

# A CONTINGENCY FRAMEWORK OF SATISFACTION FORMATION

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## ABSTRACT

This article proposes a contingency approach to satisfaction formation. Based on central versus peripheral processing in the pre-usage stage and the product evaluation stage, the centrality of the traditional constructs (i.e., expectation, performance, disconfirmation) in satisfaction formation will differ. The framework has the potential of solving the inconsistencies among consumer satisfaction studies and of pointing to fruitful directions for future research.

## INTRODUCTION

Because satisfaction is one ultimate goal of marketing activities, quite a lot of effort has been spent in developing a theoretical framework to explain the determinants, formation process, and consequences of consumer satisfaction (Yi 1990). Among these efforts, the expectancy-disconfirmation paradigm is the most studied and referenced research stream (Churchill and Surprenant 1982; LaTour and Peat 1979; Oliver 1980a, 1980b; Oliver and DeSarbo 1988; Spreng and Olshavsky 1993; Stayman, Alden, and Smith 1992; Tse and Wilton 1988). Researchers in this paradigm mostly agree that posttrial satisfaction/dissatisfaction is determined by the consumer's evaluation of the discrepancy between prior expectation (or some other comparison standard) and the actual perceived product performance after usage. Although fruitful results have been reported within this research stream, there is still no consensus on the definition of key constructs and the relationships among them (Yi 1990). Comparison standards have multiplied while some studies have shown that performance alone predicts satisfaction.

In this paper, it is argued that the evolution of the satisfaction literature clearly shows that a contingency approach is necessary in order to (1) determine which comparison standard (if any) is appropriate and (2) predict whether performance alone causes satisfaction. The Elaboration Likelihood Model (ELM) (Petty and Cacioppo 1981, 1986) provides a rich theoretical framework that can serve as a basis for developing such a

contingency approach. The first part of this manuscript briefly reviews the evolution of the satisfaction literature. In the second part of the manuscript, an integrated contingency framework will be presented. Based on the core concepts of the ELM, the framework has the potential of solving the inconsistencies among consumer satisfaction studies and of pointing to fruitful directions for future research.

## THE EVOLUTION OF CONSUMER SATISFACTION STUDIES

### Early Research

Early research interest focused mainly on three theories. The first, contrast theory, proposes that consumers will compare the actual product performance to their before-trial expectation. If the actual performance is higher than or equal to the expectation, consumers will be satisfied and rate the product performance better than the actual performance. On the other hand, if the actual performance is lower than expectation, consumers will be dissatisfied and rate the product lower than the actual performance (Anderson 1973; Cardozo 1965; Engel, Kollat and Blackwell 1973; Howard and Sheth 1969; Swan and Combs 1976).

The second theory, assimilation theory, predicts that the post-trial evaluation is a positive function of consumers' before-trial expectation. Because the task of recognizing disconfirmation is psychologically uncomfortable, consumers tend to perceptually distort their expectation-performance discrepancy toward their prior expectation (Anderson 1973; Olshavsky and Miller 1972; Olson and Dover 1976, 1979).

The third, assimilation-contrast theory, predicts that whether the assimilation effect or the contrast effect occurs is a function of the degree of discrepancy between expected and actual performance. If the discrepancy is "large," consumers will magnify the discrepancy, so that the product is perceived as much better/worse than it was in actuality (as in contrast theory). If the discrepancy is not large enough, assimilation theory holds. That is, once a range of acceptable deviations around expectations is breached, the

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discrepancy becomes psychologically distasteful, and only then the contrast effect occurs (Anderson 1973; LaTour and Peat 1979).

### **The Issue of Disconfirmation**

All studies cited above share two limitations in explaining the whole process of consumer satisfaction. First, although they agreed that satisfaction results from a comparison process, they do not really measure disconfirmation in their research. The early works either manipulated only expectation (Anderson 1973; Cardozo 1965; Olson and Dover 1976, 1979) or both expectation and performance (Olshavsky and Miller 1972), but no work explicitly measured disconfirmation.

Oliver (1976) argued that disconfirmation should be measured independently because this post-trial evaluation may be very subjective and feeling based. The result of his empirical study showed that post-trial affect and intention were positively related to expectations and subjective disconfirmation. Moreover, the results also showed that there was no negative correlation between expectations and disconfirmation, and therefore the disconfirmation construct could be measured independently. Since Oliver's (1976) work, most empirical satisfaction theory research explicitly measured the disconfirmation construct (Swan and Trawick 1980; Churchill and Surprenant 1982; Cadotte, Woodruff, and Jenkins 1987; Tse and Wilton 1988; Spreng, MacKenzie, and Olshavsky 1996; Stayman, Alden and Smith 1992).

### **Comparison Standards**

The second limitation early studies share is that researchers assumed that consumers used the expectation generated (mostly in experiments) as the standard for comparison. Expectation reflects the anticipated performance of a focal product, and it used to be the only comparison standard considered. Now researchers disagree over which comparison standard is relevant, or whether it is even fruitful to focus on only one or two comparison standards. Not only a variety of standards have been proposed, but also the expectation standard has received new scrutiny (Spreng and Olshavsky 1993).

Consider first extensions and refinements of

the expectation construct. LaTour and Peat (1979) stressed the importance of experience-based expectation. Based on Thibaut and Kelley's (1959) comparison theory, they proposed and demonstrated empirically that the standard is a function of past experiences with similar products, to a lesser extent the experiences of similar consumers, and to still lesser extent the performance promised by the manufacturer. Consumers with relatively poor prior experience were more satisfied than consumers with relatively good prior experience, while the manufacturer-induced expectations have no effect on satisfaction. Based on this early research, Woodruff, Cadotte, and Jenkins (1983) proposed brand based and product based norms as comparison standards. Consumers derive both from the various brand and product experiences they have within the product class and in comparable usage situations. In a later experiment, Cadotte, Woodruff, and Jenkins (1987) found that product versus brand norms appeared to provide the standards for different restaurant types. Stayman, Alden, and Smith (1992) applied the schema switch concept to norm choice. They found that consumers will switch product category schema if new product attributes are very discrepant from prior schema. Common to these studies is the focus on expectations, albeit expectations derived from different sources.

A second stream of research looks at different types of norms (as well as expectations). For example, Miller (1977) introduces four different types of norms-- (1) expected; (2) ideal, the wished-for level; (3) minimum tolerable, or the least acceptable level; and (4) deserved, the should be or ought to be level. Westbrook and Reilly (1983) proposed that value should be the base for comparison, while Spreng and Olshavsky (1993) introduced a similar construct called desires. "Desires are beliefs about the product attributes or performance that will lead to higher-level values" (p. 172). These researchers showed that although desires congruency did not completely mediate the effects of performance on satisfaction, it was a better predictor than expectation disconfirmation in predicting satisfaction.

### **Performance as a Construct**

In most of the satisfaction studies, product

performance was compared to the norm to determine disconfirmation. However, as Spreng and Olshavsky (1993) described, in some circumstances or product categories, product performance itself may be a major satisfaction determinant. Churchill and Surprenant (1982) found that although disconfirmation and expectation positively affected satisfaction in the case of a hybrid plant, the level of satisfaction for a video disc player was solely dependant on its performance. The experimental work by Tse and Wilton (1988) on a miniature recorder player, also supports perceived performance as a major determinant of satisfaction: "whenever a product performs well a consumer is likely to be satisfied, regardless of the level of the pre-experience comparison standard and disconfirmation" (p.205).

The importance of these results is that they challenge the key premise of the expectancy-disconfirmation paradigm. If performance is by far the major determinant of satisfaction, then the controversy over comparison norms becomes far less crucial.

### Summary and Conclusion

From this brief survey of the literature, one can conclude that the first issue is how to choose the appropriate comparison standard (if any). Since every comparison standard proposed has some empirical support, one is led to the conclusion that there are contingency variables which result in the different experimental results. That is, consumers may (or are forced to) use different comparison standards in different situations. The key to theoretical advancement is to have a framework capable of classifying these situations in a meaningful way and then suggesting contingent standards.

The second issue is which constructs predict consumer satisfaction. This issue partially revolves around the classical argument of whether consumers will contrast or assimilate the comparative difference as discussed in the beginning of this paper. More central is the challenge to the key premise that such comparisons are even made: is performance all there is? Again, the conclusion is that a contingency theory of satisfaction formation can be a plausible explanation for the different results across studies.

It is argued below that the Elaboration Likelihood Model (Petty and Cacioppo 1981, 1986) provides a framework of affect, cognition and behavior that is directly applicable to the satisfaction formation process. In the following section, the basic concepts of the ELM are reviewed and then a contingency theory of satisfaction formation is proposed based on ELM concepts.

### A CONTINGENCY MODEL OF SATISFACTION FORMATION

The Elaboration Likelihood Model (ELM) (Petty and Cacioppo 1981, 1986), posits that individuals are generally motivated to hold correct attitudes (an attitude is seen as correct to the extent that it is viewed as beneficial for the physical or psychological well-being of a person). However, situational and individual factors inherent in an evaluation setting may reduce the amount and type of thinking that people are willing or able to devote to evaluation processing. Two major categories of variables were identified by Petty and Cacioppo (1986): motivation and ability to process. Factors that may influence a person's motivation to process include personal relevance (Petty, Cacioppo, and Schumann 1983), need for cognition (Cacioppo, Petty, and Morris 1983), and personal responsibility (Petty, Harkins and Williams 1980). Factors that may influence a person's ability to process include distraction (Petty, Wells, and Brock 1976), message pace (Chaiken and Eagly 1976), and intelligence (Anderson and Jolson 1980).

If a person has no motivation and/or no ability to process information such as a persuasive message, he or she will follow a peripheral route; i.e., attitude changes without the person thinking about information central to the merits of the issue. For example, consumers may use source expertise, affective experience, simple cues (odor, color, number of arguments, and so on) to form product expectations or evaluate products. On the other hand, if he or she has motivation and ability to process the information, he or she will follow a central processing route; i. e., attitude changes with the person thinking about information central to the merits of the issue. Under this route, comprehension, learning, evaluation, elaboration,

**Table 1**  
**The Four Categories of Sequential Processing**

		<b>Post-Trial Stage :</b>	
		Motivation and Ability to Evaluate the Product Performance	
		High	Low
<b>Pre-Usage Stage:</b> Motivation and Ability to Evaluate the Pre-usage Information	High	Central, then Central Route Processing	Central, then Peripheral Route Processing
	Low	Peripheral, then Central Route Processing	Peripheral, then Peripheral Route Processing

**Table 2**  
**Centrality of Key Constructs in Predicting Satisfaction**

		<b>Post-Trial Stage:</b>	
		Central Processing	Peripheral Processing
<b>Pre-Usage Stage:</b>	Central Processing	Disconfirmation (Cognitive)	Expectation
	Peripheral Processing	Perceived Product Performance	Disconfirmation (Affective)

and integration of the information will be critical for persuasion. Attitudes formed or changed by

peripheral route processing are postulated to be relatively less persistent over time, less resistant to

change, and less predictive of long term behavior than those engendered by central route processing.

### Processing of Two Sets of Stimuli

When a person purchases and evaluates a product, he or she actually is receiving two sets of attitude changing stimuli in sequence: first, the pre-usage or all information before trial, and second the product's performance after trial. The pre-usage information influences or persuades the person to purchase the product. If the person purchases the product, the product itself becomes the attitude changing and learning vehicle when the person begins to use and evaluate it. This argument is consistent with Hoch and Deighton's (1989) assertion that consumers know about a product or brand through two major learning sources--education which gets the pre-usage information (e.g., ads, word of mouth, public reports, etc.) and direct product experience. If each of these two sets of stimuli can be processed either peripherally or centrally, then four combinations are possible over the sequence: pre-usage information can be processed peripherally or centrally, followed by post-trial product performance information which can be processed peripherally or centrally.

Whether central or peripheral processing takes place for either of the two sets of stimuli depends on the consumer's motivation and ability to process the information (as postulated by the ELM; see Table 1). Motivation to process is intimately tied to involvement, while ability may depend on the consumer's familiarity with the domain and the ambiguity of the information environment. Several studies in the satisfaction literature did attempt to incorporate some of these factors in the past. Examples include involvement (Oliver and Bearden 1983; Patterson 1993; Richins and Bloch 1991; Shaffer and Sherrell 1997), confidence (Swan and Trawick 1980), and product ambiguity (Trawick and Swan 1981; Yi 1993). However, the present model considers consumer motivation and ability in both stages (i.e., concept and usage), and since the present framework is based on ELM, the richness of ELM can be folded into the satisfaction framework.

### Four Categories of Sequential Processing

Based on central versus peripheral processing in each of the two stages (pre-usage information versus product evaluation), it is proposed that the centrality of the traditional constructs changes (see Table 2). Each of the four categories is discussed below. The contingency framework uses the term "expectation" to represent all possible pre-usage comparison standards. As mentioned, there is no consensus regarding which comparison standard is the most suitable or effective for predicting satisfaction formation. In certain situations, experience-based expectations or desires may be more effective than pure expected expectations.

**Central-Central.** If a person uses the central route to evaluate both the pre-usage information and product performance, it is proposed that the major determinant of satisfaction will be disconfirmation (see Table 2). At both stages, the consumer has the ability and the motivation to process the learning information. Therefore, s/he can directly compare perceived product performance to expectation. A review of the past experimental work in satisfaction demonstrates that if the subjects were experienced or knowledgeable users and the pre-usage information was not innovative (i.e., not beyond the current knowledge of the subject), the result of the research normally shows that disconfirmation is the one of the major determinant of satisfaction (Bearden and Teel 1983; Cadotte, Woodruff and Jenkins 1987; LaTour and Peat 1980; Oliver and DeSarbo 1988; Swan and Trawick 1980; Westbrook 1987).

**Central-Peripheral.** If a person uses the central route to process the pre-usage information, but the peripheral route to evaluate the product performance, the satisfaction evaluation of the focal product will be dominated by expectation rather than post-trial performance (see Table 2). This is because the learning generated by the central route in the pre-usage stage will be more persistent and resistant than the post-trial evaluation, therefore, the assimilation effect is more likely. The results of several past studies are consistent with the argument. Trawick and Swan (1981) found that if product performance is ambiguous to the consumers, the consumers tend

to "misinterpret" performance in the direction of their expectations. Similarly, Yi (1993) found that consumer satisfaction is determined largely by prior expectation when products are ambiguous. Anderson and Sullivan (1993) also showed that disconfirmation is less of a concern for products where quality is difficult to evaluate.

**Peripheral-Central.** If a person uses the peripheral route to process the pre-usage information and the central route to evaluate the product, the satisfaction evaluation will be determined mostly by perceived product performance (see Table 2). Research claiming that product performance is the major determinant of satisfaction generally falls within this context. As stated, consumers use the peripheral route to process the product information because of motivation or ability issues. For motivation issues, the argument here is consistent with what Oliver (1989) called "passive formation of expectation." Consumers may not have much motivation to process and generate expectation actively for certain kinds of products (e.g., continuous repeat purchase). Therefore, product evaluation alone can explain most of consumer satisfaction. For ability issues, there are several studies that can be served as examples for our argument. For example, the results of Churchill and Surprenant (1982) (video disc player) and Tse and Wilton (1988) (miniature record player) might be due to the inexperience or lack of product knowledge of the subjects. Both studies used shoppers or students to evaluate an innovative product (video disc player and miniature record player). The subjects probably had to use peripheral route processing to evaluate the advertisement type message because of their limited ability, while using central route to experience these relatively expensive products. Another example is the study by Spreng and Olshavsky (1993). The product they used was a new kind of camera. They found that product performance had a direct impact on satisfaction in addition to the indirect impact through desire congruency. If the proposed model is correct, the direct impact on satisfaction of product performance may be due to the partial domination of central route processing in the product evaluation stage. Yi (1993) also argued that consumers form their perceptions of product

performance with stronger confidence when the product performance is unambiguous to them. This confidence in the performance perception may have a stronger effect on consumer-satisfaction formation.

**Peripheral-Peripheral.** If a person uses peripheral routes to evaluate both the pre-usage information and product performance, the major determinant of satisfaction will be affect disconfirmation (see Table 2). At both stages, consumers do not have the ability and/or motivation to process the information. They may use peripheral cues as the base to form their expectations and perceived product performances. Whether they will be satisfied with a product is dependent on whether they receive consistent peripheral cues in the product evaluating stage. Peripheral cues can be very subjective and affect based (Petty and Cacioppo 1986). Different persons in different situations may focus on different cues.

Based on marketing and economics literature, two types of consumer goods are likely to be processed via the peripheral route in both stages. The first one is called convenience goods (Copeland 1923). For this kind of product, consumers do not have motivation in evaluating the product in either the concept or the product evaluation stage. The second one is called credence product (Darby and Karni 1973). In this product class, consumers cannot judge the product even after using the product (e.g., some long-term medical treatments). In the first case, consumers do not have motivation, while in the second case, consumers do not have ability to process the information. Therefore, they use peripheral routes to process the information at both stages.

## DISCUSSIONS AND FUTURE STUDIES

Based on the framework, consumer motivation and ability at the pre-usage and the trial stage can affect the centrality of key constructs in predicting satisfaction. This framework has the potential of solving the inconsistencies among past satisfaction studies. When consumers use central or peripheral routes to process the incoming information at both stages, the prediction of contrast theory will be more accurate. When consumers use the central

route to process the pre-usage information, but the peripheral route to evaluate the product performance, the prediction of assimilation theory will be more valid. Finally, when consumers use the peripheral route to process the pre-usage information, but the central route to evaluate the product performance, the prediction of performance theory will be more convincing.

Future studies can consider explicitly the motivation and ability of the subjects at both stages. The four scenarios can be tested empirically by manipulating the motivation or ability of evaluation at either stage. A meta-analysis research on the past studies may also provide a fruitful consolidation of the past efforts on studying satisfaction formation.

The framework also gives a clear guideline for marketing practitioners. For marketers, some products (central, then central processing) should never be over claimed, while others (central, then peripheral processing or peripheral, then central processing), should focus on building a solid foundation of expectation or product evaluation at the centrally processed stage. Take the medicine industry for example. If a new drug is very effective and consumers can perceive the effect immediately, the marketing effort should focus on letting consumers try the product since the major determinant of satisfaction is perceived product performance. On the other hand, if the effect of the new drug is long term, then the marketing effort should focus on building a strong faith in and expectation of the new drug. Marketers should try to let consumers process the product information through the central route (e.g., the reasons why the new drug works). A solid expectation generated by central processing can improve consumers' satisfaction with the product. Finally, for peripheral, then peripheral processing products, marketers need to make sure that consumers perceive consistent peripheral cues at the pre-trial and the trial stage, although the peripheral cues can be very subjective.

Several other issues need to be discussed here. First, the dichotomy in the two stages is a simplified one. The dimensions in each stage should be continuum. A consumer may not process information strictly based on one route. Therefore, satisfaction formation is seldom dominated by only one stage. The mixed influence of two routes may

cause the research results to show that expectation, disconfirmation, and perceived performance all influence satisfaction levels. However, this framework can still provide a prediction of the relative importance of the three antecedents in influencing satisfaction.

Second, researchers need to be very careful in designing satisfaction studies. A subtle difference in experimental procedures may cause totally different results. For example, the different empirical results of the hybrid plant versus video disc player in Churchill and Surprenant's (1982) study may have been caused by the different expectation-generating instruments. As stated in their explanation, subjects in the hybrid plant were given objective attributes in measuring expectation (e.g., size will be about 10 inches), while subjects in the video disc player were given more subjective descriptors (e.g., picture quality is excellent). Apparently, the subjects in the hybrid plant case not only had the ability to generate exact expectation, but also could easily compare the product performance to their expectation (e.g., they could easily count the blossom number and size of the plant to form the reference). Subjects had the ability to process the treatment information by central route both in the pre-trial and post-trial stages, thus disconfirmation dominated in the study. In contrast, subjects in the case of video disc player could have fallen in the peripheral-central case (described above) and thus product performance dominated.

Third, one of the very important postulations of ELM is that the attitudes generated by the central route will be more persistent, resistant, and predictive of long term behavior than those based on the peripheral route (Petty and Cacioppo 1986). Therefore, it is postulated that if satisfaction is generated by at least one central route in the two processing stages, it will be more predictive of long-term behavior.

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