

How Is Consumer Information-Processing Important to Marketing Communication Practitioners?

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Today, marketing communication is becoming an interactive or two-way system. Potential consumers can access information as and when it is needed or wanted; in other words, they need no longer wait for the marketers or advertisers to provide messages. Power is shifting away from the advertiser, and this communication process will continue to change traditional advertising dramatically.

Furthermore, a current problem facing advertisers or practitioners of marketing communication is the difficulty of attracting attention in the face of the increasing advertising or information clutter. This may cause difficulties for consumers trying to make sense out of the mass of information that bombards them. Practitioners of marketing communication are now required to reconsider effective ways to conduct campaigns to reach their target audiences.

In examining many and conglomerate communication effects, the key issue to be addressed is how consumers access, as well as process, advertising and other forms of marketing communication in what is becoming a very complex and multistage media and communication marketplace. In other words, the most important factor to be considered in planning persuasive marketing communication is an understanding of Consumer Information-Processing.

Consumer Information-Processing is complex, multistage and characterized by massive filtering of incoming information. More than anything else, what controls perception, the allocation of attention, what is processed and what are stored are the contents of long-term memory. It is because consumers will almost certainly think about the product or service differently from the sources which create the topic. That source is likely to know and care a great deal about the product or service; consumers typically know little

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and less. Only by understanding the process of Consumer Information-Processing, and specifically the way their target audience thinks about the issue, can a message designer hope to design a message that will be attended to and stored by the target audience.

Therefore, to provide the best communication design for any marketing situation, it is imperative that practitioners of marketing communication be aware of how the human brain senses, processes and recalls information. The human brain is a unique, electrochemical super computer, which is far greater in complexity, speed and sophistication than the most advanced digital computer known. The brain receives sensory impulses from the environment and decides to process this input as warranted. Processing depends on the nature and complexity of the data as perceived by an individual. The way information is received, processed and recalled by the human mind is necessary to know if communication is to be efficiently designed.

Accordingly, it is essential for practitioners of marketing communication to understand Consumer Information-Processing in depth. This paper first focuses on an overview of the theory of Consumer Information Processing. Then, it examines the nature and implications for marketing communication via each of the seven stages in Chestnut's processing model (Chestnut, 1980) and also explains in detail why it is important for practitioners of marketing communication to understand Consumer Information Processing at each stage of the procedure.

Overview of Consumer Information Processing

There is no consensual definition of Consumer Information Processing. It is very complex and not amenable to any simple mechanistic model such as the S-R model. Harris (1983:6) writes that information processing is constructive and representation stored in memory is constructed via the interaction of the environmental impetus and what the person already knows about that information.

The Consumer Information Processing model generated by Chestnut and Jacoby in 1980 particularly looked into its process rather than container interests. Despite the fact that this model was created in 1980, it has adopted various assumptions about system activity and provided some ideas of how information-processing mediates persuasive effects in marketing communication. (Chestnut, 1980:280). We have selected Chestnut's account to provide an overview of Consumers Information Processing because it is correct and easy to understand. for people in general.

To understand how Consumer Information Processing works the relationship between each stage of the information processing, which is classified in three general sets with seven distinct sectors. needs to be explained as follows :

1. Coding/ Perception
2. Conscious Evaluation
3. Memory

First, ***Preconscious Encoding***. This is the stage at which stimuli from the environment make contact with our five senses, and at which point they are converted to nerve impulses. Note that this stage is multi-channeled, preconscious and relatively automatic. In terms of marketing communication theory, this is the idea of selective exposure. This means that the target audience or consumers tend to expose themselves to things that they agree with or to find out more information and tend to avoid exposing themselves to things they do not need to seek for information. Selective exposure is the part of the information acquisition process, which transpires in a wide variety of ways; in other words, it is multi-channeled. Consequently, it requires significant advances in concept and method before a coherent picture emanates.

There are two classifications in selective exposure: active search and passive reception (Lawson et al, 1996). On one hand, in active search, consumers are motivated actively to seek information that has potential usefulness for reaching their consumption goals. This information might be already stored in the memory or it can be part of the external environment. On the other hand, in passive reception, consumers acquire information that they are not presently seeking. For instance, knowledge of the existence of the products or services, learning about product attributes, advantages or at least some qualities of the products can be received via conversations with friends or in other indirect ways.

The way in which passive reception transpires is considered as a practical implication for marketing communication. Consumers' daily living patterns selectively dominate their media exposures to advertising and other sources of consumption-related information; therefore, practitioners of marketing communication spend much more time studying consumers' selective media habits and also their activity patterns that reveal to exposure opportunities.

However, after the advertisers have understood these types of processes, they have designed the chameleon advertisement, which imitates an actual show such as a talk show and a news program. (Lawson et al, 1996). The purpose is to keep the viewers' attention by simulating the content of an actual show and thereby getting rid of zapping behavior. Still, it depends on each consumer's level of involvement.

Moreover, if consumers are in a passive reception situation, practitioners of marketing communication may use repetitive advertisements on television in order to establish a sufficient level of awareness. In contrast, if information search is active, they are likely to change message contents with much more detail and use print ads instead of television commercials for consumers who prefer to search for information of the products.

The exposure mechanisms of active search and passive reception in sector one may produce many more stimuli than the target audiences are capable of processing. Consequently, in ***Trace Activation***, some degree of identification of stimuli must take place, still at the multi-channel preconscious level. It is the interaction that defines the stimuli in terms of past experiences. In other words, it serves to provide a meaning or name for it (Posner and Warren, 1997, 26). Chestnut believes that we need to identify all stimuli to decide whether stimuli are worth paying attention to. So he argues that the input from all senses contacts our long-term memory banks to identification. According to Chestnut, this operation is multi-channel, operates in parallel rather than sequentially, and is still pre-conscious.

Rossiter and Percy (cited in Chestnut, 1980) studied the model, which concentrates on the role of reinforcement value or affect. Their inference supports the actuality of two independent mechanisms, which are verbal and affective. Verbal stimuli seem to require conscious encoding whilst visual stimuli fit well with low involvement idea and preconscious activity.

There are two types of sensory storage: verbal sensory memory and visual sensory memory. Information can be transferred from sensory memory to short-term memory, yet it is plausible that visual information, which exists for a very short time, may go straight into short-term memory without any storage of sensory memory. It also can be moved to long-term memory without ever having been stored in short-term memory. In other words, all memory systems are parallel rather than sequential processes.

According to Posner and Snyder, recognition of brands in purchasing environment is stored in this manner. As well as this affective reactions, which encode the stimuli in terms of its reinforcement value, occur and exist through the trace activation (cited in Chestnut, 1980). These reactions are able to lead choice in an approach or avoidance manner and to enter it as subjective feeling in a conscious evaluation of attitudes. For example, information on the package, size, number of servings, price and brand name of the products could be arranged in various ways to be meaningful in the consumers' mind.

In this stage, advertisers or practitioners of marketing communication can consider feature analysis, which involves mentally arranging sensations into a coherent pattern. First, figure and ground is one of the most basic and automatic organization processes of

perceptual principles of Gestalt psychologists (Lawson, 1996). The figure appears to stand out and to be more substantial than the ground. Print advertisements frequently use figure and ground techniques to help readers organize symbols and other materials that practitioners or advertisers consider most important.

Secondly, proximity means that items close to each other in time or space to be perceived as being linked. Fast foods and soft drinks are usually shown being enjoyed in active and sporty themes to relate to their target audiences. This strategy is used in comparative advertising as well. Closure can also be an advertising device. It motivates consumers mentally to complete the messages, which can facilitate learning and retention. However, not all incomplete advertising messages appear to be memorized better than completed ones. It is still necessary to determine both the nature and effectiveness of its roles in advertising. The consumers' experiences, motivation and their attitudes may influence in the sector of Trace Activation that practitioners should deliberate as well.

Information is processed continually with little strain on cognitive processes via the "**Conscious Encoding**" stage. Consumers are aware of incoming information; in other words, attention plays a role in this step. Multi-channel inputs are received and reconstructed into a single channel. The quantity of information within the channel is also limited. Particularly salient stimuli become the focus of attention. This is where Consumer Information Processing shifts from multiple-channel to single-channel. This takes place in short-term memory, which is characterized by limited capacity.

According to (Lawson et al, 1996 :357), research examined by Lawson suggested that an average American is aware of seeing less than 100 major media advertisements per day. Nevertheless, daily advertisement exposure rate for a particular consumer has been estimated to be as high as 3000 or more. This means that even if exposure in sector one and trace activation in sector two both selectively filter stimuli for information-processing, attention can be viewed as the allocation of processing capacity.

It has been noted that consumer's attention is selectively allocated to only certain stimuli. There are three characteristics of attention, which have important implications for practitioners of marketing communication.

First, consumers are able to attend to a limited number of items at any time. Second, a number of stimuli demand attention to be processed, whereas other stimuli that are very familiar to the consumers do not. In contrast, information or stimuli not requiring attention can be automatically transferred to the next stage of processing. A final characteristic of attention is that it can be allocated to stimuli on a rapid basis (Lawson et al, 1996).

It is crucial that practitioners of marketing communication should ponder these aspects of attention, since they can affect the effectiveness of different efforts to communicate or persuade consumers. In addition, both stimuli and consumers can attract attention. It is also important to understand that attention can be controlled by internal thoughts. In particular, if there are certain areas of memory that are particularly important to a person, any stimuli related to that area is likely to attract attention immediately.

However, individual attributes of consumers also play a role. Some advertisements that practitioners think can attract consumers' attention by using novelty or color strategies might not always work. Consumers' attention spans are quite limited and the time that stimuli can hold a consumer's attention appears rather short—perhaps a matter of seconds. Accordingly, attention must be repeatedly captured.

Moreover, the concept of perceptual vigilance elucidates consumers' heightened sensitivity to stimuli that are capable of satisfying motives, or stimuli that are personally relevant and generate higher levels of involvement. That is, consumers will pay more attention to marketing communication messages relevant to aroused states. Based on this concept, it has been suggested that less expensive and small-sized print advertising may be more economically effective than large ones for attracting the attention of motivated and high-involvement consumers. Practitioners of marketing communication and marketers should also be aware of this point.

Focus now turns to the limited capacity of information in the Conscious Encoding stage. There is a seven plus or minus two (Miller, 1956) upper boundary on the number of informational "chunks" in conscious storage. To illustrate, consumers are capable under normal circumstances of an upper boundary seven chunks of information in short-term memory.

Generally, short-term memory is a different kind of container rather than process from long-term memory. It works as a filter to determine whether to store that information in long-term memory or not (Assael, 1998). Consumers make a decision whether to detain information or to filter it out by relating it to information they already have stored in memory. If the information is essential enough, they will retain it.

Short-term memory also has a limited capacity to process information as mentioned earlier. In terms of time and pieces of information, short-term memory capacity can be measured in seconds—certainly less than one minute, and an average of seven pieces of information at any time. Consumers react to this restriction by chunking information. For instance, a brand image represents the beliefs consumers associate with a brand and is an information chunk. It may be composed of twenty different components but it can be retrieved as one general impression (Assael, 1998 :259).

In addition, Calder (1978 :632) points out that more cognitive responses are stimulated by the beginning and the end of the message than by the middle and must have been represented in short-term memory. This can be applied to the advertising campaign by coming up with a logo of the product's brand name and by ending with the company's trademark in order to be properly retained in the memory of consumers. Whereas they filter the information via short-term memory, consumers will either store it in long-term memory or select not to retain it for a variety of reasons; for example, it might be irrelevant and difficult to interpret.

Important implications emerge in this area that practitioners of marketing communication had better understand. The most obvious means of increasing consumers' retention is via repetition of advertising messages; however, consumers may become so familiar with the frequent advertising repetition and then they no longer notice it. Alternatively, repetition may start irritating consumers.

Additionally, when restructuring stimulus information, Posner (1973) explains that conscious evaluation engages the individual in two types of problem-solving activity. The first is sector four, *Spectator Behavior* and the second is *Participant Behavior*, sector five.

Spectator Behavior, once we have decoded the information, we must decide what to do with it. This sector involves the selection of a processing strategy. Such strategies can be thought to differ in terms of the extent or depth of processing, and the main factor in the strategy selected is involvement. If we have high involvement with the incoming information, we might select an extensive processing strategy. If we have minimal involvement, we will probably select a low involvement strategy.

Low involvement means that the product or information is perceived as unimportant. Typically, low involvement purchases, such as chewing gum, toothpaste and toilet paper, are made without much searching and with little effort to think critically about the decision (Wells et al, 1998 :253). Thus, information is processed in a passive, involuntary way due to the low personal relevance and low perceived risk associated with the purchase.

Marketing communication strategies can play a role in this stage to assist the development of awareness in the low involvement decision-making process. The primary persuasive means should be peripheral cues in low involvement communication such as music, voice of the announcer, spokesperson or perhaps background in the advertisement. The messages also need to be shorter and should contain less information.

According to Harris, Broadcast media are preferred for this type of advertising as they complement the passive learning posture adopted by the individual. In addition, repetition is crucial since the audiences have little or no motivation to retain information and their perceptual selection processes filter out unessential information. Learning improves through exposure to repeated messages but attitudes do not develop at this step of the process (cited in Fill, 1999). On the contrary, sector five which is called Participant Behavior is an active process. When consumers are persuaded they partake in understanding by reaching their own conclusion along the way; in other words, they use high involvement processing.

High involvement means that product or information about it is important and relevant. Consumers in high involvement situations will search for information and critically evaluate it (Well et al, 1998 :253). This occurs, for example, when they want to buy a new car, home or European vacation. The crucial element in this sequence is that a great deal of information is sought initially and an attitude is developed before a commitment or intention to trial is determined (Fill, 1999).

Hence, advertising and marketing communication tools usually provides a lot of product information. The message cues linked to the product benefits should be the first mode of persuasion in high involvement communications. Print media may be a more appropriate choice for advertising assertions because the receivers can digest information at a speed at which they can control. Similarly, this part of the process is facilitated by the use of credible sources of information so personal selling is essential to bring individuals closer to the product in order that it may be demonstrated and allow intense learning to occur.

It should be mentioned that long-term memory differs from short-term memory in terms of its capacity, which is vastly unlimited. Another important difference is that whereas information in short-term memory is lost unless it is rehearsed, information in long-term memory is more or less permanent.

Moreover, Batra and Ray, 1983(cited in East, 1997 :270) explain that repetition has little effect under high involvement; here consumers get the point so that further exposures produce no more change. Thus, for this kind of predominance, a wide coverage strategy is required.

It is recognized that the extent to which a consumer is personally involved in a decision-making process affects the way a decision is made. In other words, the way in which marketing communication is processed is affected by the degree of consumer involvement particularly in steps of Consumer Information-Processing. When the purchase is important and the decision is not easily reversed, it seems that consumers will give more consideration and will decide more consciously about the products they buy. The higher the level of involvement, the greater the search for information.

Wright (cited in Chestnut, 1980) points out that in **Participant Behavior** sector the evaluation of incoming information involves the generation of the cognitive response theory. Chestnut's fifth stage involves the implementation of the strategy selected at stage four. If a high involvement is selected, this will probably involve the generation of cognitive responses. They may also go off at a tangent. It may involve the analysis of the information in the message, an evaluation of the source, and perhaps an attempt to integrate incoming information with one's existing knowledge.

Cognitive response theory pays attention to the generated response system that people produce to the incoming information. In more specific terms, it refers to the thoughts-listing process. In other words, advertising is shown and verbal description or statements of ideas are collected. The assumption is made that these are the impressions or thoughts that are actually present in reaction to the advertising.

At the concept level, cognitive response involves three activities, which mediate the presence or absence of persuasive effects (Chestnut, 1980). They are: responding to the message in order to form brand attitudes, responding to the message in order to form judgments about the communication environment, and responding to information external to the message in a complex process of brand attitude formation.

Then, the results of information come out and pass through to sector six, or the **Operational Storage**. This stage is responsible for retrieving and storing information during the process. That is, the sector is atypical of conscious evaluation in that it does not appear subject to capacity limitation (Chestnut, 1980). To illustrate, when people transfer information from short-term memory to long-term memory, it does not happen immediately. Information is produced and stored in the Hippocampus of the limbic system in the middle of the night, during deep sleep, and then it will be retained in long-term memory. In other words, the Hippocampus plays a role in this stage.

Finally, information is stored in long-term memory, **Long-term Storage** or sector seven. In this step, information is stored as images that reflect the organization of specific past events called episodic memories such as one's kiss, graduation day and wedding day. Or as words and sentences that reflect facts, knowledge and concepts they remember called semantic memory.

The information in semantic memory then, is not just stored as a list, but in terms of structured networks which made of schemas, which play a critical part in information processing. When we encounter incoming information, we typically decide what schema is involved and call it up. Without schemas, we could not function efficiently as information processors. The critical role of schemas in information-processing should be clear in the practitioners of marketing communication's point of view. If you want to

communicate successfully with a target group, you must communicate in a way that is consistent with the schemas that the target groups have about the topic.

To conclude, it is vital for practitioners of marketing communication to understand the system of Consumer Information-Processing, as it is one of the fundamentals of consumer behavior study that speculates about how consumers perceive, process, store and recall the messages or information that practitioners send them. Then practitioners can evaluate and measure the ways consumer's process the messages so that they can present key messages in such a way that links to target audiences' meanings and terms, which are relevant and capable of being memorized. That is, the more accurately practitioners can measure and understand consumers, the better chance they have to persuade them effectively.

As mentioned above, to provide the best communication designed for any marketing situation, it is imperative that practitioners of marketing communication be aware of how human brain senses, processes and recalls information. Considering the cognitive processes of the brain, effective communicating can be achieved if one is aware of how the brain traverses its neural network to abstract information. It is important to keep these processes in mind when developing communication strategies to shape desired learning and communicating outcomes and to successfully encode meaningful information for future recall and confirmed learning.

Being part of the information progression age where consumers are bombarded with information clutter, they also tend to become more demanding with their expectations for products or services. It is a major challenge for practitioners of marketing communication to take Consumer Information Processing into account and continue to design, execute and evaluate marketing communication plans in order to effectively influence consumers with regard to their needs and wants.

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Alwitt, L.F. and Mitchell, A.A. (1985). **Psychological and Advertising Effects: theory, research and application.** Hillsdale, New Jersey : Lawrence Erlbaum Associates.

Assael, Henry. (1998). **Consumer behavior and marketing action.** (6th ed.) Cincinnati, Ohio: South-Western College Publishing.

Batra, Rajeev, Myers, John G. and Aaker, David A. (1996). **Advertising management.** (5th ed.) Upper Saddle River, N.J.: Prentice Hall.

Burnett, John and Sandra, Moriarty.(1998). **Introduction to marketing communication: an integrated approach.** Upper Saddle River, N.J.: Prentice Hall.

Chestnut, R. W. (1980). Persuasive effects in marketing: Consumer Information Processing Research. In M.I. Roloff and G.R. Miller. (eds.). **Persuasion: New direction in theory and research.** (pp. 267-284). Beverly Hills: Sage.

Cowan, Nelson. (1995). **Attention and memory: an integrated framework.** New York: Oxford University Press.

East, R. (1997). **Consumer Behavior: advances and applications in marketing.** New York: Prentice Hall.

Fill, Chris. (1999). **Marketing communications: contexts, contents, and strategies.** (2nd ed.). New York: Prentice Hall.

Gagn, Robert Mills and Medsker, Karen L. (1996). **The conditions of learning Training applications.** Fort Worth: Harcourt Brace College Publishing.

Harris, Richard Jackson. (ed.). (1983). **Information processing research in advertising.** Hillsdale, N.J.: Lawrence Erlbaum Associates.

Hawkins, Del I., Best, Roger J. and Coney, Kenneth A. (1995). **Consumer behavior: implications for marketing strategy.** (6th ed.) Chicago: Irwin.

Lawson, R. and others. (1996). **Consumer Behavior in Australia and New Zealand.** Sydney: McGraw-Hill.

Ranyard, Rob, Crozier, W. Ray and Svenson, Ola. (Eds). (1997). **Decision making: cognitive models and explanations.** New York: Routledge.

Schultz, Don E. and Barnes, Beth E. (1995). **Strategic advertising campaigns.** (4th ed.) Lincolnwood, Ill., USA: NTC Business Books.

Solso, Robert L. (1998). **Cognitive psychology.** (5th ed.). Boston: Allyn and Bacon.

Wells, William, Burnett, John and Moriarty, Sandra. (1998). **Advertising: principles & practice.** (4th ed.). Upper Saddle River, N.J.: Prentice Hall.