance, the contrast between expectation and outcome or the surprise effect will cause the consumer to exaggerate the disparity (Engel and Blackwell 1982; Howard and Sheth 1969; Cardozo 1965). As a result, individuals may shift their evaluations away from expectations if those expectations are inconsistent with reality. According to this theory, an understatement of product performance will lead to a perceived performance higher than an actual performance, whereas overstatement will lead to perceived performance lower than an objective performance. That is, perceptions of product performance are enhanced with positive disconfirmation, and lowered by negative disconfirmation. Thus, perceived performance is primarily a function of

disconfirmation. Here disconfirmation is defined as the performance minus expectation so that positive disconfirmation occurs when performance exceeds expectation.

Cardozo (1965) found a contrast effect in a study with ballpoint pens. Catalogs with different (low or high quality) products were shown to the subjects in order to create low and high expectations about a pen. Then the subjects evaluated the quality of a different pen compared to the pen shown in the catalog. Subjects who received a pen of expected quality rated the product higher than a group expecting a higher quality. That is, when the expectation was negatively disconfirmed, the product quality was evaluated lower than when confirmed. This finding is consistent with the contrast theory. However, the anchors for dependent measures differed between high and low expectation groups. The dependent measure (evaluation of the focal product as compared to the product in the catalog) had the anchor of high quality products for the high expectation group, but low quality products for the low expectation group. As a consequence, it is difficult to compare these measures across the two groups (cf. Olshavsky and Miller 1972).

Cohen and Goldberg (1970) found that negative disconfirmation has a negative effect on post-consumption preference, confirming Cardozo's findings. But in this study, expectations were not manipulated, and no measures of disconfirmation were taken. Neither study made a comparison with a control group without expectations, causing difficulty in interpreting the effect as a contrast effect. Furthermore, the effects of positive disconfirmation have not been examined in these studies. Some researchers have suggested moderating variables which may be useful in determining whether or not contrast effects occur. These include effort, involvement with the product, effort expended, and general ambiguity of product judgment (Olson and Dover 1976).

Assimilation-Contrast Theory

The assimilation-contrast theory maintains that there are latitudes of acceptance and rejection in one's perceptions (Sherif and Hovland 1961). If the disparity between expectation and performance is small enough to fall into the consumers' latitude of acceptance, one will tend to assimilate the product rating toward one's expectations. That is, high expectations about product quality lead to more favorable ratings, whereas low expectations lead to less favorable ratings.

However, if the discrepancy between expectations and performance is so large as to fall into the zone of rejection, then a contrast effect occurs and the consumer magnifies the perceived disparity (Anderson 1973). According to this theory, promotional messages need to overstate product performance slightly within the range of acceptance, but not so much as to induce a contrast effect. In sum, the effect of a disconfirmed expectation on product ratings varies as a function of the magnitude of disconfirmation. Assimilation effects occur for moderate disconfirmation, whereas contrast effects result for large disconfirmation.

Many studies have found that a consumer's perception of product performance is assimilated toward expectations, supporting the assimilation effect (Anderson 1973; Olshavsky and Miller 1972; Olson and Dover 1976). Olshavsky and Miller (1972) have investigated the effects on product ratings of both understatement and overstatement of product quality. The results support the assimilation theory in that overstatement leads to more favorable ratings, while understatement yields less favorable ratings of the same product. That is, judgment of product performance seems to be displaced toward the manipulated expectations, whether positively or negatively disconfirmed.

Anderson (1973) shows that consumers' product ratings are assimilated toward expectations that are manipulated. In this study the manipulations are successful, and a no-expectancy group as well as an accurate-expectancy group is used as a control group. This study has examined both positive and negative disconfirmation, whereas many other studies have looked only at negative disconfirmation. The contrast effect is reported for extremely high expectancy, since the ratings are lower in the extremely high expectation group than in the high expectation group. This is not a true contrast effect, however, as these ratings are still higher than those observed in the no-expectancy group. Thus, there is still an assimilation effect on these ratings.

Although the assimilation-contrast theory can explain negative or positive effects of disconfirmed expectations as a function of disconfirmation magnitude, it is difficult to pinpoint the magnitude necessary for the contrast effect to occur. Many studies have failed to find the contrast effect at all (e.g., Anderson 1973). This finding might be explained by the fact that consumer

expectations were not created sufficiently high to result in disconfirmation which was large enough to create a contrast effect. Or the contrast effect may occur only under certain conditions. The assimilation-contrast theory emphasizes the importance of ego-involvement³ in determining the effect (Sherif and Hovland 1961). In general, a person can be said to have a high amount of ego involvement with a product when the product has intrinsic importance, personal meaning, or significant consequences. Highly involved persons have larger latitudes of rejection than less involved individuals, and they show greater assimilation and contrast effects. Few studies have examined the role of involvement in perception of product performance.

Dissonance Theory

According to the cognitive dissonance theory, disconfirmed expectations create a state of dissonance or psychological discomfort (Festinger 1957). When an individual receives two ideas which are dissonant, one attempts to reduce this mental discomfort by changing or distorting one or both of cognitions to make them more consonant. As applied to product evaluation, if a disparity exists between product expectations and product performance, consumers may have psychological tension and try to reduce it by changing their perception of the product. If this proposition is valid, promotional messages should substantially raise expectations above product performance to obtain a higher product evaluation.

Several studies have found support for the dissonance theory (e.g., Cardozo 1965; Olshavsky and Miller 1972; Olson and Dover 1979). It may be noted that the dissonance theory and the assimilation theory predict the same effect of expectations. Olson and Dover (1979) found that perceptions of product attributes are affected by expectations, and suggested the dissonance theory as an explanation. However, Cohen and Goldberg (1970) failed to find this dissonance effect.

The problem with this theory is that it is difficult to demonstrate that disconfirmation does indeed arouse dissonance. For dissonance to occur, there should be 1) firm conviction or volition 2) public and irrevocable commitment to the product 3) possibility of unequivocal disconfirmation 4) occurrence of disconfirmation (Festinger 1957). It is doubtful whether these conditions are met in typical experiments where inconsequential expectations are induced by experimenter-provided

product information, little public commitment made, and rather equivocal evidence then offered. It is not clear whether subjects were given any choice in some studies. It should be noted at this point that unambiguous evidence of disconfirmation is one necessary condition for the dissonance effect to occur.

Generalized Negativity Theory

Any disconfirmation of expectations will be perceived as less pleasant than confirmation, according to the generalized negativity theory (Carlsmith and Aronson 1963). Carlsmith and Aronson (1963) show that disconfirmation of expectations results in a hedonically negative state which is generalized to objects in the environment. If consumers expect a particular performance from a product, but a discrepant performance occurs, they will judge the product less favorably than if they had no prior expectations. Either positive or negative disconfirmation lowers product evaluation. That is, affective judgments of a product are inverse functions of the magnitude (not direction) of disconfirmation. If this theory is valid, promotion should seek to create expectations that are consistent with actual product performance .

Oliver (1976) provided support for this theory by showing that positive or negative disconfirmation leads to an unfavorable evaluation of a product. However, this result was observed only when ego-involvement, commitment and interest were high. This result is consistent with the finding that hedonic reactions were found in the presence of strong expectations (Weaver and Brickman 1974), which are likely to produce involvement, commitment, and interest. In sum, it appears to be only under certain conditions that the generalized negativity theory holds.

Hypothesis Testing Theory

Deighton (1984) suggests a purely cognitively based explanation for the expectation effect on product rating with a two-step model of advertising's influence. First, advertising creates expectations, which serve as a hypothesis for consumers. Consumers tend to confirm their expectations when exposed to product information such as product experience or evidence. Results of this study support the hypothesized bias of consumers to confirm their expectations.

Many studies in social cognition have also demonstrated this confirmatory tendency in inference formation (Gilovich 1981; Lord, Ross, and Lepper 1979).

Hoch and Ha (1986) show that the expectation effect exists, but that ambiguity of evidence (or product experience) moderates the effect. When the evidence is unambiguous, product ratings are not affected by expectations. Yet, when evidence is ambiguous, subjects use an assimilation-like processing of evidence and their product ratings are affected by expectations.

We have examined five theories that have been suggested as explanations for confirmation/disconfirmation of expectation effects on perceived product performance. As Table 3 summarizes, the theories make different predictions as to the effects of expectations and disconfirmation. For example, the assimilation theory predicts that raising expectations will enhance perceived product performance, whereas the contrast theory predicts that it would undermine the perceptions of product performance. Even if some of the theories predict the same pattern of expectation effects, they differ in designating the conditions under which the effects will occur. For instance, ambiguity of evidence is expected to increase the expectation effect under the hypothesis testing theory, which contradicts the dissonance theory's prediction that it will decrease the expectation effect.

Understanding of the conditions moderating these effects has important implications for promotions. Since product evaluations are a function of expectations, and promotions influence consumers' expectations about the product, the effects of expectations and disconfirmation are crucial to answering the following questions. What should be the level of product performance claimed in promotions? Have promotional activities created appropriate levels of consumer expectations? For example, creating unrealistic expectations by exaggerated promotions might result in lowered product evaluations.

Studies of CS

Marketing researchers have argued that product performance exceeding standards leads to satisfaction, while performance below the standards leads to dissatisfaction (Engel and Blackwell 1982; Howard and Sheth 1969). This is consistent with findings in the areas of job, life, and

patient satisfaction in that satisfaction is a function of certain standards and perceived discrepancy from the standards (e.g., Andrews and Withey 1976; Campbell, Converse and Rodgers 1976; Ilgen 1971; Weaver and Brickman 1974). The effects of comparison standard and discrepancy perception are found to be additive, which implicitly assumes that they are unrelated. Many studies of consumer satisfaction basically adopt this confirmation/disconfirmation paradigm, but they differ in the choice of standards. The studies are reviewed here according to the comparison standard used.

Expectation-Disconfirmation Paradigm

According to the expectation-disconfirmation model suggested in the consumer satisfaction literature (e.g., Oliver 1977, 1980a, 1981), consumers judge satisfaction with a product in comparison with their expectations about the product performance.⁴ If the performance is above the (predictive) expectations (i.e., if positive disconfirmation occurs), increases in satisfaction are expected. If the performance is below expectations (i.e., if negative disconfirmation occurs), increases in dissatisfaction are expected. Disconfirmation is thus expected to affect consumer satisfaction. Expectations are also hypothesized to influence consumer satisfaction (see Oliver and Desarbo 1988). In sum, consumer satisfaction is hypothesized primarily as a function of expectations and disconfirmation, with expectations used as standards of comparison.

Theoretical support for this model comes from the adaptation level theory positing that one perceives stimuli only in relation to an adapted standard (Helson 1964). The standard is a function of perceptions of the stimulus, the context, and the organism. Once created, the adaptation level serves to guide subsequent evaluations in that positive and negative deviations will remain in the general vicinity of one's original position. Oliver (1980a) applied this theory to the study of consumer satisfaction by arguing that expectations about product performance can be seen as an adaptation level. He also cited the literature suggesting that expectations create a frame of reference for comparative judgments.

Oliver (1980a) found that disconfirmation is positively related to consumer satisfaction in a study of flu shots. Positive disconfirmation (perceived performance above the expectation)

increased consumer satisfaction, while negative disconfirmation (perceived performance below the expectation) decreased consumer satisfaction. The effects of expectations were somewhat mixed. Expectation was found to be positively related to consumer satisfaction in one subsample (i.e., a student sample). In the other subsample (i.e., a resident sample), however, expectation was not related to consumer satisfaction. Attitudes were also hypothesized to have a positive effect on consumer satisfaction, which was observed only for the student sample.

Bearden and Teel (1983) found support for the expectation-disconfirmation model, and also suggested the adaptation level theory as an explanation. Both expectation and disconfirmation were found to have significant effects on consumer satisfaction with auto repair service. Bearden and Teel used disconfirmation as a moderator variable, but obtained ambiguous results. However, Oliver and Bearden (1983) found that expectations do not have any significant effects on consumer satisfaction, though the effect of disconfirmation was found.

In summary, there are mixed findings as to the antecedents of consumer satisfaction. Consumer satisfaction is found to be directly affected by expectations in some studies (Bearden and Teel 1983; Churchill and Surprenant 1982 “non-durable products”; Oliver 1980a; Oliver and Linda 1981; Swan and Trawick 1981; Westbrook and Reilly 1983), but not in other studies (Churchill and Surprenant 1982 “durable products”; Oliver and Bearden 1983). Most studies found that disconfirmation is a significant predictor of consumer satisfaction, but Churchill and Surprenant (1982) showed that neither disconfirmation nor expectation had any effect on consumer satisfaction with durables, and that only perceived performance had a significant effect on consumer satisfaction. The effect of attitudes was found in some studies (e.g., Oliver 1980a) but not in others (e.g., Bearden and Teel 1983; Oliver and Bearden 1983).

These findings suggest that the effects of expectation, disconfirmation, performance, and attitudes on consumer satisfaction may be more complex than hypothesized by the original expectation-disconfirmation model. Further studies should attempt to determine the moderating conditions of these effects, and provide a framework that could integrate the mixed findings.

Comparison Level Theory

LaTour and Peat (1979) criticized the confirmation-of-expectation paradigm because the approach assumes that the primary determinant of consumer satisfaction is the predictive expectations created by manufacturers, test reports, or unspecified sources. They argued that this assumption ignores other sources of expectations such as consumers' past experience, and other consumers' experience with similar products. LaTour and Peat proposed a modification of the comparison level theory (Thibaut and Kelley 1959). They argued that there are three basic determinants of comparison level for a product: (1) consumers' prior experience with similar products, (2) situationally-produced expectations (e.g., those created through manufacturers' advertising or retailers' promotional efforts), and (3) the experience of other consumers who serve as referent persons. In contrast, many studies adopting an expectation-disconfirmation paradigm have used only situationally-produced expectations as standards (Olshavsky and Miller 1972; Anderson 1973; Oliver 1976, 1977, 1980a).

LaTour and Peat (1980) conducted a field experiment to test the comparison level theory. They assessed the effects of prior experience, situationally-induced expectation, and other consumers' experience on consumer satisfaction. They found that situationally-induced expectations had little effect on consumer satisfaction, whereas prior experience expectations were the major determinant of consumer satisfaction. This finding suggests that consumers may give less weight to manufacturer-provided information when they have personal experience and relevant information about other consumers' experience.

Swan and Martin (1981) also found support for the comparison level explanation. Satisfaction with an automobile was not related to the disconfirmation of (predictive) expectations but to the disconfirmation of the comparison level. These findings suggest that different sources of expectations might be used by consumers. It will be interesting to investigate what source of expectations are used under what conditions and what is the relative importance of each source in forming overall expectations.

Equity Theory

Equity theory has also been applied to the study of consumer satisfaction (e.g., Fisk and Young 1985; Mowen and Grove 1983; Swan and Mercer 1982; Swan and Oliver 1985). The equity theory asserts that individuals compare their outcome/input ratios with those of others with whom they are in a relationship (e.g., Adams 1963). The basis for comparison is the degree of equity which consumers perceive between what they have received and what the other person has received relative to their respective inputs. In the context of consumer satisfaction, the marketer's net gain (outcome/input) was often compared to the consumer's net gain (outcome/input). Satisfaction is thought to exist when an individual perceives that the outcome-to-input ratios are fair.

Fisk and Young (1985) tested the equity theory in a consumer satisfaction context. Disconfirmation of equity expectations was experimentally manipulated as a means of creating consumer dissatisfaction. In particular, expectations for waiting time and price of an airline service were confirmed or disconfirmed in a factorial design. Results support the hypothesis that inequity results in dissatisfaction and reduces the intention to repurchase the product. That is, inequitable waiting and pricing led to consumer dissatisfaction. This study is important in that it develops a conceptual synthesis between equity and satisfaction.

In a study of new automobile buyers' satisfaction with their salesperson, Swan and Oliver (1985) found that satisfaction was determined by both inequity and disconfirmation. Both variables had independent, additive effects on satisfaction. This finding suggests that the equity theory might be complementary to the disconfirmation effects (cf. Swan and Mercer 1982). The equity theory would predict that people feel dissatisfaction if they experience either negative or positive inequity. The results, however, showed that dissatisfaction occurred only at the high level of negative inequity. Positive inequity did not produce dissatisfaction, contrary to equity theory predictions. Positive inequity appears to be perceived as fair or satisfactory by consumers. In sum, equity theory can be usefully adopted for explaining consumer satisfaction, but it appears to need some modifications.

Norms as Comparison Standards

Many researchers have suggested the use of norms as a comparison standard, although they have used slightly different labels. These include normative deficit (Morris 1977), ideal and deserved expectations (Miller 1977; Sirgy 1984), normative expectation (Summers and Granbois 1977) and desired expectation (Swan, Trawick and Carroll 1982). These standards refer to what “should be” the performance of the product, whereas the predictive expectations in the basic confirmation paradigm mean what “will be” the likely product performance.

Woodruff, Cadotte and Jenkins (1983) suggested experience-based norms as a standard for comparison. Under the expectation-confirmation model, expectations are based on the consumer's experience with the focal brand. Woodruff, Cadotte and Jenkins expanded the base of experience to include other brands. For example, a consumer's experience may be with a brand unit, other units of the same brand, other similar brands, or a whole class of products competing for the same need. These experiences may cause consumers to form norms or standards that establish what a focal brand *should* be able to achieve.

Cadotte, Woodruff, and Jenkins (1987) provided a test of the experience-based norms construct as a comparison standard. Pre- and post-usage measures were obtained from subjects in three different use situations. They compared three alternative types of comparison standards: 1) the product type norm, 2) the best brand norm, and 3) brand expectations. The product type norm refers to the typical or average performance of all brands in the product category. The best brand norm measures the performance of the best brand in the product category. Finally, brand expectation is expectations about the focal brand.

The product norm model and the best brand norm model were consistently better than the brand expectation model in explaining consumer satisfaction. This finding suggests that comparison standards seem to be based on one's total experience with the focal and related brands. In addition to brand expectations, the best brand norm and product norm are used as standards for evaluating focal brand performance. Results also showed that in two of three situations a different standard

explained the data better, suggesting that the situation is an important factor in determining what comparison standard is used.

Value-Percept Disparity Theory

Westbrook and Reilly (1983) propose a value-percept disparity theory as an alternative to the expectation-confirmation model. A major problem with the expectation-confirmation model, according to them, is that it does not differentiate between cognitive and evaluative notions. What is *expected* from a product may not correspond to what is *desired or valued* from a product. For instance, product breakdowns and improper functioning produce dissatisfaction, regardless of whether they are expected or not. When values and expectations are manipulated separately, values rather than expectations are found to determine satisfaction (Locke 1967). That is, success in relation to aspirations or values (as opposed to expectations) seems primarily responsible for satisfaction. Another problem with the disconfirmation of expectations model is the assumption that consumer satisfaction is limited to those beliefs for which expectations have been formulated prior to purchase. In fact, consumers seem to show satisfaction or dissatisfaction for aspects where expectations never existed.

The value-percept disparity theory asserts that satisfaction is an emotional response triggered by a cognitive-evaluative process in which the perceptions of an object are compared to one's values (needs, wants, or desires). The greater the disparity between perceptions of the product and values, the greater the dissatisfaction predicted by this theory. Conversely, the smaller the value-percept disparity, the greater the satisfaction. This theory may be seen as a special type of norm-based theory (e.g., Cadotte, Woodruff, and Jenkins 1987).

Westbrook and Reilly (1983) have compared the expectation-confirmation model with the value-percept disparity model. The value-percept disparity was defined as the extent to which the product provides the features and performance characteristics needed or desired. It was measured on a 7-point semantic differential scale anchored with "provides far less than my needs" and "provides exactly what I need." They have found that neither the expectation-disconfirmation nor the value-percept model was sufficient on its own. Rather, both constructs were needed in

explaining consumer satisfaction. Disconfirmation had stronger effects on satisfaction than value-percept disparity (the standardized paths of .53 versus .18). However, the result was less than conclusive, since only a single indicator of value-percept disparity was used in this study. It is possible that the sole indicator did not in fact adequately represent the construct, thereby attenuating the estimated effect of value-percept disparity. Development of validated multiple measures of the construct should be a priority for future research in this area.

Issues in Studies of CS Determinants

Need for Agreed-upon Conceptualizations of Key Concepts

A lack of agreed-upon definitions for key concepts such as “expectations” and “disconfirmation” is one of the problems confronting studies of consumer satisfaction. As a consequence, direct comparison of the results of these studies is difficult at best, as the studies employed different conceptualizations and operationalizations of the key constructs in consumer satisfaction. Let us examine some of the different definitions of the key concepts.

A variety of conceptualizations of “expectation” exist in the literature. Some studies use expectation to mean “pre-consumption beliefs about the overall performance of the product, created by manufacturer’s claims or product information.” These include anticipated performance (Anderson 1973; Churchill and Surprenant 1982; Oliver 1977; Westbrook and Reilly 1983) and anticipated satisfaction from the use of a product (Swan and Martin 1981). Typically, the expectation is measured on a semantic differential scale anchored with “not very good” and “excellent” (Churchill and Surprenant 1982).

Others define expectations as “consumers’ beliefs (B_i) about the levels of attributes possessed by a product” and use individual beliefs (i.e., B_i) or the sum of beliefs (i.e., $\sum B_i$) as the measure of expectations (Bearden and Teel 1983; Churchill and Surprenant 1982; Oliver and Linda 1981; Olson and Dover 1976, 1979; Westbrook and Reilly 1983). In Oliver’s (1979, 1980a, 1981) model, however, the concept of expectation also includes an evaluation (a_i) of outcomes, and the sum of belief-times-evaluation products (i.e., $\sum B_i a_i$) is used as a measure (Oliver and Bearden 1983); that is, expectancy value attitude is used as a measure of expectations (Fishbein and Ajzen

1975). Conceptually, the former measure seems more appropriate since expectations refer to probabilities about the product performance. However, Swan and Trawick (1981) found high correlations between these two measures of expectations (i.e., $\sum B_i$ and $\sum B_i a_i$). See Oliver and Winer (1987) for a nice review of consumer expectations.

Definitions and measures of “disconfirmation” also differ widely, but we can find three types; objective disconfirmation and two types of subjective disconfirmation (perceived disconfirmation and inferred disconfirmation). *Objective disconfirmation* is the objective discrepancy between expectation and objective performance (e.g., Cardozo 1965; Cohen and Goldberg 1970; Ilgen 1971; Olshavsky and Miller 1972; Weaver and Brickman 1974). Here, the objective performance is the product performance level assumed to be common to all individuals. It is typically the level that is known to the researcher a priori or manipulated by the researcher. Therefore, the objective disconfirmation is obtained by the discrepancy between the objective performance and expectations. It has the advantage of ease of measurement, but it ignores the possibility that individuals may perceive the product performance differently, and thus perceive the discrepancy differently. The objective disconfirmation approach seems to be less appropriate as a predictor of consumer satisfaction which is a subjective, psychological state.

On the other hand, subjective measures of disconfirmation are based on the difference between expectations and the subjective product performance as perceived differently by individuals (see Figure 1). Depending upon how the discrepancy is measured, there are two types of subjective disconfirmation: inferred disconfirmation and perceived disconfirmation.

Inferred disconfirmation is the discrepancy calculated as the difference between expectations (or some other comparison standards) and product performance. Disconfirmation is therefore inferred from consumer responses by the researchers. It is frequently modeled as the result of the difference between pre-consumption ratings (expectation) and post-consumption ratings (perceived performance) of the product. It has been measured either at the overall level or at the attribute-specific level (LaTour and Peat 1979; Oliver 1977, 1979; Oliver and Bearden 1985; Swan and Martin 1981; Swan and Trawick 1981; Trawick and Swan 1980).

Perceived disconfirmation represents a subjective evaluation of the discrepancy between product performance and expectations that is directly perceived by the consumer. It is frequently measured on a scale with end labels of “better-than expected” and “worse-than-expected” to a question asking how close the product comes to prior expectations (e.g., Bearden and Teel 1983; Churchill and Surprenant 1982; Oliver 1977, 1980a, 1981; Oliver and Bearden 1983, 1985; Oliver and Linda 1981; Swan and Trawick 1981; Westbrook 1980a; Westbrook and Oliver 1981; Westbrook and Reilly 1983; Tse and Wilton 1988). This can also be measured either at the overall product level or at the individual attribute level. However, studies indicate that measurement at the attribute level does not provide any improvement over the global level measurement (Oliver 1980b).

Inferred and perceived disconfirmation may appear to be measuring the same construct, but they are distinct for several reasons (Swan and Trawick 1981). Inferred disconfirmation is the perceived performance level minus expected performance level, whereas perceived disconfirmation is the perception of this discrepancy. For perceived disconfirmation, consumers would compare perceived performance to the recalled expectations, which may not match pre-consumption expectations because of cognitive dissonance, assimilation, or contrast (Oliver 1977). For example, if pre-consumption expectations are subjectively misperceived in a positive direction, then perceived disconfirmation will be relatively more favorable than inferred disconfirmation. Also, perceived disconfirmation may be sensitive not only to the difference between consumers' pre-ratings and post-ratings, but also to consumers' perception of the likelihood of and the evaluation of the product performance level (Swan and Trawick 1981). For example, a pleasant surprise may receive a very favorable perceived disconfirmation. Empirically, studies show that these two concepts are different. The correlations between perceived and inferred disconfirmation range from .17–.22 (Oliver 1980c), to .31 (Swan and Trawick 1981), to .50–.53 (Oliver and Bearden 1985), to .54 (Oliver 1977), and .83 (Trawick and Swan 1980).

Given these two types of subjective disconfirmation measures, a question might be: Which measure of disconfirmation is better? There seem to be several theoretical reasons for using

perceived disconfirmation rather than inferred disconfirmation measures. One problem with the inferred disconfirmation measure is that since the same scale is used twice, it could lead to a consistency bias in responses. Subjects are likely to give similar before- and after-consumption ratings if they are attempting to be consistent. A second problem is that a ceiling or floor effect might occur, which can cause difficulty in capturing the disconfirmation (Swan and Trawick 1981). Suppose an individual gave the highest score on the scale for expectation ratings prior to consumption. Then even if the product performs well above these expectations, the individual can give only the same score (i.e., the highest score on the scale) for perceived performance ratings. In such a case, the inferred disconfirmation, which is calculated by subtracting the post-consumption ratings from pre-consumption ratings, would be zero. That is, although positive disconfirmation exists in the consumer's mind (i.e., better product performance than expected), the disconfirmation score will be recorded as zero, indicating that the product performance just matched the expectations.

Another methodological problem with the inferred disconfirmation measure is lack of reliability, which is inherent in using any difference scores, as when researchers compare the pre-test scores and post-test scores in experimental studies (Lord 1963). The reliability of the difference score decreases as the variance of either measure decreases. The reliability of the difference score also decreases as the correlation between the two measures increases. Since the pre- and post-consumption ratings are highly correlated, the reliability of the difference (i.e., inferred disconfirmation) score is likely to be low (Prakash 1984). Also, if inferred disconfirmation, together with expectations and perceived performance, is used as a predictor of consumer satisfaction, the model will be overspecified since the inferred disconfirmation is determined entirely by the two constructs: expectations and performance. Perceived disconfirmation, as a distinct construct, is not an exact function of the two constructs, and using perceived disconfirmation can therefore avoid such overidentification problems.

The inferred disconfirmation approach is problematic especially when inferred disconfirmation is calculated as the difference between anticipated satisfaction and perceived satisfaction with the

more (less)-satisfied-than-expected scale. Disconfirmation is an independent variable in predicting or explaining consumer satisfaction, but its definition and measurement involve the dependent variable (i.e., satisfaction). There is therefore a circularity in using such a measure as a predictor.

Comparison of the assumptions underlying each approach seems to suggest some insights into their relative effectiveness. The inferred disconfirmation approach requires the assumption that consumers have formed expectations about the product and should be able to judge product performance, since it is measured as the algebraic difference between product performance and expectations. On the other hand, the perceived disconfirmation approach does not require such an assumption by focusing directly on the consumers' perceptions of the discrepancy as psychological processes. Consumers' perceptions of the discrepancy might be different from the subtractive function of product performance and expectations, as when their perceptions are distorted or biased. A fundamental question is: which disconfirmation is likely to play a role in the consumer's information processing. In this regard, perceived disconfirmation is more likely to be used by consumers in their judgments of evaluations.

Swan and Martin (1981) compared inferred and perceived disconfirmation measures in their predictive ability for consumer satisfaction. They found that consumer satisfaction is more sensitive to inferred disconfirmation than to perceived disconfirmation, which is inconsistent with what has been suggested. However, some caution is needed in interpreting this finding, since the result may be due to the unreliability of perceived disconfirmation measures. The perceived disconfirmation was measured on a single item, while the inferred disconfirmation was measured by five items. It is possible that the relation between consumer satisfaction and perceived disconfirmation is attenuated due to the excessive measurement error in the single item.

In fact, Tse and Wilton (1988) found that perceived disconfirmation yields a better prediction of consumer satisfaction than inferred disconfirmation even with a single measure ($r^2 = .73$ versus $.56$). A similar finding was obtained by Oliver and Bearden (1985). Hence, perceived disconfirmation was a better approach to model disconfirmation than inferred disconfirmation. In theory, satisfaction should be more closely related to perceived disconfirmation than to inferred

disconfirmation (Oliver and Bearden 1985; Swan and Trawick 1981). However, this issue should be the subject of more empirical research. In future studies comparing the two approaches, researchers need to control for methodological differences such as reliability.

Comparison Among Alternative Theories

Many consumer satisfaction researchers show that findings are consistent with predictions from a suggested theory, and proceed as if the suggested theory is proven. Yet, merely finding outcomes to be consistent with the predictions of a theory fails as a test of the theory if the outcomes could also have been predicted by alternative theories. For example, several theories such as dissonance, assimilation, hypothesis testing, and adaptation level predict the same expectation effects; that is, there will be a shift in consumer judgment toward expectations. As a result, we have various theories explaining the same phenomenon and have difficulty predicting precisely under what conditions the effect will occur. In general, studies of consumer satisfaction have lacked the perspective of considering a particular theory against alternative explanations (cf. Olson and Dover 1979). Fortunately, several recent studies provide such a perspective (e.g., Oliver and DeSarbo 1988; Tse and Wilton 1988).

Relationship between Expectation and Disconfirmation

Another issue concerns the relationship between expectation and disconfirmation. Oliver (1977; 1980a) claims that expectation and disconfirmation are unrelated and have additive effects, and this claim is supported by many studies (Linda and Oliver 1979; Oliver 1980a; Oliver and Linda 1981; Westbrook and Reilly 1983). However, there seems to be a relationship between the two, since disconfirmation is the discrepancy between the perceived performance and expectation. For example, if expectations are high, they are more likely to be disconfirmed. In the process of consumer satisfaction formation as illustrated in Figure 2, it was hypothesized that expectation is formed prior to disconfirmation and determines the level of disconfirmation. Some support for this claim comes from Churchill and Surprenant (1982) who found a significant relationship between expectation and disconfirmation for one product (i.e., plant), in that expectation has a negative effect on disconfirmation.

Bearden and Teel (1983) examined an interesting model of the relationship between expectation and disconfirmation. They hypothesized that expectation and disconfirmation may have interaction effects on satisfaction. By incorporating disconfirmation as a quasimoderator, disconfirmation was hypothesized to affect satisfaction directly by itself and indirectly through an interactive relationship with expectation. The path from this interactive variable to consumer satisfaction was significant for one sample, but not for another sample. Oliver and Desarbo (1988) found an interaction between expectation and disconfirmation. Although the results are inconclusive to date, the possibility of an interactive relationship seems worthy of further investigation.

Effects of Perceived Performance

Some researchers have claimed that perceived performance should be included as a predictor of consumer satisfaction together with expectations and disconfirmation (Churchill and Surprenant 1982; Oliver and Desarbo 1988; Tse and Wilton 1988). Churchill and Surprenant (1982) found that perceived performance had a direct impact on satisfaction judgments of a plant and a video disc player. In fact, for the video disc player, satisfaction was solely determined by the performance level; neither expectation nor disconfirmation affected satisfaction.

Tse and Wilton (1988) examined the role of perceived performance in consumer satisfaction formation with a tape recorder. The model with perceived performance outperformed other single predictor models with expectations or disconfirmation, and two-variable models with expectations and disconfirmation. In addition, perceived performance had indirect effects on consumer satisfaction through its influence on perceived disconfirmation. Thus, perceived performance seemed to have both direct and indirect effects (through its effect on disconfirmation) on satisfaction. Consumer satisfaction could be increased not only by minimizing disconfirmation, but also by increasing performance. Oliver and Desarbo (1988) also found that performance has a direct effect on satisfaction. Furthermore, their findings suggest that the relative impact of performance and disconfirmation may vary across individuals.

Many researchers of consumer satisfaction have focused on expectation and disconfirmation as key variables, and have ignored the effect of product performance except through its influence on

disconfirmation (for an exception, see Churchill and Surprenant 1982; Oliver and Desarbo 1988). That is, disconfirmation was hypothesized to mediate all the effects of product performance on satisfaction. However, the above findings suggest that the importance of performance should not be neglected by consumer satisfaction researchers and managers. Product performance per se has a direct impact on satisfaction and that direct impact can be quite important for certain product categories. It appears that the impact of perceived performance is important for durables and high involvement products. As the U. S. auto industry has learned, one should recognize the importance of product performance for consumer satisfaction (Churchill and Surprenant 1982).

Alternative Comparison Standards

As we have seen, several alternative comparison standards have been suggested as a predictor of consumer satisfaction: expectations, norms, equity, etc. Which comparison standard is most likely to influence consumer satisfaction? To answer this question, Tse and Wilton (1988) compared three types of comparison standards: expectation, ideal, and equity. Results indicated that expectations and ideals have significant effects on consumer satisfaction. Expectations had positive direct effects on consumer satisfaction, whereas ideals had negative indirect effects on satisfaction through its influence on perceived performance. However, equity failed to produce any direct or indirect effects on consumer satisfaction. The results were interpreted with an assimilation/contrast theory. Expectation as an anchor may tend to evoke an assimilation effect on the evaluation of the product, whereas ideal may evoke a contrast effect.

Cadotte, Woodruff, and Jenkins (1987) compared three alternative comparison standards using causal modeling. Experience-based norms such as the best brand norm and the product norm were found to be better predictors of consumer satisfaction, compared with brand expectations. But no one standard always provided the best explanation of the satisfaction process. Rather, comparison standards were likely to vary across situations, consistent with Churchill and Surprenant's (1982) suggestion that satisfaction processes differ across products (cf. Zinkan and Wallendorf 1985). Researchers need to examine under what situations one comparison standard performs better than others.

An alternative approach exists as to the use of comparison standards. It has been suggested that more than one comparison standard may be used in consumer satisfaction formation (Sirgy 1984; Wilton and Nicosia 1986). Tse and Wilton (1988) examined this possibility by assessing simultaneous effects of both expectations and ideals. The results indicated that the two types of comparison standards affected consumer satisfaction simultaneously, supporting the presence of multiple comparison standards. They also suggested the possibility that the post-consumption comparison can be seen as a continuous process involving different comparison standards over time. This idea is quite interesting, and it warrants further research with longitudinal observations. Another possibility is that consumers may form a standard that is a weighted composite of several standards (Cadotte, Woodruff, and Jenkins 1987). That is, multiple standards are combined to form a multidimensional standard, which can be used for evaluating the product performance. Research is needed to investigate this possibility.

More Focus on Affective Aspects Needed

Research on consumer satisfaction thus far has primarily examined cognitive variables such as expectations or disconfirmation. However, satisfaction may not be a solely cognitive phenomenon. Rather, satisfaction is likely to comprise an element of affect or feelings. Thus, consumer satisfaction should be influenced by other general states of affect concurrently experienced by the individual. The presence of positive or negative affect, unrelated to the product itself, may well influence the affect evoked by the evaluative process inherent in satisfaction formation. For example, satisfaction with the consumption experience might be associated with happy or sad events. Westbrook (1980a) examined the impact of intrapersonal affective variables on satisfaction. The findings suggested that satisfaction is partly a function of overall affective influences such as overall life satisfaction and consumer discontent, in addition to purchase-specific cognitive factors such as expectations or disconfirmation. Prakash (1985) surveyed the literature on mood states and suggested a conceptual framework of the interrelationships between mood states and consumer satisfaction. In field studies of automobile owners and cable television subscribers, Westbrook (1987) found that independent dimensions of positive and negative affect

exist in consumers' emotional responses and that both dimensions of affective responses are directly related to consumer satisfaction judgements, complaint behaviors, and word-of-mouth activities. More attention should be given to affective influences in consumer satisfaction processes in future research.

Methodological Issues

Two types of control groups are possible in experimental studies on the effects of expectation and disconfirmation: 1) a no-expectation group that receives no expectancy manipulation and whose members "objectively" evaluate the product without specific prior expectations and 2) an accurate-expectation group that receives "accurate" (as opposed to understated or overstated) product information and whose group members thus have supposedly accurate product expectations (Olson and Dover 1979). Since the former group has no actually processed expectations, there should be neither confirmation nor disconfirmation of expectations. The accurate expectations for the latter group are presumably confirmed by the consumption experience.

For the contrast effect, one needs to compare the high or low expectation (disconfirmation) group with the no-expectation control group (that will provide an objective performance not affected by expectations).⁵ The accurate-expectation group is likely to differ from the no-expectation group, since perception of the performance in the former group is still likely to be affected by the expectation. The accurate-expectation group often provides higher evaluation than the no-expectation group, which supports the above argument (Anderson 1973). It is therefore difficult to make conclusions about the contrast effect using the accurate-expectation group as a control group (Cardozo 1965; Cohen and Goldberg 1970). It seems important to use the appropriate control group in investigating the processes of consumer satisfaction formation.

Another issue concerns manipulation of key constructs in empirical studies. Many studies fail to check their manipulations of expectation and disconfirmation (Cardozo 1965; Cohen and Goldberg 1970; Olshavsky and Miller 1972; for an exception, see Oliver and Desarbo 1988). Expectations were typically manipulated with product descriptions (Cardozo 1965; Olshavsky and

Miller 1972), or ad-like product information (Anderson 1973; Olson and Dover 1976). It is questionable whether such a communication could establish real expectations in a short time.

Still another issue is the timing of measurement of expectations, especially in survey studies. It is important to measure expectations before the consumption experience, considering that expectations are formed prior to the consumption experience and used as a predictor of consumer satisfaction. Measuring expectations in retrospect can introduce a subtle interaction between actual product performance and prior expectations. The possibility for such interactions as retrospective distortion of expectations, hindsight bias, memory loss, and primacy effect poses threats to the validity of such studies (Oliver 1981; Swan and Combs 1976). For example, when performance is very good, one may adjust the expectations and report these adjusted expectations rather than original expectations.

Demand characteristics may also be present because of the relative transparency of the goal in typical experiments of consumer satisfaction. Subjects are usually provided with product information shortly before they try the product, which is immediately followed by consumer satisfaction measurements. In such settings, subjects may feel an implicit demand to use the provided information in evaluating the product.

CONSEQUENCES OF CS

In the previous sections, we have examined studies on the conceptualizations and antecedents of consumer satisfaction. In this section, we will review the studies which have focused on the consequences of consumer satisfaction. They are discussed according to variables that are affected by consumer satisfaction.

Consumer Responses to CS

Many studies have attempted to identify factors that predict different types of consumer responses to satisfaction or dissatisfaction (Best and Andreasen 1977; Day and Ash 1979; Gronhaug and Zaltman 1981; Resnik and Harmon 1983). Substantial focus has been placed on consumers' complaint strategies in reaction to dissatisfaction. It has been found that consumers

show several types of responses to dissatisfaction: 1) taking no action, 2) switching brands or curtailing patronage, 3) making a complaint to the seller or to a third party, and 4) telling others about the unsatisfactory product (i.e., negative word-of-mouth communication) (Day 1980; Krapfel 1985; Richins 1983b). For definitional and taxonomical issues in complaint behaviors, see Singh (1988). It can be noted that the second type of consumer response refers to exit (i.e., going out of the market) and brand disloyalty (i.e., switching), whereas the third type corresponds to voice, according to Hirschman's (1970) theory. Factors thought to be predictive of consumer responses have received particular attention by marketing researchers.

Andreasen (1985) tested Hirschman's (1970) theory about consumer responses to unsatisfactory product performance in a "loose monopoly," where suppliers of a product hold near-monopoly control of supply but where a small amount of competition exists. According to Hirschman, the extent to which exit, voice, or loyalty is the principal response to a unsatisfactory experience is a function of several factors: 1) perceived heterogeneity of product quality, 2) consumer sophistication, 3) consumer loyalty, 4) entry and exit barriers, 5) likely success of the voice option, 6) extent of collectivized voicing in the industry, and 7) relative costs of exit, voice, and inaction.

Results of this study supported the prediction that an elite group of quality-conscious consumers would be most sensitive to product quality and likely to police the market. It was also found that the most quality-conscious and potentially vocal consumers would exercise the exit option, leaving sellers to deal with a relatively voiceless mass of consumers. In the event of poor physician care, sophisticated consumers simply switched providers while the remaining consumers simply stayed behind and did nothing. Next, let us examine different types of consumer reactions to satisfactory or unsatisfactory experiences.

Complaint Behaviors

The most studied consequence of consumer satisfaction is complaint behaviors in an attempt to remedy the dissatisfaction. The intensity of complaint behavior was often hypothesized to be directly proportional to the degree of dissatisfaction (Bearden and Teel 1983). However,

substantial evidence suggests that complaint behavior is not just a function of the intensity of dissatisfaction but also several other factors such as consumer characteristics, consumers' perceptions of the attribution of dissatisfaction, expectancy of outcomes, costs involved, product type, etc (Day 1984; Singh and Howell 1985). This can explain empirical findings which show that a large proportion of dissatisfied consumers do not complain (Best and Andreasen 1977; Day 1984).

Gronhaug and Zaltman (1981) proposed three models of complaint: the resources, learning, and personality models. Based on the assumption that making overt complaints requires resources, the resources model focuses on access to time, money and power as determinants of complaining. The learning model suggests that experienced, better-trained consumers will complain since they are more aware of their rights. The personality model assumes that certain personality characteristics are associated with ability to perceive dissatisfaction and handle complaints, and argues that complainers tend to be more self-confident and aggressive than noncomplainers. Results indicated that the buying experience was the most significant predictor of complaining behavior, yielding support for the learning model. Overall, the three models revealed only modest differences between complaining and noncomplaining consumers, and marketplace participation was found to be the key factor. This study is important in that it addresses how and why various indicators should discriminate complainers and noncomplainers by making explicit underlying assumptions or models.

An attribution theory framework has also been used to explain complaining behavior. According to the attribution theory, it is not merely the judgment that the product failed that determines consumer response to dissatisfaction. Consumers try to determine why the product failed, and the type of reason inferred influences how the consumer will respond to an unsatisfactory experience (Folkes 1984; Krishnan and Valle 1979; Landon 1977; Richins 1983b). For example, a consumer who feels that he or she was foolish in using the product will react differently than one who feels that the manufacturer is responsible for the dissatisfaction. Researchers have attempted to classify attributions made when customers are dissatisfied with a

product on several dimensions. Excellent reviews on the attribution theory and its implications exist in the marketing literature (e.g., Folkes 1988).

Valle and Wallendorf (1977) showed that attributions about product performance fall into dimensions of “psychological distance from the consumer.” At the one end, attribution is made to oneself (e.g., one’s own shopping ability), then friends, retailers (e.g., sales clerks), manufacturers, and the larger social system (e.g., laws) at the other end. The type of complaining behavior by a dissatisfied consumer tends to be related to the psychological distance of attribution. This dimension seems to be an extension of the locus of control dimension (e.g., internal versus external). Krishnan and Valle (1979) found support for this dimension in consumer attributions and showed that attributions were an important predictor of complaint behavior.

Landon (1977) also tested whether the attribution theory offers any insight into complaining behavior. By using internal and external fate control, he has asked the respondents to indicate causes of their dissatisfaction which led them to complain. The causes are categorized as internal (e.g., I made the mistake) or external (e.g., somebody else made the mistake). When the mistake was the consumer’s he did not complain, but when the mistake was somebody else’s he did complain. In sum, using the locus dimension, the above studies showed that when the perceived reason for a consumer’s dissatisfaction is seller-related, the consumer is more likely to complain to the seller than when the perceived reason is buyer-related.

Folkes (1984) extended the attributional framework by classifying attributions for the causes of product failure along the dimensions of stability (stable or unstable), locus (firm-related or consumer-related), and controllability (controllable or uncontrollable) using Weiner’s (1980) causal dimensions. She found that stable attributions are associated with the desire for a refund rather than an exchange. When unsatisfactory product performance is firm-related, it is perceived that the consumer is owed a refund and an apology. When product failure is firm-related and controllable, consumers show anger and a desire for revenge. Further, Folkes, Koletsky, and Graham (1987) found that attributions have not only direct effects on complaint intentions, but also indirect effects, mediated by anger toward the company.

Some studies were also conducted to obtain profiles of complaining consumers. They examined the following questions: What types of consumers are likely to voice complaints? What are the differences between complaining consumers and complimenting consumers? Robinson and Berl (1980) found that complainers were typically younger, had more income, and were less brand loyal than were complimenters in a study with customers of a lodging chain. The finding that younger, high-income consumers were more likely to complain suggests that their expectations were higher. If this had been the case, their expectations were highly likely to be disconfirmed. Also, brand loyal consumers were more prone to complimenting behaviors than to complaining activities.

Word-of-Mouth

Word-of-mouth seems to have an important impact on consumer responses for several reasons. First, since it involves face-to-face communication, it might have a substantially greater impact on recipients than the written summary data or mass communication. Word-of-mouth communication may contain concrete information based on vivid experiential incidents. Second, it is originated by non-firm, non-marketing sources, and it is likely to be perceived as more credible than other communications from marketers. Third, word-of-mouth communication can be more damaging since it is communicated to many others, whereas complaints to the seller involve only the consumer. An important determinant of word-of-mouth seems to be consumer satisfaction or dissatisfaction. Thus, researchers have examined word-of-mouth as one of the consequences of consumer satisfaction with consumption experience.

Richins (1983b) examined negative word-of-mouth by dissatisfied consumers (telling others about their unsatisfactory experience) and identified variables that distinguish this response from others such as switching brands, stopping patronage of the store, or making a complaint. The results indicated that negative word-of-mouth occurred when the problem was severe, and when retailer's responsiveness to complaints was negatively perceived. It was also affected by attributions of the dissatisfaction; more negative word-of-mouth was made when blame for the dissatisfaction was attributed to the retailers.

A review by Weinberger, Allen and Dillon (1981) regarding the research investigating impacts of negative information on consumers lists few studies (e.g., Arndt 1968) that investigate negative word-of-mouth. Consumers seem to give more weight to negative information and nonmarketing sources of information in making evaluations (e.g., Lutz 1975) than to positive information and marketing information. Further, word-of-mouth communication literature has focused on *new* products with an emphasis on *opinion leaders* and diffusion of innovation. In this regard, Richins (1983b) provided valuable insights into negative word-of-mouth about existing (as opposed to new) products by dissatisfied consumers (rather than opinion leaders).

Curren and Folkes (1987) expanded on Richins' (1983b) work by examining whether attributions for product performance influenced consumers' positive as well as negative communications about products. Controllability (under volitional control versus uncontrolled) and stability (stable versus fluctuating) as well as locus (buyer- versus seller-related) dimensions were used to classify attributions. The results suggested that similar attributions influence consumer communications, regardless of the valence of communication (positive or negative) or the target of the communication (fellow consumer or firm). Specifically, the desire to communicate was greater for seller-controlled causes, and seller-related stable causes are likely to induce positive communications. Further, stable causes (whether buyer-related or seller-related) elicited warnings against the product more often than unstable causes. In sum, controllability, stability, and locus dimensions of consumer attributions influenced both positive and negative communications.

Repeat Purchase Behavior

Newman and Werbel (1973) noted that dissatisfied consumers are less likely to repurchase the brand than satisfied consumers (cf. Francken 1983). One study reported that from 30 to over 90 % of dissatisfied consumers did not intend to repurchase the brand (Technical Assistance Research Programs 1979). Oliver (1980a) hypothesized that consumer satisfaction influences attitudes, which in turn affects repurchase intention. Results supported this view in that consumer satisfaction had a positive effect on attitudes. These positive attitudes were found to increase purchase intentions, which is consistent with the Fishbein model (Fishbein and Ajzen 1975).

Many studies found that consumer satisfaction influences purchase intentions as well as post-purchase attitude (Bearden and Teel 1983; LaBarbera and Mazursky 1983; Oliver and Linda 1981; Oliver and Swan 1989). Many researchers believe that brand loyalty includes a positive attitude as well as simple repeat purchase behavior (Jacoby and Chestnut 1978). This implies that consumer satisfaction is likely to increase repeat purchase behavior and brand loyalty and to reduce brand switching.

It was also found that those dissatisfied consumers who made a complaint about their dissatisfaction reported higher repurchase intentions than those who did not complaint, even if their complaints were not satisfactorily handled (TARP 1979). This finding implies that firms should encourage dissatisfied consumers to voice their complaints rather than switching to other brands. The act of giving consumers opportunities to complain, not necessarily properly handling the complaints, seems to be important for positive image and sales for the firms. Indeed, Bearden and Oliver (1985) found support for this prediction.

Company Reactions to Consumer Complaints

Several researchers have examined how organizations respond to consumer complaints, a prevalent reaction by dissatisfied consumers (e.g., Fornell and Westbrook 1984; Gilly and Gelb 1982; Resnik and Harmon 1983). Findings suggest that company responses to consumer complaints have important effects on consumer satisfaction and repurchase behavior. Gilly and Gelb (1982) found that quick complaint responses or those involving monetary reimbursement result in greater satisfaction, which, in turn, affects repurchase intentions.

How successful are managers in responding to consumer complaints? Are consumers' perceptions of what are legitimate company reactions to complaints different from those of managers? These questions have been addressed by some researchers. Resnik and Harmon (1983) examined manager and consumer perceptions of appropriate managerial responses to consumer complaints. In general, consumers were more likely than managers to view complaints as legitimate. In particular, this finding was true for complaints that did not suggest obvious solutions. When confronted with an ambiguous situation, consumers appeared to believe that

some response was required. In contrast, managers tended to think that the consumers wanted something for nothing, were confused, or evaluated incorrectly the merits of complaints. Folkes and Kotsos (1986) also found that sellers tended to find fault with the product itself less often than consumers when explaining product failures, suggesting that consumers and firms may have different perceptions.

Customer satisfaction was found to be the primary response objective for managers. The managers' desire to satisfy consumers was supported by the data. In 90% of the cases, the response emphasis was appropriate and managers gave at least what was required by consumers. This finding was especially significant when the complaints had obvious solutions and had high perceived legitimacy. Many marketing activities including complaint handling involve the allocation of company resources to meet consumer needs. Therefore, it seems important to achieve an acceptable match between a particular response that is desired by a complaining consumer and the response managers are willing to give. In this respect, the study by Resnik and Harmon (1983) provides useful insights into the process of complaint resolution.

Fornell and Westbrook (1984) found that a high proportion of consumer complaints (relative to other unsolicited consumer communications) lead to organizational suppression of the unit receiving the complaints. This subsequently contributed to a further increase in complaints by isolating the consumer affairs unit from management participation. That is, there was a vicious circle of consumer complaints. Contrary to what may be expected, a firm's responsiveness to consumer complaints was negatively, rather than positively, related to the ratio of negative to positive consumer communications. This finding of a vicious circle has important implications for marketing practice. It suggests that a number of firms seem to behave in a dysfunctional manner with respect to consumer complaints, rather than using consumer complaints to their benefit. The vicious circle must be broken if firms are to benefit from handling the consumer complaints. Fornell and Westbrook suggested a comprehensive strategy of organizational change for effective complaint management.

Recently, several researchers provided new insights into company response to complaints: complaint management can be used as an opportune marketing tool rather than a cost (Fornell and Wernerfelt 1987; Gilly and Hansen 1985). Fornell and Wernerfelt (1987, 1988) developed an economic model of defensive marketing strategy by consumer complaint management, on the basis of Hirschman's (1970) exit-voice theory. The objective of the defensive marketing strategy is to reduce customer exit and brand switching or to maximize customer retention. Fornell and Wernerfelt's conceptualization of the defensive strategy is similar to, but somewhat more general than Hauser and Shugan's (1983). Hauser and Shugan define defensive marketing strategy as the reaction of a brand to the launch of a new competitive brand, but Fornell and Wernerfelt do not require new entrants in the market.

Fornell and Wernerfelt's (1987) analysis suggested that complaints from dissatisfied customers should be maximized subject to cost constraints, rather than minimized as many firms strive to achieve. They also showed that defensive marketing (i.e., retaining customers) by complaint management can lower the total marketing expenditure by substantially reducing the cost of offensive marketing (e.g., obtaining new customers). Some relevant studies gave the findings that a dissatisfied customer, once persuaded to stay, is more loyal and thus more valuable than before, and that generous complaint management is likely to generate positive word-of-mouth communication. Fornell and Wernerfelt (1988) developed a model of complaint management in terms of defensive marketing strategy and analyzed the firms' incentives to manage complaints.

The defensive marketing strategy seems to be especially important for markets characterized by low growth and high competition, since the cost of generating a new customer (offensive marketing) in these markets is high. Although many marketing studies have emphasized offensive strategies designed to obtain additional customers, encourage brand switching, increase purchase volume, and increase purchase frequency, very little research has been done on defensive marketing. In this regard, the use of complaint management as a defensive strategy seems worthy of further investigation.

Issues in Consequences of CS

CS as a Mediator of Attitude Change

An important issue is the role of consumer satisfaction in attitude change. As consumers interact with a product toward which they have established an attitude, they are subject to two sets of forces. On the one hand, new experiences and information produce forces toward change. An attitude may change with the product experience, since consumers learn from experience. An attitude will therefore be affected by consumer satisfaction, which can be seen as a summary of the nature of product experience. On the other hand, the existing attitude creates forces toward stability (e.g., resistance to change). As a result, an attitude may be affected by the previous attitude. In sum, the effect of a previous attitude indicates the temporal stability of an attitude, whereas the effect of consumer satisfaction reflects the consequence of consumer learning from product experience (see Oliver 1980a). Figure 3 provides a diagram of these processes.

Figure 3 here

This raises the following question: Are the links between the variables different across consumers, products or situations? Link 1, the stability of attitude over time, might differ across consumers; for example, an attitude may be more stable if it is based upon substantial experience than if it is based upon little direct experience. Link 2 shows the effect of a prior attitude on consumer satisfaction. Affect is thus hypothesized to influence cognitive evaluations of consumption experience, which is consistent with the findings that an attitude guides judgment of relevant evidence or information processing (Lord, Ross, and Lepper 1979). This effect would be strong when consumers have low involvement in the product, since in such cases they might judge product performance on the basis of overall affect rather than individual cognitive judgments about the product. Link 3, the effect of consumer satisfaction on the attitude, can be understood as a cognition-affect link. Consumer satisfaction is a psychological state resulting from specific product experience, and it decays into (but nevertheless greatly affects) one's attitude toward

products (Oliver 1981). So the path from consumer satisfaction to attitude reflects a learning process dependent on one's experience.

Another issue is the sequence of key constructs within the overall framework. The sequence from pre-attitude, to consumer satisfaction, post-attitude, intention, and behavior has been generally hypothesized (Oliver 1980a). Does this sequence apply to every consumer with every product in every situation? Or, does the sequence differ across consumers, products, or situations? Some possible moderating variables are involvement and product experience, although Oliver and Bearden (1983) were unable to find such involvement effects..

Attributions as a Predictor of Complaining Behavior

Predicting the type of complaining behavior may also be useful. The attribution theory seems to provide a useful framework for this task, since consumers may interpret the same consumption experience differently. An interpretation of the unsatisfactory experience, rather than the magnitude of dissatisfaction, is likely to determine consumers' reactions. Since product consumption is an encounter between a consumer and a product, attributions of the outcome might be made to either party; that is, the consumer or the product. More specifically, product satisfaction may be attributed to the inherent nature of product, the motivation of the seller, the consumer's own abilities to consume the product appropriately, or to the consumption circumstances (Westbrook 1980a). Depending upon what attributions are made, consumer satisfaction would have different consequences. For example, it might be expected that consumers who blame themselves for dissatisfaction with a product are less likely to complain (Russo 1979). For a review of attribution theory in marketing, see Mizerski, Golden, and Kernan (1979) and Folkes (1988).

Several questions arise regarding this issue. When do consumers participate in attributional thinking? Is it mainly when they are dissatisfied, as is implicitly assumed in consumer satisfaction research? Is it also when consumers are satisfied? Or do consumers make attributions when satisfaction or dissatisfaction is extremely intense? One relevant finding is that people do attributional analysis when something unexpected or unusual happens (Folkes 1988; Weiner

1985). Also, bad, painful or unpleasant events tend to inspire a search for causal explanations (Weiner 1980). Since consumer satisfaction involves disconfirmation of expectations, consumers' attributions of consumer satisfaction are likely to occur. Yet factors such as product importance might influence attributional search by consumers.

A basic premise is that attribution of responsibility acts as a mediator between a consumer's dissatisfaction and behavioral responses. Certainly a consumer who feels dissatisfied because he or she misused the product will react differently, compared with a consumer who feels that the manufacturer was responsible. Thus, the attributional approach seems appropriate for investigating how consumers interpret and respond to unsatisfactory experiences. Yet few studies showed that attributions about dissatisfaction *cause* the complaining behavior. It is still possible that attribution itself might be caused by the complaining behavior (as the self-perception theory might suggest). A direct test is needed to determine causality.

Word-of-Mouth

Another important issue is the investigation of the effects of word-of-mouth (WOM) communication regarding the consumption experience, whether satisfactory or unsatisfactory. Do dissatisfied consumers participate more in word-of-mouth than do satisfied consumers? On the one hand, it has been reported that people have a tendency not to tell bad news (Tesser and Rosen 1975). According to this, negative word-of-mouth activities are less likely to occur than positive word-of-mouth. On the other hand, it has been found that people are more sensitive to unfavorable information (Lutz 1975; Richins 1983b; Weinberger, Allen and Dillon 1981). What will be the case with consumers' word-of-mouth?

A study conducted by the Technical Assistance Research Program (1981) showed that consumers tell more about an unsatisfactory outcome than a satisfactory one. Engel, Kegerreis, and Blackwell (1969), examining the amount of word-of-mouth by consumers satisfied or dissatisfied with an innovative automobile diagnostic center, found no difference in the extent of word-of-mouth between the two groups. Yet, Holmes and Lett (1977) found that satisfied consumers participate more in word-of-mouth than dissatisfied consumers.

Empirical evidence on this issue is therefore mixed. However, these contradictory findings can be reconciled by examining their contextual differences. Based on such a perspective, Richins (1984) proposed that negative word-of-mouth (relative to positive word-of-mouth) should increase as consumer commitment to the product increases. This argument was based on the assumption that the greater the commitment to the product, the more likely consumers are to make efforts to complain or tell others. Understanding the conditions under which positive or negative word-of-mouth is prevalent could provide useful insights into consumer affair policies.

What are the effects of word-of-mouth about consumption experience on recipients? In other words, how does a consumer use the information from word-of-mouth communication? Are they influenced primarily by negative word-of-mouth? If a consumer's own experience differs from word-of-mouth, how will he respond?

We may examine the mechanisms underlying the effect of word-of-mouth on attitude change. When one is exposed to word-of-mouth (e.g., others' experience with a product), one might be more critical of any bias in the communication than when it is based on one's own experience. If one feels the communication is biased, one will discount the word-of-mouth. If one feels the communication is due to the product, one will use the word-of-mouth as product information. What factors then would determine perceptions of bias?

Attributions of the word-of-mouth content may affect acceptance of the message and perception of product quality. To be specific, attributions to the product⁶ will decrease the perception of communicator bias. On the other hand, attributions to the person or situation will increase the perception of communicator bias. Ultimately, attitude change upon exposure to word-of-mouth is a function of perceived communicator bias and perceived product quality.

Effective Complaint Management

Managers should be alert to potential problems and opportunities in the effective handling of consumer complaints. Consumer complaints were traditionally treated as threats or problems to firms. However, considerable research suggests that consumer complaints, if effectively managed, can be great opportunities on several grounds. First, complaints serve as consumer

feedback about a product or company performance, which can provide useful information for marketing decisions (Resnik and Harmon 1983). Second, appropriately handled complaints can greatly reduce the amount of brand switching among dissatisfied consumers (Fornell and Wernerfelt 1987, 1988). Studies showed that complaining dissatisfied consumers are more likely to repurchase the brand than noncomplaining dissatisfied consumers, especially when the complaint was satisfactorily resolved (TARP 1986). In fact, a basic finding is that dissatisfied complainers had higher levels of brand loyalty than noncomplainers, suggesting that firms should make efforts to facilitate the voicing of complaints (e.g., the installation of toll-free 800 numbers). Third, the cost of retaining a current customer (e.g., via complaint management) is often low relative to the cost of attracting a new customer (Fornell and Wernerfelt 1988). For example, Volvo, the Swedish automobile manufacturer, estimates that the cost of generating a new customer is three times the cost of retaining a present customer (Fornell and Wernerfelt 1988).

The effectiveness of complaint handling can be assessed by the level of satisfaction among complaining consumers. Several related questions arise concerning this issue. What factors determine satisfaction of consumer complaints? What impact does the satisfied complaint or dissatisfied complaint have on potential customers? Exploring these questions is important for effective management of complaints. Managers' responses to satisfy complaints might often be in conflict with the goal of effective management of company resources. For example, managers might excessively commit company resources to facilitate consumer satisfaction. It would be important for managers to find the level of complaint handling effort that optimizes both utilization of company resources and satisfaction of consumer complaints. Richins and Verhage (1985) discuss the implications of cross-cultural differences in consumer attitudes for complaint management.

CONCLUSION

This paper has attempted to review and integrate the studies on consumer satisfaction in three areas: 1) definition and measurement, 2) antecedents, and 3) consequences of consumer

satisfaction. The review suggests that many important findings have led to much progress in the understanding and modeling of consumer satisfaction. Consumer satisfaction is generally defined as the consumer's response to the evaluation of the perceived discrepancy between some comparison standards (e.g., expectations) and the perceived performance of the product. Consumer satisfaction is found to be determined by a pre-experience comparison standard and disconfirmation. Many attempts have been made to conceptualize the key constructs and integrate their interrelationships into comprehensive models (e.g., Bearden and Teel 1983; Churchill and Surprenant 1982; Oliver 1980a). These studies contributed greatly toward a better understanding of consumer satisfaction by relating it to the antecedents and consequences.

Much emphasis of recent research has moved from describing the data to testing hypotheses. We have seen increasing efforts to develop testable models of consumer satisfaction. Also, more elaborate research designs and analytic techniques have been employed: e.g., factorial designs, multitrait-multimethod designs and cross-lagged panel designs (e.g., Oliver 1980a; Oliver and Desarbo 1988; Tse and Wilton 1988; Westbrook 1980b).

This area seems to be quite challenging to researchers for several reasons. There are many sources of potential bias in the data; they include a selection bias, a nonresponse bias, an interviewer bias, a tendency to oversample extreme experiences, and demand characteristics. Thus, the validity of the data should be established in any study. The area needs conceptual precision on key constructs and more comparable measures across research efforts. It is important to have a common scale or definition for a valid comparison across studies.

Several directions for future research have been proposed in each area. Potential research areas include: developing an overall model of consumer satisfaction (with minimum necessary key variables), identifying standards for comparison (e.g., expectations vs. norms), exploring the process of expectation formation (e.g., the relative roles of past experience, others' experience, similar other brands, etc.), investigating the mechanisms underlying consumer satisfaction mediating attitude change, assessing the relative impact of each type of complaining behavior, examining determinants of the type of complaining behavior, and investigating the process of

word-of-mouth effects on receivers (e.g., How do people react to product scandals?). An investigation of these issues can provide a better understanding of consumer satisfaction, a central concept in marketing.

Footnotes

¹ It should be noted that Oliver (1980a, 1980b, 1981) argues conceptually and shows empirically that expectations and disconfirmation are unrelated.

² It should be noted that perceived performance can be lower than objective performance. This might occur when expectations are lower than objective performance or the contrast effects occur such that perceptions of product performance are negatively biased.

³ Ego involvement or issue involvement can be distinguished from task or response involvement (Sherif and Hovland 1961).

⁴ Expectations here refer to consumers' predictions about the expected performance of the product, and they reflect what performance will probably be. Researchers have thus sometimes called them predictive expectations in order to distinguish from other types of expectations such as normative or ideal expectations (Miller 1977). In this paper, expectations will be used to refer to the predictive expectations, unless noted otherwise.

⁵ In reality, it might be difficult to create no expectations among the subjects. Even though no information is provided by the experimenter for expectancy manipulation, some of the subjects might form expectations about the focal brand based on their previous experience with similar brands. This indicates that a rigorous test of the disconfirmation effects should control for such possible confounding effects (e.g., by using a new product category).

⁶ This will include all product-related parties such as manufacturers, retailers, and the product itself. But for convenience, product is used broadly to represent such various parties.

Table 1
Reliabilities of Selected Single-item CS Scales

Scales	Reliability *	Descriptions
Delighted-Terrible Scale	Westbrook (1980b) .65 (Auto) .84 (Bank) .73 (Watch)	To a question "How do you feel about the product" the respondent selects one of 7 responses ranging from delighted to terrible.
Percentage Scale	Westbrook (1980b) .55 (Auto) .81 (Bank) .72 (Watch)	To a question "How satisfied have you been with the product" the respondent selects between 0% and 100%.
Need S-D Scale	Westbrook (1980b) .68 (Auto) .78 (Bank) .69 (Watch)	To a question "To what extent does the product meets your needs" the respondent selects between extremely well and extremely poorly.
Content Analytic Scale	Westbrook (1980b) not reported	Code free responses to unstructured questions into 1) only favorable 2) both favorable and unfavorable 3) neither favorable nor unfavorable 4) only favorable evaluations.

* Test-retest reliability over a 10-day period is reported.

Table 2
Reliabilities of Selected Multi-item CS Scales

Scales	Reliability *	Descriptions
Likert Scale	Westbrook & Oliver (1981) .93-.96 (auto) .75-.95 (calculator) Bearden and Teel (1983) .93-.95 (auto repair) Oliver (1980) .82 (flu shot) Oliver & Bearden (1983) .92 (diet pill)	Summing responses ranging from strongly agree to strongly disagree toward several statements indicating satisfaction with the product
Semantic-Differential Scale	Westbrook & Oliver (1981) .94-.95 (auto) .90-.91 (calculator) Oliver and Linda (1981) .94 (clothing)	Summing semantic differential items dealing with various means of expressing overall satisfaction
Graphic Scale	Westbrook & Oliver (1981) .72-.87 (auto) .90-.93 (calculator)	Using non-verbal scales such as faces, thermometer, circles and ladder
Verbal Scale	Westbrook & Oliver (1981) .76-.88 (auto) .52-.68 (calculator)	Use several verbal scales; e.g., D-T scale, satisfied-dissatisfied, and behavioral tendency
Porter	Westbrook & Oliver (1981) .46-.68 (auto) .70-.72 (calculator)	Sum the differences between perceived level and desired level for all attributes

* Alpha coefficient is reported.

Table 3
Summary of Predicted Effects of Disconfirmed Expectations on Perceived Product Performance Under Alternative Theories

Theory	Effects	Conditions	Moderators of Effects
Contrast	+	positive disconfirmation	
	-	negative disconfirmation	
Assimilation-	+	small disconfirmation	
Contrast	-	large disconfirmation	
		larger	high involvement
Dissonance	+	some necessary conditions	
		smaller	ambiguity
Generalized	-	any disconfirmation	
Negativity	larger		high ego involvement, commitment, & interest
Hypothesis	+		
Testing	larger		ambiguity

* + (-) indicates effects such that perceptions of product performance are shifted toward (away from) expectations.

** Larger (smaller) means that the predicted effects of expectations are greater (smaller) under the moderating conditions.

Table 4
Summary of the Selected Studies on Product Evaluation

Study	Dependent var. (product)	Expectation effects	Suggested theory	Comments
Cardozo (1965)	product rating (ball-point pen)	- +	contrast dissonance	effort as a moderator problematic dependent measure
Cohen & Goldberg (1970)	preference (coffee)	+	dissonance	no manipulation of expectations
Jacoby, Olson & Haddock (1971)	perceived quality (beer)	+		price and brand name used to create expectation
Olshavsky & Miller (1972)	product rating (tape recorder)	+	assimilation (consistency)	no measures of expectation
Anderson (1973)	product rating (ball-point pen)	+/-	assimilation- contrast	mixed findings for contrast ambiguity in contrast effect
Oliver (1976)	overall affect (car)		generalized negativity	involvement, commitment, & interest as moderators
Oliver (1977)	overall affect (car)	+	assimilation	expectation and disconfirmation have additive impacts
Olson & Dover (1979)	product ratings (coffee)	+	assimilation (dissonance)	use control groups manipulation checks
Deighton (1984)	product rating (a car)	+	hypothesis testing	advertising as a source of hypotheses
Hoch & Ha (1986)	perceived quality (clothes)	+	hypothesis testing	ambiguity as a moderator of expectation effects

Figure 1
Perceived and Objective Performance

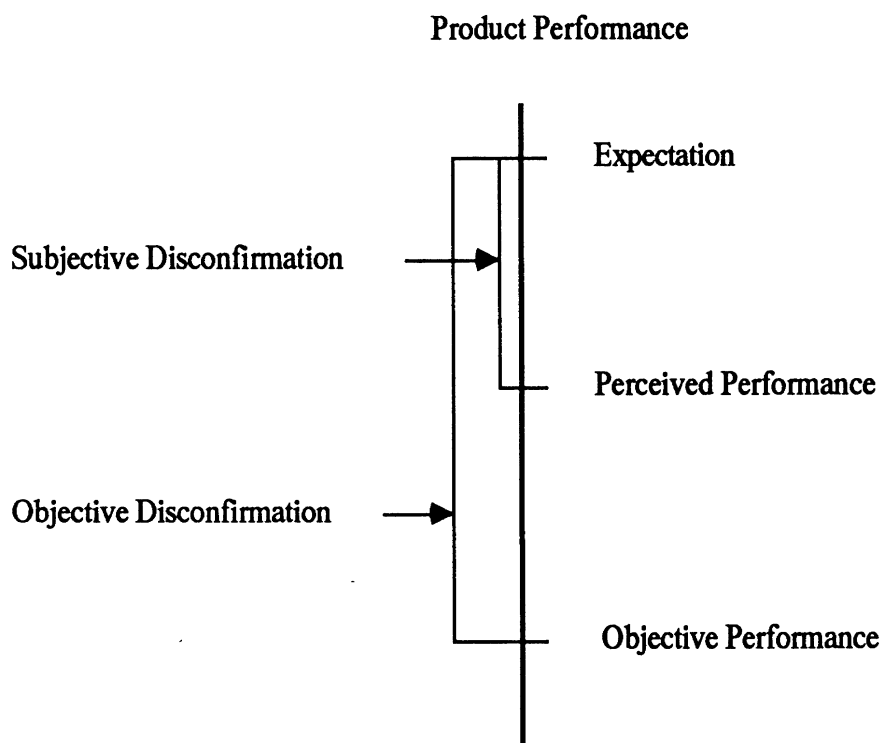
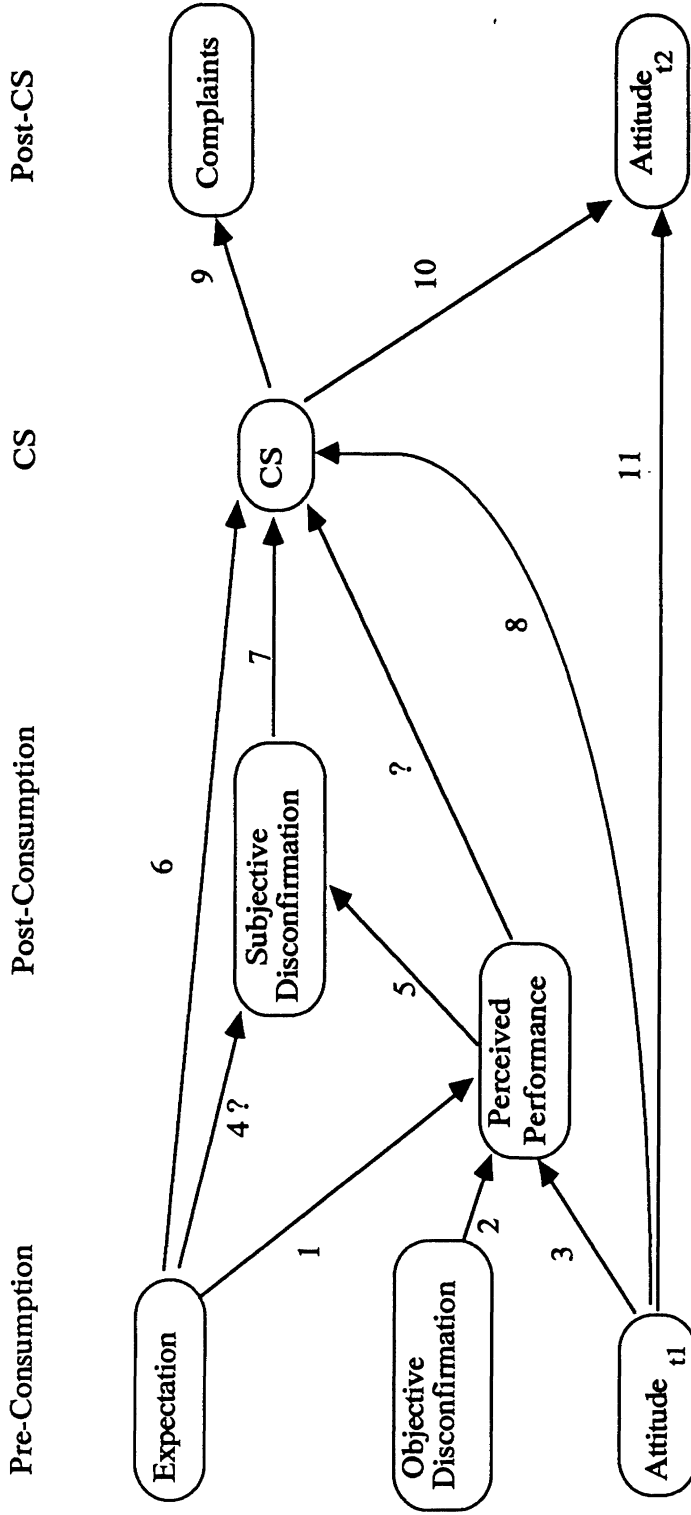


Figure 2
Processes of Consumer Satisfaction (CS)



1, 2, and 3 are investigated in studies of product performance.

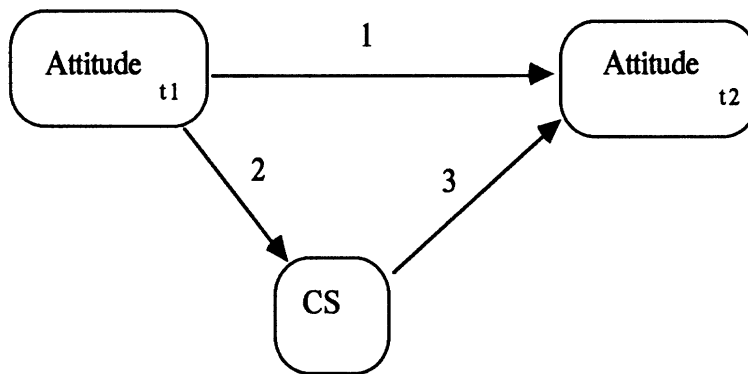
6, 7, and 8 are investigated in studies of antecedents of CS.

9, and 10 are investigated in studies of consequences of CS.

? indicates the existence of mixed findings about the path (for example, 4 is found by Churchill and Surprenant (1982), but not by Oliver (1980a)).

Figure 3

CS as a Mediator of Attitude Change



References

- Adams, J. Stacy (1963), "Toward an Understanding of Inequity," Journal of Abnormal and Social Psychology, 67 (October), 422-36.
- Anderson, Rolph E. (1973), "Consumer Dissatisfaction: The Effects of Disconfirmed Expectancy on Perceived Product Performance," Journal of Marketing Research, 10 (February), 38-44.
- Andreasen, Alan R. (1977), "A Taxonomy of Consumer Satisfaction/Dissatisfaction Measures," Journal of Consumer Affairs, 11 (Winter), 11-23.
- _____ (1985), "Consumer Responses to Dissatisfaction in Loose Monopolies," Journal of Consumer Research, 12 (September), 135-41.
- _____ and Arthur Best (1977), "Consumers Complain-Does Business Respond?" Harvard Business Review, 55 (July-August), 93-101.
- Andrews, Frank M. and Stephen B. Withey (1976), Social Indicators of Well-Being, New York: Plenum Press.
- Arndt, Johan (1968), "Word-of-Mouth Advertising and Perceived Risk," in Perspectives in Consumer Behavior, H. Kassarijan and T. Robertson, eds. Glenview, IL: Scott Foresman.
- Ash, Stephen B. (1978), "A Comprehensive Study of Consumer Satisfaction with Durable Goods," in Advances in Consumer Research, H. Keith Hunt, ed. Ann Arbor, MI: Association for Consumer Research, 254-62.
- Bagozzi, Richard P. and Youjae Yi (1989), "On the Use of Structural Equation Models in Experimental Designs," Journal of Marketing Research, 26 (August), in press.
- Bearden, William O. and J. Barry Mason (1984), "An Investigation of Influences on Consumer Complaint Reports," in Advances in Consumer Research, Thomas C. Kinnear, ed. Provo, UT: Association for Consumer Research.
- _____ and Richard L. Oliver (1985), "The Role of Public and Private Complaining in Satisfaction with Problem Resolution," Journal of Consumer Affairs, 19 (Winter), 222-40.

- _____ and Jesse E. Teel (1983), "Selected Determinants of Consumer Satisfaction and Complaint Reports," Journal of Marketing Research, 20 (February), 21-8.
- Best, Arthur and Alan R. Andreasen (1977), "Consumer Response to Unsatisfactory Purchases: A Survey of Perceiving Defects, Voicing Complaints, and Obtaining Redress," Law and Society, 11 (Spring), 701-42.
- Bettman, James R. (1974), "A Threshold Model of Attribute Satisfaction Decision," Journal of Consumer Research, 1 (September), 30-5.
- Cadotte, Ernest R., R. B. Woodruff, R. L. Jenkins (1987), "Expectations and Norms in Models of Consumer Satisfaction," Journal of Marketing Research, 24 (August), 305-14.
- Campbell, Angus, P. E. Converse, and W. L. Rodgers (1976), The Quality of American Life, New York: Russell Sage Foundation.
- Cardozo, Richard N. (1965), "An Experimental Study of Consumer Effort, Expectation and Satisfaction," Journal of Marketing Research, 2 (August), 244-9.
- Carlsmith, J. Merrill and Elliot Aronson (1963), "Some Hedonic Consequences of the Confirmation and Disconfirmation of Expectancies," Journal of Abnormal and Social Psychology, 66 (February), 151-6.
- Churchill, Gilbert A., Jr. and C. Surprenant (1982), "An Investigation into the Determinants of Customer Satisfaction," Journal of Marketing Research, 19 (November), 491-504.
- Cohen, Joel B. and M. E. Goldberg (1970), "The Dissonance Model in Post-Decision Product Evaluation," Journal of Marketing Research, 7 (August), 315-21.
- Curren, Mary T. and Valerie S. Folkes (1987), "Attributional Influences on Consumers' Desires to Communicate About Products," Psychology and Marketing, 4 (Summer), 31-45.
- Czepiel, John A. and Larry J. Rosenberg (1977), "The Study of Consumer Satisfaction: Addressing the 'So What' Questions," in Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction, H. Keith Hunt, ed. Cambridge, MA: Marketing Science Institute. 92-119.

- _____, _____, and Adebayo Akerele (1974), "Perspectives on Consumer Satisfaction," AMA Educators' Proceedings, Chicago: American Marketing Association, 119-23.
- Day, Ralph L. (1977), "Extending the Concept of Consumer Satisfaction," in Advances in Consumer Research, W. D. Perreault, ed. Atlanta, GA: Association for Consumer Research, 149-54.
- _____ (1980), "Research Perspectives on Consumer Complaining Behavior," in Theoretical Developments in Marketing, C. W. Lamb and P. M. Dunne, eds. Chicago: American Marketing Association, 211-15.
- _____ (1984), "Modeling Choices Among Alternative Responses to Dissatisfaction," in Advances in Consumer Research, T. Kinnear, ed. Ann Arbor, MI: Association for Consumer Research.
- _____ and Stephen B. Ash (1979), "Consumer Response to Dissatisfaction with Durable Products," in Advances in Consumer Research, W. L. Wilkie, ed. Miami: Association for Consumer Research, 438-44.
- _____ and Muzaffer Bodur (1978), "Consumer Response to Dissatisfaction with Services and Intangibles," in Advances in Consumer Research, H. Keith Hunt, ed. Ann Arbor, MI: Association for Consumer Research, 64-74.
- _____ and H. Keith Hunt (1979), New Dimensions of Consumer Satisfaction and Complaining Behavior, Bloomington, IN: Indiana University.
- _____ and _____ (1982), New Findings on Consumer Satisfaction and Complaining, Bloomington, IN: Indiana University.
- _____ and _____ (1983), International Fare in Consumer Satisfaction and Complaining Behavior, Bloomington, IN: Indiana University.
- _____ and E. Landon, Jr. (1977), "Toward a Theory of Consumer Complaining Behavior," in Consumer and Industrial Buying Behavior, A. G. Woodside, J. N. Sheth, and P. D. Bennett, eds. New York: North Holland.

- Deighton, John (1984), "The Interaction of Advertising and Evidence," Journal of Consumer Research, 11 (December), 763-70.
- Engel, James F. and Roger D. Blackwell (1982), Consumer Behavior, New York: Holt, Rinehart, and Winston.
- Engel, James F., Robert J. Kegerreis and Roger D. Blackwell (1969), "Word-of-Mouth Communication by the Innovator," Journal of Marketing, 33 (July), 15-9.
- Festinger, Leon (1957), A Theory of Cognitive Dissonance, Stanford, CA: Stanford University Press.
- Fishbein, Martin and Icek Ajzen (1975), Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research, Reading, MA: Addison-Wesley.
- Fisk, Raymond P. and Clifford E. Young (1985), "Disconfirmation of Equity Expectations: Effects on Consumer Satisfaction with Services," in Advances in Consumer Research, E. Hirschman and H. Holbrook, eds. Provo, UT: Association for Consumer Research.
- Folkes, Valerie S (1984), "Consumer Reactions to Product Failure: An Attributional Approach," Journal of Consumer Research, 10 (March), 398-409.
- _____ (1988), "Recent Attribution Research in Consumer Behavior: A Review and New Directions," Journal of Consumer Research, 14 (March), 548-65.
- _____, Susan Koletsky, and John Graham (1987), "A Field Study of Causal Inferences and Consumer Reaction: The View from the Airport," Journal of Consumer Research, 13 (March), 534-39.
- _____ and Barbara Kotsos (1986), "Buyers' and Sellers' Explanations for Product Failures: Who Done It," Journal of Marketing, 50 (April), 74-80.
- Fornell, Claes and William T. Robinson (1983), "Industrial Organization and Consumer Satisfaction/Dissatisfaction," Journal of Consumer Research, 9 (March), 403-12.
- _____ and Birger Wernerfelt (1987), "Defensive Marketing Strategy by Customer Complaint Management: A Theoretical Analysis," Journal of Marketing Research, 24 (November), 337-46.

- _____ and _____ (1988), "A Model for Customer Complaint Management," Marketing Science, 7 (Summer), 187-98.
- _____ and Robert A. Westbrook (1984), "The Vicious Circle of Consumer Complaints," Journal of Marketing, 48 (Summer), 68-78.
- Francken, Dick A. (1983), "Post-purchase Consumer Evaluations, Complaint Actions and Repurchase Behavior," Journal of Economic Psychology, 4, 273-90.
- Gilly, Mary and Betsy Gelb (1982), "Post-Purchase Consumer Processes and the Complaining Consumer Behavior," Journal of Consumer Research, 9 (December), 323-8.
- Gilly, Mary and Richard W. Hansen (1985), "Consumer Complaint Handling as a Strategic Marketing Tool," Journal of Consumer Marketing, 2 (Fall), 5-16.
- Gilovich, Thomas (1981), "Seeing the Past in the Present: The Effect of Associations to Familiar Events on Judgments and Decisions," Journal of Personality and Social Psychology, 40 (5), 797-808.
- Gronhaug, Kjell (1977), "Exploring Consumer Complaining Behavior: A Model and Some Empirical Results," in Advances in Consumer Research, W.D. Perreault, ed. Atlanta, GA: Association for Consumer Research, 159-65.
- _____ and Gerald Zaltman (1981), "Complainers and Noncomplainers Revisited: Another Look at the Data," in Advances in Consumer Research, Kent B. Monroe, ed. Ann Arbor, MI: Association for Consumer Research, 83-7.
- Hauser, John and Steven M. Shugan (1983), "Defensive Marketing Strategies," Marketing Science, 2 (Fall), 319-60.
- Helson, Harry (1964), Adaptation-level Theory, New York: Harper & Row.
- Herzberg, Frederick, B. Mausner, and B. Snyderman (1959), The Motivation to Work, 2nd ed. New York: John Wiley & Sons, Inc.
- Hirschman, Albert O. (1970), Exit, Voice, and Loyalty, Cambridge, MA: Harvard University Press.

- Hoch, Stephen J. and Y. Ha (1986), "Consumer Learning: Advertising and the Ambiguity of Product Experience," Journal of Consumer Research, 13 (September), 221-33.
- Holmes, John D. and John D. Lett (1977), "Product Sampling and Word of Mouth," Journal of Advertising Research, 17 (October), 35-9.
- Howard, John A. and J. N. Sheth (1969), The Theory of Buyer Behavior, New York: John Wiley and Sons.
- Hunt, H. Keith (1977), "CS/D--Overview and Future Research Direction," in Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction, H. Keith Hunt, ed. Cambridge, MA: Marketing Science Institute.
- _____ and Ralph L. Day (1980), Refining Concepts and Measures of Consumer Satisfaction and Complaining Behavior, Bloomington, IN: Indiana University.
- _____ and _____ (1982), Conceptual and Empirical Contributions to Consumer Satisfaction and Complaining Behavior, Bloomington, IN: Indiana University.
- _____ and _____ (1985), Consumer Satisfaction, Dissatisfaction and Complaining Behavior, Bloomington, IN: Indiana University.
- Ilgel, Daniel R. (1971), "Satisfaction with Performance as a Function of the Initial Level of Expected Performance and the Deviation from Expectation," Organizational Behavior and Human Performance, 6 (January), 345-61.
- Jacoby, Jacob and Robert W. Chestnut (1978), Brand Loyalty Measurement and Management, New York: Wiley.
- Jacoby, Jacob, Jerry C. Olson, and Rafael A. Haddock (1971), "Price, Brand Name, and Product Composition Characteristics as Determinants of Perceived Quality," Journal of Applied Psychology, 55, 570-79.
- Kourilsky, Marilyn and Trudy Murray (1981), "The Use of Economic Reasoning to Increase Satisfaction with Family Decision Making," Journal of Consumer Research, 8 (September), 183-8.

- Krapfel, Robert E. (1985) "A Consumer Complaint Strategy Model: Antecedents and Outcomes," in Advances in Consumer Research, E. Hirschman and H. Holbrook, eds. Provo, UT: Association for Consumer Research.
- Krishnan, S. and V. A. Valle (1979), "Dissatisfaction Attributions and Consumer Complaint Behavior," in Advances in Consumer Research, William L. Wilkie, ed. Miami: Association for Consumer Research, 445-9.
- 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.
- Landon, E. Laird (1977), "A Model of Consumer Complaint Behavior," in Consumer Satisfaction, Dissatisfaction, and Complaining Behavior, Ralph Day, ed. Bloomington: IN, Indiana University Press, 31-5.
- _____ (1980), "The Direction of Consumer Complaint Research," in Advances in Consumer Research, J. Olson, ed. Ann Arbor, MI: Association for Consumer Research, 335-8.
- LaTour, Stephen A. and Nancy C. Peat (1979), "Conceptual and Methodological Issues in Consumer Satisfaction Research," in Advances in Consumer Research, William L. Wilkie, ed. Ann Arbor, MI: Association for Consumer Research, 431-7.
- _____ and _____ (1980), "The Role of Situationally-Produced Expectations, Others' Experiences, and Prior Experience in Determining Consumer Satisfaction," in Advances in Consumer Research, Jerry C. Olson, ed. Ann Arbor, MI: Association for Consumer Research, 588-92.
- Leavitt, Clark (1977), "Consumer Satisfaction and Dissatisfaction: Bipolar or Independent," in Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction, H. Keith Hunt, ed. Cambridge, MA: Marketing Science Institute, 132-49.
- Locke, Edwin A. (1967), "Relationship of Success and Expectation to Affect on Goal Seeking Tasks," Journal of Personality and Social Psychology, 7 (2), 125-34.

- Lord, Charles, L. Ross, and M. Lepper (1979), "Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence," Journal of Personality and Social Psychology, 37, 2098-109.
- Lord, Frederick M. (1963), "Elementary Models for Measuring Change," in Problems in Measuring Change, C. W. Harris, ed. Madison,: University of Wisconsin Press.
- Lutz, Richard J. (1975), "Changing Brand Attitudes Through Modification of Cognitive Structure," Journal of Consumer Research, 1 (March), 49-59.
- Maddox, R. Neil (1981), "Two-Factor Theory and Consumer Satisfaction: Replication and Extension," Journal of Consumer Research, 8 (June), 97-102.
- Mason, Joseph B. and S. H. Himes, Jr. (1973), "An Exploratory Behavioral and Socioeconomic Profile of Consumer Action about Dissatisfaction with Selected Household Appliances," Journal of Consumer Affairs, 7 (Winter), 121-7.
- Miller, John A. (1977), "Studying Satisfaction, Modifying Models, Eliciting Expectations, Posing Problems and Making Meaningful Measurements," in Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction, H. Keith Hunt, ed. Cambridge, MA: Marketing Science Institute, 72-91.
- Mizerski, Richard W., Linda L. Golden, and Jerome B. Kernan (1979), "The Attribution Process in Consumer Decision Making," Journal of Consumer Research, 6 (September), 123-40.
- Morris, Earl W. (1977), "A Normative Deficit Approach to Consumer Satisfaction," in Conceptualization and Measurement of Consumer Satisfaction and Dissatisfaction, H. Keith Hunt, ed. Cambridge, MA: Marketing Science Institute, 240-74.
- Mowen, John and Stephen Grove (1983), "Search Behavior, Price Paid, and the 'Comparison Other': An Equity Theory Analysis of Post Purchase Satisfaction," in International Fare in Consumer Satisfaction and Complaining Behavior, R. L. Day and H. K. Hunt, eds. Bloomington, IN: Indiana University, 17-9.
- Newman, Joseph W. and Richard A. Werbel (1973), "Multivariate Analysis of Brand Loyalty for Major Household Appliances," Journal of Marketing Research, 10 (November), 404-09.

- Oliver, Richard L. (1976), "Hedonic Reactions to the Disconfirmation of Product Performance Expectations: Some Moderating Conditions," Journal of Applied Psychology, 61 (2), 246-50.
- _____ (1977), "Effects of Expectation and Disconfirmation on Postexposure Product Evaluations: An Alternative Interpretation," Journal of Applied Psychology, 62 (4), 480-6.
- _____ (1979), "Product Satisfaction as a Function of Prior Expectation and Subsequent Disconfirmation: New Evidence," in New Dimensions of Consumer Satisfaction and Complaining Behavior, Ralph L. Day and H. Keith Hunt, eds. Bloomington, IN: Indiana University, 66-71.
- _____ (1980a), "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions," Journal of Marketing Research, 17 (September), 46-9.
- _____ (1980b), "Theoretical Bases of Consumer Satisfaction Research: Review, Critique, and Future Direction," in Theoretical Developments in Marketing, C. W. Lamb and P. M. Dunne, eds. Chicago, IL: AMA, 206-10.
- _____ (1980c), "Conceptualization and Measurement of Disconfirmation Perceptions in the Prediction of Consumer Satisfaction," in Refining Concepts and Measures of Consumer Satisfaction and Complaining Behavior, H. Keith Hunt and Ralph L. Day, eds. Bloomington, IN: Indiana University, 2-6.
- _____ (1981), "Measurement and Evaluation of Satisfaction Process in Retail Setting," Journal of Retailing, 57 (Fall), 25-48.
- _____ (1987), "An Investigation of the Interrelationship between Consumer (Dis)Satisfaction and Complaining Reports," in Advances in Consumer Research, Vol. 14, Melanie Wallendorf and Paul Anderson, eds. Provo, UT: Association for Consumer Research, 218-22.
- _____ and William O. Bearden (1983), "The Role of Involvement in Satisfaction Processes," in Advances in Consumer Research, Ann Arbor, MI: Association for Consumer Research.

- _____ and _____ (1985), "Disconfirmation Processes and Consumer Evaluations in Product Usage," Journal of Business Research, 13 (June), 235-46.
- _____ and Wayne S. DeSarbo (1988), "Response Determinants in Satisfaction Judgments," Journal of Consumer Research, 14 (March), 495-507.
- _____ and G. Linda (1981), "Effects of Satisfaction and Its Antecedents on Consumer Preference and Intention," in Advances in Consumer Research, Kent B. Monroe, ed. Ann Arbor, MI: Association for Consumer Research, 88-93.
- _____ 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.
- _____ and Robert A. Westbrook (1982), "The Factor Structure of Satisfaction and Related Postpurchase Measures," in New Findings on Consumer Satisfaction and Complaining, Ralph L. Day and H. Keith Hunt, eds. Bloomington, IN: Indiana University.
- _____ and Russell S. Winer (1987), "A Framework for the Formation and Structure of Consumer Expectations: Review and Propositions," Journal of Economic Psychology, 8 (December), 469-99.
- Olshavsky, Richard W. and John A. Miller (1972), "Consumer Expectations, Product Performance, and Perceived Product Quality," Journal of Marketing Research, 9 (February), 19-21.
- Olson, Jerry C. and Philip Dover (1976), "Effects of Expectation Creation and Disconfirmation of Belief Elements of Cognitive Structure," in Advances in Consumer Research, B. B. Anderson, ed. Cincinnati, Ohio: Association for Consumer Research, 168-75.
- _____ and _____ (1979), "Disconfirmation of Consumer Expectation through Product Trial," Journal of Applied Psychology, 64 (April), 179-89.
- Pfaff, Anita B. (1972), "An Index of Consumer Satisfaction," in Proceedings, M. Venkatesan, ed. Iowa City, Iowa: Association for Consumer Research, 713-37.

- Pickle, Hal B. and Robert Bruce (1972), "Consumerism, Product Satisfaction /Dissatisfaction: An Empirical Investigation," Southern Journal of Business, 7 (September), 87-100.
- Prakash, Ved (1984), "Validity and Reliability of the Confirmation of Expectations Paradigm As a Determinant of Consumer Satisfaction," Journal of the Academy of Marketing Science, 12 (4), 63-76.
- _____ (1985), "Mood States and Consumer Satisfaction: A Conceptual Framework," in Consumer Satisfaction, Dissatisfaction and Complaining Behavior, H. Keith Hunt and Ralph L. Day, eds. Bloomington, IN: Indiana University.
- Resnik, Alan J. and Robert R. Harmon (1983), "Consumer Complaints and Managerial Response: A Holistic Approach," Journal of Marketing, 47 (Winter), 86-97.
- Richins, Marsha L. (1983a), "An Analysis of Consumer Interaction Styles in the Marketplace," Journal of Consumer Research, 10 (June), 73-82.
- _____ (1983b), "Negative Word-of-Mouth by Dissatisfied Consumers: A Pilot Study," Journal of Marketing, 47 (Winter), 68-78.
- _____ (1984), "Word of Mouth Communication as Negative Information," in Advances in Consumer Research, Thomas C. Kinnear, ed. Provo, UT: Association for Consumer Research.
- _____ and B. J. Verhage (1985), "Cross-cultural Differences in Consumer Attitudes and Their Implications for Complaint Management," International Journal of Research in Marketing, 2, 197-206.
- Robinson, Larry M. and Robert L. Berl (1980), "What About Compliments: A Follow-up Study on Customer Complaints and Compliments," in Refining Concepts and Measures of Consumer Satisfaction and Complaining Behavior, H. Keith Hunt and Ralph L. Day, eds. Bloomington, IN: Indiana University, 144-8.
- Ross, Ivan and Richard L. Oliver (1984), "The Accuracy of Unsolicited Consumer Communication As Indicators of 'True' Consumer Satisfaction/Dissatisfaction," in

- Advances in Consumer Research, Thomas C. Kinnear, ed. Provo, UT: Association for Consumer Research.
- Russo, J. Edward (1979), "Consumer Satisfaction/Dissatisfaction: An Outsider's View," in Advances in Consumer Research, W. L. Wilkie, ed. Ann Arbor, MI: Association for Consumer Research, 453-5.
- Sherif, M. and C. I. Hovland (1961), Social Judgment: Assimilation and Contrast Effects in Communication and Attitude Change, New Haven, Yale University Press.
- Shrauger, J. Sidney (1975), "Responses to Evaluation as A Function of Initial Self-Perceptions," Psychological Bulletin, 82 (4), 581-96.
- Singh, Jagdip (1988), "Consumer Complaint Intentions and Behavior: Definitional and Taxonomical Issues," Journal of Marketing, 52 (January), 93-107.
- _____ and Roy D. Howell (1985), "Consumer Complaining Behavior: A Review and Prospectus," in Consumer Satisfaction, Dissatisfaction and Complaining Behavior, H. Keith Hunt and Ralph L. Day, eds. Bloomington, IN: Indiana University.
- Sirgy, M. Joseph (1984), "A Social Cognition Model of CS/D: An Experiment," Psychology and Marketing, 1 (Summer), 27-44.
- Summers, John O. and Donald H. Granbois (1977), "Predictive and Normative Expectations in Consumer Satisfaction and Complaining Behavior," in Advances in Consumer Research, W. D. Perreault, ed. Atlanta, GA: Association for Consumer Research, 155-8.
- Swan, John. E. and Linda J. Combs (1976), "Product Performance and Consumer Satisfaction: A New Concept," Journal of Marketing, 40 (April), 25-33.
- _____ and Warren S. Martin (1981), "Testing Comparison Level and Predictive Expectations Model of Satisfaction," in Advances in Consumer Research, Kent Monroe, ed. Ann Arbor, MI: Association for Consumer Research, 77-82.
- _____ and Alice A. Mercer (1982), "Consumer Satisfaction as a Function of Equity and Disconfirmation," in Conceptual and Empirical Contributions to Consumer Satisfaction and

Complaining Behavior, H. Keith Hunt and Ralph L. Day, eds Bloomington, IN: Indiana University, 2-8.

_____ and Richard P. Oliver (1985), "Automobile Buyer Satisfaction with the Salesperson Related to Equity and Disconfirmation," in Consumer Satisfaction, Dissatisfaction and Complaining Behavior, H. Keith Hunt and Ralph L. Day, eds. Bloomington, IN: Indiana University.

_____ and I. Frederick Trawick (1981), "Disconfirmation of Expectations and Satisfaction with a Retail Service," Journal of Retailing, 57 (Fall), 49-67.

_____, _____, and Maxwell G. Carroll (1982), "Satisfaction Related to Predictive, Desired Expectations: A Field Study," in New Findings on Consumer Satisfaction and Complaining, H. Keith Hunt and Ralph L. Day, eds. Bloomington, IN: Indiana University, 15-22.

Technical Assistance Research Programs (1979), Consumer Complaint Handling in America: Summary of Findings and Recommendations, Washington, DC: U. S. Office of Consumer Affairs.

_____ (1981), Measuring the Grapevine--Consumer Response and Word of Mouth, Atlanta, GA: The Coca Cola Company.

_____ (1986), Consumer Complaint Handling in America: An Update Study, Contract HHS-100-84-0065, Washington, D. C.

Tesser, Abraham and Sidney Rosen (1975), "The Reluctance to Transmit Bad News," in Advances in Experimental Social Psychology, Vol. 8, L. Berkowitz, ed. New York: Academic Press, 193-232.

Thibaut, J.W. and H. H. Kelley (1959), The Social Psychology of Groups, New York: John Wiley & Sons, Inc.

Trawick, I. Frederick and John E. Swan (1980), "Inferred and Perceived Disconfirmation in Consumer Satisfaction," in Marketing in the 80's: Changes and Challenges, Richard P. Bagozzi et al, eds. Chicago: AMA, 97-100.

- Tse, David K. and Peter C. Wilton (1988), "Models of Consumer Satisfaction: An Extension," Journal of Marketing Research, 25 (May), 204-12.
- Valle, Valerie A. and Melanie Wallendorf (1977), "Consumer Attributions and the Cause of Their Satisfaction and Dissatisfaction," in Consumer Satisfaction, Dissatisfaction, and Complaining Behavior, Ralph Day, ed. Bloomington: IN, Indiana University, 26-30.
- Weaver, Donald and Philip Brickman (1974), "Expectancy, Feedback and Disconfirmation as Independent Factors in Outcome Satisfaction," Journal of Personality and Social Psychology, 30 (March), 420-8.
- Weinberger, M. G., Chris T. Allen, and W. R. Dillon (1981), "Negative Information: Perspective and Research Directions," in Advances in Consumer Research, Kent B. Monroe, Ann Arbor, MI: Association for Consumer Research.
- Weiner, Bernard (1980), Human Motivation, New York: Holt, Rinehart, and Winston.
- _____ (1985), "An Attribution Theory of Achievement Motivation and Emotion," Psychological Review, 92 (4), 548-73.
- Westbrook, Robert A (1977), "Correlates of Post Purchase Satisfaction with Major Household Appliances," in Consumer Satisfaction, Dissatisfaction, and Complaining Behavior, Ralph Day, ed. Bloomington, IN: Indiana University Press, 85-90.
- _____ (1980a), "Intrapersonal Affective Influences on Consumer Satisfaction with Products," Journal of Consumer Research, 7 (June), 49-54.
- _____ (1980b), "A Rating Scale for Measuring Product/Service Satisfaction," Journal of Marketing, 44 (Fall), 68-72.
- _____ (1987), "Product/Consumption-Based Affective Responses and Postpurchase Processes," Journal of Marketing Research, 24 (August), 258-70.
- _____ and Joseph W. Newman (1978), "An Analysis of Shopper Dissatisfaction for Major Household Appliances," Journal of Marketing Research, 15 (August), 456-66.

- _____, _____, and James R. Taylor (1978), "Consumer Satisfaction/Dissatisfaction in the Purchase Decision Process," Journal of Marketing, 42 (October), 54-60.
- _____ and Richard L. Oliver (1981), "Developing Better Measures of Consumer Satisfaction: Some Preliminary Results," in Advances in Consumer Research, Kent B. Monroe, ed. Ann Arbor, MI: Association for Consumer Research, 94-9.
- _____ and Michael D. Reilly (1983), "Value-Percept Disparity: An Alternative to the Disconfirmation of Expectations Theory of Consumer Satisfaction," in Advances in Consumer Research, Richard P. Bagozzi and Alice M. Tybout, eds. Ann Arbor, MI: Association for Consumer Research.
- Wilton, Peter C. and M. Nicosia (1986), "Emerging Paradigms for the Study of Consumer Satisfaction," European Research, 14 (January), 4-11.
- _____ and David K. Tse (1983), "A Model of Consumer Response to Communication and Product Experiences," in Advertising and Consumer Psychology, Arch Woodside and Larry Percy, eds. Lexington, MA: Lexington Books, 315-32.
- Woodruff, Robert B., E. R. Cadotte, and R. L. Jenkins (1983), "Modeling Consumer Satisfaction Processes Using Experience-Based Norms," Journal of Marketing Research, 20 (August), 296-304.
- Zinkan, George M. and Melanie Wallendorf (1985), "Service Set Similarities in Patterns of Consumer Satisfaction/Dissatisfaction," International Journal of Research in Marketing, 2, 227-35.