

CONSUMER POSTPURCHASE LEARNING

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ABSTRACT

This article presents an adaptive, nonstop, close-loop learning model of how consumers modify their knowledge after purchase. The model attempts to extend current thinking on postpurchase learning to include both the CD/S model and knowledge assessment process. The contributions of this model to consumer research are discussed and possible future research is drawn.

INTRODUCTION

The study of consumers postpurchase learning process, which is central to understanding how consumers make repeat-purchase decision, has been an interesting topic in consumer research literature (e.g., Bearden and Teel 1983; Bolton and Drew 1991; Oliver 1980, 1993; Oliver and Desarbo 1988; Westbrook and Oliver 1991; Tse and Wilton 1988). Since a satisfactory purchase experience would be one requirement for continued interest in a product that might lead to repeat purchasing (Oliver 1993). Researchers in this area have turned great interest to the study of consumer satisfaction/dissatisfaction (CS/D) model. Reviews of the literature (LaTour and Peat 1979; Oliver 1993) suggest that performance-specific expectation and expectancy disconfirmation play a major role in satisfaction judgment. Disconfirmation refers to the discrepancy between consumer predictive expectations and the perception of product performance. CS/D model concentrates on the formation of satisfaction judgment through experience, rather than analyzing how the experience impacts consumers' knowledge. Since the learning process is sensitive to a consumer's knowledge, it seems reasonable to expect that the investigation of how postpurchase experience affects consumer's knowledge might provide an insight into consumer's repeat purchasing process.

The other branch of research in this area focuses on consumers' knowledge modification after purchase (e.g., Huffmen and Houston 1993; Hoch and Deighton 1989; Johnson and Russo 1984; Meyer 1987). This school of thought analyzes consumer learning in the paradigm of information processing, knowledge assessment, and structure of memory. It strengthens the direct relationship from experience to knowledge modification.

The present article attempts to unite previous CS/D models and knowledge modification process to an adaptive, nonstop, close-loop learning model. To achieve this end, this paper first describes the CS/D model and

outlines knowledge modification process. Next it integrates CS/D model with knowledge modification process to propose a consumer postpurchase adaptive learning framework. The properties of this framework are then discussed and suggestions for future research are drawn.

BACKGROUND

CS/D Model

In the studies of Oliver (1980, 1981, 1993), Tse and Wilton (1988), and Yi (1990), consumers are posited to form preconsumption expectations, observe product performance, compare performance with expectations, make disconfirmation perceptions, combine these perceptions with expectation levels, and form satisfaction judgments. The basic CS/D model, which comes from Oliver (1993), is shown in Figure 1.

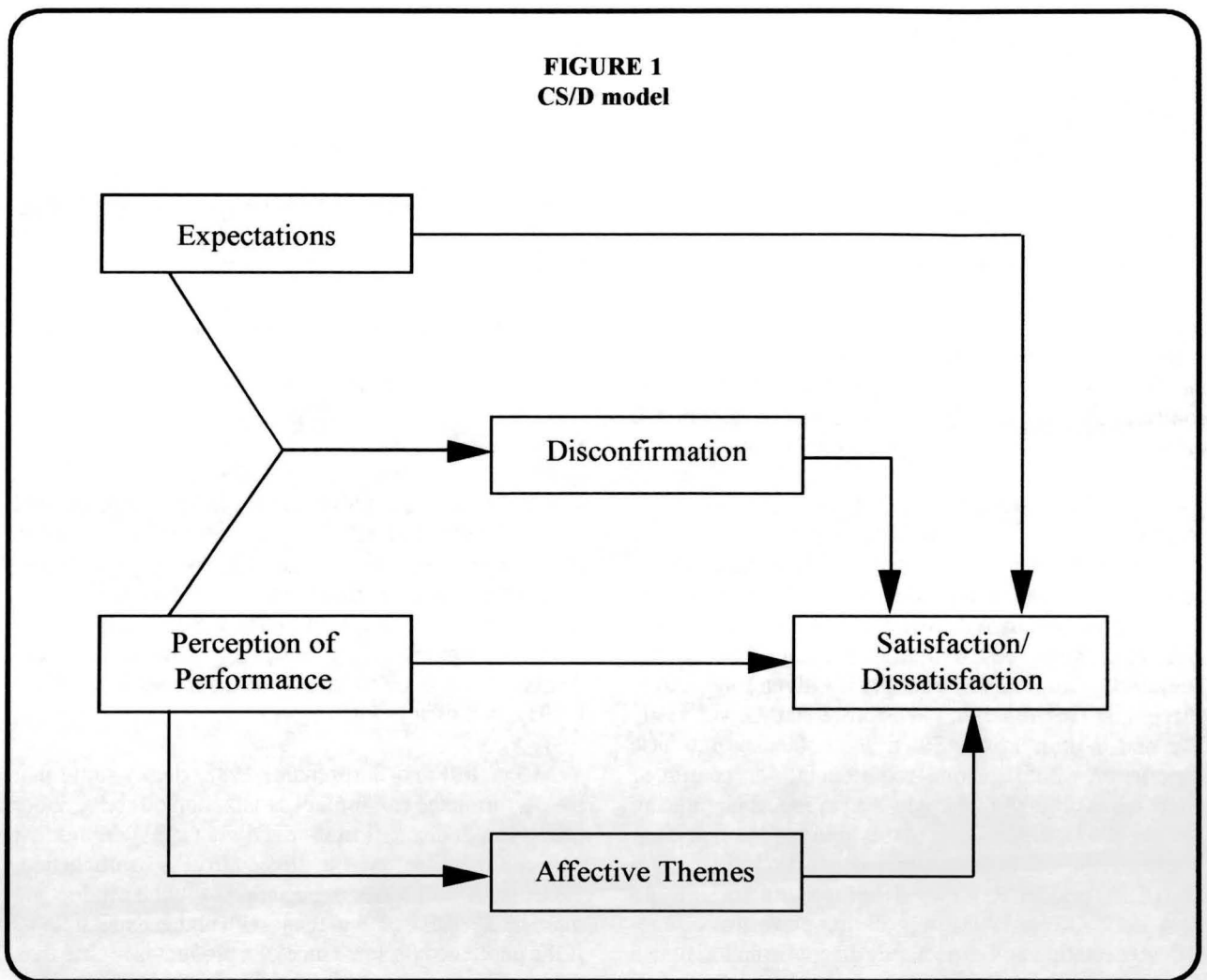
Churchill and Surprenant (1982) demonstrate that the performance can impact satisfaction directly, rather than through disconfirmation. Oliver (1981) argues that expectations also have a direct effect on satisfaction. Consumers with lower expectations about a product are more likely satisfied than those with higher expectations. If the perceived performance of a product is higher than the expectation level, then satisfaction judgment will be formed. Positive/negative affect has also been proposed as a satisfaction determinant. Oliver (1993) suggests that positive product experience would have a positive effect on satisfaction and negative product experience would have a negative effect on satisfaction.

Attribution theory has also been an approach to study CS/D (Folkes 1990). If consumers attribute their negative product experience to the producers, they may feel dissatisfied with the product. If they attribute their negative product experience to the lack of knowledge about the product, their dissatisfaction of the product could be relieved to some degree. This may also lead them to search for more information about the product.

Knowledge Assessment

Consumers' knowledge is an important construct in understanding consumer information search and information processing (Rao and Monroe 1988; Bettman and Park 1980). There are two kinds of knowledge: objective knowledge and self-assessed knowledge. Park, Mothersbaugh, and Feick (1994) define objective knowledge as "accurate information about the product class

FIGURE 1
CS/D model



stored in long-term memory”; and self-assessed knowledge or subjective knowledge as “people’s perceptions of what or how much they know about a product class.”

Objective knowledge is the collected information about a product, but it may not necessarily be the true information of the product. Self-assessed knowledge is the consumers’ feeling of knowing. Usually, the more objective knowledge a consumer has, the more knowledgeable he/she may feel about the product. However, there are two major differences between objective and subjective knowledge (Park, Mothersbaugh, and Feick 1994). First, subjective knowledge doesn’t always reflect objective knowledge precisely. What consumers feel they know does not always match what they actually know. Second, subjective knowledge influences consumer information search directly and independently. No matter how much objective knowledge a consumer has, if he/she conceives that more knowledge is needed, he/she may search for more information about the product and increases his/her objective knowledge. In this sense, the information search could be a mediator between subjective knowledge and objective knowledge.

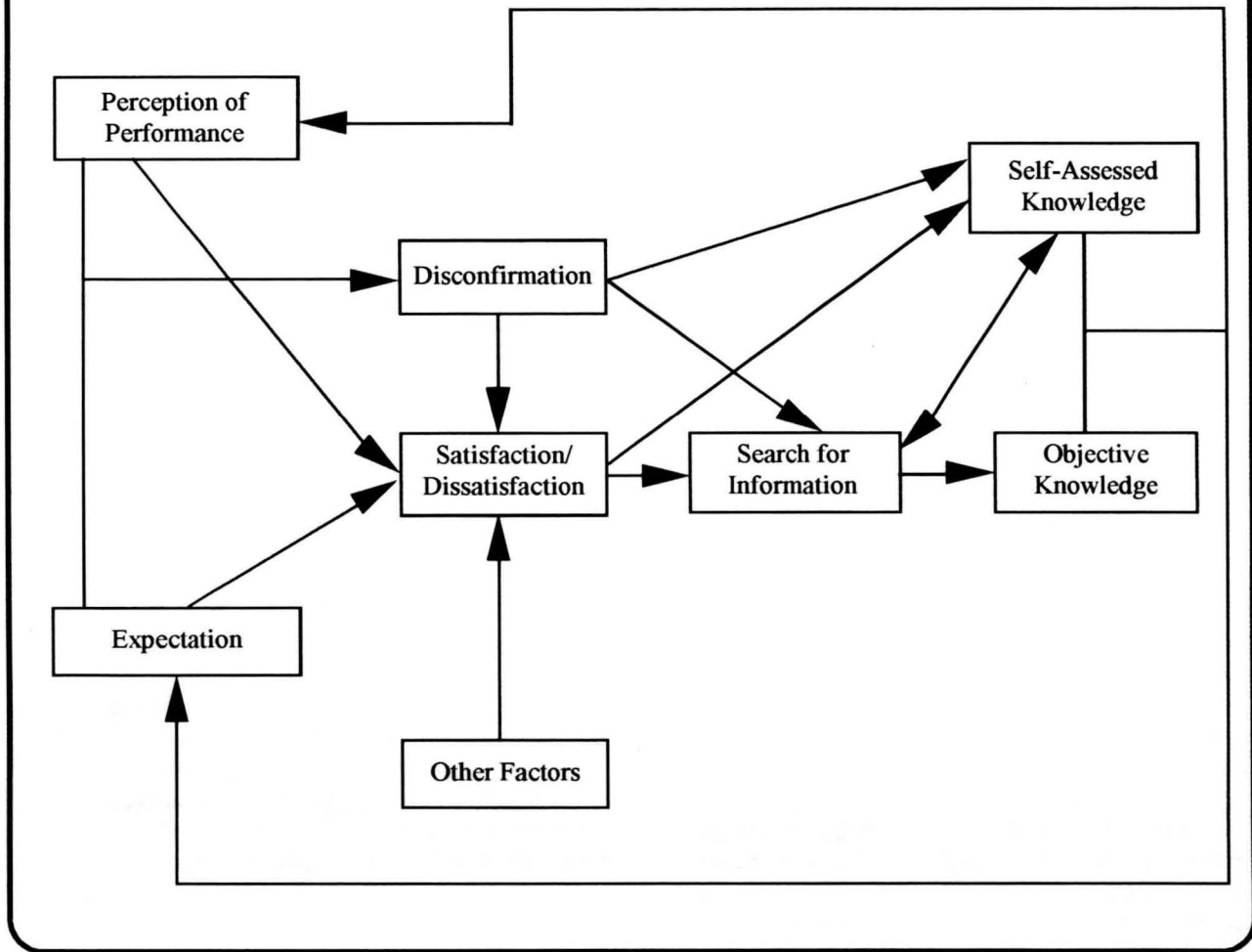
Altogether, this branch of consumer research concentrates on the relations between experience and knowledge assessment rather than exploring the influence of disconfirmation and satisfaction on knowledge modification.

CONSUMER POSTPURCHASE LEARNING MODEL

CS/D model only deals with how experience, disconfirmation, affective themes, etc. impact consumer satisfaction/dissatisfaction and it doesn’t include the issues of how experience changes consumers’ knowledge. On the other hand, knowledge assessment research ignores the effect of satisfaction/dissatisfaction on consumers’ knowledge modification. A gap exists between CS/D model and knowledge modification research. To bridge this gap, the present paper proposes a close-loop, nonstop, and adaptive learning process, as shown in Figure 2.

In this model, it is proposed that consumers compare product performance with predictive expectations, form

FIGURE 2
Consumer Postpurchase Learning Model



disconfirmation perceptions. Based on this disconfirmation and other factors, consumers make satisfaction/dissatisfaction judgment. Both disconfirmation and satisfaction/dissatisfaction can impact consumers' subjective and objective knowledge modification. As consumers get more and more experience, the disconfirmation of adjusted expectation will get smaller and smaller, and consumers' knowledge tends to adapt to the true information about a product.

To demonstrate the model clearly, it is separated into three stages, i.e., expectation and perception of performance stage, disconfirmation and satisfaction/dissatisfaction judgment stage, and knowledge adjustment stage.

Expectation and Perception of Performance Stage

In this stage, consumers form their predictive expectation about a product and perceive the actual performance of the product. Consumers with a greater store of

knowledge about a product will not only make more precise expectations, but also can perceive the product performance more accurately (Johnson and Russo 1984). Therefore, they may find out more discrepancy between expectation and perception of performance.

Park, Mothersbaugh, and Feich (1994) demonstrate that both objective and subjective knowledge have effects on expectations. Objective knowledge is the basis of the formation of expectations; and subjective knowledge may help to build confidence of the expectations. If they feel knowing more about the product, they will be more confident about their expectations.

Perception of a product performance is mainly based on objective knowledge. It has been generally agreed upon that organized knowledge structures such as schema and categories have an important effect in perception (Bettman and Sujana 1987). Consumers with greater objective knowledge might acquire more information

from experience. For example, a novice driver can not tell the property of a car as well as an expert driver.

Disconfirmation and Satisfaction/Dissatisfaction Judgment Stage

Disconfirmation comes from the comparison of the expectation and the perception of performance. The more the difference between the expectation and perception of performance is, the greater the disconfirmation. According to CS/D model, disconfirmation is one of the factors that can impact consumers' satisfaction/dissatisfaction directly. Disconfirmation can also lead consumers to pay more attention to experience. As consumers pay more attention to the information of disconfirmation or experience, the familiarity of the brand may be increased.

Disconfirmation increases consumers' uncertainty and is likely to make consumers utilize external information. Therefore, consumers' objective knowledge might increase (Meyer 1987). Further more, disconfirmation itself is information from experience, which might be stored in the category memory. So disconfirmation has a direct influence on consumers' objective knowledge. On the other hand, the disconfirmation has a positive relationship with the familiarity of a product (Park, Mothersbaugh, and Feick 1994). As the familiarity increases through experience, consumers might feel knowing more about the product (Bettman and Sujan 1987) and therefore increases self assessed knowledge.

Satisfaction may increase the consumers' feeling of knowing and make them confident of their prior knowledge. Satisfaction cues might let consumers feel more familiar with this product and the corresponding information might be easy to retrieve (Oliver 1980). As the familiarity with the product increases, consumers might slow down information searching; hence, consumers' objective knowledge might increase slowly or not increase. Collectively, satisfaction may increase subjective knowledge, but might not increase consumers' objective knowledge.

Dissatisfaction might be attributed to that the product is not as good as desired, and may increase consumers' uncertainty of the corresponding beliefs (Folkes 1988). Bettman and Sujan (1987) suggest that uncertainty of beliefs can cause consumers to search for external information and increase their objective knowledge and subjective knowledge. So dissatisfaction may influence objective knowledge and subjective knowledge through external information searching. At the same time, dissatisfaction cue can increase consumers' familiarity with the product, so self-assessed knowledge might be increased by dissatisfaction directly.

Knowledge Adjustment Stage

Howard and Sheth (1969) and Oliver (1980) advanced early analysis of the disconfirmation and consumer knowledge modification. Much of the literature on postpurchase learning is grounded in the paradigm of attitude. Howard and Sheth (1969) recognized that the disconfirmation and prepurchase attitude could influence postpurchase attitude, i.e.,:

$$A_{\text{postpurchase}} = f(\text{disconfirmation}) + A_{\text{prepurchase}}$$

If attitudes can be viewed as a summation of weighted beliefs (Fishbein and Ajzen 1975), then these beliefs provide the foundation to form the attitude. In this view, the disconfirmation changes the attitude through changing beliefs. The limit of this static model is that it only focuses on the attitude changing from a prepurchase state to a postpurchase state and ignores that the postpurchase attitude can also be modified through experience.

Our postpurchase learning model posits that based on existing knowledge consumers form expectations and perception of performance, then compare expectations with the perception of performance, and form disconfirmation and satisfaction/dissatisfaction judgment. Both disconfirmation and satisfaction/dissatisfaction can modify consumers' knowledge, this modified knowledge will also lead to modified expectation and perception, then start a new learning cycle.

Bettman and Sujan (1987) suggest that as experience and familiarity increases, consumers' knowledge will be calibrated continuously. From this perspective, consumer postpurchase learning is a dynamic process in which consumers modify their knowledge to adapt to the true information.

CONCLUSION AND DISCUSSION

Our consumer postpurchase learning model is an adaptive, nonstop, close-loop learning process. As consumers' experiences cumulate, internal knowledge of consumers will tend to approach the true information about a product. This paper makes the following contribution to the present consumer research:

Nonstop Learning Model

Previous research on consumer postpurchase learning (Howard and Sheth 1969), considered this learning model as a static model, i.e., the process of consumers' knowledge changing from prepurchase to postpurchase is a one-step process. This paper will argue that consumer postpurchase learning is a nonstop process. Consumers adjust their knowledge gradually as their experiences

cumulate, and disconfirmation would get smaller and smaller until this process approaches equilibrium in which consumers do not perceive disconfirmation or just ignore such disconfirmation and knowledge remains unchanged. The conceptual idea of equilibrium here is that even though consumers' knowledge remains unchanged, it does not mean this learning process has stopped, it only means the knowledge approaches equilibrium. Whenever consumers perceive enough disconfirmation, the equilibrium will be broken and knowledge would be modified again.

Adaptive Learning Rule

Since consumer postpurchase learning is a dynamic process, consumers' knowledge is not changing randomly, it should follow some rules. This paper explicitly proposes an adaptive learning rule, i.e., consumers' knowledge tends to get congruent with the true information. Since human beings have intelligence, consumers can process external information and calibrate their own beliefs. Therefore, Consumers' knowledge does not always follow commercials or information from external media, but tends to converge to the true information of a product. This consumer postpurchase learning model shows that good product quality can be realized eventually by consumers and helps to solidify the advantage of a product.

Close-Loop System

Previous research on consumer behavior, e.g., CS/D model, knowledge assessment, etc., only focuses on one direction path. CS/D model concentrates on the relations from expectations, perception of performance and other factors to satisfaction/dissatisfaction judgment; knowledge assessment research focuses on the paths from experience to knowledge modification. Such open loop models may work well under static conditions, but under

dynamic conditions, the one-direction models seem weak at interpreting feedback process.

From the view of system, this article reports a close-loop, dynamic learning process, in which disconfirmation may modify consumers' knowledge so as to decrease disconfirmation. This consumer postpurchase learning model is an adaptive system, whose target would be the true information about a product. No matter what consumers' initial knowledge is, in the end, consumers will realize the objective performance of a product.

Providing a Way By Which a Novice Can be Transformed into an Expert

This model may work differently for different individuals. If a consumer is active in learning, he/she may perceive more discrepancy between expectation and perception. Since disconfirmation has a positive effect on both objective and self-assessed knowledge, he/she may learn more information about the product. Thus, if a novice consumer keeps on learning actively, as experiences cumulate, he/she will acquire more and more knowledge, and appear to be an expert on this product. If a consumer is passive in learning, he/she will learn less than an active consumer does. This model provides a way by which a novice can be transformed into an expert by learning from experience.

However, since this consumer postpurchase learning model is only a theoretical hypothesis, collecting data to test it would be an area of future research. The key relations to be tested are the effect of disconfirmation on objective knowledge and subjective knowledge, and the effect of satisfaction/dissatisfaction on objective and subjective knowledge. Another major hypothesis to be tested is that disconfirmation should get smaller after each learning cycle.

ENDNOTES

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