

Review of Models of Consumer Behaviour and Influence of Emotions in the Decision Making

Mikel Alonso López

Abstract—In order to begin the process of studying the task of making consumer decisions, the main decision models must be analyzed. The objective of this task is to see if there is a presence of emotions in those models, and analyze how authors that have created them consider their impact in consumer choices. In this paper, the most important models of consumer behavior are analysed. This review is useful to consider an unproblematic background knowledge in the literature. The order that has been established for this study is chronological.

Keywords—Consumer behaviour, emotions, decision making, consumer psychology.

I. INTRODUCTION

THE models of consumer behavior generally reflect the structure of each individual, with components such as attitude, beliefs, learning, confidence, personality, motivation, memory, individual characteristics, experience, or purchase intent. They also highlight external influences such as social, culture, reference groups or family. But in them you cannot find the presence of emotions, except for model of [1], which recognizes the existence of positive or negative affectivity states towards an attribute, object, idea or person. This review highlights the most important characteristics of the main models of consumer behavior.

II. MODEL OF NICOSIA [30]

The only model that explicitly includes the seller is [30], even if the emphasis of the model focuses on the consumer, defining buying behavior as an active decision making process. The model has four interaction fields. The first field includes all processes of the message aimed to the consumer, such as advertising and other forms of promotion in order to try to influence their attitudes. The attributes of the firm and of the consumer are comparable to exogenous variables. The second field includes the immediate response to the message. The consumer shapes his/her attitude, evaluates the alternatives and is able to enter the active phase of the model. In the third field, the consumer develops a motivation to act, also called behavior in other models, and then it acts. This action involves the purchase of the product. The fourth field includes feedback connections that occur after the purchase. The behavior gives feedback to the firm by stimulating it and also the consumer, which with consumption and product experience see altered their own attributes (see Fig. 1). This

model recognizes that there are differences between the formation of attitude and behavior. Such conceptualization helps understand that attitudes do not always predict behavior.

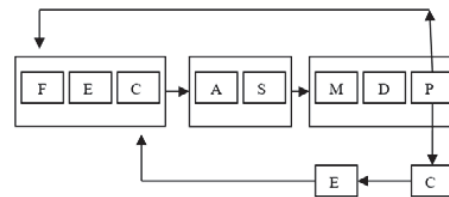


Fig. 1 Nicosia Consumer Behavior model [30]

III. MODEL OF ENGEL, KOLLAT AND BLACKWELL [10]

This was a pioneering model, which served a great purpose by providing a vehicle that helps understand the meaning of many unrelated ideas back then.

The model consists of five kinds of concepts: First is the input, which refers to the information received by the consumer. Second, there is the process of received information. Third, the decision process, which is more frequent in the result of the buying process. And finally, the variables that influence the decision-making process, which are widely about motivation.

Reference [10] explains how consumers buy and purchase, but does not go into how certain operating variables influence others, how this influence occurs or which is its strength or its impact (see Fig. 2).

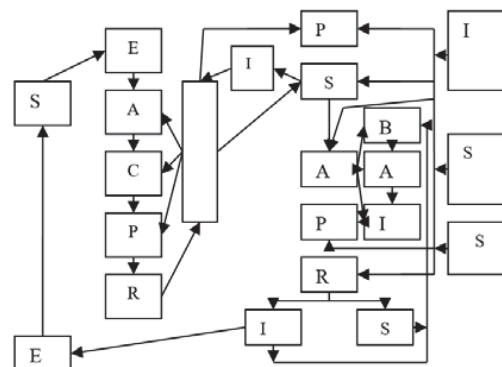


Fig. 2 Engel, Kollat and Blackwell Model [10]

One of the main advantages of this model is its generality. It can be applied to a wide range of situations. Its power of unification is substantial, in the sense that it brings together a wide range of concepts and propositions. Reference [10] was original by developing the information search and evaluation

Mikel Alonso López is with the Complutense University, Madrid Faculty of Commerce and Tourism, c/Islas Filipinas nº3, 28003 Madrid, Spain (e-mail: malonsz@ucm.es).

process. Its strength also lies in its utility to interpret a wide range of findings by researchers in almost any situation.

IV. MODEL OF HOWARD AND SETH [18]

It shows the processes and variables that affect the behavior of the individual. It emphasizes mainly on three types of variables: perception, learning and attitude formation. The purpose of the model is to explain how consumers compare different products in order to choose one that suits their needs. Consumers learn through an active search for information about products. This information serves to carry out a comparison of alternative brands, according to various selection criteria (see Fig. 3).

The exogenous variables include psychosociological characteristics of the consumer, such as culture, social class, personality, economic level. This model does not explain, however, how these variables affect perception and learning processes.

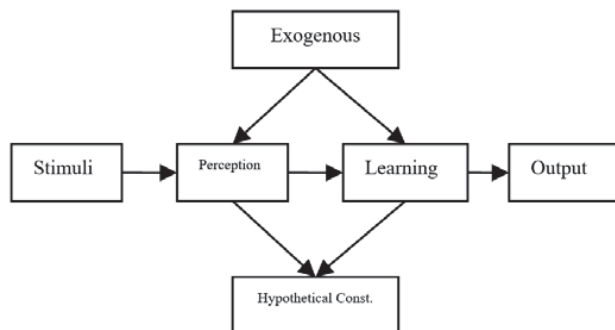


Fig. 3 Howard and Sheth Model [18]

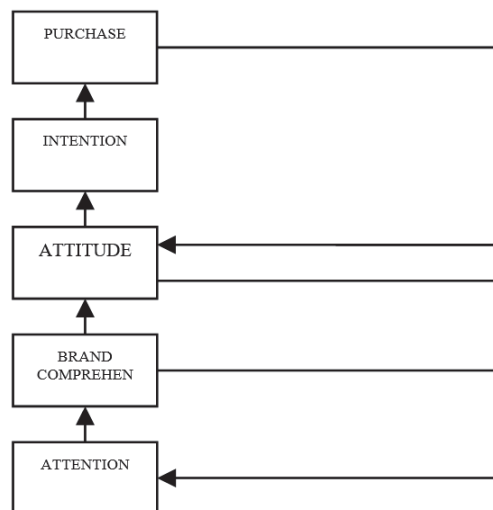


Fig. 4 Exogenous Variables of Howard and Sheth Model [18]

A stimulus is perceived, the learning process occurs and the resulting output may be the purchase itself. The intermediate stages are called hypothetical constructs because they are unobservable and, however, they must exist so that the output is given. These stages are affected by exogenous or external

variables to the immediate system model, such as personality, social class, reference group, financial status and the importance of the purchase. Each of the components of this structure includes different variables, for example, the stimulus can come from commercial or social sources. The stimulus includes, among others, the product quality, distinctive price, service, as well as information from a relative, a friend or someone from a reference group (see Fig. 4).

The vertical arrows represent the direction of behavior the ones on the right are the feedback. This scheme means that in the process of purchase, the first consumer wants to buy the product and then gets informed on the differences between different brands, thereby forming an attitude towards brands and towards the product in general. This attitude is the basis for purchase intent and finally, the purchase itself (see Fig. 4). This and the subsequent experience with the product lead to a review of brand knowledge, so a person that has purchased a particular brand can continue buying the same brand in the future simply because he/she knows more of that than others. The greatest contribution of this model is to assume that the consumer is an active seeker of information from the environment, using his/her past experiences which constitute generalizations that serve as a guide in their decision making.

Reference [18] is ultimately dynamic, reflects the complexity of the purchase behavior and carries out an important effort to understand the value of references.

V. MODEL OF BETTMAN [4]

The Bettman model [4] adds to the notion of consumer behavior the concepts of how humans process information. This view of human information process represents one of the biggest developments in the understanding of thought processes.

In the model, we can observe that the ability to process appears as the limit of the consumer's short-term memory in its ability to acquire information and extract its meaning. Short and long term motivation has played an integral role in our thinking processes. Attention has set limits on whether the consumer will receive and be affected by our advertising. The acquisition and evaluation of information, often referred as search, constitutes the means by which the consumer finds the information it needs to choose from several brands. Memory is not mentioned but it is implicit in 'memory search'.

Reference [4] is able to explain much of consumer behavior, though it doesn't show when some variables influence others. It is a fairly general model that can be applied to a wide range of individual purchasing situations. It also has heuristic power to stimulate new ideas on consumers. It plays a unifying role that systematically brings together a number of previously non-related ideas (see Fig. 5).

When it appeared, it was a quite original model by contributing the concepts of information processing to the context of consumer behavior model.

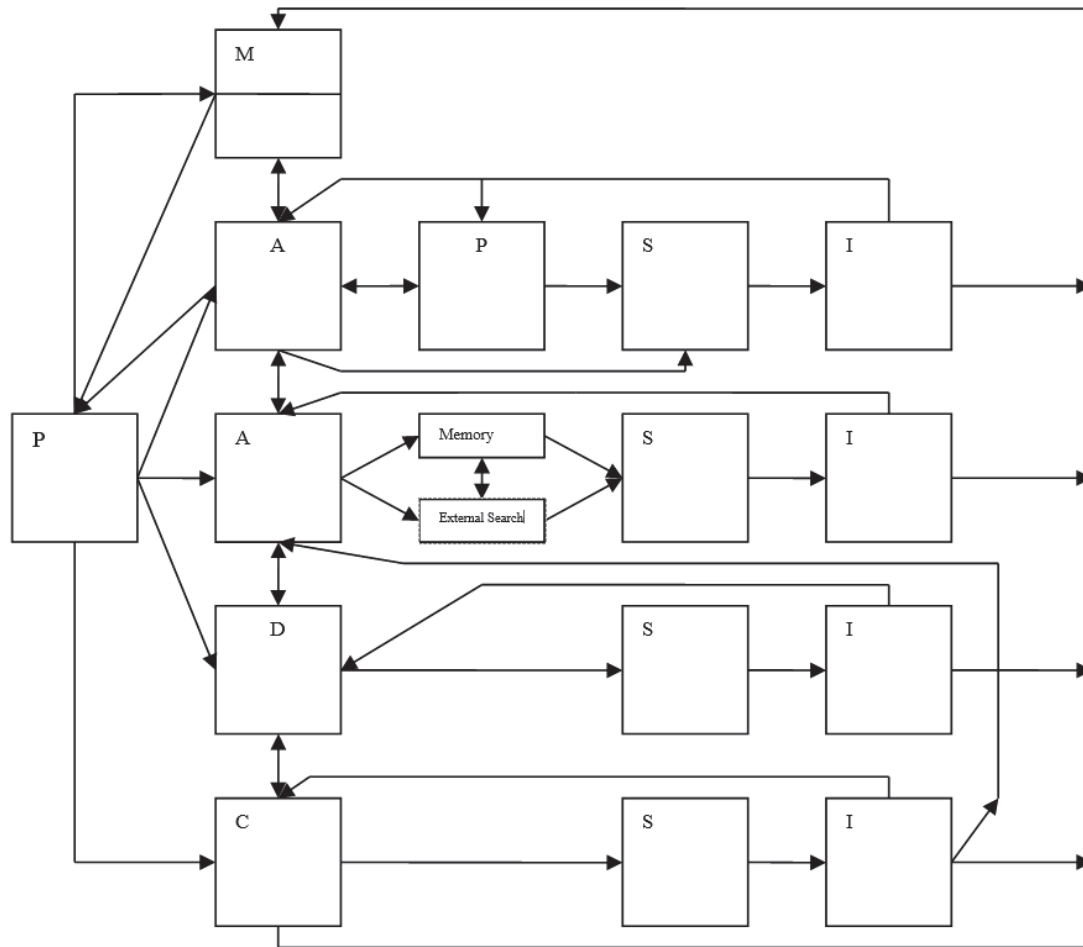


Fig. 5 Bettman Consumer Behavior Model [4]

The model components are:

- **Information:** Stimuli are any physical fact to which the buyer's senses are exposed, either voluntarily or involuntarily. They are sources of buyer information such as brochures, newspapers, radio, television and word of mouth. The main senses that absorb this information are sight and hearing, though in the case of food taste and smell are also important. The main interest of the information focuses more on perception than stimuli, understanding as perception what the buyer perceives when it receives the stimulus. That's how we define information as the perception caused by the stimulus. The standard measure of consumer perception is memory. The information allows consumers to recognize the brand (B), evaluate it in terms of their needs, thus forming the attitude (A), and then they mentally create a level of confidence (C) or certainty in the ability to judge whether the brand will give satisfactory results, or unsatisfactory.
- **Brand recognition:** It is the first part of the brand image, and it is defined as the degree of knowledge of the buyer on the criteria for categorizing the brand, but not to evaluate and differentiate it from other brands of the same product category. Recognition helps the consumer to form

an attitude (A) to the mark and confidence (C) in its own ability to judge. The attributes of brand recognition are usually physical: Color, size, shape and texture of the package. You may think that brand recognition refers to the shape of the product, in contrast to the attitude of consumers towards the brand, which has more to do with its function, meaning what the product does and which results in whether the consumer likes it or not.

- **Attitude:** It is the second part of the brand image, and it is defined as the expectations that the buyer has of the brand meeting its needs. To the extent it has these expectations its intention to buy the brand will be encouraged. It is probably the most basic concept and the most accepted in the social sciences.
- **Confidence in judgment:** It is the third element of the brand image. It is defined as the degree of certainty of buyer in regards to its ability to properly judge a mark. Buyer confidence regarding a particular brand is increased when its ideas are clarified, thanks to the repeated messages it receives from marketing professionals and other buyers, because either its acquaintances like it too, because it is different from others and because the information is consistent with what they know about it. In

turn, confidence results in purchase intent by eliminating the indecisiveness created by uncertainty. The reason why confidence (C) favorably affects the purchase intention (I) is that when trust is scarce, then new information is sought, even when the attitude is unfavorable. Although presented as three independent constituent elements of brand image, brand recognition, attitude towards it, and buyer confidence in their ability to judge, these are all closely related, being the ABC of marketing elements. Attitude also helps the buyer to determine in which product category the brand will be included.

- **Intent:** Purchase intent is defined as the state of mind that reflects the buyer's plan to purchase a specific number of units of a brand over a period of time. When seeking purchase intent at the time, you can measure the effects of B, A and C in I, indirectly measuring the effects of B, A and C in P. This works very well for frequently purchased products, but some problems may arise with products of infrequent purchase, the due to the interval of time between the measure of intention and the execution of the purchase.
- **Purchase:** It is the situation in which the buyer has already paid for a brand or has been financially committed to buying a certain amount of product in a given period of time. Purchase intent originates the purchase itself.

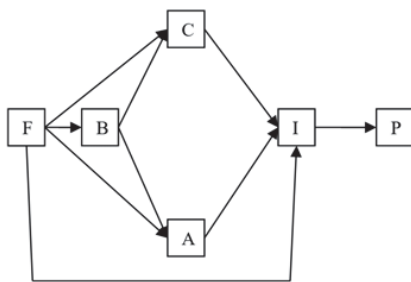


Fig. 6 Consumer Decision Model by John A. Howard [4]

Reference [17] provides a systematic explanation of the process through which consumers buy. While it has a high predictive value, its simplicity and quantitative capacity has served to implement it in marketing simulations. In this sense, it is a model supported by facts and verifiable.

VI. MODEL OF ALONSO [1]

Reference [1] defines the following moments or stages that sequentially reflect a purchase decision process:

- 1 The first moment serves to highlight the needs as a framework for daily life, the backdrop that reveals tensions, unrest or shortcomings. Human beings are not intended to suffer imbalances and to avoid them; they do activities of diverse nature, including consumption activities that are obviously very important in both a quantitative and qualitative aspect. The needs appear integrated in the so-called individual structure, occupying the top part, which is indicative of its framing nature.
- 2 Information processing. A small number of stimuli that companies and the environment send out daily is internalized by the individual consumer. This happens because information processing is done through a necessarily very selective channel to that is sifting through that huge flow in each of the four main stages that make up the process. It is necessary that the individual is physically exposed to the stimulus, that there is no physical impediment so the relationship stimulus-subject senses can be established. In addition, for the processing to occur, it is essential that the consumer is attentive, understanding by attention how the mind fully absorbs the information provided. For then to occur the comprehension of the content of the stimulus, the individual must minimally understand what is being transmitted to him/her. Finally, the information processing concludes with retention, the stimuli that have surpassed the previous selective screenings and that eventually get stored in the internal memory structure, which constitutes a small part of the initial set and respond to those who are in line or connect with current interests of the individual.
- 3 External influences. Some of its types:
 - 3.1 First, the environment appears again in its double basic demographic-economic aspect. Undoubtedly, we are individually concerned by the evolution of different variables of demographic nature in our behavior and it should be at least considered that the economic situation and our own expectations have a key impact on consumer decisions and, consequently, in the functioning and development of the market.
 - 3.2 Second, all individuals belong to different groups during the course of our lives. This sense of belonging means that we are influenced by relationships with other members and the rules and forms of behavior and solution of problems generated in each of them. From a high to a low social dimension we initially encounter our culture. From our birth we joined our own culture and learned throughout the years, we learned symbols, developed criteria, learned ways to solve problems, structured our attitudes and all this broad set of elements that make up our own culture underlies permanently in each of the decisions we make. On an important though smaller dimension than the corresponding cultural group we find the social strata that derive from the indisputable historical fact concerning the inequalities that occur, on a greater or lesser extent, in all societies that we consider. The strata as individual aggregates normally offer homogeneous behaviors and therefore it is expected that consumers that belong to each of them, due to their sense of belonging, show similarities in their purchasing behavior.
 - 3.3 At a third level we find the reference groups, among which we should mention family as the basic primary group. The family group is critical in our behavior, as it incorporates information, develops economic functions and, in fact, for most goods and services at our disposal, it

is the family the unit consumption by default and should be analyzed as a unit of collective decision, analyzing the role of each member of the group, their negotiation processes and their conflict and solution formulas. Along with family it is also relevant the social influence that we receive as a result of our belonging in other primary groups, friends, coworkers, neighbors or secondary groups such as professional, religious, trade union, political, cultural, sporting organizations or similar.

- 4 The individual structure. The individual psychological field, which accounts for the individual structure, is the center of management and control. It is composed of a set of variables or structures of different nature and complexity, interrelated and with mutual effects the one with the other. The simplified functioning could be described as follows: the stimulus that has overcome the different screenings of the processing and is eventually retained, has been internalized depending on the proper way to understand, organize and interpret information of the individual, meaning from perceptual mechanisms themselves. Individual perceptions of the data that come from abroad initiate the process of learning, memorization, and accumulation of experience and knowledge. This wealth of knowledge has enabled the consumer to develop its evaluation criteria that will allow him/her to analyze the supply of goods and services offered by the market, differentiate the brands and set his or her preferences. Knowledge, evaluation criteria and his/her own personality will lead to the formation of attitudes, dynamic structures that encourage action, such as states of positive or negative affectivity to an attribute, object, idea or person. In this internal scenario of multiple and continuous relationships, we must also locate the defense mechanisms used by the individual to overcome certain potential situations of frustration or damage. From all this interaction, processed stimulus, stimulated necessity, external influences and internal variables can be derived two basic results or the process is paralyzed as a result of not having occurred sufficient stimulation of necessity and not displaying the state of stress, or the process continues because the consumer has recognized the existence of a problem to be solved and at this time it can be said that is motivated to develop a finalist behavior.

- 5 The purchase decision process begins by recognizing the problem that happens when the consumer perceives a difference between the ideal and its current status. However, not all discrepancies between the two states will take recognition, as there is a minimum level of perceived difference that must first be overcome. Motivation is the logical consequence of the awareness of a situation that requires a solution, as once motivated the individual it heads to an end, a satisfactory result. Purchase intent is developed below as a solution formula. Previously the consumer will establish alternative courses of action; the first step will be conducting an internal search for information from the knowledge and experience

accumulated. If this is insufficient, the consumer will conduct an external search for different sources of information that are within reach. This search for alternatives will be more complete according to the importance of the situation in question, the risk that is perceived as the outcome of a bad solution, and the less experience the individual has in the subject matter. The information that is obtained will automatically get evaluated according to the assessment criteria corresponding to the category of goods or services considered. Identifying a feasible course of action and a potential solution to the problem will lead the consumer to choose a place of purchase including among those formed by its evoked group, the choice of a particular brand that is the fruit of desire that arises as a result of the motivation group, and finally the act of purchase. Once the purchase is done, the human being evaluates the results of its behavior, if the acquired brand has met the expectations and expected benefits with its consumption or use. This assessment may or may not be dissonant in physical or emotional terms. Finally, the evaluation leads to satisfaction or dissatisfaction and to perform certain post-purchase activities.

- 6 Exits or post-purchase activities. The purchase may have been able to generate satisfaction or dissatisfaction. This second situation usually causes the consumer to give word of mouth to others, telling them negatively on the result of his/her purchasing behavior, which can become a dangerous multiplied rejection effect in the future. In fewer occasions the consumer makes claims to the company or to other institutions or organizations of various kinds. Satisfaction will logically lead to an increase of habit of the brand's use, an increase of loyalty. In both situations of claim or loyalty, the company increasingly creates relationship formulas with its clients, after sales services or customer service. These structures, along with mouth-ear communication and complaints before agencies that are different to the company, are information sources that give feedback to the model. In a sense the feedback is produced in the internal structure of the consumer, who according to the result obtained and new generated experience will change some of its internal variables, such as evaluation criteria or attitudes. In other sense, the information should be channeled to the company, which will enable improvements in existing products, identifying new market opportunities and a good help for the development of new actions and business strategies. Finally, this feedback closes both internal and external circuits, and permanently shows the cyclical nature of human behavior.

VII. CONCLUSION

Having analyzed the main classical models of decision making in consumer behavior, we observed that the presence of emotions in them is virtually nonexistent. It would be interesting to complement these models with aspects related with emotional decision making. In this context, [36] made

contributions on the influence of mere exposure in the purchasing decisions of consumers or [11], which argues that most choices are made based on emotional reasons and committed value, [14] which argues that most choices are made based on emotional reasons and committed value, or [35], who emphasize the importance of emotions in consumer behavior in the post-purchase period. In addition, it also should be noted that there are other partial models that try to systematize some tasks in the process of purchasing decision, and it did include emotions in their paradigms, such as [32] who did a codification of a network of common valuation based on objectives, [14] who explained that the images trigger emotions, look out for the reserve of emotions, the warehouse we currently have and look for situations and / or similar records, or [16] who detailed that consumer behavior depends on the affective tasks that each individual does [25]-[27].

In response to internal components mentioned above, we get the following classification of influence of emotions in decision making: The evolutionary theory of emotions. It starts with the work [9], which relates the emotions of humans with animals, stressing that relate to our own evolution. Reference [9] reveals the innate nature of most emotions, based on similar facial expressions in animals, children and adults, as well as in people born blind and very different human groups and races. Subsequently, [13], [14], [29], to continue with this line, said that in a given situation emotional one, especially facial, innate and universal given emotional expression arises.

Reference [18] considers the emotional experience stems from the perception that the human being has the physiological sensations in the body and its responses, which precedes the emotional response of the peripheral nervous system. Consumer research in this regard can be [2], [14], [19], [28]. Neurobiological theory of emotions. Started by [9], which criticizes the theory of James and concludes that the brain is the control center of emotional behavior, specifically the thalamus. Activating it produces two simultaneous effects: the subjective experience of emotion and bodily changes associated. Other authors in this line are [3], [6]-[8], [12], [22]-[34].

According to a cognitive point of view, emotions have a background, which is the subjective assessment of the individual to a situation or event [2], [15], [21], [24], [31], [33]. According to [32], the first theories formulated to explain the neuropsychological basis of emotion perception [5], [20]. He stressed the importance of feedback of the body's responses to stimuli and emotionally relevant in determining the nature and extent of emotional feeling, but did not distinguish between the identification of emotional stimuli and emotional state occurred.

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