

Attention, memory and perception: a conceptual analysis of Neuropsychology applied to advertising and its influence on consumer behavior

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Abstract

The goal of this work was to rescue and apply the concepts of attention, memory and perception, from Neuropsychology, in the advertising and see how these elements influence the consumer's behavior. The observation unit used in the study was a liquor advertising. The results of this exploratory research indicated that the consumer's level of attention is focused on the most unusual scenes and the ones with greater impact; the excess of constituent elements in advertising scenario diffculted the attention and memorization of the product and advertised category; the commercial perception also indicated that fewer than half of consumers related spontaneously the commercial with the brand as a reference (Johnnie Walker) and a slight index knew how to categorize the advertised product.

Keywords: Attention. Memory. Perception. Neuropsychology. Advertising.

Introduction

Advertising reserves to itself, in the communication mix, an essential role in the dissemination and marketing of products and services and the exposure of the brand identity. Through it, consumers form ideas, concepts, and opinions that will determine their choice and preference, which influences their behavior.

The study of the psychology field has important elements that can help to understand consumer behavior better. Concepts such as the levels of selective attention, perception, and memory – widely used in Neuropsychology – can be very effective when brought to the field of communication, to the extent that it underlies and gives consistency to issues that professionals in this area often defend in a merely subjective way. The question proposed here is, therefore, to bring the concepts of attention, memory, and perception from this field

of study to support and make a more objective analysis of an audiovisual advertising by a well-known liquor brand in the market.

The consumer behavior study has its origin in the observation of people, to understand them and to get insights. It has focused on understanding why they buy, make certain choices, make decisions and behave in a certain way. What motivates them, what catches their attention, what keeps their loyalty? These and many other derived issues are prerequisites for the survival of companies in a highly competitive market (Blackwell; Miniardi; Engel, 2005).

As the orientation of the market has changed in recent decades (from production-oriented to consumer-oriented), the consumer behavior study has also changed. The consumer preferences change constantly. Therefore, the focus is currently on the analysis of consumption.

Communication and marketing managers need to understand these desires to create and maintain a permanent relationship with their consumers. However, this relationship should be built and reasoned to achieve levels of attention, memory, and perception to strengthen and base present and future choices. The effectiveness of marketing programs and communication strategies, therefore, depends on their persuasive ability to survive all stages of information processing by target consumers.

The empirical object chosen for this experiment was the commercial advertising of the whiskey brand Johnnie Walker – in the category Double Black Feat – by the unusual aspect of its subject and the richness of elements that fills the setting of the analyzed commercial. The objectives of this exploratory study were to investigate, after exposure to the commercial advertising, the following:

- Attention level (to the objects, the scenes, the characters),
- Perceived level of evidence presented,
- Memorization level (memory),
- Message action or effect, identifying associations with characters from the film, associations of the scenes with the advertised product and with the advertised brand.

From the literature review, the methodological experiment involved the data collection and the interpretation of these elements, it is expected to contribute to a better foundation and greater consistency in the analysis that professionals are accustomed to performing in advertising, bringing greater objectivity to the subject, in order to collaborate in the process of understanding the relationship between propaganda and consumer behavior, mediated by concepts from Neuropsychology.

Attention: a filter or a beam of light?

“Are you paying attention?” How many times have you heard this phrase?

Paying attention to something means to focus on certain aspects and, at the same time, eliminate (or ignore) several others that are around. Kandel (2009, p.339) states that “attention is like a filter”, from which some items gain more prominence at the expense of others:

At all times, animals are flooded with a broad range of sensory stimuli, and yet, they pay attention to only one stimulus or a very small number of them, ignoring or suppressing others. The brain’s ability to process sensory information is more limited than the capacity of its receivers to measure the environment. Attention, therefore, acts as a filter by selecting some objects for further processing. [...] In our momentaneous experience we focus on specific sensory information and exclude (more or less) the other (KANDEL, 2009, p.339 – Our translation).

Myers (2012, p.68 – Our translation) states that attention is a beam of light: “Using selective attention, your conscious attention, focuses, like a beam of light, on only a very limited aspect of all that you experience”.

As we are “bombarded” by information all the time and in many different ways that take our five senses, it is natural to select according to the moment and a series of factors. In particular, in the context of this study, we stress advertising, colors and shapes of packages, promotional materials, advertisements, commercials and the full range of resources for communication and marketing efforts.

Everyone knows what attention is. It is the acquisition by the mind, clearly and vividly, of one among the many simultaneously possible objects or chains of thought. The focus, the concentration of consciousness, are part of its essence. It involves the removal of some things so that you can effectively deal with others (JAMES apud KANDEL, 2009, p.340 – Our translation).

Still, according to James, there are at least two types of attention: involuntary and voluntary.

Involuntary attention is sustained by automatic neural processes and is particularly evident in implicit memory. [...] Involuntary attention is activated by a property of the external world – the stimulus – and is captured, according to James, by ‘great things, shiny things, things in motion or blood’. On the

other hand, involuntary attention, as one that is at stake when we are driving and paying attention to the road and traffic is a particular feature of explicit memory and comes from the internal need to process stimuli that are not automatically raised (JAMES apud KANDEL, 2009, p.341 – Our translation).

Souza (2006), in his work *Elementos de Teoria e Pesquisa da Comunicação e dos Media*, lists the studies of selective attention proposed by Hovland, Lumsdaine and Sheffield (1949) and by Lazarsfeld, Berelson and Gaudet (1944), stating that “people tend to seek, accept and consume the messages that meet their interests and their system of beliefs, values, expectations and ideas and to reject or distort the messages that conflict with this system” (SOUZA, 2006, p.499 – Our translation).

In this sense, commercial advertising by which people have a greater interest in the subject, or at least, no feelings of rejection, will find it easier to have their message/intention accepted and understood, either creating or not the consumption desire. At least one of the answers of our experiment shows this, when we see some indignation with the commercial advertising that the person watched, as described further on.

According to Souza (2006), Cooper and Jahoda (1947) had already explained the existence of individual defense mechanisms against persuasion and these are related to psychological escape from certain messages or refusal to interpret them. Later, Klapper (1963) emphasized that the pre-dispositions that people denote and their message selection are also factors of resistance to persuasion (SOUZA, 2006).

The author also reports that Lazarsfeld, Berelson, and McPhee (1971) have revealed that the motivation and interest vary depending on the people. However, according to the authors, the more a person is exposed to a particular topic, the more interest he/she will show on it, which motivates the person to deepen it. Also, prolonged exposure to a certain theme that meets the person’s values, beliefs, ideas, and expectations leads to resistance to changes and convictions strengthening (SOUZA, 2006). Concerning propaganda, specifically, the media strategy should consider the relevance of this principle.

Memory: learning that persists

Memorization involves highly complex aspects.

What we memorize from our meeting with the given object is not only its visual structure mapped on the optical images of the retina. The following issues are also necessary: First, the sensory-motor patterns associated with the object of vision (such as eye and neck movements or the entire body movement, when applicable); second, the sensory-motor patterns associated with touch

and manipulation of the object (if any); Third, the resulting sensory-motor pattern evoking previously acquired memories related to the object; fourth, the sensory-motor patterns related to triggering emotions and feelings associated with the object (DAMÁSIO, 2009, p.169 – Our translation).

Myers defines memory as “learning that persists over time, information that has been stored and can be retrieved” (2012, p.249 – Our translation). Brandão (1995, apud PÉREZ-NEBRA; SANTANA, 2008) adds that we accumulate experience so that it can be used during our lives, promoting the significance of everyday facts through learning and memory.

In this sense, the memory is of utmost importance for advertisement, as if the possibility to mentally store recent or past information about events, products and brands did not exist, marketing actions (in its different aspects – notably advertising) would not make sense to consumers.

Several authors have proposed memory information processing models. Atkinson and Shifrin (1968) presented a classic model, endorsed by Myers (2012), Pérez-Nebra (2008), Karsaklian (2000), among others. The model submitted by these authors proposed that the memory is formed in three stages:

1. The first step is to record the information that will be remembered as a *passing sensory memory*, that is, where we keep immediate stimulations;
2. From this stage, the information is processed in a *short-term memory* compartment, which is encoded by reiteration/repetition – it is a receiving structure for a temporary storage of information;
3. Finally, the information passes to the *long-term memory* to be retrieved in the future – it is where our knowledge is stored.

However, not relegating the historical importance of this model in three stages, Myers says that this process is “limited and fallible” (2012, p.250 – Our translation). Thus, the author adopts a modified version of the model proposed by Atkinson and Shiffrin, to which were incorporated two new and important concepts:

- Some information “jump” the first two of the three stages and are automatic and directly recorded in the long-term memory, and we cannot be aware of this “leap”. The author introduces the concepts of *automatic processing* and *committed processing – effortful* (cf. p.251);
- Another understanding of short-term memory: *working memory*. Given the extensive range of information that we are currently undergoing, we direct our attention to certain stimuli, especially those which are new or important. It is

the active and conscious processing of information received through hearing and visual and spatial perception to the information retrieved from long-term memory. Thus, the working memory associates new data to old ones, which enables us to solve problems.

In the current context, the decision-making process regarding some factors that affect our professional and personal life is very relevant. “Decisions, in general, are the result of influences, whether conscious or unconscious, intentional or not. The influence is one of the phenomena that usually occur in interpersonal relationships and can induce the individual to a particular behavior” (BATISTA et al, 2008, p.138 – Our translation).

Perception, also a psychological factor

A person’s purchasing decisions, for example, are more influenced by psychological factors such as perception, learning, beliefs and attitudes.

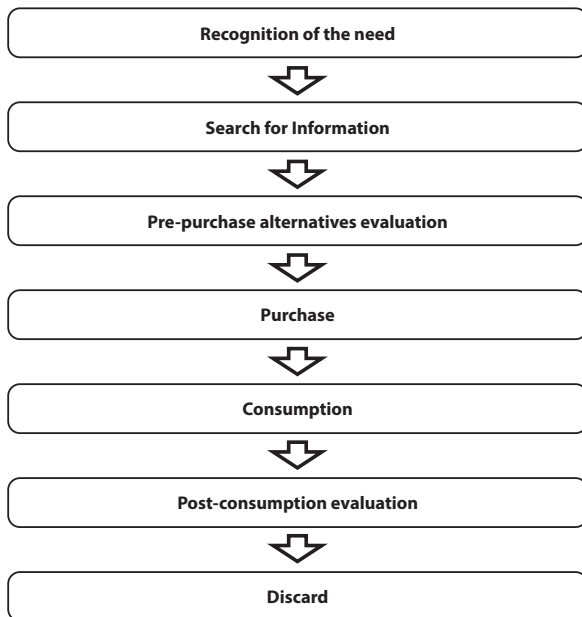
In this study, we are particularly interested in the perception factor, defined by Lamb, Hair and McDaniel (2012) as the process by which we select, organize and interpret stimuli, translating them into a meaningful and coherent picture. “In essence, perception is the way we see the world around us, and how we recognize that we need help in making a purchasing decision” (LAMB; HAIR; MCDANIEL, 2012, p.99 – Our translation).

As we cannot perceive all the stimuli around us, we use selective exposure to decide which stimuli to notice and which to ignore. Of course, it affects the marketing actions and messages conveyed through advertising. The familiarity of an object, the contrast, intensity (such as the increased volume, color, smell and movements) are signals that interfere and influence the perception. Consumers adopt these signals to identify products and brands.

Consumer behavior

To understand the complexity of the decision-making process, we use the EBM model proposed by Blackwell, Miniard, and Engel (2005, p.73).

Figure 1 – How consumers make decisions for goods and services



Source: Blackwell; Minardi; Engel, 2005, p.73 – Our translation

The authors describe in detail all steps of the model, which is not the principal object of this investigation. However, we emphasize that the memory is an integral and decisive part, integrating various stages, thereby fulfilling an important role in the decision-making process.

In particular, memory and consumer perception are determining factors in the early stages of the model, more precisely in the recognition of needs in the search for information (including information processing: exposure, attention, understanding, acceptance, and retention) and the evaluation of pre-purchase alternatives.

Marketing strategies, in particular, advertising can thus play a significant role in decision making. To implement effective strategies, we need to know how consumers use the advertising information to make decisions.

Rucker and Sternthal (2013, p.227) point out that sometimes consumers base their judgment on the information presented in advertising (ads, commercials etc.), and how this information relates to what we already know about the brand and its competitors – *deliberative judgment*. Other times, the judgment takes place through a rapid assessment of indicative stimuli such as color, shape or spokesman of the brand – *superficial judgment*. It also happens that the judgment of the brands to be influenced by the subjective experience of the consumer, which occurs because of the way the message information has been processed. This kind of judgment is called *metacognitive*, to be anchored in the thoughts

about the message that gave foundation to the judgment.

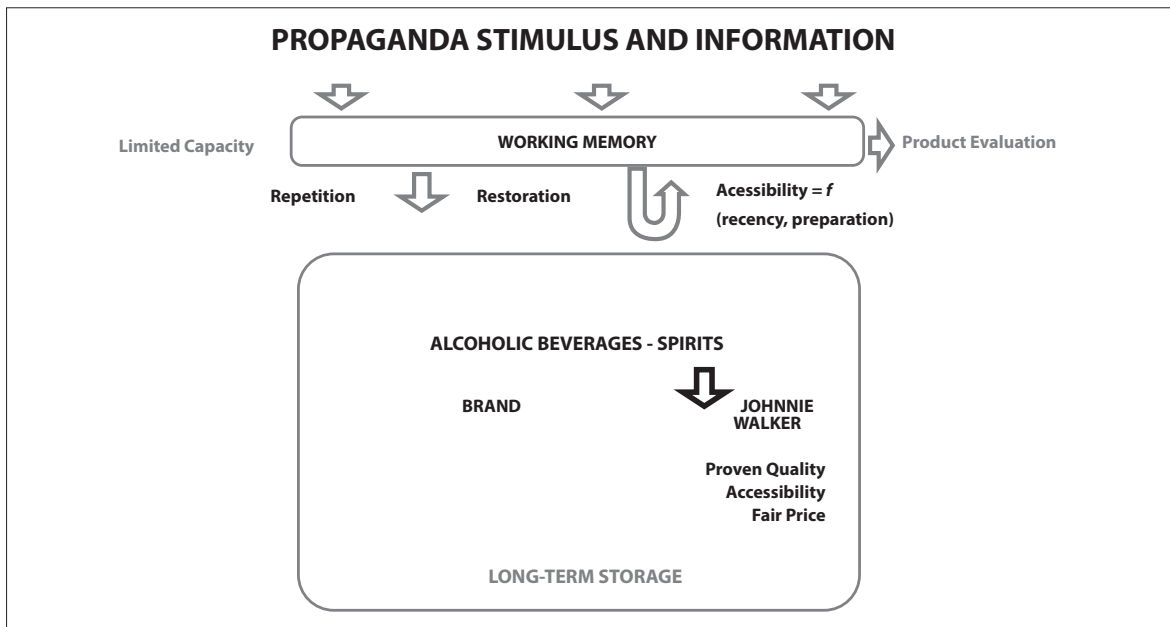
Rucker and Sternthal (2013, p.227) represent the deliberative judgments in response to advertising by a model of two-stage memory (Figure 2). Consumers, when exposed to information about a particular advertising actively, represent them in the *working memory*, initially more or less reliably, to portray what they are thinking at the time of exposure to the advertising piece.

As already explained, the working memory has as its main feature its limited capacity, as it is only able to store a small amount of information for a short period, with no further processing. For the information contained in an advertisement to be useful in the composition of judgment, it must be represented in the second stage of memory, the long-term memory, which is configured as a large repository of information that the consumer has processed but is not active in the working memory. Storing information in an organized manner to facilitate subsequent judgment is an important property of long-term memory. The hierarchical organization is an essential structure for understanding consumer reactions to advertising.

In the model proposed by these authors, the hierarchical structure is presented on two levels: a brand level and a category or goal-level.

Figure 2, below, aims to adapt the model to the brand which is the object of study of this article. Johnnie Walker is a brand belonging to the category of alcoholic spirits. The brand and category are associated with some benefits: proven quality, ease of access/purchase and fair price, while the category itself is set to the benefit distilled alcohol.

Figure 2 – Adaptation of the two-stage model



Source: RUCKER; STERNTHAL, 2013, p.227 – Our translation

In response to an advertisement, the judgment of consumers is based on two sources of information: advertising content and prior knowledge of the consumer. When exposed to a commercial, for instance, the information is represented in the working memory. If they are relevant, they will activate prior knowledge stored in long-term consumer memory.

The authors reaffirm that long-term memory is the repository of what consumers have learned and that working memory has a limited storage capacity, as not all the information we have in the long-term memory are accessible. The most accessible information from long-term memory must be restored and represented in working memory. “You can think of the development as a rich set of associations that consumers make about a brand” (RUCKER; STERNTHAL, 2013, p.227 – Our translation).

If the information presented in an advertisement is repeated and stored in long-term memory, it can be restored to serve as a basis for current or future judgments.

This proposed model can explain or at least contribute to the understanding and discussion of the results of this study, although the primary focus would be on how attention, memory, and perception are present in a particular commercial advertising of Johnnie Walker’s brand.

Methodology

The purpose of the experiment is to identify which creative elements call the public's attention the most, what is their perception and which items are recorded in their memory (recall). It also intends to bring up the relationship between context/product category and context/advertised brand in the commercial advertising/film.

This exploratory research was based on a primary data survey with a quantitative approach. The instrument used is a structured and non-disguised questionnaire applied electronically, responded via Internet and Facebook posts. The data collection period was between December 5th and 10th, 2014.

Previously, the questionnaire was pre-tested to verify the correct understanding of the proposed questions and whether they reached the objectives set for the study. Some modifications and adjustments were made to improve the final instrument.

The respondents' exposure preceded the implementation of the initial and final questionnaire to a Johnnie Walker whiskey brand commercial in the category Double Black Feat in their 1 minute version¹.

The advertising piece in question features a male character that, to the sound of *Kill Of The Night* song, played by Gin Wigmore, covers with black paint (or oil?) the existing objects in a luxurious, classic and sophisticated setting. While the male character serves up a dose of Johnnie Walker, the female character enters, lights a cigarette lighter and throws it to the back, hitting a piano, presented at the scene and located behind the characters. The piano immediately catches fire. The female character replaces the initial dose by another, serving Johnnie Walker Double Black.

After that, respondents accessed the electronic version of the questionnaire to continue the research. The instrument consists of 16 questions composed by open questions, multiple choice, and rating scales. Initial questions concern the respondent's classification data. Next, the respondents indicated through open question which objects and scenes presented in the commercial they remembered having seen or caught their attention. After, a series of 17 objects presented in the film are listed so that respondents can indicate if they remember them and to what degree they can describe them. Likewise, they are required to report the impact on a scale of 0 to 100 points, of 14 commercial scenes. Semantic differential scales also evaluate the commercial scenes.

Nine phrases about context, the characters and the understanding of the message appear in the sequence and were answered in the Lickert scale format. In the final part, the respondents indicated which brand was announced (multiple choice question), how the

1 The version can be checked on the website <https://www.youtube.com/watch?v=kfHN7L8NFJQ>.

dominant color in the commercial had relation to the product category and were faced with the final scene of the film, to where they should move the computer cursor and click on the three points that most attracted their attention. The questionnaire ends with a question about the degree of attention with which the respondent watched the commercial advertising before answering the survey.

The sample was obtained through two non-probabilistic techniques of selection: intentional, through the choice of emails of respondents by the researchers, and by self-generated sampling/in the network, the participants were asked to send the questionnaire to people from their personal circle of relationship.

The final sample consisted of 45 people, 61% female, and 39% male. The age groups of respondents were under 25 (no answer); 26 to 35 (23%); 36 to 45 years (39%); and more than 46 years (38%). The education level of respondents was: complete high school (2%); undergraduate (11%); specialization (18%); master (50%) and doctorate (18%).

Presentation and discussion of the results

The first three questions relate to gender, age and level of education, as mentioned above. Let us turn to the other results.

All respondents cited at least three elements while some, more dedicated, mentioned more than 15 different elements. We point out in hierarchical order the existing pictures in the scenario (32 spontaneous mentions), the car (29), the drink/bottle/whiskey (27), paint/bucket of paint (20), the lighter and the piano (both with 19 mentions) glass/glasses (17), statue (11) and the globe (10 citations). It is worth mentioning that several objects were described in the respondent's perspective, crossing the stimulus, working memory and long-term memory. For example, the statue of Michelangelo's David, angel statue, classic Baroque style furniture, furniture of the Victorian period and objects generically defined as works of art or antiques.

The scenes that attracted the attention of the respondents the most were those in which the characters painted the pieces and the lighter, and fire scenes itself are the ones that most impacted the attention of the interviewees.

Interesting how, as an open question, some context phrases appear among the answers and demonstrate some worldviews:

The whole commercial advertising is preposterous, incomprehensible. Perhaps the scene of putting the black ink on the globe or setting everything on fire, that was already horrible.

The guy is throwing that thick black ink, destroying everything in that environment... Terrible, an entirely crazy action...

The guy was either with the intention of destroying things of great value from an enemy, or it was all of his own and suddenly, from one minute to the other, he decided to make a radical decision, destroying everything and value the life of another style, other things...

... When he [man] is taking his drink and the woman sets fire to all those symbols of wealth.

The scene in which the paint is thrown on the Volkswagen Beetle (sic).

At least 20 of the 45 respondents (44.4%) cited the whiskey among their answers. Of 4 respondents (9%) who cited the brand Johnnie Walker drink, only 2 of them (4.4%) cited the category of the advertised product.

The memory of the selected and related objects in the questionnaire and which appear in the advertising was measured by the use of a 5-point scale: I do not remember that object (1), I remember that object, but could not describe it (2), I remember that object, but could describe it with few details (3), I remember that object and could describe it in almost every detail (4) and I remember that object and could describe it with all the features (5). The most recognized objects were lighter (3.79), followed by luxury car (3.52), gramophone (3.51) and vinyl record (3.50). Note that some objects obtained distinct relevance from the spontaneous mention previously reported, as the respondent was now limited to the degree of memory stimulated by this issue in particular. The frames failed to appear as a stimulus that would be stored in detail, unlike the lighter whose presence causes impact in the scene; luxury car, being an object of desire; gramophone and vinyl record for being the oldest objects, currently considered as pieces of art and, in the context of the scene in which they appear, they were singled out as easily describable in detail.

At least 35.5% realized that the whiskey bottle had not been included in the question (purposely) and mentioned the item.

Among the scenes from the advertising contained in the questionnaire, four were classified by respondents as *striking*: black paint being thrown in the car, man throwing paint on the walls, dripping paint on the globe and woman lighting a lighter, all with 41 points.

Other scenes were mentioned spontaneously. The answers show the respondent's perception and opinion:

When the woman throws the lighter in the room, thinking it was oil and not black paint only. I thought everything would explode.

The calmness, the woman's blasé behavior lighting the lighter and the final image, it seems that the man sitting on the couch and the woman standing next to what turned into a kind of 'barbecue grill'.

The man sitting on the couch indifferent to all that happens around....

Two other remarks point out to the product itself and the brand:

The whole commercial is horrible! I am seriously considering not consuming this brand and this product anymore.

Alternatively, at the other extreme, the phrase:

The lightness of JW being poured into the glass.

55% said the male character called more attention in the commercial advertising. Remembering most of the respondents of the survey were women (in the pre-test most respondents were men, which in turn chose the female character).

Respondents considered the advertising scenes impacting (4.53), unusual (4.42) and aggressive (4.09) – on a scale from 1 to 5 possible points. However, the scenes were considered neutral when referred to match or not with the advertised product.

When exposing their perceptions about the advertising and the brand, they agreed that "The advertising environment matches with the Johnnie Walker brand" (3.48) on a scale of 1 to 5 stars. The statement that the bold commercial advertising design did not combine with the Johnnie Walker brand was not as consensus as it reached neutrality in the obtained positions. However, they said "It took me a long time to realize what product the commercial advertised" (3.14), which generated a certain expectation that appears that has been fulfilled, for the phrase "perfectly got the product that the commercial advertised" reached an average of 3.14. The characters presented in the commercial advertising also shared perceptions about the brand: both the man representing the brand as the woman matching the consumer profile, reached averages close to neutral point scale.

The most prominent scene cited spontaneously by the respondents was: “The final framework of the entire room with the couple and the piano on fire”, which although complex regarding detail and variety of objects, it denotes the full impact and the peculiarity of the scene.

Regarding the indication of how the dominant color in the commercial reflects the characteristics of the advertised product, 48% of respondents realized and indicated that the black color applied to the commercial advertising had to do with the category of the advertised product.

At the end of the questionnaire, it was inserted the scene in which the piano appears on fire and the characters quietly take their whiskey, and respondents should “click” in 3 points that most caught their attention (coincidentally, the chosen scene to this question was the same which was indicated by respondents as the most outstanding). The *heat map* obtained was the following:



The globe appears as the most prominent focal point, possibly because of its position at the forefront of the scene. Several other points were highlighted. Perhaps the excessive number of elements in the scene stole the attention of respondents and generated their dispersion. However, the map confirms the appreciation of the male character, conductor of all the action in the film, and the impact of the burnt piano. Little attention was given to the advertised product.

Regarding the level of attention with which the participant saw the commercial at the beginning of the survey, 23 respondents (51%) reported having paid much attention to the advertising. Therefore, the high level of attention declared explains partly the wealth of details obtained, for example, in the spontaneous recall and detailed description of scene objects.

Final Considerations

This study objective was to apply the concepts of attention, memory, and perception in advertising, evaluating how these elements influence consumer behavior, based on the commercial advertising of the Johnnie Walker distilled beverage.

About the concept of attention, it is noted that the commercial is rich in details which allowed the respondents to pay attention and cite many scene elements, although not connecting them directly with the advertised product. The most unusual scenes in the commercial advertising and of greatest impact were the ones that most caught the attention of consumers. Although half of the respondents have declared to pay close attention to the advertising, only two respondents (out of 45) correctly cited the category of the advertised product (Double Black Feat).

The Lazarsfeld, Berelson and McPhee's Theory (1971), in which prolonged exposure to a particular theme which meets the values, beliefs, ideas and expectations of a person has the effect of resistance to change and the strengthening of beliefs, is reinforced by opinion remarks that appeared amid the spontaneous answers, such as phrases in which people seem to have been offended by the displayed piece of propaganda and transferred this feeling against the brand:

All [scenes] are horrible... However, the guy sat down for a drink in the environment that he has just destroyed with paint, and on top of that the woman sets fire. Ah, it is horrible. What kind of people is that? Rebel without a cause? Vindictive? Insane society?

The perception of the advertising also indicates that just under half of consumers related spontaneously the commercial with the brand studied (Johnnie Walker) and a slight index categorized the advertised product.

It was clear that the excess of constituents in the advertising scenario hampered attention and memorization of the advertised product and can be an explanatory factor in this perception. The *heat map* signaled the "confusion" created in the consumer's mind, who does not know where to look at facing such details.

It is worth noting the mention of one of the respondents:

I ended up with a comparison between painting everything in black and the bottle of whiskey in yellow / gold. Finally, the red fire and the appearance of another bottle in black. This comparison caught my attention.

Although this is not fact, because the main objective of the black paint (or oil in the perception of the respondents) in the commercial was to relate this color to the category of the advertised beverage: whiskey double black feat, this was not clear in the speech of respondents.

As already stated, the most popular concept says that memory is the ability to evoke past situations from a present stimulus. However, when we look at detailed descriptions of people about the facts of their memory, we realize that the process is much more complex than simply retrieving the past, since the same fact or event can be remembered differently, because of the context in which memory is used. Many respondents demonstrated this by introducing additional details and objects present in the film and giving their opinions about the scenes, in a story that reflects their broader perception of the meanings implicit in the depicted scenes.

Giglio (2010, p.125 – Our translation) adds another finding about memory: “the way past is rebuilt is linked to present and future events. In other words, there is evidence that we change our memories according to our expectations, our plans”. Interpreting this statement by the operating angle, we can say that when a customer reports an experience, he or she is also signaling which stimuli and experiences are relevant in the present and the future. Thus, “if memory is a process of rebuilding past, the passages that relate to acts of consumption may be modified, provided that the consumer is adequately stimulated” (GIGLIO, 2010, p.125 – Our translation). Here, the communication strategy of a company/brand/product can contribute to the rescue of the audience memory by connecting it to this situation and creating the layout for the future selection process. Of course, a single stimulation is not enough, because, besides memory, we also reach out for our reason. We understand that this is clearly stated on the results.

Research limitations and proposals for future studies

The exploratory nature of this study imposes limitations to the results presented. First, we note that the non-probabilistic selection of respondents makes it impossible to extrapolate the data beyond the sample obtained, being thus a trend indicator. The very size of the sample corroborates and reinforces this limitation.

It is true that, by accepting to participate in the study, respondents tend to have higher levels of attention to the advertising piece than they would under normal conditions in which they would be subject to their mechanisms of selective attention and perception. The high degree of attention declared in this research results confirms this statement.

The commercial used as the object of this study was shown in its 1-minute version, available on Youtube. We emphasize that the 30-second version of the same piece was available in the broadcast TV and cable TV during the field research. Eventually, the respondent who had contact with the version before participating in the research was already familiar with the film.

As a suggestion for future work, the continuation of this study may bring interesting contributions, as we could work with three simultaneous samples of respondents in a new experiment: a sample who have never been exposed to the advertising piece before and would see the film in its 1 minute version; another sample of respondents who were not exposed to the commercial and would attend to its 30 seconds version; and a third sample of respondents who have been exposed to the 30-second commercial on TV and would participate in the research by watching the 30 seconds version again. This experimental design can contribute to the understanding of levels of attention, memory, and perception of commercial advertising in different situations and to what extent previous exposure to film in real viewing conditions can interfere and help further elucidate the results of this exploratory study.

In this article, we look at the concepts of attention, memory, and perception from Neuropsychology to relate to the influence on consumer behavior. From these three elements, it would be possible to create a relationship with the Theory of Selective influence², once we have studied at least three of the four concepts that take part on this theory, namely: selective attention, selective perception, selective memory and selective action.

2 In the Theory of Selective Influence, four elements are worth analyzing: 1. Selective attention – people create mental filters and focus their attention in a more limited way, leaving aside what is not interesting for them and paying attention to what they like; 2. Selective perception – individuals attribute meaning to what they see according to their beliefs, interests, values, attitudes, interpreting according to his/her cognitive structure (perception = psychological activity whereby individuals organize significant interpretations of sensorial stimuli received in the environment); 3. Selective remembrance – some kinds of content, for some kind of people, are remembered for a long time; for others, with different cognitive structures, associative bindings and social connections, the same material may be readily forgotten; and 4. Selective action – not everyone will act the same way for being exposed to a given message on the media. The action is the final link of the chain. “Each set of factors contribute, in a way, with the selectivity in which the audiences pay attention to the media, interpreting that to which they are exposed to, remembering the content and being influenced in their actions” (SOUSA, 2006 – Our translation);

References

- BATISTA L. L.; RODRIGUES, C. D. R. R.; BRIZANTE, J. G.; FRANCHESCI, R. Aspectos cognitivos da percepção na propaganda. **Ciências & Cognição**, v.13, n.3, 2008. p.137-150.
- BLACKWELL, R.D; MINIARD, P.W.; ENGEL, J.F. **Comportamento do consumidor**. São Paulo: Pioneira Thomson Learning, 2005.
- DAMÁSIO, A.R. **E o cérebro criou o homem**. São Paulo: Companhia das Letras, 2011.
- GIGLIO, E. M. **O comportamento do consumidor**. 4ª ed., São Paulo: Cengage Learning, 2010.
- HOVLAND, Carl; LUMSDAINE, Arthur; SHEFFIELD, Fred D. **Experiments in Mass Communication**. Princeton: Princeton University Press, 1949.
- JAMES, W. **The principles of psychology**. New York: Holt, 1890.
- KANDEL, E. R. **Em busca da memória**. São Paulo: Companhia das Letras, 2009.
- KARSAKLIAN, E. **Comportamento do consumidor**. São Paulo: Atlas, 2000.
- LAMB, C. W., HAIR, J. F.; MCDANIEL, C. **Marketing**. São Paulo: Cengage Learning, 2012.
- MYERS, David G. **Psicologia**. 9ª ed. São Paulo: LTC, 2012.
- PÉREZ-NEBRA, A. R.; SANTANA, A.F.R. Será que imagem é mesmo tudo? Descrição de variáveis que impactam a retenção da propaganda na memória. **Comunicação & Inovação**, v.9, n.17, 2008, p.13-24.
- RUCKER, D.D.; STERNTHAL, B. Estratégia de propaganda. In: CALDER, B. J.; TYBOUT, A. M. (org). **Marketing**. São Paulo: Saraiva, 2013, p.223-230.
- SOUZA, J. P. **Elementos de Teoria e Pesquisa da Comunicação e dos Media**. Porto: Edições Universidade Fernando Pessoa, 2006. Available in: <http://bocc.unisinos.br/pag/sousa-jorge-pedro-elementos-teoria-pequisa-comunicacao-media.pdf>. Accessed on: December 2nd. 2014.

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