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A THEORY OF BUYER BEHAVIOR

The usual purpose of a theory is to explain empirical phenomena. The empirical phenomenon which we want to explain is the buying behavior of individuals over a period of time. More specifically, our theory is an attempt to explain the *brand choice* behavior of the buyer. We assume that brand choice is not random but systematic, and the task we have undertaken in developing this theory is to formulate a structure that enables us to view it as a system.

To elaborate on our assumption: First, we assume that buying behavior is rational in the sense that it is within the buyer's "bounded rationality" (March and Simon, 1958); that is, his behavior is rational within the limits of his cognitive and learning capacities and within the constraint of limited information. Second, we are attempting to build a positive theory and not a normative theory. Third, if brand choice behavior is assumed to be systematic, then it can be observed in certain standard ways. Later on, we describe a series of measures of the buyer's buying behavior generally labeled purchase behavior, attitude toward a brand, comprehension of the brand, attention to impinging stimuli, and intention to buy a brand. Fourth, if behavior is systematic, it is caused by some event—a stimulus—either in the buyer or in the buyer's environment. This event or stimulus is the input to the system, and purchase behavior is the output. What we must describe, then, is what goes on between the input and the output.

A Summary of the Theory

Much buying behavior is more or less repetitive, and the buyer establishes purchase cycles for various products which determine how often he will buy. For some products, such as durable appliances, this cycle is lengthy and purchase is infrequent. For many other products, such as food and personal-care items, the purchase cycle is short and purchase is frequent. Confronted by repetitive brand-choice decisions, the consumer simplifies his task by storing relevant information and establishing a routine in his decision process. Therefore our theory must identify the elements of his decision process, observe the changes that occur in them over time as a result of their repetitive nature, and show how a combination of decision elements affects search processes and the incorporation of information from the buyer's commercial and social environment.

The elements of a buyer's brand-choice decision are (1) a set of motives, (2) several alternative courses of action, and (3) decision mediators by which the motives are matched with the alternatives. Motives are specific to a product class, and reflect the underlying needs of the buyer. The alternatives are the various brands that have the potential of satisfying the buyer's motives.

This article was especially prepared for this book. The theory summarized here will be treated in greater detail in a forthcoming book by John A. Howard and Jagdish N. Sheth.

There are three important notions involved in the definition of alternatives as brands. First, the several brands which become alternatives to the buyer need not belong to the same product class as defined by the industry. For example, a person may see Sanka coffee, Ovaltine, and Tetley's tea as three alternatives to satisfy his motives related to beverage consumption. He also may see only two alternatives, such as coffee and beer, both belonging to physically dissimilar product classes. Second, the brands which are alternatives of the buyer's choice decision are generally small in number, collectively called his "evoked set." The evoked set is only a fraction of the brands he is aware of, and a still smaller fraction of the total number of brands actually on the market. Third, any two consumers may have quite different alternatives in their evoked sets.

Decision mediators are the set of rules that the buyer employs to match his motives and his means of satisfying those motives. They serve the function of ordering and structuring the buyer's motives, and then ordering and structuring the various brands based on their potential to satisfy these ordered motives. Decision mediators develop by the buyer's process of learning about the buying situation. They are therefore influenced by information from the buyer's environment, and even more importantly by the actual experience of purchasing and consuming the brand.

When the buyer is just beginning to purchase a product class, he lacks experience; he does not have a set of decision mediators for that product class. To develop them, he *actively seeks information* from his commercial and social environments. The information he actively seeks, or accidentally receives, is subjected to perceptual processes, which not only limit his intake of information (magnitude of information is affected) but modify it to suit his frame of reference (quality of information is affected). These modifications are significant in that they distort the neat "marketing-stimulus consumer-response" relation.

Along with his active search for information, the buyer may to some extent generalize from similar past experience. Such generalization may be due to the physical similarity of a new product class to an old product class. For example, during initial purchases of whisky, a buyer may generalize from his experiences in buying gin. Generalization can also occur when two product classes are physically dissimilar, but have a common meaning deriving from a company brand name. For example, a buyer might generalize from his experience in buying a refrigerator or range to his first purchase of a dishwasher.

Whatever the source, the buyer develops sufficient decision mediators to enable him to choose a brand which seems to have the best potential for satisfying his motives. If the brand proves satisfactory, the potential of that brand to satisfy his motives for subsequent purchases is increased, and the probability of his buying that brand again is likewise increased. With repeated satisfactory purchases of one or more brands, the buyer is likely to manifest a routine decision process in which the sequential steps in buying are so well structured that an event which triggers the process may also complete it. Routine purchasing implies that decision mediators are well established, and that the buyer has strong brand preferences.

The phase of repetitive decision making in which the buyer reduces

product class, the larger is the evoked set (Howard and Moore, 1963).

Time pressure is a current exogenous variable and therefore specific to a decision situation. When a buyer feels pressed for time, because of any of several environmental influences, he must allocate his time among alternative uses. In this process a reallocation unfavorable to purchasing activity can occur. Time pressure will create inhibition, as mentioned earlier. It will also unfavorably affect the search for information.

Financial status refers to the constraint a buyer may feel because he lacks financial resources. This can affect his purchase behavior by creating a barrier (inhibitor) to purchasing the most preferred brand. For example, a buyer may want to purchase an expensive foreign car, but lacking sufficient financial resource, he will settle for a low-priced American model.

Personality traits are such variables as self-confidence, self-esteem, authoritarianism, and anxiety, which have been researched to identify individual differences. These individual differences are "topic free" and therefore supposedly exert their effect across product classes. We believe their effect is felt on (1) nonspecific motives and (2) the evoked set. For example, the more anxious a person, the greater his motivational arousal; dominant personalities are more likely (by a small margin) to buy a Ford instead of a Chevrolet; the more authoritarian a person, the narrower the category width of his evoked set.

Social and organizational setting involves the group, a higher level of social organization than the individual. It includes informal social organization, such as family and reference groups, which is relevant for *consumer behavior*; and formal organization, which constitutes much of the environment for *industrial purchasing*. Organizational variables are those of small group interaction, such as power, status, and authority. We believe that the underlying processes of intergroup conflict in both industrial and consumer buying behavior are in principle very similar, and that the differences are largely due to the formal nature of industrial activity. Organization, both formal and social, is a crucial variable because it influences most of the learning constructs.

Social class involves a still higher level of social organization, the social aggregate. Several indices are available to classify people socially. Perhaps the most common index is Warner's classification (see Ch. 5, this book). Social class mediates the relation between input and output by influencing (1) specific motives, (2) decision mediators, (3) the evoked set, and (4) inhibitors. The latter influence is important, particularly in the adoption of innovations.

Culture provides a more comprehensive social framework than social class. It consists of patterns of behavior, symbols, ideas, and their attached values. Culture will influence motives, decision mediators, and inhibitors.

Conclusions

In the preceding pages we have summarized a theory of buyer brand choice. It is complex, but we strongly believe that complexity is essential to an adequate description of buying behavior.

We hope that our theory will provide new insights into past empirical data, and guide future research by instilling coherence and unity into

actions to the same stimulus. Alternatively, two buyers may both urgently need a product, but they buy two different brands. This can be explained by another construct: "predisposition toward a brand."

Elements of the Theory

Figure 1 represents our theory of buyer behavior. The central rectangular box isolates the various internal variables and processes which, taken together, show the state of the buyer. The inputs to the rectangular box are stimuli from the marketing and social environments. The outputs are a variety of responses which the buyer is likely to manifest, based on the interaction between the stimuli and his internal state.

Besides the inputs and outputs, there are a set of seven influences which affect the variables in the rectangular box.* These variables appear at the top of the diagram and are labeled "exogenous" variables. Their function is to provide a means of adjusting for the interpersonal differences discussed above.

The variables within the rectangular box are hypothetical constructs, which serve the role of endogenous variables in the sense that changes in them are explained, but they are something less than endogenous variables in that they are not well defined and are not observable. Their values are inferred from relations among the output intervening variables.

Several of the exogenous variables such as personality, social class, and culture have traditionally been treated as endogenous variables. We believe that they affect more specific variables, and that, by conceiving their effect via the hypothetical constructs, we can better understand their role.

Our theory of buyer behavior has four major components: stimulus variables, response variables, hypothetical constructs, and exogenous variables. We will elaborate on each of these components below, in terms of both their substance and their interrelationships.

Stimulus Input Variables

At any point in time, the hypothetical constructs which reflect the buyer's internal state are affected by numerous stimuli from his environment. This environment is classified as either commercial or social. The commercial environment consists of the marketing activities of various firms, by which they attempt to communicate to the buyer. From the buyer's point of view, these communications basically come via either the brand objects themselves or some linguistic or pictorial representation of brand attributes. If brand elements such as price, quality, service, distinctiveness, or availability are communicated through brand objects

*Terminology is difficult in a problem area that cuts across both economics and psychology, because each discipline has often defined its terms differently from the other. We find the economist's definitions of "exogenous," vs. "endogenous," and "theory" vs. "model" more useful than those of the psychologist. The psychologist's distinction of hypothetical constructs and intervening variables, however, provides a helpful breakdown of endogenous variables. Finally, for the sake of exposition, we have often not clearly distinguished here between the theory and its empirical counterparts. Although this practice encourages certain ambiguities, and we lay ourselves open to the charge of relying our theory, we believe that it simplifies the exposition.

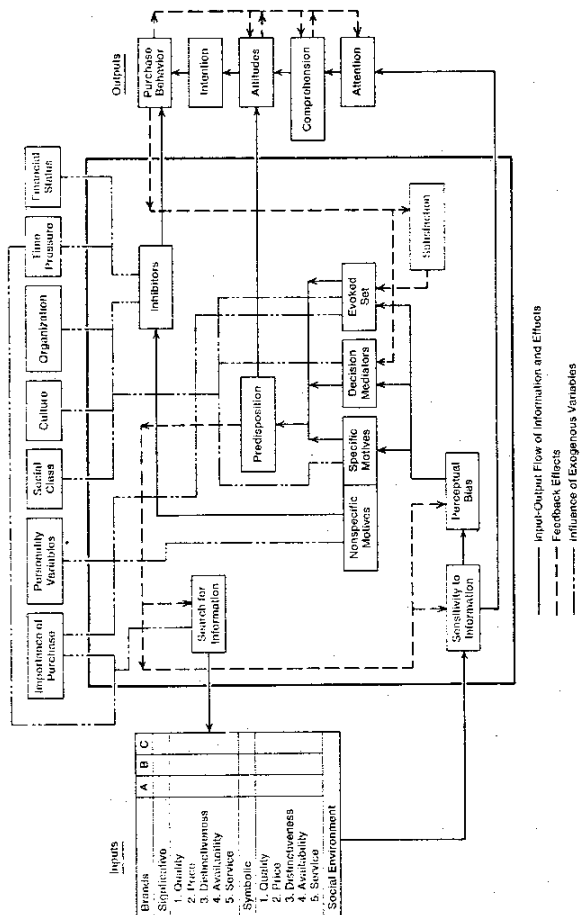


Figure 1. A theory of buyer behavior.

(significates), the stimuli are defined and classified as *significant* stimuli. If, on the other hand, brand attributes represented by linguistic or pictorial symbols are communicated via mass media, billboards, catalogs, salesmen, etc., the stimuli from these commercial sources are classified as *symbolic* stimuli. We view the marketing mix as the optimum allocation of funds between the two major channels of communication to the buyer—*significant* and *symbolic*.

Each commercial input variable is hypothesized to be multivariate. The five major dimensions of a brand—price, quality, distinctiveness, availability, and service—probably summarize the various attributes. The same dimensions are present in both the *significant* and *symbolic* communication that becomes the input stimuli for the buyer. However, certain dimensions may be more appropriately conveyed by *significant* rather than *symbolic* communication, and vice versa. For example, price is easily communicated by both channels; shape may best be communicated by two-dimensional pictures rather than verbal communication. Finally, size may not be easily communicated by any *symbolic* representation: the physical product (*significate*) may be necessary.

The third stimulus input variable is the information that the buyer's social environment provides for a purchase decision. The most obvious example is word-of-mouth communication.

The inputs to the buyer's mental state from the three major categories of stimuli are processed and stored through their interaction with a series of hypothetical constructs. The buyer may react to these stimuli immediately, or later.

Hypothetical Constructs

Our hypothetical constructs and their interrelationships are the result of an integration of Hull's (1943, 1952) learning theory, Osgood's (1957^{a,b}) cognitive theory, and Berlyne's (1963) theory of exploratory behavior, along with other ideas.

These constructs fall into two classes: (1) those having to do with perception, and (2) those having to do with learning. Perceptual constructs serve the function of information processing; learning constructs serve the function of concept formation. It is interesting that, after years of experience in advertising, Reeves (1961) arrived at a very similar classification: his "penetration" is analogous to perceptual variables, and his "unique selling propositions" are analogous to learning variables. We will first describe learning constructs, since they are the major components of decision making; the perceptual constructs which serve the important role of obtaining and processing information are more complex, and will be described later.

Learning Constructs. The learning constructs are labeled (1) motives—specific and nonspecific, (2) brand-potential of the evoked set, (3) decision mediators, (4) predisposition toward brands, (5) inhibitors, and (6) satisfaction with the purchase of a brand.

Motive is impetus to action. The buyer is motivated by expectation or anticipation, based on learning from the outcome of past purchase of a brand in his evoked set. Motives or goals may be thought of as constituting

a means-end chain, and hence as being general or specific, depending upon their position in the chain.

The specific motives—lower level motives in the means-end chain—are very closely anchored to the attributes of a product class; in this way they become purchase criteria. Examples of specific motives are those for buying a dietary product—low calories, nutrition, taste, and value. Similarly, the specific motives in buying an air conditioner might be durability, quietness, cooling power, and design.

Very often, several specific motives are nothing more than indicators of some underlying, more general motive; that is, some motive that is higher in the means-end chain. In the foregoing example, the specific motives of nutrition and low calories might be indicators of the common motive of good health.

Motives also serve the important function of raising the buyer's general motivational state, thereby rousing him to pay attention to environmental stimuli. Probable examples of nonspecific motives are anxiety and fear, the personality variables of authoritarianism, exhibitionism, and aggressiveness, and the social motives of power, status, and prestige. Although they are nonspecific, they are not innate but learned, mostly as a result of acculturation. The nonspecific motives also possess a hierarchy within themselves. For example, anxiety is considered to be the source of another motive, that of the need for money (Brown, 1961).

Brand potential of the evoked set is a second learning construct. A buyer who is familiar with a product class has an evoked set of alternatives to satisfy his motives. The elements of his evoked set are some of the brands that make up the product class. This concept is important because the brands in a buyer's evoked set constitute competition for the seller.

A brand is, of course, a class concept, like many other objects or things. The buyer attaches a *word* to this concept—a label or brand name. The brand name conveys certain meanings, including its potential to satisfy his motives. In an advanced economy with relatively careful quality controls, the buyer is generally assured that any one brand object is like another. If quality controls are not adequate, the buyer will probably not summarize the potential of a brand in one word or label, but instead divide it into subclasses.

Various brands in the buyer's evoked set will generally satisfy his goal structure differently. One brand may possess such strong potential that it is an ideal brand for the buyer. Another brand may satisfy his motives barely enough to be part of his evoked set. Through a learning process, the buyer obtains and stores knowledge of each brand's potential, and then ranks them in order of their potential to satisfy his wants. The evoked set, in short, is a set of alternatives to be evaluated. Predisposition represents the buyer's preference ranking of them.

Decision mediators, a third learning construct, are the buyer's mental rules for matching alternatives with motives and ranking them in terms of their want-satisfying capacity. As mental rules, they exhibit reasoning, wherein the cognitive elements related to alternatives and motives are structured. In addition, decision mediators also contain a set of criteria by which the buyer denotatively discriminates between the brands he views

as being in a product class, and those brands that are not. The words he uses to describe these criteria are the words he thinks with and finds easy to remember. These criteria are important to the manufacturer, because if he knows them he can deliberately build into his product and its promotion those characteristics which will differentiate his brand from competing brands.

Decision mediators thus represent enduring cognitive rules established by the process of learning, and their function is to establish meaningful and congruent relations among brands, so that the buyer can manifest goal-directed behavior. In view of the fact that decision mediators are learned, principles of learning become crucial in understanding their development and change over time.

There are two broad sources of learning: (1) actual experience, and (2) information. Actual experience can be with either the *same* buying situation in the past, or with a *similar* buying situation. The latter is generally labeled "generalization." Similarly, information as a source of learning can come from either the buyer's commercial or his social environment. Later, we will elaborate on each of these sources of learning.

Predisposition, a fourth construct, is the summary effect of the previous three constructs. It refers to the buyer's preference toward brands in his evoked set. It is, in fact, an aggregate index expressed in attitudes, which in turn can be measured by attitude scales. It might be visualized as the "place" where brands in the evoked set are compared with the mediator's choice criteria, to yield a judgment on the relative contribution of the brands to the buyer's motives. This judgment includes not only an estimate of the value of the brand, but also an estimate of the confidence with which the buyer holds that position. This uncertainty aspect of predisposition can be called "brand ambiguity," in that the more confidently he holds it, the less ambiguous the connotative meaning of the brand is to him and the more likely he is to buy it (G. S. Day, 1967).

Inhibitors, the fifth learning construct, are forces in the environment which create important disruptive influences on the actual purchase of a brand, even when the buyer has reasoned out that that brand will best satisfy his motives. In other words, when the buyer is motivated to buy the product class and is predisposed to buy a particular brand, he may not buy it because certain environmental forces inhibit the purchase act and prevent him from satisfying his preferences.

We postulate at least four types of inhibitors. They are (1) a high price for the brand, (2) lack of availability of the brand, (3) time pressure on the buyer, and (4) the buyer's financial status. The first two are part of the environmental stimuli, and therefore they are part of the input system. The last two come from the two exogenous variables of the same name. Temporary barriers to the purchase of a brand may also be created by social constraints emanating from other exogenous variables.

An essential feature of all inhibitors is that they are *not internalized* by the buyer, because their occurrence is random and strictly situational. However, for a given buyer, some inhibitors may persist systematically over time. If they persist long enough, the buyer is likely to incorporate them as part of his decision mediators, thus permitting them to affect the

mental structure of his alternatives and motives. An example of such internalization might be the consequences of the constant time pressure a housewife faces because she has taken a job. Continuation of the time pressure may alter her evoked set as well as her motive structure. Convenience and time saving become important motives, and her evoked set may come to include time-saving brands, such as instant coffee. Similarly, a brand may be withdrawn by a company because of its stage in the product life cycle. The permanent unavailability of that brand will be learned and internalized by buyers, and they will remove that brand from their evoked sets.

Satisfaction, the last of the learning constructs, refers to the degree of congruence between the actual consequences of purchase and consumption of a brand, and what was expected from it by the buyer at the time of purchase. If the actual outcomes are judged by the buyer to be *better than or equal* to the expected, the buyer will feel satisfied; that is,

actual consequences \geq expected consequences.

If, on the other hand, the actual outcomes are judged to be *less than* what he expected, the buyer will feel dissatisfied; that is,

actual consequences $<$ expected consequences.

Satisfaction or dissatisfaction with a brand can be with any one of its different attributes. If the brand proves to be more satisfactory than the buyer expected, the attractiveness of the brand will be enhanced. If it proves less satisfactory than he expected, its attractiveness will diminish. Satisfaction, therefore, affects the ranking of brands in the evoked set for the next buying decision.

We also think that, if a brand purchase proves completely unsatisfactory, the buyer will *remove* the brand from his evoked set. In other words, he will not consider it for future purchases. If the brand has proved extremely satisfactory, the buyer will retain *only* the purchased brand in his evoked set; other brands will have close to zero probability of consideration. In short, *extreme* outcomes are likely to affect the *number* of brands in the evoked set, and reasonable discrepancies between actual and expected outcomes will affect the *ranking* of the brands in the evoked set.

Relations Among Learning Constructs. Several important notions underlie the concept of predisposition toward a brand and its related variables. The simplest way to describe them is to state that we may classify a decision process as either "extensive problem solving," "limited problem solving," or "routine response behavior," depending on the strength of predisposition toward brands. In the early phases of buying, the buyer does not yet have well-developed decision mediators; specifically, his product-class concept is not well formed and his predisposition is low. As he acquires information and gains experience in buying and consuming a brand, his decision mediators become firm and his predisposition toward that brand is generally high.

In extensive problem solving, predisposition toward a brand is low. None of the brands are sufficiently discriminated on the basis of their decision-mediator criteria for the buyer to show preference for any one brand. At this stage of decision making, brand ambiguity is high, and the

buyer actively seeks information from his environment. The more extensive the search for information, the greater is *latency of response*—the time interval between initiation of a decision and its completion. Similarly, deliberation or reasoning is high, since the buyer lacks a well-defined product-class concept—the denotative aspect of his decision mediators. He is also likely to consider many brands as part of his evoked set, and stimuli coming from the commercial environment are less likely to trigger an immediate purchase reaction.

When predisposition toward brands is moderate, the buyer's decision process is one of limited problem solving. Brand ambiguity still exists, since he is not able to discriminate and compare brands to develop a preference for one brand over others. He is likely to seek information, but not to the extent he does for extensive problem solving. More importantly, he seeks information to compare and discriminate various brands more on a relative basis than to compare them absolutely. He thinks and deliberates, since his predispositions are only tentatively defined. His evoked set consists of a small number of brands, and he has about the same degree of preference for each of them.

In routine response behavior, the buyer has accumulated sufficient experience and information to eliminate brand ambiguity, and he has a high level of predisposition toward one or two brands in his evoked set. He is unlikely to actively seek information from the environment, since such information is not needed. Also, insofar as he does admit information, it will tend to be that which supports his current choice. Very often, this congruent information will act as a "triggering cue" to motivate him to manifest purchase behavior.

Much impulse purchase behavior is really the outcome of a strong predisposition and a facilitating commercial stimulus, such as a store display. The buyer's evoked set consists of a few brands, toward which he is highly predisposed. However, he will have greater preference toward one or two brands in his evoked set than toward the others.

As mentioned earlier, predisposition is an aggregate index of how well a brand conforms to the choice criteria contained in a decision mediator. Thus, any changes in these criteria as a result of learning from experience or information imply some change in predisposition. The greater the learning, the stronger is predisposition toward brands in the evoked set. The exact nature of learning will be described later, when we discuss the dynamics of buying behavior. However, there are two other issues which need some attention here.

First, although our focus is on brand choice behavior, the buyer also simplifies the total sequence of behavior necessary to make a purchase—i.e. going to the store, looking at products, paying at the counter, etc.—by reducing the number of steps and ordering them in a definite sequence. The greater is his predisposition, the more will be his simplification of total buying behavior, and therefore the more routine will be his purchase behavior.

Second, if the purchase cycle is very long, as is the case for automobiles and other durable appliances, the buyer may develop firm decision mediators and yet manifest exploratory behavior to a marked degree at each purchase decision, because (1) market conditions invariably change

and the buyer may find past experience insufficient, and (2) his decision mediators have become fuzzy, through lack of use and the resultant forgetting.

Perceptual Constructs. Another set of constructs serves the function of procuring and processing information relevant to a purchase decision. As mentioned earlier, information can come from any one of the three stimulus inputs—significant commercial stimuli, symbolic commercial stimuli, and social stimuli. Here we will describe only the constructs; their use by the buyer will be explained when we discuss the dynamics of buying behavior. The perceptual constructs in Figure 1 are (1) sensitivity to information, (2) perceptual bias, and (3) search for information.

A perceptual phenomenon implies either ignoring a physical event which could be a stimulus, seeing it attentively, or sometimes imagining what is not present in reality. All perceptual phenomena create some change in the quantity or quality of objective information.

Sensitivity to information refers to the opening and closing of sensory receptors which control the intake of information. The manifestation of this phenomenon is generally called "perceptual vigilance" (paying attention) or "perceptual defense" (ignoring information). Sensitivity to information therefore serves primarily as a gatekeeper for information entering the buyer's nervous system, thus controlling the quantity of information input.

Sensitivity to information is a function of two variables, according to Berlyne (1963). One is the degree of stimulus ambiguity. If a stimulus to which the buyer is exposed is very familiar or too simple, its ambiguity is low and the buyer will not pay attention—unless he is predisposed to such information from past learning. Furthermore, if stimulus ambiguity continues to be low, the buyer feels a sense of monotony and actively seeks other information—he can be said to *complicate* his environment. If the stimulus is so complex and ambiguous that the buyer finds it hard to comprehend, he will ignore it by resorting to perceptual defense. Only if the stimulus is moderately ambiguous will the buyer be motivated to pay attention and freely absorb objective information about the brand under consideration.

In response to a single communication, the buyer at first may find the information complex and ambiguous and tend to ignore it. As the information continues to enter his nervous system, he may find it really to be at the medium level of ambiguity, and pay attention. As the process of communication progresses and he pays continuing attention, he may find the information too simple and look for more complex information.

The second variable which governs sensitivity to information is the buyer's predisposition toward the brand which is the subject of that information. The buyer learns to attach connotative meanings to a brand and to the symbols which stand for the brand. Thus, both the *source* of communication and the *content* of communication, as well as the brand itself, can come to have meaning for him. For example, he may have learned in the past to associate *low* credibility with commercial sources and *high* credibility with social sources. Similarly, he may attach connotations of quality to certain attributes of the brand, such as package, color, flavor,

and taste. These connotations are part of his predisposition toward the brand.

Predisposition thus acts as a feedback in Figure 1, governing sensitivity to information, and, in turn, the intake of further information. This feedback is his degree of interest. The more pertinent to the brand is the information, the more likely the buyer is to open up his receptors and pay attention to it. Similarly, the more pertinent the source, the greater the attention the buyer is likely to give the communication.

Perceptual bias is the second perceptual construct. The buyer not only selectively attends to information, but he may actually distort it, once it enters his nervous system. In other words, the quality of information can be altered by the buyer. He may distort the cognitive elements contained in information to make them congruent with his own frame of reference, as determined by the amount of information he has already stored. Theories of cognitive consistency have been developed (Feldman, 1966; Fishbein, 1967) to explain how this congruency is established and what its consequences are, in terms of the distortion of information that might be expected. Most qualitative change in information occurs as a result of feedback from various decision components, such as motives, the evoked set, and decision mediators. These relations are too complex, however, to describe in this summary.

The perceptual phenomena described above are likely to be less operative if information is received from the buyer's social environment. This is so because (1) the source of social information (such as a friend) is likely to be favorably regarded by the buyer, and (2) the information itself is modified by the social environment (the friend) so that it conforms to the needs of the buyer; therefore, distorted reception and further modification is less likely.

Search for information is the third perceptual construct. During the total buying phase, which extends over time and involves several repeat purchases of a product class, there are times when the buyer actively seeks information. It is very important to distinguish times when he passively receives information from occasions when he actively seeks it. We believe that perceptual bias is less operative in the latter instance, and that a commercial communication at that stage has, therefore, a high probability of influencing the buyer.

Active seeking of information occurs when the buyer senses ambiguity of brand meaning in his evoked set. As we saw earlier, this happens in the extensive problem-solving and limited problem-solving phases of the decision process. Ambiguity of brand meaning exists because the buyer is not certain of the purchase outcome of each brand. In other words, he has not yet learned enough about alternatives to establish an expectancy of brand potential that will satisfy his motives. This type of brand ambiguity is generally confined to initial buying of that brand.

However, ambiguity may exist despite knowledge of relative brand potential. This ambiguity rests in the buyer's inability to discriminate between alternatives. The buyer may be unable to discriminate because his motives are not well structured: he does not know how to order them.

He may then seek information to resolve conflict among goals—a resolution implied in his learning of the appropriate product-class aspect of decision mediators, as discussed earlier.

There is yet another stage of buying behavior in which the buyer is likely to seek information. It is when the buyer has established a routine decision process, but he is so familiar and satiated with repeat buying that he feels bored. Then all the existing alternatives in his evoked set, including the more preferred brand, become unacceptable to him. He seeks change or variety in that buying situation. In order to obtain this change, he actively searches for information on other alternatives (brands) that he never considered before. At this stage, he is particularly receptive to any information about new brands. This explains large advertising budgets in a highly stable industry, a phenomenon which has long baffled both the critics and defenders of advertising. New products on the market and buyer forgetfulness are not plausible explanations.

Response Variables

The complexity of buyer behavior extends beyond our hypothetical constructs. Just as there is a variety of inputs, there is also a variety of buyer responses, which become relevant for different areas of marketing strategy. The wide variety of consumer responses can be easily appreciated in the diversity of measures used to evaluate advertising effectiveness. We have attempted to classify and order this diversity of buyer responses in terms of output variables. Most of our output variables are directly related to some, but not other constructs. Each output variable serves different purposes, both in marketing practice and in fundamental research.

Attention. Attention is related to sensitivity to information. It is a buyer response that indicates the magnitude of his information intake. Attention is measured continuously during the time interval that the buyer is receiving information. There are several psycho-physiological methods of quantifying the degree of attention a buyer pays to a message. Awareness is not an appropriate measure, because it is a stock concept, not a flow concept.

Comprehension. Comprehension refers to the store of knowledge about a brand that the buyer possesses at any point in time. This knowledge can vary from simple awareness of a single brand's existence, to a complete description of the attributes of a brand. It reflects the denotative meaning of the brand. In that sense it is strictly cognitive, and not included in the motivational aspects of behavior. Simply stated, it is a description of the common denotative elements of the brand in words with which the buyer communicates, thinks, and remembers. Some of the standard measures of advertising effectiveness such as awareness, aided or unaided recall, and recognition may capture different aspects of the buyer's knowledge of a brand.

Attitude Toward a Brand. Attitude toward a brand is the buyer's evaluation of the brand's potential to satisfy his motives. It therefore includes the connotative aspects of the brand concept; it contains those aspects of the brand which are relevant to the buyer's goals. Attitude is directly re-

lated to predisposition, consisting of both the evaluation of a brand in terms of the decision-mediator criteria of choice, and the confidence with which that evaluation is held.

Intention to Buy. Intention to buy is the buyer's forecast of which brand he will buy. It includes not only the buyer's predisposition toward a brand, but also a forecast of inhibitors. Intention to buy has been used extensively in predicting the purchases of durable goods, with some recent refinements in terms of the buyer's confidence in his own forecast; however, these studies are in terms of broadly defined product classes (Juster, 1964). We may characterize intention to buy as a response short of actual purchase behavior.

Purchase Behavior. Purchase behavior is the overt manifestation of the buyer's predisposition, in conjunction with any inhibitors that may be present. It differs from attitude to the extent that inhibitors are taken into consideration; and it differs from intention to the extent that it is actual behavior, which the buyer only forecasted in his intention.

What becomes a part of a company's sales, or what the consumer records in a diary as a panel member, is only the terminal act in the sequence of shopping and buying. Very often, it is useful to observe the complete movement of the buyer from his home to the store and his purchase in the store. Yoell (1965), for example, presents several case histories showing that time-and-motion study of consumer purchase behavior has useful marketing implications.

We think that, at times, it may be helpful to go so far as to incorporate the act of consumption into the definition of purchase behavior. We have, for example, used a technique for investigating decision making in which the buyer verbally describes the sequential pattern of his purchase and consumption behavior in a given buying situation. Out of this description, we have obtained a "flow chart" of sequential decision making which reveals the number and structure of the decision rules the buyer employs.

Several characteristics of purchase behavior become useful if we observe the buyer in a repetitive buying situation. These include the incidence of buying a brand, the quantity bought, and the purchase cycle. Several stochastic models of brand loyalty, for example, have been developed (Sheth, 1967; this book). Similarly, we could take the magnitude purchased and compare light buyers with heavy buyers to determine if heavy buyers are more loyal buyers.

The Interrelationships of Response Variables. In Figure 1 the five response variables are ordered to create a hierarchy, similar to the variety of hierarchies used in practice, such as AIDA (attention, interest, desire, and action); to the Lavidge and Steiner (1961) hierarchy of advertising effectiveness; as well as to the different mental states a person is alleged by anthropologists and sociologists to pass through when he adopts an innovation (Rogers, 1962^b). There are, however, some important differences which we believe will clarify certain conceptual and methodological issues raised by Palda (1966) and others.

First, a response variable called "attention" has been added, which is crucial because it indicates whether or not a communication is received by the buyer. Second, several different aspects of the cognitive realm of

behavior, such as awareness, recall, and recognition, are lumped into one category called "comprehension," to suggest that they are all varying indicators of the buyer's storage of information about a brand. In this way we obtain leverage for understanding buyer innovation. Third, attitude is defined to include its affective and conative aspects, since any attempt to establish causal relations between attitude and behavior must take into account the motivational aspects of attitude. Furthermore, the perceptual and the preference maps of the buyer with respect to brands are separated into "comprehension" and "attitude," respectively. Fourth, another variable, "intention to buy," is added, because properly defined and measured intentions for several product classes in both durable and semidurable goods have proved useful. To the extent that intention incorporates a buyer's forecast of his inhibitors, it might form a basis for marketing strategy designed to remove the inhibitors before actual purchase behavior is manifested.

Finally, and most important, we have incorporated several feedback effects which were described when the hypothetical constructs were discussed. We will now show the relations as direct connections among response variables—although these "outside" relations are merely the reflection of relations among the hypothetical constructs. For example, purchase behavior via satisfaction involves consequences that affect decision mediators and brand potential in the evoked set; any change in mediators and brand potential constitutes a change in predisposition. Attitude is related to predisposition, and therefore it can change in the period from pre-purchase to post-purchase. By incorporating this feedback, we are opening the way to resolving the question of whether attitude causes purchase behavior, or purchase behavior causes attitude. Over a period of time the relation is interdependent, each affecting the other. Similarly, we have a feedback from "attitude" to "comprehension" and "attention," the rationale for which was given when perceptual constructs were described.

The Dynamics of Buying Behavior

We will now explain the changes in hypothetical constructs which occur as a result of learning. Learning constructs are, of course, directly involved in the change that we label "learning." Since some learning constructs indirectly govern perceptual constructs by way of feedback, there is also an indirect effect on the learning constructs themselves. As mentioned earlier, decision mediators, which structure motives and the evoked set, can be learned from two broad sources, (1) past experience, and (2) information. Past experience can be further classified as deriving from buying a specified product or buying a similar product. Similarly, information can come from the buyer's commercial environment or his social environment; if the source is commercial, the information may be significant or symbolic.

We will look at development and change in learning constructs as due to (1) generalization from similar buying situations, (2) repeat buying of the same product class, and (3) information.

Generalization from Similar Purchase Situations

Some decision mediators are often similar across product classes because many motives are common to a wide variety of purchasing activities. For example, a buyer may satisfy his health motive by buying many different product classes. Similarly, he may buy many product classes at the same place; this very often leads to spatial or contiguous generalization. The capacity to generalize allows the buyer to exercise great flexibility in adapting his purchase behavior to the myriad of varying market conditions he faces.

Generalization refers to the transfer of responses from past situations to new situations which are similar, based on the relevance of stimuli. It saves the buyer time and effort otherwise spent in seeking information to resolve the uncertainty inevitable in a new situation. Generalization can occur at any one of the several levels of purchase activity, but we are primarily interested in the generalization of those decision mediators which involve only *brand-choice* behavior, in contrast to choice of store or choice of time and day for shopping.

Two kinds of brand generalization should be distinguished: First, there is *stimulus generalization*, in which the buyer—who has associated a brand purchase with a decision mediator (product class)—associates with the same decision mediator a new brand similar to the old one. For example, suppose a buyer has a decision mediator which calls for the purchase of *double-edged* shaving blades. His purchase response may then be transferred to a new brand of *stainless steel* double-edged blades via the same decision mediator. He may further refine his decision mediator to associate his purchase behavior with only one brand of new stainless steel blades, rather than with all.

Stimulus generalization can occur, not only when two brands are physically similar, but also when two brands are physically dissimilar but possess the same meaning. This is called *semantic generalization*. It is likely to occur when a radically new product is introduced by a company with which the buyer has had satisfactory past experience. The buyer can generalize via the company image. This is especially true of durable appliances, where a brand name is common to different products.

Second, there is *response generalization*, in which the buyer generalizes an *old response* to a *new response*, given the *same stimulus*. It can occur when the buyer, after reading an ad for brand A, goes to the store to buy it, but finds brand B, which is similar to brand A, and switches. In the same fashion, a buyer may “move up” the quality ladder for a particular make of automobile. Finally, he might buy *larger* packages of the same brand product.

Just as we find semantic *stimulus* generalization, we also find semantic *response* generalization. For example, a buyer who is motivated to purchase low-calorie food may generalize his response from skim milk to diet cola.

Repeat Purchase Experiences

Another source of change in learning constructs is the repeated purchase of the same product class over a period of time. In Figure 1 the pur-

chase of a brand involves two types of feedback, one affecting decision mediators and the other affecting brand potential of the evoked set. First, the experience of buying, with all its cognitive aspects of memory, reasoning, etc., has a learning effect on decision mediators. This occurs irrespective of which specific brand the buyer chooses in any one purchase decision, because decision mediators, like motives, are product-specific and not limited to any one brand. Hence, every purchase has an incremental effect in more firmly establishing decision mediators. This is easy to visualize if we remember that buying behavior is a series of mental and motor steps; the actual choice is only its terminal act.

Purchase of a brand creates certain satisfactions for the buyer which he compares with his evaluation of the brand's potential. If the buyer is satisfied, the potential of the brand is enhanced, increasing the probability of repeat purchase. If he is dissatisfied, the potential of the brand is diminished, and the probability of repeat purchase is reduced. Hence the second feedback, from purchase behavior to satisfaction, changes the attractiveness of the brand purchased.

If there are no inhibitory forces influencing the buyer, he will continue to buy a brand which proves satisfactory. In the initial stages of decision making, he may show some tendency to oscillate between brands in order to formulate his decision mediators. In other words, he may learn by trial-and-error at first, then settle on a brand, and thereafter buy it with such regularity as to suggest that he is brand loyal. However, unless a product involves high purchase risk, there is a time limit on this brand loyalty: he may become bored with his preferred brand and look for something new.

Information As a Source of Learning

The third major means by which learning constructs are changed is information received from (1) the buyer's commercial environment, consisting of advertising, promotion, salesmanship, and retail shelf display; and (2) his social environment, consisting of his family, friends, reference groups, and social class.

We will first describe the influence of information as if perceptual constructs were absent. In other words, we will assume that the buyer receives information with perfect fidelity, as it exists in the environment. Also, we will discuss separately information received from commercial and social environments.

The Commercial Environment. A company communicates its offerings to buyers either by the physical brand itself (significates), or by symbols (pictorial or linguistic) which represent the brand. Significant and symbolic communication are the two major means of interaction between sellers and buyers.

Figure 1 shows the influence of information on motives, decision mediators, the evoked set, and inhibitors. We believe that the influence of commercial information on motives (specific and nonspecific) is limited. The main effect is primarily to *intensify* whatever motives the buyer has, rather than to create new ones. For example, a physical display of the brand may intensify his motives above the threshold level, which, combined with strong predisposition, can result in impulse (unplanned) purchase. A

similar reaction is possible when an ad creates sufficient intensity of motive to provide an impetus for the buyer to go to the store. A second way to influence motives is to show the *perceived instrumentality* of the brand, and thereby make it a part of the buyer's defined set of alternatives.

Finally, to a very limited extent, marketing stimuli may change the *content of motives*. This, we believe, is rare. The general conception among both marketing men and laymen is that marketing stimuli do change the buyer's motives. However, on a closer examination it would appear that what is changed is the *intensity* of those motives already provided by the buyer's social environment. Many dormant or latent motives may become stimulated. The secret of success very often lies in identifying the change in motives created by social change and intensifying them, as seems to be the case in the advertising projection of youthfulness for many buying situations.

Marketing stimuli are important in determining and changing the buyer's evoked set. Commercial information tells him of the existence of brands (awareness), their identifying characteristics (comprehension plus brand name), and their relevance to the satisfaction of his needs (decision mediator).

Marketing stimuli are also important in creating and changing the buyer's decision mediators. They become important sources for *creating* (learning) decision mediators when the buyer has no prior experience to rely upon. In other words, when he is in the extensive-problem-solving (EPS) stage, it is marketing and social stimuli which are his important sources of learning. Similarly, when the buyer actively seeks information because all existing alternatives are unacceptable to him, marketing stimuli become important in *changing* his decision mediators.

Finally, marketing stimuli can unwittingly create inhibitors. For example, a company's efforts to emphasize a price-quality association may result in a high-price inhibition in the mind of the buyer. Similarly, in emphasizing the details of usage and consumption of a product, marketing communication might perhaps create inhibition related to time pressure.

The Social Environment. The social environment of the buyer—family, friends, and reference groups—is another major source of information influencing his buying behavior. Most social input is likely to be symbolic (linguistic), although at times a friend may show the physical product to the buyer.

Information from the social environment also affects the four learning constructs: motives, decision mediators, the evoked set, and inhibitors. However, the effect on these constructs is different than that of the commercial environment. First, information about brands is considerably modified by the social environment before it reaches the buyer. Most of the modifications are likely to be in adding connotative meanings to brands and their attributes, and in the effects of such perceptual variables as sensitivity to information and perceptual bias.

Second, the buyer's social environment will probably strongly influence the content of his motives, and his ordering of them to establish a goal structure. Several research studies have concentrated on such influences (Bourne, 1957, this book; Bush and London, 1960; Gruen, 1960;

Laird, 1950; Katz and Lazarsfeld, 1955).

Third, the buyer's social environment may also affect his evoked set. This is particularly true when he lacks experience. Furthermore, if the product class is important to the buyer, and he is not technically competent or he is uncertain in evaluating the consequences of the brand for his needs, he may rely more on the social than on the marketing environment for information. This is well documented by several studies using the perceived risk hypothesis (Bauer, 1960 and this book, 1961; Bauer and Wortzel, 1966; Cox, 1962; S. M. Cunningham, 1966; Arndt, 1967*).

Information-Processing Effects

As we have said, distortion of stimuli by the perceptual constructs—sensitivity to information, perceptual bias, and search for information—is likely to be much greater for marketing stimuli than for social stimuli. This is so essentially because the buyer attaches greater credibility—competence and trust—to social sources, and because of the ease of two-way communication in social situations. Similarly, the buyer may more actively seek information from his social environment, particularly evaluative information. Thus, the foregoing discussion of the commercial and social environments must be qualified by the perceptual effects inevitable in any information processing.

Exogenous Variables

As mentioned earlier, there are several influences operating on the buyer's decisions which we treat as exogenous: that is, we do not explain their formation and change. Many of these influences come from the buyer's social environment, and we wish to separate those effects of his environment which have occurred in the past and are not related to a specific decision from those which are current and do directly affect the decisions that occur while the buyer is being observed. The inputs that occur during the observation period provide information to the buyer to help his current decision making. Past influences are already embedded in the values of the perceptual and learning constructs. These exogenous variables are particularly appropriate as market-segmenting variables, because they are causally linked to purchase.

Strictly speaking, there is no need for exogenous variables, since in the social sciences these forces are traditionally left to *ceteris paribus*. We will bring them out explicitly, however, for the sake of research design, so that a researcher may control or take into account the individual differences among buyers that are due to past influence. Incorporating the effects of these exogenous variables reduces the unexplained variance, or error in estimation, which it is particularly essential to control under field conditions. Figure 1 presents a set of exogenous variables which we believe provide the control essential to obtaining satisfactory predictive relations between the inputs and outputs of the system.

Importance of purchase refers to differential degrees of ego-involvement in or commitment to different product classes. It is therefore an entity which must be carefully examined in inter-product studies. Importance of purchase will influence the size of the evoked set and the magnitude of the search for information. For example, the more important the

product class, the larger is the evoked set (Howard and Moore, 1963).

Time pressure is a current exogenous variable and therefore specific to a decision situation. When a buyer feels pressed for time, because of any of several environmental influences, he must allocate his time among alternative uses. In this process a reallocation unfavorable to purchasing activity can occur. Time pressure will create inhibition, as mentioned earlier. It will also unfavorably affect the search for information.

Financial status refers to the constraint a buyer may feel because he lacks financial resources. This can affect his purchase behavior by creating a barrier (inhibitor) to purchasing the most preferred brand. For example, a buyer may want to purchase an expensive foreign car, but lacking sufficient financial resource, he will settle for a low-priced American model.

Personality traits are such variables as self-confidence, self-esteem, authoritarianism, and anxiety, which have been researched to identify individual differences. These individual differences are "topic free" and therefore supposedly exert their effect across product classes. We believe their effect is felt on (1) nonspecific motives and (2) the evoked set. For example, the more anxious a person, the greater his motivational arousal; dominant personalities are more likely (by a small margin) to buy a Ford instead of a Chevrolet; the more authoritarian a person, the narrower the category width of his evoked set.

Social and organizational setting involves the group, a higher level of social organization than the individual. It includes informal social organization, such as family and reference groups, which is relevant for *consumer behavior*; and formal organization, which constitutes much of the environment for *industrial purchasing*. Organizational variables are those of small group interaction, such as power, status, and authority. We believe that the underlying processes of intergroup conflict in both industrial and consumer buying behavior are in principle very similar, and that the differences are largely due to the formal nature of industrial activity. Organization, both formal and social, is a crucial variable because it influences most of the learning constructs.

Social class involves a still higher level of social organization, the social aggregate. Several indices are available to classify people socially. Perhaps the most common index is Warner's classification (see Ch. 5, this book). Social class mediates the relation between input and output by influencing (1) specific motives, (2) decision mediators, (3) the evoked set, and (4) inhibitors. The latter influence is important, particularly in the adoption of innovations.

Culture provides a more comprehensive social framework than social class. It consists of patterns of behavior, symbols, ideas, and their attached values. Culture will influence motives, decision mediators, and inhibitors.

Conclusions

In the preceding pages we have summarized a theory of buyer brand choice. It is complex, but we strongly believe that complexity is essential to an adequate description of buying behavior.

We hope that our theory will provide new insights into past empirical data, and guide future research by instilling coherence and unity into

current research, which now tends to be atomistic and unrelated. Models can be constructed of the relations between the output intervening variables, and a splendid beginning along these lines has been carried out by Day (1967). Also, as the hypothetical constructs are explored, elements of the constructs will be broken out and better defined, so that these elements can be invested with the operational status of intervening variables. McClelland's work with achievement, for example, has shown how this transformation can occur with motive. In this way our theory suggests specific programs of research.

We are vigorously pursuing a large research program aimed at testing the validity of this theory. The research was designed in terms of the variables specified by the theory, and our preliminary results lead us to believe that it was fruitful to use the theory in this way. Because it specifies a number of relationships, it has clearly been useful in interpreting preliminary findings. Above all, it is a great aid in communication among the researchers and with the companies involved.

Finally, a number of new ideas are set forth in the theory, but we would like to call attention to three in particular. The concept of evoked set provides a means of reducing the noise in many analyses of buying behavior. The product class concept offers a new dimension for incorporating many of the complexities of innovation, and especially for integrating systematically the idea of innovation into a framework of psychological constructs. Anthropologists and sociologists have been generally content to deal with peripheral variables and to omit the psychological constructs which link the peripheral variables to behavior. The habit-perception cycle in which perception and habit respond inversely offers hope for explaining, to a great extent, the phenomenon which has long baffled both critics and defenders of advertising: large advertising expenditures in a stable market, where, on the surface, it would seem that buyers are already sated with information.