

CONSUMER USE OF PRODUCT INFORMATION AND ITS IMPACT ON
SATISFACTION EVALUATION

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ABSTRACT

This paper seeks to make a conceptual contribution to the understanding of biases in information use and its impact on consumer satisfaction evaluations. This involves a description of information biases, the conditions under which they are most likely to operate, and an assessment of their impact on satisfaction, dissatisfaction or indifference concerning a product use situation.

INTRODUCTION

Consumer behavior research has focused a great deal of attention and effort upon understanding how consumers use information to make decisions. The effect of information on brand attitude and brand choice has been extensively discussed and researched in the marketing literature. Much less discussion and research has centered on normative information use and consumer choice models (Sheth, 1980). Even less researched has been the contrast between normative and descriptive use of information within the satisfaction evaluation process.

A major finding from the field of cognitive psychology is that people have limited information-processing capacity (Newell and Simon, 1972). Consequently, people rely on heuristics (Tversky and Kahneman, 1974) to reduce cognitive strain and effort and to keep the information processing demands within cognitive capacity limits. Sometimes, this use of heuristics leads individuals to misuse or ignore potentially useful information or to rely on prior expectations or beliefs to guide weighting and interpretation of data. This suggests that an assumption of knowledgeable evaluation and use of information may be overly optimistic. In fact, a great deal of research has centered on human inferential shortcomings (Nisbett and Ross, 1980). This line of research suggests the possibility of biased evaluation and misuse of information. The studies of belief perseverance (Lord et al., 1979; Nisbett and Ross, 1980; Ross and Anderson, 1982) find that human beliefs can survive and be supported by informational evidence that logically should have weakened the strength of beliefs. These studies show that people evaluate the relevance and validity of information within the framework of their implicit theories or beliefs.

Another contrast between normative and descriptive use of information can be found in the issue of how people assign inferential weights to incoming information. In normative theory the impact of data should be determined by its informativeness and not by any of the contextual variables. However, several studies indicate that inferential weights assigned to information is much less influenced by its informativeness than by how the information is presented. For example, a case study data presentation may have more impact than a statistical data presentation (for a review, see Nisbett and Ross, 1980).

To summarize, in contrast to normative information use, the way people combine information is potentially errorful. Individuals thus have shortcomings in revising their existing beliefs and assigning inferential weights to information. When such biases do operate

during the product evaluation process, the resulting product evaluation may be either normatively or pragmatically wrong. This situation, in turn, may lead to inappropriate feelings of either satisfaction or dissatisfaction. The next section reviews the conceptual basis for understanding expectations as utilized in the confirmation/disconfirmation paradigm of consumer satisfaction. Thus, the literature concerning testing of expectations as hypotheses will be reviewed: it outlines two topics from the literature on human inferential shortcomings which directly relate to this approach. Third, is a discussion of the conditions under which learning biases are thought to most likely operate. Finally, some hypotheses concerning the consequences of these biases on satisfaction/dissatisfaction evaluations will be presented.

This line of research is important in at least two respects. First, identifying and demonstrating the conditions under which confirmatory and selection biases exist may help marketers to structure information and evidence to encourage consumer satisfaction. Secondly, for those interested in helping consumers improve their product evaluations, research in this area will provide information on the best way to structure the judgmental task in such a way as to avoid biasing effects.

EXPECTATIONS AND THE DISCONFIRMATION PARADIGM

Most of the research on consumer satisfaction has focused on the disconfirmation paradigm (Bettman, 1986). This conceptualization holds that evaluation of products occurs when consumers compare some a priori expectations of product performance with actual performance and render a judgment that the experience was noticeably better or worse than anticipated (Hunt, 1977). With the disconfirmation model, satisfaction is defined as the consumer's evaluation of product performance as a positive or negative feeling in response to, or following a specific consumption experience (Day, 1983). It is related to the size and direction of the disconfirmation experience (Oliver, 1980); that is, the degree to which actual performance departs from initial expectations. Specifically, an individual's expectations are (1) positively disconfirmed when performance exceeds expectations; (2) negatively disconfirmed when performance is below expectations; or (3) confirmed when performance is approximately equal to expectations (Churchill and Surprenant, 1982).

In the marketing context, interest in the disconfirmation paradigm may be traced to Howard and Sheth (1969) who included consumer satisfaction as one of several hypothetical learning constructs in their theory of buyer behavior. They suggested that satisfaction "refers to the degree of congruence between the actual consequences from purchase and consumption of a brand and what was expected from it by the buyer at the time of purchase" (p. 35). This conceptualization has generally been supported in a number of studies that have tested the model (Oliver and Linda, 1981; Bearden and Teel, 1983; LaBarbera and Mazursky, 1983; Oliver and Bearden, 1983).

The Role of Expectations and the Zone of Indifference

While most researchers agree as to the importance of expectations in the satisfaction process, various

approaches have been utilized in its conceptualization and measurement. The most frequently used definition of expectations involves the consumer's pre-purchase prediction of what product performance will be (Churchill and Surprenant, 1982; Day, 1983; Olson and Dover, 1979; Oliver and Linda, 1981; Westbrook, 1980). These have been referred to in the literature as predictive expectations. However, results by Churchill and Surprenant (1982) and theorizing by others (LaTour and Peat, 1979; Woodruff, Cadotte, and Jenkins, 1983) suggest that there may be a problem in using predictive expectations as the standard of comparison. Woodruff et al. (1983) hypothesized that expectations based on normative standards are more closely linked to satisfaction. Referred to as normative expectations, they represent levels of product performance that the consumer desires, hopes, or would like to realize given his or her investment in terms of time, money, effort and emotions associated with the product purchase. A number of closely related concepts have been discussed in the literature. These include Miller's (1977) ideal expectations and Swan, Trawick and Carroll's (1980) desired expectations.

In their modification of the confirmation/disconfirmation paradigm, Woodruff et al. (1983) proposed that expectations are based on experience (product and brand) and that some interval around a performance norm is likely to be considered equivalent to the norm. Woodruff et al. (1983) refer to this interval as a "zone of indifference" and posit that positive or negative disconfirmation occurs when the comparison process results in an evaluation that is outside the zone and thus different enough from the norm to be recognized as such. Thus the relationship is conceptualized as being one of zonal ranges. Earlier work by Gioia and Sterns (1980) and by Miller (1977) have also included this conceptualization.

These zonal ranges may be defined as follows:

- Latitude of Acceptance - a range of acceptable experience performances which include a best performance experience.
- Latitude of Rejection - a range of objectionable experience performances which include a worst performance experience.
- Zone of Indifference - a range of performances which the consumer recognizes as neither significantly better than nor significantly worse than their reference based norm for that use situation.

The zone of indifference concept has several important implications in the satisfaction/dissatisfaction literature. First, for the same consumer, the zone may differ in width for different use situations depending on perceptual abilities and situational factors. Secondly, and more fully explored in this paper, concerns the role of the zone of indifference in raising the satisfaction/dissatisfaction process to a conscious level. According to Woodruff et al. (1983), perceived brand performance must be outside the zone of indifference before a positive or negative emotional response will be raised to a conscious level.

Weak disconfirmation of expectations, whether positive or negative, tends to be assimilated away (Olshavsky, 1977). Perceptions of performance which are close to expectations are within a latitude of acceptable performance, and are assimilated toward the expectation (Anderson, 1973; Olson and Dover, 1977; Olshavsky and Miller, 1972). Performance which is above or below the norm, but within the indifference zone, leads to indifference. On the other hand, if the discrepancy between expectations and performance is large, a contrast effect occurs in which the consumer magnifies the perceived

difference (Hovland, Harvey and Sherif, 1957). Hence, whether assimilation or contrast effects develop is a function of the relative disparity between expectations and actual product performance.

Positive disconfirmation logically leads to satisfaction which, in turn, may lead to positive responses such as brand or store loyalty, favorable word of mouth, and "complimenting behavior." Negative disconfirmation has the opposite effect. That negative disconfirmation has aversive consequences to the producer, including a tendency for negative word of mouth to occur, is well-documented (Richins, 1983).

It does not follow, however, that predictive and normative expectations are independent. In some cases the two may be identical (Woodruff et al., 1983; Barbeau, 1985). Furthermore, predictive expectations more likely affect normative expectations in part because they may tend to serve as a lower bound for normative expectations (Day and Landon, 1977). In a sense, normative expectations may represent consumers' comparison level for the product, while predictive expectations represent an adaptation level for the product.

Both predictive and normative expectations are formed in much the same way (Nolan and Swan, 1984) and are derived from total prior experience with: 1) the specific brand unit, 2) other units of the same brand, 3) other units of similar brands, or 4) product type or class experience. This experience encompasses product use, advertising, word of mouth from family and referents, interactions with salespeople, and other information sources.

Some expectations may be quite vague. For instance, the consumer may not be very familiar with the item (such as a vacation destination) and may have obtained very little prepurchase information about it. Although little researched, Swan (1982) theorizes that the impact of vagueness may be to create a wide latitude of acceptance (or range within which performance disconfirmation will be positive) and a relatively high number of unanticipated consequences. However, the more general case is that expectations exist or are formed during the purchase process. Woodruff et al. (1983) suggest that expectations are, to a large extent, experience based. Thus a consumer can draw on experience with other similar brands and products which compete for the same use situation. They hypothesize that the width of the zone of indifference varies inversely with the breadth and depth of a consumer's experience with a particular brand.

A consumer can be thought of as bringing a set of expectations (both predictive and normative) to a purchase occasion. These expectations are based on past associations between existing circumstances and past situations. As such, an expectation can be thought of as the extrapolation of an assumed relationship(s) between a cue(s) and a target event. For example, consider that acquisition of a personal computer is the target event and a ratings report from Consumer Reports is the cue. A crucial issue is whether the consumer believes that Consumer Reports gives accurate and unbiased ratings, and if so, how much faith should be placed in their ratings as opposed to a recommendation from a friend or salesperson. A number of such cues or sources of information are typically sought out or encountered by the consumer and combined in some manner to form an expectation.

Expectations and Hypothesis Testing

From this perspective many expectations can best be thought of as beliefs about how products should function. Within the context of this paper, these beliefs will be considered as hypotheses about products

which are subsequently used in product evaluation. Some examples might include: "The higher the price, the better the quality." "Volvos are the safest cars built." "Dr. Jones gives very personal service." "You can't go wrong if you buy an IBM PC." "Tide gets clothes cleaner than any other detergent." The main theme of this proposal is that the evaluation of products and subsequent judgments about satisfaction/dissatisfaction can be thought of as tests of hypotheses by "naive scientists" and are thus subject to biases in the process of arriving at a product evaluation.

PSYCHOLOGICAL STUDIES RELATED TO INFORMATION UTILIZATION

Beliefs and Information Processing

Much empirical evidence exists to indicate that, in social interactions, people tend to process information in such a manner as to sustain their initial beliefs (Hovland, Janis, and Kelley, 1953; Kelley, 1950; Lord, Lepper and Ross, 1979; Nisbett and Ross, 1980; Snyder and Swann, 1978a; 1978b; Swann and Read, 1981; Taylor and Deaux, 1973). For example, Kelley (1950) showed that people's judgment of another person's personality was significantly affected by prior beliefs. In Kelley's experiment, half the students in a psychology course were given a biographical note about a guest lecturer which described him as a "rather cold person, industrious, critical, practical and determined." The other half of the students received biographies which substituted "warm" for "cold." Students who were told to expect a warm lecturer rated him as relatively sociable and friendly. Whereas, those expecting a cold lecturer judged him as unsociable and formal.

This expectancy-confirmation effect can occur even in the absence of any interaction between the perceiver and the target object. Darley and Gross (1983) refer to this phenomenon as the "cognitive confirmation effect." In this case, consumers selectively search for aspects of the target object in such a manner that their expectations are confirmed (Duncan, 1976; Kelley, 1950; Langer and Abelson, 1974; Mynatt, Doherty and Tweency, 1977; Swann and Read, 1980). Thus, consumers with different expectancies about a product or service may experience identical performance and still emerge with their divergent expectancies "confirmed." Snyder and Swann (1978) researched hypothesis-testing processes in social interaction. They found that when subjects were provided with hypotheses about the personal attributes of other individuals, they subsequently tested these hypotheses by preferentially searching for behavioral evidence that would confirm these hypotheses. A study by John, Scott and Bettman (1986), also suggests how existing perceptions or expectations regarding relationships may bias the information consumers gather and use to make judgments. In the study, consumers who had prior beliefs regarding a positive relationship between price and quality were more likely to sample only high priced products in a particular category. The concern is that consumers will avoid the types of information that would allow them to adjust their expectations in such a manner as to make more appropriate evaluations of product performance and the subsequent feelings of satisfaction/dissatisfaction (Brehmer, 1980). Thus consumers could possibly make incorrect and irrational evaluations of products because they do not sufficiently consider the results of additional information which does not agree with their prior beliefs or they overweight additional information which agrees with their prior beliefs.

Other evidence for the role of beliefs in processing information is found in the so-called illusory correlation phenomena. Illusory correlation is defined

by Chapman (1967, p. 151) as "the report by observers of a correlation between two classes of events which in reality (a) are not correlated or (b) are correlated to a lesser extent than reported." This effect is likely to result from the differential encoding of certain events or co-occurrences (Hamilton, Dugan and Trolter, 1985). The basic work on the ability of subjects to recognize covariation indicates that subjects' beliefs dispose perceivers to report consistent relationships among variables whose empirical linkages are very weak or even non-existent. As Jennings, Amabile and Ross (1982, p. 215) state, "the intuitive scientist's pre-conceptions about empirical relationships are apt to determine what he detects, what he fails to detect, and what he sees that is not really there to be seen."

Ajzen (1977) showed that a greater correlation was perceived between the values of two variables when causally relevant names were assigned than if causally irrelevant names were used. This result was obtained despite the fact that the true correlation between the variables was held constant. This means, for example, that the consumer may select an inappropriate variable to make a prediction. One example would be the use of price to indicate quality. If consumers then have strong expectations that higher priced items will be of higher quality, these expectations can bias classification of ambiguous outcomes (Bettman et al., 1984).

The belief maintenance phenomenon can also be found in the study of stereotypes (Taylor and Deaux, 1973; Hamilton and Rose, 1980). Hamilton and Rose (1980) found confirming information was recalled as having occurred more often than disconfirming information. The results of their experiments indicate that when information is acquired that confirms a stereotype, it will be recalled as having occurred more often than either unrelated or disconfirming information. The outcome of this is to bias the perception of the actual correlational relationships in a way that would maintain one's stereotypic beliefs.

Beliefs, once formed, can survive and even be strengthened by evidence that logically should have weakened the strength of the belief. Strong evidence for this claim comes from Lord, Ross and Lepper (1979). Subjects previously classed as strongly for or against capital punishment were shown two contradictory studies on the topic. Position beliefs were strengthened by the confirming study, but little affected by the disconfirming study. The effect was that mixed evidence, far from reducing confidence in opinions, polarized them. This implies that completely inconsistent or even random data, when processed in a biased fashion, can maintain or even reinforce one's preconceptions.

Ross and Anderson (1982) outline three mechanisms underlying the belief perseverance phenomenon: 1) biased search, recollection, and assimilation of information; 2) the formation of causal explanations; and 3) the behavioral confirmation or "self-fulfilling" hypotheses. Biased search, recollection, and assimilation of information refers to the tendency to process evidence in the light of prior beliefs. Beliefs influence the processes by which individuals seek out, store, and interpret relevant information. Consequently, a tendency exists to perceive more support for those beliefs than actually exists in the evidence at hand. As Lord et al. (1979) have documented, potentially confirmatory evidence is apt to be taken at face value while potentially disconfirmatory evidence is subjected to highly critical and skeptical scrutiny. Thus, according to Ross and Anderson (1982), two consequences follow: First, any pattern of evidence processed in this fashion, even evidence that is essentially random, will tend to bolster the initial belief. Second, once evidence has been processed in this fashion it gains

the capacity to sustain the prior belief when that belief is subjected to new empirical disconfirmation or to attacks on its original evidential basis.

The formation of causal explanations refers to the tendency to engage in causal analysis or explanation. The process of forming judgments involves more than just noting evidence relevant to beliefs. It also involves establishing a logical reason to account for functional relationships that one has come to believe exists. Once again, this process not only bolsters existing beliefs, it is likely to sustain that belief in the face of contradictory challenges.

A third reason for the existence of the belief perseverance phenomenon is the presence of the "behavioral confirmation effect" (Snyder and Swann, 1978a; 1978b; Snyder, Tanke and Berscheid, 1977) and is consistent with Merton's description of the "self-fulfilling prophecy." The difference between self-fulfilling prophecy and the processes described previously is that interaction is involved. In this process, 1) a perceiver develops a set of expectancies about a target person; 2) the perceiver then acts toward the target person in a way that is in accord with his or her expectations; 3) next, the target interprets the meaning of the perceiver's action; 4) based on the interpretation, the target responds to the perceiver's action, and; 5) the perceiver interprets the target's action (Darley and Fazio, 1980).

In this type of sequence, expectations guide a behavior pattern that precludes the observation of disconfirming events (Einhorn and Hogarth, 1978). A good example is a consumer with the belief, "You only get good service in an expensive restaurant." This expectation could easily lead to the self-fulfilling prophesy when the service provider reacts to the customer's expectations. It is also possible that the consumer's attitude toward durable products results in the same type of process. For example, the consumer with the belief, "The most expensive will perform the best" may, because it is more expensive and perceived as a premium product, use the product properly and take better care of it. This, in turn, results in the fulfilling of product expectations.

Case History Versus Statistical Information

Consistency with prior beliefs is not the only determinant of information use in making judgments; the type of information plays a role as well. For instance, word of mouth is generally held to be more credible than commercial messages, and beliefs based on usage experience are held much more confidently than beliefs based on external sources. Mizerski (1982) presents findings that suggest unfavorable word of mouth ratings, as compared to favorable word of mouth ratings on the same attributes, prompt significantly stronger attributions to product performance, belief strength, and affect toward products.

Perhaps the clearest case of differential weighting involves the use of case history information as opposed to statistical information. Case enriched information is defined as information which consists of a narrative, anecdotal, or incidental content which relates to the experience of an individual. Statistical information is defined as information which contains various numerical indices, i.e., measures such as means or average, probability estimates, ratio or proportion analysis, etc., which relate to the experience of a group of individuals. Case history information dominates statistical information (base-rates). Indeed, considerable evidence documents the failure to consider base-rate data (see, for example, Kahneman and Tversky, 1973; Lyon and Slovic, 1976; Nisbett and Borgida, 1975) and to weight

case history information more heavily than abstract and pallid information (D'Agostino et al., 1977; Parker, 1981; Smith, 1981).

Why is statistical data so comparatively ineffective? And why is case history information more influential? One hypothesis is that statistical data (base rate information) are usually of an abstract, pallid and remote nature and lack the concrete impact of specific information in memory (Hogarth, 1980). By contrast, specific case data are frequently emotionally loaded and thus encoded and remembered on several dimensions with a correspondingly rich set of meaningful associations (Abelson, 1976; Dickson, 1982; Scott and Tybout, 1982).

Even logically inferior information can predominate if it is more concrete than its logically superior competition (Anderson, 1983). This suggests, for example, that when forming beliefs about a car, the positive or negative experience of a single person known by the consumer is liable to weigh more heavily in evaluation than encountered and more valid statistical information, e.g., in Consumer Reports. When using cues to judge the strength of predictive relationships, there is a bias towards using observed frequency rather than observed relative frequency (see for example, Estes, 1976). This means when a consumer is considering the relative performance of two products, the absolute number of successes is given greater weight than the relative number of successes to trials, i.e., successes and failures (the denominator is ignored). Consequently, highly informative statistical data are often ignored and have little impact on judgment, while case history data with much less informative value have strong effects on judgment.

A second explanation for the failure to give adequate weight to base-rate information is its relative "causal status" in the mind of the individual. Ajzen (1977) has argued that people's intuitive notions of causality play an important role in their judgmental strategies. He states:

Judgment by causality can be described as follows. When asked to make a prediction, people look for factors that would cause the behavior or event under consideration. Information that provides evidence concerning the presence or absence of such causal factors is therefore likely to influence predictions. Other items of information, even though important by the normative principles of statistical prediction, will tend to be neglected if they have no apparent causal significance. Statistical information is used mainly when no causal information is available.

That is, unless base-rate data are seen to be causally linked to a "target" event, they will either be ignored or played down.

A third reason for people's failure to be influenced by base-rate information is presented by Kahneman and Tversky (1973). Their basic explanation appears to center on the idea that people lack good schemata for working with probabilistic information. Nisbett, Borgida, Crandall and Reed (1976) suggest that there is some truth that people are simply not very good at dealing with base-rate data.

LIKELY CONDITIONS FOR OCCURRENCE

This discussion is not meant to suggest that consumers never purchase brands which are expected to

be negatively disconfirming or that consumers are incapable of making normatively correct evaluations. Certainly, there are many situations in which consumers directly seek disconfirming evidence. Brand switching and trial purchases are prime examples where consumers do purchase products when they anticipate being dissatisfied but hope to be surprised. Sometimes the consumer purchases a product expected to fall below norms because few alternatives exist in the market.

Also, some studies have found that people are quite accurate in their perceptions of response-outcome relationships (Alloy and Abramson, 1979; 1982; Beach and Scopp, 1966; Erlick, 1966; Erlick and Mills, 1967; Bettman, Creyer, John, and Scott, 1984; Bettman, John and Scott, 1986; Shaklee and Tucker, 1980; Peterson, 1980). Alloy and Tabachnik (1984) suggest that the ability to judge and learn covariation or causal attribution, and the mixed results in the literature can be explained by looking at the interaction between the information currently available in the environment and expectations regarding that information (see Figure 1). Their framework consists of a 2x2 table formed by considering the four combinations of low versus high strength of prior expectations and low versus high strength of current situational information.

FIGURE 1
Likely Conditions for Occurrence of Bias

Prior Expectations	Current Situational Information	
	Low	High
Low	Cell 1: Low confidence In Judgment	Cell 2: Judgment in Line With situational Information
High	Cell 2: Judgment in Line With Prior Expectations	Cell 3: Case 1: Both imply same cause. Judgment with high confidence Case 2: Imply different cause. Judgment usually in line with prior expectations

Adapted from "Assessment of Covariation by Humans and Animals: The Joint Influence of Prior Expectations and Current Situational Information," By Alloy and Tabachnik, *Psychological Review*, Vol. 91, 112-149.

In Cell 1 of Table 1, both situational information and prior expectations regarding the covariation between two events are weak. Thus people forego making a judgment or make an inference with low confidence. In Cell 2, the strength of the prior expectations is high and situational information is weak, judgments are predicted to be direct reflections of a priori expectations. In Cell 3, situational information is stronger than are prior expectations, perceived covariation will be in line with the available situational information. Finally, Cell 4, represents the situation in which both expectations and situational information strongly and independently suggest a particular covariation perception. If both prior expectations and situational information are congruent then the covariation judgment is made with extreme confidence. If, however, the beliefs and situational information are incongruent, the person faces a cognitive dilemma. In this situation the person could overlook, distort, or misremember current situational information and make a judgment in line with prior expectations; or they could reinterpret or ignore strongly held beliefs in favor of the situational

information. Alloy and Tabachnik (1984) conclude that, unless the belief-contradictory evidence is substantial or particularly salient, covariation assessments will be biased in the direction of initial expectations.

This implies that the impetus for revising prior beliefs is most likely to come from recognition of an incongruence between those beliefs and some new evidence. The most likely scenario for the incongruence to be recognized is for the outcome data to be strong and unambiguous and prior expectations to be weak or unavailable. A cognitive dilemma occurs if the prior belief and the outcome data disagree and both are strong and available. As the brief review above indicates, in previous studies individuals often have resolved this dilemma by making assessments more in line with their prior beliefs. If people can explain most occurrences to their own satisfaction with minimal and local changes in their existing conceptions, they will rarely feel the need for drastic revision of these conceptions.

This approach appears very promising in its ability to help consumer researchers understand how these processes operate within the satisfaction/dissatisfaction framework. It suggests that expectations and outcome experience are by-products in the development of knowledge representations. As such, biases are most likely to operate under two conditions: 1) when expectations are firmly held and outcome evidence is weak or ambiguous providing little support for any particular belief perception or 2) when prior beliefs are strongly held and outcome evidence is strong but incongruent with prior beliefs. In the second situation the direction of the bias (either toward prior expectations or outcome information) is generally dependent on the amount and salience of the belief-contradictory evidence. This also suggests that biases are most likely to operate when the product category involves experience attributes. Experience attributes are those product attributes that cannot be verified by consumers prior to purchase and use of the product but can be verified after examination and or use (Nelson, 1970; Sheffet, 1983). These attributes would include such things as taste, texture, color, and certain types of effectiveness (for example the "brightness" of a wash, the "feel" of a shampoo, or the "friendliness" of a service provider). Due to the subjective element present in the judgment of experience attributes, consumers will vary in their judgment as to the outcomes. Consequently, the outcomes are more often ambiguous and thus more likely to be the subject of learning biases.

HYPOTHESES FOR FUTURE RESEARCH

Based on the studies reviewed previously, some implications about the behavior of consumers during the satisfaction evaluation process can be derived. A consumer's usage of information depends on many factors. This paper concentrated on two such factors, the effects of prior beliefs and the characteristics of the information (case vs. statistical). Information usage is operationalized here as changes in the consumers post-usage evaluation feelings and or confidence. The following hypotheses relate the two factors, information characteristics and conformity to prior beliefs, to three outcomes: 1) changes in confidence, 2) changes in the zonal ranges, and 3) changes in satisfaction evaluation.

- H1: When evaluating a product involving ambiguous outcomes and a consumer has strong expectations, information is more likely to be used if it is consistent with a consumer's established

beliefs than if it is inconsistent with those beliefs.

H2: When evaluating a product involving ambiguous outcomes and a consumer has strong expectations, consumers exposed to information that is consistent with their prior beliefs will have a narrower zone of indifference than consumers exposed to information that is inconsistent with those beliefs.

H3: When evaluating a product involving ambiguous outcomes and a consumer has strong expectations, consumers exposed to information that is consistent with their prior beliefs are more likely to evaluate the product as significantly more satisfying than consumers exposed to information that is inconsistent with those beliefs.

H4: When evaluating a product involving experience attributes and a consumer has strong expectations, consumers exposed to information consistent with their prior beliefs will have greater confidence in their post-use satisfaction evaluation than subjects exposed to information that is inconsistent with those beliefs.

H5: When evaluating a product, case study information is more likely to be used by a consumer than information based on statistical summaries.

H6: When evaluating a product, consumers exposed to case study information will have a narrower zone of indifference than consumers exposed to information based on statistical summaries.

H7: When evaluating a product, consumers exposed to case study information are more likely to evaluate the product as significantly more satisfying than subjects exposed to information based on statistical summaries.

H8: When evaluating a product, consumers exposed to case study information will have more confidence in their post-use satisfaction evaluation than subjects exposed to information based on statistical summaries.

The research design proposed involves three stages; a) expectation creation, b) presentation of additional information, and c) post-use evaluation. The study would consist of a 2 x 2 x 2 between subjects factorial design with control group. The first factor, expectations, would utilize two levels, positive and negative. The second factor, information consistency, would include both positive and negative statements. The third factor, information type, would also employ two levels, statistical versus case history information. Two products may be picked for such a study. One may be a product high in experience attributes and the other may be a product low in experience attributes.

Measurement issues involved in such a study are complex and not easily dealt with in a short space. Two of the more important measures, satisfaction and zone of indifference will be discussed here. The conceptualization of satisfaction presented here is that satisfaction/dissatisfaction is a result of the

confirmation or disconfirmation process and not simply a restatement of the confirmation/disconfirmation evaluation. As such, the measure should capture the emotional response to the disconfirmation of the reference based norm. The type of measures recommended are those close to those used by Westbrook (1983) and Cadotte, Woodruff and Jenkins (1982).

In contrast to the satisfaction construct there is very little guidance available from the literature on how to measure the zone of indifference. One method recommended by Woodruff et al. (1983) is similar to a procedure employed by Rothschild and Houston (1977). Rothschild and Houston (1977) measured latitudes of acceptance of each of eleven attributes using a nine point scale of the type presented in Figure 2. Subjects first indicated ideal points by placing a box about the corresponding number on the scale. Other tolerable attribute levels were indicated by circling the corresponding numbers. The size of the latitude of acceptance for an attribute was simply the total number of circled and squared points on the scale. To develop a measure which would be useful to infer the zone of indifference using a most typical product standard, subjects could first be asked to indicate what they perceive as the most typical performance of the brand that they would use in that particular situation. Then they could be asked to describe other levels of performance which, although not the most typical, are frequently encountered and which they find neither surprising nor particularly pleasing or displeasing.

FIGURE 2
Example of Scale Used by Rothschild and Houston (1977)

Experience In Politics: No Experience	Very Little Experience	Some Experience	Quite a Bit of Experience	A Great Deal of Experience				
1	2	3	4	5	6	7	8	9

CONCLUDING COMMENTS

In this paper the literature on belief perseverance and characteristics of information (case history vs. statistical) has been presented. It was proposed that if expectations are strong and outcome evaluations are ambiguous then information biases are likely to operate. This, in turn, means that satisfaction evaluations will be impacted. There are important implications for both marketing strategy and those involved in helping consumers make better decisions. This is an under-researched area and it is hoped that the conceptual framework and hypotheses presented will offer new directions for satisfaction research.

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