

THE STANDARDS ISSUE: AN ACCESSIBILITY-DIAGNOSTICITY PERSPECTIVE

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ABSTRACT

Consumer satisfaction (CS) is critical to business profitability. To implement any customer measurement program, businesses must understand how consumers evaluate their (dis)satisfaction. Researchers have proposed that our satisfaction evaluations involve a comparison process between product (service) performance and standards of comparison. However, little research has been devoted to the understanding of the circumstances under which consumers utilize one or more standards, construct ad hoc or retrieve prior standards, or when standard disconfirmation would have little impact on CS. Based on the accessibility-diagnostics model, we propose preliminary answers to these issues. A standard is utilized only when it is accessible and diagnostic for (or relevant to) the judgment task or goal. Multiple standards however may be utilized when they are moderately diagnostic. Applying the same model, we suggest that accessibility and diagnosticity or goal relevance determine whether or not a consumer will construct or retrieve one or more standards from memory. When product performance is more diagnostic than disconfirmation (and standards), it is more likely to affect customer satisfaction. Accessibility and diagnosticity are affected by individual, product and situational variables.

INTRODUCTION

The CS literature is dominated by the expectancy disconfirmation paradigm. This paradigm states that satisfaction results from the comparison of perceived product or service performance with prepurchase expectations. Satisfaction occurs when performance exceeds expectations and dissatisfaction occurs when performance falls short of expectations. However, despite the many empirical validations, some studies have shown that there exist many satisfaction situations which cannot be predicted by the current dominant model. Researchers have questioned the conceptualization of the expectations as the only standard of comparison

(Woodruff et al. 1983; Woodruff et al. 1991; Woodruff, 1993; Gardial et al. 1993; Miller, 1977; Cadotte et al. 1987; LaTour and Peat, 1979; Spreng and Dixon, 1992; Spreng and Olshavsky, 1993; Clemons and Woodruff, 1992; Westbrook and Reilly, 1983; Krishnan and Olshavsky, 1995). An empirical relationship between product performance and satisfaction has also been found (Churchill and Surprenant, 1982; Patterson, 1993; Anderson and Sullivan, 1993; Tse and Wilton, 1988; Swan, 1988; LaTour and Peat, 1979; Fornell, 1992). Other studies have questioned the cognitivist explanation of CS (Mano and Oliver, 1993; Oliver, 1993; Westbrook and Oliver, 1991; Westbrook, 1987) and CS measurement scales (Garpentine, 1994; Teas, 1994; 1993; Cronin and Taylor, 1994; 1992, Grönroos, 1993). More recently, Spreng and Olshavsky (1993; Spreng et al. 1996) have called for a development of a more general model that would explain more (dis)satisfaction situations and that would place current models in a more comprehensive framework.

In response to the need for a better framework, different alternative models have been proposed: the value-percept disparity model (Westbrook and Reilly, 1983), the experience-based norms model (Woodruff et al. 1983; Cadotte et al. 1987), the desires congruency model (Spreng and Olshavsky, 1993), the means-end disconfirmation model (Clemons and Woodruff, 1992), the combined cognitive and affect-augmented model (Oliver, 1993), and so forth. However, if researchers agree on the need for a better model of consumer satisfaction, they are still far from finding it. Current models agree that our subjective evaluation of our satisfaction involves a comparison process between product or service performance and a standard of comparison. Yet, no agreement has been reached upon which standard is used by consumers. Different standards have been suggested in the literature: Ideal performance (Miller, 1977; Tse and Wilton, 1988; Sirgy, 1984), Desired performance, Wants (Myers, 1991), Desires (Olshavsky and Spreng, 1989), Values (Westbrook and Reilly, 1983), comparative and normative expectations (Prakash,

1984), deserved or equitable performance (Tse and Wilton, 1988; Liechty and Churchill, 1979; Miller, 1977), minimum tolerable (Miller, 1977) or adequate performance (Zeithaml et al. 1993), product and brand norms (Cadotte et al. 1987), schema (Stayman et al. 1992), predictive performance (Prakash, 1984), expected performance (Miller, 1977), market supplied (Gardial et al. 1994), and so forth. What is missing, however, is a general framework that systematically organizes and distinguishes among these and other varieties of standards. Such a framework is necessary to appreciate the complex role of standards in the satisfaction formation process and the full extent of individual, product and situational differences in their use. Woodruff et al. (1991) have proposed that three dimensions are relevant to distinguish these standards: the nature of experience, level, and perceptual distinctiveness. Our typology is based on the theories that underlie comparison standards. This scheme proposes that each standard stresses a different aspect of a consumer's experience, life and has a different level (see table 1).

Some researchers suggest that multiple standards are likely to be used for a given consumption experience (Woodruff et al. 1983; 1991; Forbes et al. 1986; Tse and Wilton, 1988). Yet, there is little knowledge on what makes consumers use one or more standards. So far, only a few studies have investigated the determinants of standards use. Bolting and Woodruff (1988) showed that situational involvement may affect the type of standard applied to product performance evaluations. In low involvement situations consumers were more likely to use a favorite brand norm or focal brand expectations than a product norm in disconfirmation judgments. Gardial, et al. (1993) have found that subjects use different standards at different levels of the means-end hierarchy. Gardial, Flint and Woodruff (1996) have found that various types of trigger events, extraordinary stimuli relevant to product use and which bring about change in consumers' responses to the product/service in question, are associated with comparison standards. This implies that the use of a given standard may depend upon which event triggered product evaluation. So, if researchers admit that consumers may use multiple standards, then,

Q1: Under what circumstances do consumers use one or more standards?

On the other hand, researchers seem to admit that consumers always use prior standards in memory implying that they are stable over time (see Gardial et al. 1994 for an exception). Recent studies, however, recognize that standards may be built during or upon product consumption (Iacobucci et al. 1994; Woodruff et al. 1991). The following question then comes to mind:

Q2: When do consumers retrieve prior standards and when do they construct ad hoc or on-line standards?

Finally, researchers have found evidence which indicates that product performance has more significant influence on satisfaction than standard disconfirmation without very convincing theoretical arguments for the results (Patterson, 1993; Churchill and Surprenant, 1982). So, the following question is examined:

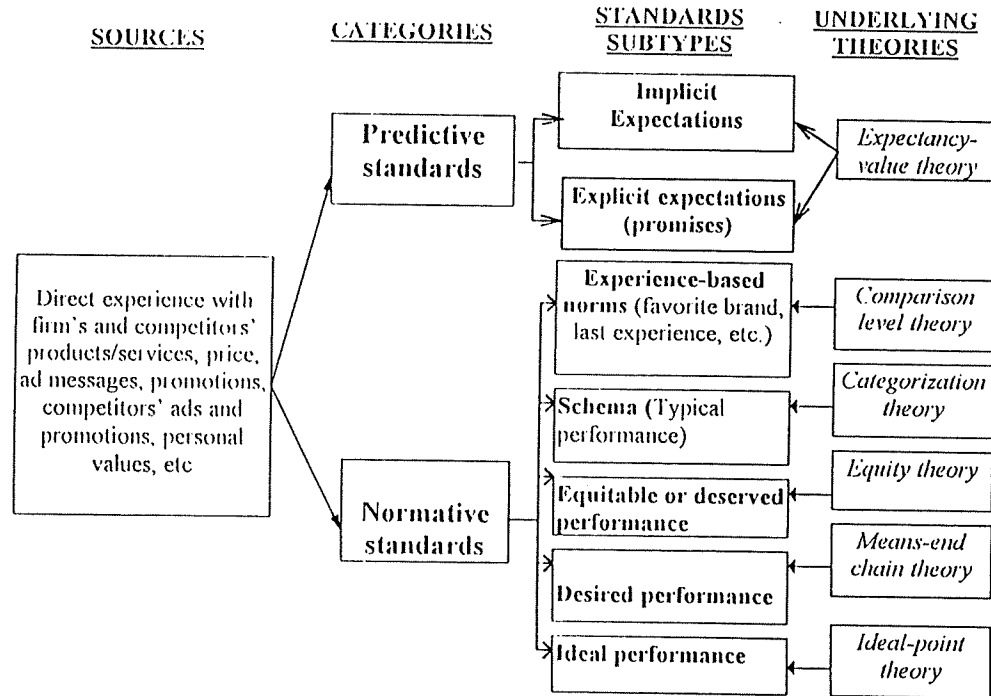
Q3: When does product performance outperform disconfirmation and standards in explaining consumer satisfaction?

This article aims at providing some conceptual answers to these questions. To do so, the approach consists in viewing consumer satisfaction as a memory-based activity as the comparison process takes place in the consumer's mind and only the outcomes (complaining behavior, WOM communications, repurchase) are manifest. As such, some progress can be made by using memory-related theories. Throughout the article, the accessibility-diagnostics model (Feldman and Lynch, 1988) will be used as an explaining framework. The rationale here is based on the following postulates: (1) consumers may approach a consumption experience with different standards (or frames of reference) in their mind; (2) consumers may use different standards simultaneously; (3) it is not necessary that prior standards be used as some standards can be constructed or selected on the spot during and/or upon product consumption. This assumption is based on recent work which states that beliefs, attitudes, intentions are not always ready waiting

Table 1

UNDERLYING THEORIES	Standards of comparison	Definition
<i>Expectancy-value theory</i>	EXPECTATIONS	
	Predictive expectations	Beliefs about product attributes or performance at some time in the future
	Promises or market supplied expectations	Explicit promises made by the seller on product performance
<i>Comparison level theory</i>	NORMS	
	Last received	The most recent experience the consumer had with the brand or product category
	Average performance	The performance the consumer believes the typical (or average) product or service of this type provides
	Favorite brand	The performance one gets from one's most preferred brand
	Best available	The performance one believes is the best performance that is available
	Best on attributes	The performance one believes one can receive on each attribute, even though no one brand is best on all the attributes at the same time
	Minimum tolerable	Minimum performance a consumer believes a product or brand must provide
	Product category	The performance one can receive from the product compared to a product in another category
	Product type	The performance one can receive from a type of product compared to another one in the same category
	Other brand	The performance one can get from a brand compared to another brand in the same product type
	What others have received	The performance that others have received and therefore the consumer believes s/he should receive
<i>Categorization theory</i>	SCHEMA	
	Schema	Performance a consumer believes should come from a brand or product categorized in a particular product category schema.
<i>Equity theory</i>	EQUITY-BASED NORMS	
	Equitable or deserved performance	The performance of a product the consumer thinks s/he should get , given what was put into the exchange
<i>Means-end theory</i>	DESIRES	
	Desires	The performance of a product or service that the consumer judges will lead to higher level values
<i>Ideal-point theory</i>	IDEAL	
	Ideal performance	The performance that is the best one can imagine, an abstract ideal

Figure 1
The Different Categories of Standards



to be used by the individual but may be constructed upon internal (self-generated) or external (e.g. market research survey questionnaire) request (Morwitz et al.1993); and (4) it is not necessary that standard disconfirmation prevails in any satisfaction judgment. This assumption is based on research that found a significant relationship between product performance and satisfaction (Patterson, 1993).

The article is organized into four sections. The first section makes an overview of the standards that may be used by consumers in comparison processes. The second section examines the case where consumers have a priori standards in mind; the third section examines the circumstances under which consumers retrieve a priori or construct ad hoc standards; and in the fourth section, a theoretical explanation is provided on the

relationship between product (or service) performance and satisfaction. Throughout the paper implications for future research are discussed.

STANDARDS OF PRODUCT EVALUATION: AN INTEGRATIVE REVIEW

We propose that there are two broad categories of comparison standards: predictive standards and normative standards. Predictive standards refer to customers' beliefs on what will happen in their next consumption experience. Normative standards refer to customers' beliefs about what should happen in their next consumption experience (see Figure 1). Our proposition is consistent with previous work in marketing and organizational behavior. In

marketing, we draw from Boulding and his colleagues (1993; see also Lawler, 1971 on pay satisfaction) who distinguish predictive from normative expectations.

However, our approach is different from Boulding et al's (1993) in that we consider predictive and normative standards as second-order constructs. From these two broad categories we still distinguish six more subtypes of standards based on their underlying theories. Six theories are at the basis of the standards of comparison as we know them today: (1) the expectancy-value theory, (2) comparison level theory, (3) ideal-point theory of choice and preferences, (4) equity theory, (5) categorization theory and (6) means-end theory. Each of these theories emphasizes a specific aspect of the consumer's experience. Our distinction of the six subtypes of standards is consistent with the work that found that this distinction is relevant (Tse and Wilton, 1988; Gupta and Stewart, 1996). In the organizational behavior field, the relative deprivation theory (see Crosby, 1976) proposes that six important judgments are preconditions to feelings of dissatisfaction about outcomes. Individuals will feel dissatisfied and resentful about the level of an outcome when (1) there is a discrepancy between the outcome they want and what they receive (e.g. desired performance), (2) they see that a comparison other has more than they do (this standard has been suggested by Spreng and Dixon, 1992), (3) past experience has led them to expect more than they now have (e.g. last consumed brand), (4) future expectancies for achieving better outcomes are low, (5) they really feel they deserve more (e.g. equitable or deserved performance), and (6) they absolve themselves of personal responsibility for the lack of better outcomes (i.e. attribution of causes). Empirical evidence has been found by Sweeney and his colleagues (1990). We draw on this theory to suggest that different discrepancy constructs might play important roles in predicting satisfaction with products and services.

The typology here is based on the nature of the standard. It also considers the level of the standard as each will have a different value given that "it is possible that even when people utilize the same standard subtype, there could be individual differences with respect to the specific content of the particular standard subtype that is

used" (Higgins, Strauman and Klein, 1986, p.23).

Expectancy-Value Theory: Does the Product Meet My Prepurchase Beliefs?

Expectancy-value theory defines attitudes in terms of beliefs and their importance. Fishbein and Ajzen (1975) suggest that attributes (or consequences) associated with an attitude object are evaluated on two dimensions. First, the individual considers the likelihood that an attitude or a consequence will be associated with the object, and then, considers the desirability of that attitude (or consequence). The early works in CS (Oliver, 1977, 1980; Olson and Dover, 1979) drew from that theory and proposed that before buying, consumers estimate the likelihood that product attributes (or the whole product) will provide a given performance upon consumption. This prepurchase evaluation (i.e. expectations) will then be used as a standard in the comparison process. Different concepts related to expectations have been suggested. Most of the authors who have used these concepts (Oliver, 1980; 1981; Churchill and Surprenant, 1982; Miller, 1977 [expected performance]; Swan and Trawick, 1980; Prakash, 1984 [predictive expectations]; Spreng and Dixon, 1992; Gardial et al. 1994 [market supplied standard]) all talk about product (or service) probability estimations in providing a given performance on its attributes or globally. More recently, some researchers (Spreng and Dixon, 1992; Woodruff et al. 1991) have proposed that seller's promises can be used as comparison standards.

The Comparison Level Theory: Is the Product Better than the Other Experiences?

Another set of standards can be considered as resulting from the comparison level theory. Thibault and Kelley's (1959) comparison level theory suggests that consumer satisfaction results from the discrepancy between the result and a standard of comparison called the comparison level. This comparison level is determined by the average salient results of the same interactions (e.g. the similar previous service encounters), the similar interactions experienced by other individuals (e.g. one's friends) and in a lesser

extent by specific expectations on the current interaction. LaTour and Peat (1979) modified this theory and proposed that there exists a comparison level for each attribute. This comparison level is a function of previous experiences with various levels of the attribute, the levels of attributes experienced by similar consumers that the individual is aware of and the expectations created by the seller. These authors have proposed two more standards: (1) average performance and (2) average performance obtained by others. The main characteristics of these standards are that they don't concern the focal brand but other experiences. In the same vein, Woodruff et al. (1983) proposed and validated (Cadotte et al. 1987) two types of standards called experience-based norms: (1) brand norms (most popular brand, last consumed brand, favorite brand) and (2) product norms which correspond to what LaTour and Peat (1979) called average performance. Other standards can be integrated into this category: (1) minimum tolerable performance: (Miller, 1977) which corresponds to what Zeithaml et al. (1993; Parasuraman et al. 1991) have called "adequate performance", (2) best brand available: (Spreng and Dixon, 1992), (3) best performance on attributes: (Spreng and Dixon, 1992), (4) product category, and (5) product type: (Gardial et al. 1994) (see Table 1).

The Ideal-Point Theory: Is the Product a Perfect One?

Ideal-point choice and preference models propose that consumers have an image of an ideal brand in memory and compare actual brands with that ideal. Each brand is supposed to have ideal points for each attribute which represent the ideal or optimal amount of an attribute (Garpentine, 1994; Kotler, 1991). When an attribute performance is greater or lower than the ideal point consumers perceive poor quality and are dissatisfied. Drawing on this theory, researchers have suggested that consumers use the ideal performance as a comparison standard. Most of these standards refer to product perfection. Ideal performance has been defined as the best performance a consumer can imagine (Spreng and Dixon, 1992), a wished-for performance (Miller, 1977), and the optimal product performance a

consumer can ideally expect (Tse and Wilton, 1988). This standard should be considered as a consumer's perfect quality for the product/service to avoid any confusion with expectations (see Iacobucci et al. 1994 for an excellent example on hotel registration).

Equity Theory: Does the Product Correspond to What I Spent?

Equity theory (Adams, 1963) states that consumers compare their inputs (i.e. resources) into the exchange with what they get in return. Adams expressed this as a ratio of results (product or service performance) with inputs (money, time, and energy). Equity is determined by comparing the consumer's ratio with the seller's ratio (distributive equity). This theory has been validated in CS/D studies (Oliver and Swan, 1989; Oliver and DeSarbo, 1988). This theory has lead researchers to recognize that equitable (Tse and Wilton, 1988) or deserved (Miller, 1977) performance or fairness (Spreng and Dixon, 1992) can be used as a comparison standard in satisfaction judgments. This standard corresponds to the performance level a consumer deserves given what s/he put into the exchange.

Categorization Theory: Does the Product Correspond to what I Know about This Category?

Rosch (1975) proposed that individuals are flooded with so much information from the environment that it is almost impossible for them to process all of it. As a result, they develop cognitive structures that help them organize and process information efficiently. Individuals have schemas about the environment - i.e. generic knowledge structure composed of relevant attributes of a stimulus as well as their interrelations (Folkes and Kiesler, 1991). The schema is an organized model of expectations associated with a stimulus. Once a product is categorized into a certain class, knowledge and expectations the consumer has developed over time (schema) on this kind of product will affect the kind of information the consumer will encode on the product as well as inferences made about that product (Bettman, 1979; Sujana and Dekleva,

1987). Stayman et al. (1992) used this theory and Mandler's (1982) notion of schema congruency (see also Meyers-Levy and Tybout, 1989) to suggest that product category schema can be an alternative standard in the comparison process. This standard is distinctive in that it assumes schema-level rather than attribute-level processing. Thus, consumer satisfaction may be affected not only when product performance falls short of expectations but also when product representations are incongruent (i.e. distant from) with the schema (Gupta and Stewart, 1996). This standard stresses a holistic processing based on a simultaneous consideration rather than an analytical processing based on sequential consideration of the attributes (Cohen and Basu, 1987). It is on this specific point that schema is different from average performance which, although it involves different products, proceeds by an analytical processing. Moreover, although this standard bears on brands other than the focal brand, it is not limited only to the brands purchased by the consumer in the past but considers generic and abstract attributes of a product category (e.g. what is related to PCs irrespective of the brands the consumer has already tried). Finally, schema is normative rather than probabilistic as it bears on what should be for a product category.

Means-End theory: Does the Product Correspond to what I Wanted to See?

Means-end theory (Gutman, 1982) states that the consumer buys a product to obtain some benefits or consequences which in turn will satisfy her or his higher level values. The objective of this theory is to understand what makes products personally relevant for consumers by modeling the relationships between a product (a set of attributes and benefits) and a consumer (a holder of values). Drawing from this theory, Olshavsky and Spreng (1989; 1992; Spreng and Olshavsky, 1993; Spreng et al. 1996) have proposed that consumers use their means-end chains as comparison standards. They have proposed the concept of " desires " to represent means-end based standards--"attributes, levels of attributes and benefits that the consumer believes lead or are linked to higher-level values" (Spreng and Olshavsky, 1993, p.171). Desires can

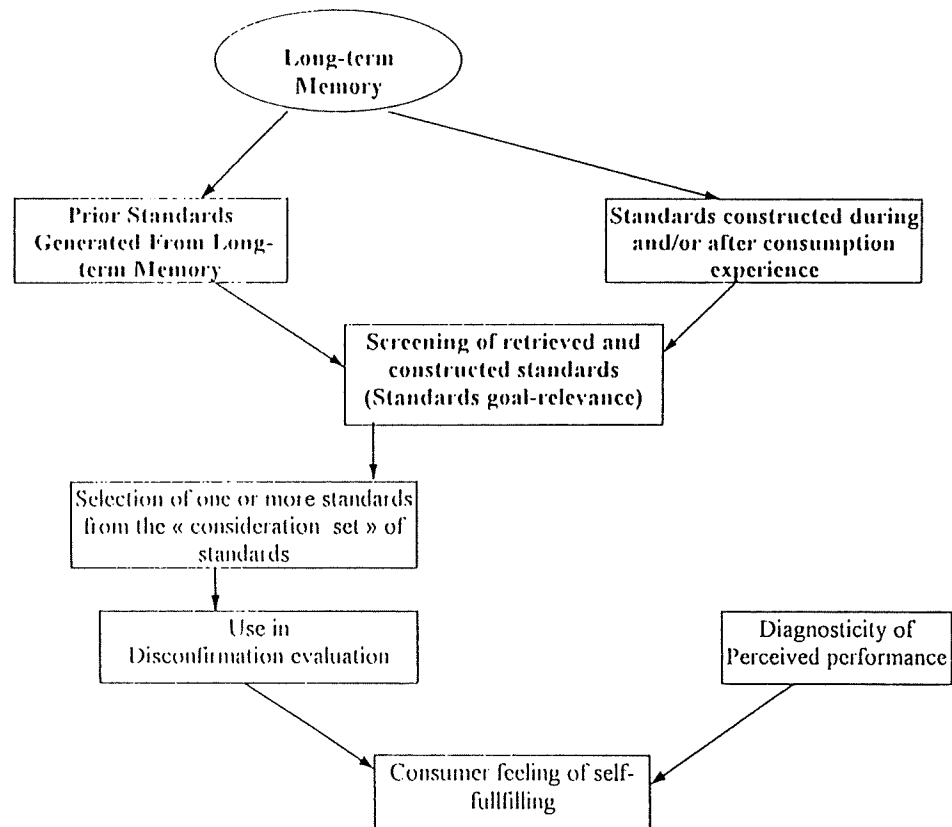
be conceptualized at various levels of the chain (Clemons and Woodruff, 1992; Gardial et al. 1993). At the values level, desires correspond to " values " suggested by Westbrook and Reilly (1983). Desires can also be defined at the benefit level. As a result, satisfaction becomes the capacity of product (or service) to meet or exceed a consumer's desires in terms of benefits. Other similar concepts have been suggested in the literature (Zeithaml et al., 1993; Sirgy, 1984; Swan and Trawick, 1980). The reader is invited to see Spreng and Olshavsky (1993) for more. Myers (1991) proposed that a consumer's " wants " are an alternative comparison. He found that wants predict satisfaction better than expectations. The common point among all these standards is that they emphasize what the consumer wants to see to be satisfied.

Given that standards can be structured according to their underlying theories or nature, what then determines the use of these standards in the comparison process? The answer to this question may be obtained from the accessibility-diagnostics framework (Feldman and Lynch, 1988).

FACTORS AFFECTING STANDARDS USE IN SATISFACTION EVALUATION: ACCESSIBILITY AND DIAGNOSTICITY OF STANDARDS

According to Feldman and Lynch's (1988) accessibility-diagnostics framework, the likelihood that a potential input in memory (e.g. an attribute, the memory of one's experiences, one's attitude, one's reaction to advertisement, another person's suggestion, etc.) would be used in memory-based judgments or decisions depends on its accessibility and diagnosticity. Accessible information can be actively disregarded if it is perceived to be nondiagnostic (Alba et al., 1991). If accessibility has been defined as the retrievability of an input from memory, diagnosticity has been defined differently by authors (Feldman and Lynch, 1988; Lynch et al. 1988; Dick et al. 1990; Herr et al. 1991; Pechman and Ratneshwar, 1992; Menon et al. 1995). Lynch et al. (1988) have stated that diagnosticity should be defined subjectively and not objectively. Here, we consider diagnosticity or goal-relevance as the

Figure 2
A Process Model of Standard Selection and Use in Satisfaction Evaluation



degree to which the use of each standard is perceived to be self-fulfilling. Figure 2 shows a representation of the subprocesses that consumers might go through in the use of comparison standards.

Figure 2 is an adaptation of the three-stage choice process model by Nedungadi, Mitchell and Berger (1993). The first stage involves a generation of alternative standards from long-term memory to short-term memory. This process involves the retrieval of previously encoded standards (e.g. favorite brand quality) from long-

term memory and the construction of ad hoc standards (e.g. based on an interaction with the product/service or due to a measurement instrument). It results in a set of alternative standards being brought to mind and considered in short-term memory. As suggested by Lynch, Marmorstein and Weigold (1988) this process of standard generation (retrieval and construction) involves a stopping-rule or threshold that determines when to stop generating alternative standards. The second stage involves the screening of standards for acceptability in which

inappropriate standards are eliminated. The consumer might generate last consumed brand as a comparison standard and find it inappropriate for the current consumption experience. This standard will be dropped both from working memory and further consideration. The third stage involves a selection of one or more standards from what might be called a "consideration set of comparison standards."

This is to say that the use of a standard in satisfaction judgment will be (1) a positive function of its accessibility and retrievability in memory, (2) a positive function of its diagnosticity or relevance for the consumption goal, (3) a negative function of the accessibility of the other standards in memory, and (4) a negative function of the diagnosticity of the other standards that will be accessible in memory. For example, "last visited restaurant" will be a comparison standard for current restaurant only when the consumer remembers that consumption experience. Moreover, even if it is recalled it has to be relevant for the current experience.

Thus, we define consumer satisfaction as an evaluation of the discrepancy between product/service performance and one or more accessible and diagnostic standards (retrieved and/or constructed).

The following propositions will say more about this statement.

Proposition 1: Prior Standards Must be Accessible to be Used in Satisfaction Evaluation

We argue that a standard is utilized when it is accessible and diagnostic for the consumption experience. This argument is similar to Higgins et al's (1986) proposition that "In general, two variables that influence the utilization of standards are their *accessibility* and their *goal-relevance*the accessibility and goal-relevance of standards can vary as a function of individuals' personality" (p.51). For instance, when expectations are inaccessible, consumers will retrieve the other standards that are accessible, even if their diagnosticity is low. However, when expectations are accessible, consumers will assess their diagnosticity relative to the other standards that are accessible in memory (e.g. the performance of a previously consumed brand). When expectations

are not diagnostic the other standards will be preferred. If expectations are highly diagnostic, they will be used. However, if they are moderately diagnostic, then a combination of expectations and norms or desires may be used in an attempt to make the best possible judgment. This result has somewhat been obtained by Tse and Wilton (1988). They found that expectations and ideal performance jointly explained consumer satisfaction (see also Gardial et al. 1993; Gupta and Stewart, 1996). Unfortunately, there was no strong theoretical foundation for that result.

The idea of accessibility of the standards of comparison is implicit in many studies (Dröge and Halstead, 1991; Halstead, 1993). Grönroos (1993) states that consumer's experiences with a service encounter may alter his/her expectations, and these altered expectations are the ones that s/he compares with his/her service experiences. In the same way, there is a research stream that shows that people are often unable to remember their expectations of the outcomes of an event correctly once the outcomes become known (Christensen-Szalanski and Willham, 1991). Zwick, Pieters and Baumgartner (1995; see also Pieters and Zwick, 1993) have also found that retrieved and biased expectations due to backward assimilation explain satisfaction better than prior expectations especially when the product has some personal relevance.

One important factor in consumer satisfaction is consumer confidence in market supplied information (Spreng, MacKenzie and Olshavsky, 1996). Many factors have been found to affect information accessibility (interference, decay, recency, primacy - see Biehal and Chakravarti, 1986; 1983; Folkes, 1994 for more). Little research has been devoted to the accessibility of comparison standards. Some results may however be found in the work by Pieters and associates (1993; 1995) on hindsight bias and backward assimilation processes, and by Schwarz and Scheuring (1988; Schul and Schiff, 1993) on questionnaire content and format. Standards of comparison may be considered as consumers' beliefs.

Expectations are beliefs that consumers make prior to product purchase. Confidence in one's expectations may be a requirement for consumers to rely on their expectations (Spreng and Olshavsky, 1993; Spreng and Dixon, 1992).

Confidence increases the likelihood that a previously made belief will be activated from memory in a consumption experience evaluation. In other words, expectations formed with a large amount of confidence will be more easily retrieved and used in a judgment of satisfaction. Similar arguments can be found in Berger and Mitchell (1989) and Fazio and associates (1986; 1989). When expectations are formed with a small amount of confidence, they are likely to be inaccessible from memory. As a result, other references provided by the other standards may be more preferable. Confidence in one's expectations is a function of the amount of information (Peterson and Fitz, 1988; Oskamp, 1965). Amount of information is likely to provide more opportunities for product relevant cognitive elaboration (Einhorn and Hogarth, 1978; Petty and Cacioppo, 1986; Berger and Mitchell, 1989). When consumers are informed by friends (Arndt, 1967; Bearden and Teel, 1983; Herr et al. 1991) or salespeople about technically complex (i.e. with experience and credence attributes) products, they are more likely to express much confidence in their expectations. On the contrary, when amount of information is low, consumers may express little confidence in their expectations (Sanbonmatsu et al. 1992) and are likely to use the other standards.

Proposition 2: Consumers are Likely to Construct Ad Hoc Standards Based on Their Interaction with the Product/Service or when Asked a Disconfirmation Question

One of the assumptions in this research is that consumers could also construct standards based on their interaction with the product or service. Iacobucci et al. (1994) maintains that "a service encounter may be compared with an ad hoc norm constructed simultaneously with the experience of the service encounter, not to a precomputed or preexisting expectation" (p. 23). They state that perhaps expectations for the unfamiliar service are generalized from expectations based on services that are not identical, but similar and more familiar. For example, a person might have no experience with a realtor but might conjecture a cross between a salesperson and an attorney or some such roles and the resulting evaluation would be a global evaluation conducted at a higher level

(see Johnson, 1984). Moreover, standards are likely to be constructed when consumers are asked to answer questions concerning whether product quality has met their expectations, favorite brand or desires (see Fitzsimons and Morvitz, 1996).

When are prior standards and ad hoc standards differentially operative?

To better explain standards construction, we can draw on the work on cognitive factors in survey research. Based on the work by Simmons, Bickart and Lynch (1993) we argue that when consumers have made prepurchase evaluations (e.g. expectations), comparison standards could be retrieved directly from memory and need not be computed on the spot using cognitions situationally made salient by product consumption experience. The Feldman and Lynch (1988) framework implies that, because prior standards should be more accessible and highly diagnostic, consumers who have a priori standards in memory should not be influenced much by product consumption experience. However, those who had no accessible and relevant prior standards would be likely to build ad hoc standards on the spot. As a result, they would be much influenced by product performance. This argument corresponds to Hastie and Park's (1986) memory-based versus on-line judgments. Memory-based satisfaction judgment refers to the use of prior standards while on-line satisfaction judgment refers to the construction of ad hoc standards. The use of a priori standards is memory-based as the subject must rely on the retrieval of what s/he believed to render a judgment on whether or not s/he is satisfied. The construction of ad hoc standards, on the other hand, is on-line because the subject is forming the satisfaction judgment on the spot as product performance is experienced. The distinction between the two processes is based on differences in the sources of information that is entered as input to the satisfaction judgment: what existed before and what has been constructed.

The ease of product evaluation (i.e. because of experience and credence attributes) and consumer experience with the product are such important constructs in standard construction.

Some standards would be constructed because either the product has a lot of experience (Nelson, 1970) and credence (Darby et al. 1973) attributes or the consumer lacks significant experience

(Simmons et al. 1993). Experience and credence attributes may only be available or may be more easily judged only after rather than before the consumption experience. A recent study by Wright and Lynch (1995) shows that confidence and accessibility for experience attributes are greater after direct experience than after advertising. Arnould and Price (1993) found that when the experience is extraordinary (e.g. river rafting) , expectations are less likely to affect satisfaction because consumers are unable to say in advance what the service or the product will provide them. Therefore, when prepurchase evaluation is difficult consumers are likely to build standards upon product consumption. Whereas when prepurchase is easier (i.e. because there are less experience and credence attributes and more search attributes) they are likely to use their previously formed standards or frames of reference. This observation is important as in most studies of CS/D expectations are manipulated through ad messages. Ads will be effective in manipulating expectations only when they communicate search attributes (Wright and Lynch, 1995).

Looking at consumer experience, we propose that when consumers have significant experience they may have preexisting beliefs (e.g. expectations and norms) and attitudes in memory. When they evaluate their satisfaction, consumers can retrieve those beliefs and compare product performance with them. However, when consumers lack significant experience and knowledge about product or service, they are likely to build standards of comparison on the spot. These arguments can be interpreted in terms of accessibility and diagnosticity. That is experience makes existing standards more accessible while lack of knowledge requires that consumers build on-line standards because of inaccessibility of the a priori standards (similar arguments can be derived from the work by Kline and Wagner, 1994, and Kalwani et al. 1990). On the other hand, some implications may be drawn from the work on cognitive factors in survey research. Bickart (1993) has found interesting results in a study on carryover and backfire effects in surveys. Carryover effects occur when respondents give answers that are consistent with beliefs rendered accessible by a previous response. Backfire effects occur when respondents give

answers that are inconsistent with beliefs rendered accessible by a previous response. Bickart's (1993) evidence suggests that relative accessibility and diagnosticity of a previous response will determine the occurrence of a carryover effect. Knowledgeable respondents are less likely to experience backfire effects as they can recall different beliefs from memory. Again, as high knowledge leads to more perceived self-relevance, the likelihood of backfire effects is greater for low than for high knowledge respondents. Similarly Morwitz et al. (1993) have shown that measuring intent changes subsequent behavior and repeated measurement of purchase intent increases the purchase rate for those who had a strong intent and decreases purchase rate for those who had a weak intent. These authors underline the particular role of product knowledge. Measuring intent affects behavior only when one does not have prior experience with the product. This is because measuring intent makes respondents' attitudes more accessible and can change these same attitudes. But, well-articulated beliefs (held by familiar individuals) are less likely to be affected by intent and attitude questions.

The implications of this literature on the construction vs retrieval of comparison standards is that *consumption experience will affect the retrieval or construction of comparison standards*. That is, low knowledge consumers are likely to build ad hoc standards as they are more likely to be affected by product consumption. They do not have well articulated beliefs about the product (similar to a backfire effect). High knowledge consumers however are less likely to be affected by the consumption experience, and build ad hoc standards, as they have well articulated beliefs about the product (similar to a carryover effect).

Proposition 3: Comparison Standards (Retrieved and/or Constructed) Must be Diagnostic or Goal-Relevant to be Used

Diagnosticity or relevance of comparison standards is a function of the consumption or purchase goal. Usually, consumers buy products and services with some goal in mind be it central or not. Goal relevance in turn is affected by individual, product and contextual factors. Some investigations recognize that the context of

Table 2
Involvement and Product Type as Determinants of Standard Diagnosticity

		Involvement	
		High involvement	Low involvement
Product type	New product	(1) Desires most diagnostic	(3) Expectations most diagnostic
	Old product	(2) Desires/Experience-based norms moderately diagnostic	(4) Experience-based norms most diagnostic

evaluation can influence standard utilization (Woodruff et al. 1991; Higgins et al. 1986). For example (Spreng and Dixon, 1992), if the product is used in a public situation (e.g. serving wine to guests), the standard may be what one desires the most, while in a private situation (e.g. drinking wine with just one's family) a standard such as favorite brand may be used. Other factors are involvement and product type. For instance, the choice between experience-based norms and desires may depend upon consumer involvement. High involvement consumers are likely to use desires since the product domain has a high degree of self-relevance. Desires are defined according to the means-ends model (Gutman, 1982). They are what the consumer needs to achieve her or his values. Gutman (1982) suggests that low involvement products are not linked to values because of the lack of relationships between product benefits and consumer's values (see also Mulvey et al. 1994).

When a consumer evaluates satisfaction with a new product, desires or expectations (e.g. what the seller has said the product will do) may be the appropriate standards. Experience-based norms are less likely to be used as the consumer lacks appropriate experience with the product. However, when satisfaction judgment is related to a familiar product, experience-based norms may be the most appropriate standards because they require some previous experience with the product. Moreover, when product performance is very poor, equitable performance is likely to be the appropriate standard as this might result in mistrust towards the firm (Oliva, Oliver and MacMillan, 1992).

Proposition 4: Standard Disconfirmation Must be Diagnostic to be More Effective than Product Performance

Researchers have shown that product performance or service encounter perceptions have a direct influence upon satisfaction (Tse and Wilton, 1988). LaTour and Peat (1979) proposed that consumers who are obliged to buy a poor quality brand (if their favorite brand is out of stock) may be directly dissatisfied with any consumption experience. In the same way, buyers of a new brand facing expectations disconfirmation can still be satisfied if it provides the attributes valued by consumers of competing brands. Empirical results have been obtained by Churchill and Surprenant (1982) for a durable good, by Patterson (1993) for high-involvement products, and Swan (1988) found that product performance was a significant predictor of satisfaction while for services different attributes affected CS differently. A recent study by Pieters et al. (1995) also supports the direct influence of experiences in services through a backward assimilation process.

We explain this based on the accessibility-diagnostics framework. When standards are not diagnostic, product performance (or service encounter experiences) will have a stronger impact upon satisfaction. The work by Dabholkar (1993) on the relationship between perceived quality and satisfaction may inform us on this phenomenon. Product performance is more cognitive and satisfaction is both cognitive and affective (but more emotional). As a result, the attitude model used by the consumer can make product performance more diagnostic than disconfirmation

and vice versa. When consumers evaluate consumption experience first and then form a feeling about it (i.e. cognitive states are followed by affective states), it is more likely that product performance will be more diagnostic than disconfirmation. On the other hand, if consumers develop an affective state first as a basis to develop cognitions about the experience then it is likely that disconfirmation will be more diagnostic in informing the consumer. This, however, is possible only under some conditions.

Some products or services are naturally more emotional than others (e.g. movies). If a product is more cognitive than product performance is likely to be more diagnostic. This is the case for products which have been used by most of the authors who found a significant direct relationship between product performance and satisfaction (e.g. VCR in Churchill and Surprenant, 1982; low-combustion heater in Patterson, 1993). On the contrary when the product is more emotional then its evaluation is more likely to be diagnostic (i.e. standards of comparison are more likely to be used). If a product or service has low emotional possibilities consumers will tend to evaluate it cognitively and performance will be more diagnostic. Also, some consumers are more cognitive than others and are likely to evaluate consumption experience rationally at the cognitive level. For instance, Smith and Petty (cited by Cacioppo et al. 1996, p.229) have found that attitudes of individuals high in need for cognition are affected by argument quality regardless of the confirmation or disconfirmation of expectations. However, attitudes of individuals low in need for cognition were influenced by argument quality only when the type of argument they received was unexpected.

Other consumers express their emotions very strongly. That is they have a high affect intensity (Larsen and Diener, 1986) and would evaluate experiences at an emotional level. High affect intensity individuals have been found to express their emotions very strongly (Larsen and Diener, 1986; Moore, Harris and Chen, 1995). As standard disconfirmation generates emotions (Krishnan and Olshavsky, 1995) we argue that high affect intensity individuals express their emotions and (dis)satisfaction more strongly than low affect intensity individuals. For these subjects

disconfirmation is likely to be more diagnostic than product performance. High involvement also decreases consumers' sensitivity to preusage phenomena and increase their sensitivity to outcome phenomena (Oliver and Bearden, 1983; Barber and Venkatraman, 1986). In this case, product performance may be more diagnostic than standard disconfirmation.

Table 3
Summary of Propositions on Standards Utilization

Proposition 1: Standards must be accessible to be used in satisfaction evaluation

1.1: When expectations are held with much confidence they are likely to be more accessible and used in the comparison process.

1.2: Lack of confidence makes expectations less accessible. As a result consumer satisfaction is likely to be affected by other standards.

Proposition 2: Consumers may also construct ad hoc standards based on their interaction with the product/service or when asked a disconfirmation question

2.1: Consumers are likely to retrieve prior standards when product performance is easy to evaluate

2.2: Experts are less likely to build ad hoc standards

2.3: When product or service is new, consumers are likely to build ad hoc standards

Proposition 3: Accessible standards (retrieved and/or constructed) must be goal-relevant to be used.

3.1: When the product is new and has high self-relevance, desires are likely to be used.

3.2: When the product is very familiar and has high self-relevance, desires and experience-based norms are likely to be used because they will be moderately diagnostic.

3.3: When the product is new and has low self-relevance, accessible expectations (seller's promises) are likely to be the most diagnostic standard

3.4: When the product is old and has low self-relevance, accessible norms are likely to be the most diagnostic standards.

Proposition 4: Product performance outperforms standards disconfirmation in satisfaction evaluation when it is more diagnostic

4.1: For individuals high in need for cognition, product performance is likely to be more diagnostic while it is likely to be less for those low in need for cognition.

4.2: For individuals high in affect intensity standards disconfirmation is more likely to affect satisfaction than product performance. Individuals low in affect intensity product performance is likely to be more diagnostic.

CONCLUSION

This article began with an interest in understanding when consumers (1) utilize one or more standards, (2) construct ad hoc or retrieve a priori standards or (3) emphasize product performance more than standard disconfirmation in the consumption experience evaluation. Based on the accessibility-diagnostics model, we have made some propositions to provide preliminary answers to these questions. We first identified different standards for evaluating product performance and classified them based on their underlying theories. Based on these standards, we discussed factors affecting their utilization in the comparison process.

The first implication of our research is that CS scholars have to test the structure of comparison standards. Particularly, how do consumers represent standards in their memory? Our framework can provide a starting point in the development of a confirmatory factor model. The concept-disaggregation method proposed by Bagozzi and Heatherton (1994; see also Abe, Bagozzi and Sandaragani, 1996) could help researchers achieve this objective. The standards issue has been investigated for more than twenty years, but so far there is no agreed-on typology. Structuring the standards of comparison is a prerequisite for the study of their use by consumers. As one reviewer has said, we should "address the possibility that all of these standards are but variations on a single standard or determinants of this single standard. Until this issue is solidly addressed, effort to explain the condition under which different standards are used appear simply unnecessary." Yet, we believe that these standards are likely to be different because, for example, we cannot call product evaluation with one's ideal an expectation because consumers do not expect their consumption experience to meet their ideals (see Liljander and Strandvik, 1993). We have much theoretical discussion on standards of comparison now (see Iacobucci et al. 1994, p.19-31). Consequently, the time appears to be ripe to clear it up.

Once this question is addressed, future research should also consider the propositions we have made to advance our knowledge of standards use. As far as empirical testing is concerned, we

suggest that given that measurement scales may affect standard accessibility (Schwartz and Scheuring, 1988; Schul and Schiff, 1993) researchers could utilize the response latency technique (Fazio, 1986). This technique could contribute to the elimination of measurement instrument effect. Specifically, expectations accessibility could be manipulated and measured through the latency to answer to expectations recall questions. On the other side, it may be difficult for researchers to capture standards construction processes given that this may occur during product consumption. As a result, we suggest that researchers design experiments which manipulate standards measurement order in relation with product consumption. The difference in standards values after consumption could express the influence of product performance and standards construction (similar to backfire effect) while the lack of difference could be interpreted as retrieval of standards (similar to carryover effects).

Understanding all these processes seems important as CS ratings might differ if different standards are used in different settings, by different individuals for different products and services. Today's businesses are required to apply TQM and ROQ (Rust et al. 1995) techniques. Knowing the standards applied will probably make the measurement and interpretation of CS ratings easier and meaningful for managers.

Empirical results based on our propositions will also advance work on measurement of CS. Woodruff et al. (1993, p.107) for example suggest two ways for measuring satisfaction: avoiding measurement of any particular standard versus specifying one or more standards that respondents are to consider when making a scale response. Knowledge of which factors influence the utilization of standards will inform researchers and practitioners on which standard should be applied. This in turn will inform managers on which variables should be acted on to improve customer satisfaction. With the development of National Customer Satisfaction Indexes (Fornell, 1992; Fornell et al. 1996) it is necessary that we improve the quality of the information obtained.

Current debate on whether expectations should be measured before or after the consumption experience (Grönroos, 1993) or whether performance-based scales are better (see

Grapentine, 1994; Cronin and Taylor, 1994; Teas, 1994; Parasuraman et al. 1994) could be solved if we establish circumstances under which consumers might be expected to retrieve prior standards and conditions under which constructed standards might be more diagnostic. One can think that standards are to be measured before the consumption experience when consumers retrieve prior standards and measured after the consumption experience when consumers build ad hoc standards. Moreover, performance-based measures could be more informative in conditions under which product performance is more diagnostic than standard disconfirmation. As far as managerial implications are concerned, we believe that firms could affect consumers' consideration sets of standards with ad messages.

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