

FOREIGN EXPERIENCE OF FOOD MARKETING

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Abstract— In the paper have been examined the theoretical foundations of such a relatively new branch of behavioral economics as neuromarketing. The paper discusses the main methods and tools of neuromarketing. In addition, the article provides a brief description of the possibilities of its application in modern realities..

Index Terms— marketing, neuromarketing, neurolaboratory, neuromarketing methods, brain research, emotional involvement of the consumer, emotional stimulus.

1 INTRODUCTION

THE evolution of marketing concepts has almost always been influenced by psychological and neurophysiological thought. The beginning and middle of the twentieth century marked the beginning of the basic methods of neuroscience, the last ten years have been characterized by the active development of neuroimaging methods, which laid the foundations of neuromarketing tools.

The concept of neuromarketing, scientists believe, was developed by psychologists at Harvard University in the 1990s. However, the founders of this direction are traditionally considered the General Director of Retail branding A.G.Arndt Tryndl and the director of the store branding Retail branding Bart Oeyman.

A general neuromarketing technique was developed in the late 1990s by Harvard professor Jerry Zultman, who immediately patented it under the name ZMET (Zaltman Metaphor Elicitation Method). The essence of ZMET is to recognize a person's subconsciousness using sets of specially selected pictures that cause a positive emotional response and activate hidden images-metaphors that stimulate a purchase. On the basis of the identified images, graphic collages are constructed, which are used as the basis for commercials. The data is then interpreted through interviews with a psychologist or by analyzing images of the brain. ZMET marketing technology quickly gained popularity among hundreds of large customer firms, among which Coca-Cola and Pepsi, Nestle, General Motors, Procter & Gamble, and others (more than two hundred large companies) can now be noted.

2 LITERATURE REVIEW

According to F. Kotler, today neuromarketing has developed into a full-fledged marketing direction. The technology of neuromarketing is based on a model according to which the bulk (more than 90%) of a person's mental activity, including emotions, takes place in the subconscious area, that is, below

the levels of controlled awareness [1].

Despite the fact that neurobiological research in the field of human decision-making has been carried out for a very long time, for the first time neuroscanning technology was used exclusively for marketing purposes by the already mentioned Professor Zultman in the late 1990s. The very same term "neuromarketing" was proposed by Professor Smids in 2002, and the first international conference entirely devoted to neuromarketing research was held only in 2004 in the USA. It can be noted that neuromarketing is a very young discipline, the prerequisites for the formation of which go into the field of neurobiology and medical research, which appeared long before the formation of the concept of neuromarketing.

The concept of neuromarketing assumes that a person perceives environmental stimuli (for example, a product presentation), first of all, at the level of neurophysiological signals. They are translated by the senses through biophysical and biochemical processes into the language of emotions even at the subconscious level, the limbic system - the deep subcortex of the brain, which determines the type of the emotional system.

The conceptual neuromarketing platform today is based on the work of Jerry Zultman, Arndt Trindl, Bart Oyeman, Martin Lindstrom, David Lewis, Roger Dooley and others.

The Big Explanatory Dictionary interprets the concept of "neuromarketing" as follows: one of the modern concepts of marketing influence in retail, based on research on consumer psychology, using the technology of "scanning" the brain of potential consumers in order to determine which images the target group responds to most actively, and bet on the feelings and emotions of customers.

The scientific community has information about the direct use of magnetic resonance imaging equipment in neuromarketing research. He became a pioneer here at the turn of 2002 and 2003. an American scientific and commercial project called the Brighthouse Institute for the Science of Mind. The new MRI-based neuromarketing method he developed is similar to ZMET and also uses specially selected images. The only difference is that the reaction of the surveyed clients to the presented images is established not by the conversation of psychologists, but by direct scanning and analysis of the brain regions activated in this case. However, when studying the positive and negative reactions of the brain to certain images, neuromarketologists are absolutely not interested in the con-

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scious reaction of a person. The reason for this is the stated goal of the study - to establish how effective advertising is in subconsciously stimulating the purchase of a particular product or in developing brand loyalty [2].

It should be noted that the most important advantage of neuromarketing over classic marketing is the ability to accurately identify which of the advertised products, brands or videos you just like, and which is really effective for making a decision. For example, in a neuromarketing study conducted by researchers in Australia, it was shown that a promotional video with rapidly changing episodes was not liked (as follows from subjective reports) of any of the participants in the experiment; moreover, the video was annoying. However, brain scans of the participants while watching advertising videos with different tempo of changing episodes revealed that it was the video with a fast pace that was remembered significantly better than static or low-dynamic videos. Subsequently, the product that was advertised in this "bad" video from the point of view of classic marketing was quickly recognized in the supermarket and bought more often.

3 FOREIGN EXPERIENCE OF FOOD MARKETING

Here's an example of a study conducted by renowned marketing consultant and brand expert Martin Lindstrom, Applied Neuroimaging Professor Gemma Calvert, and Richard Silberstein, Professor and CEO of Research Institute in Australia, between 2004 and 2007. Two of the most advanced brain scanning technologies: magnetic resonance imaging (MRI) and a modern analogue of the electroencephalogram, known as topographic mapping of electrical activity of the brain (TCEAM). In the course of the study, the effect of warnings about the dangers of smoking (the risk of emphysema, heart disease, etc.), naturalistic photographs of affected organs on the brain activity of a smoker was studied. After processing the results, it was found that all these inscriptions and pictures stimulated the area of the brain of smokers (the area of the nucleus accumbens), which plays a key role in getting a person pleasant sensations. Moreover, the results of MRI and TCEAM obtained during the study led to directly opposite results of the questionnaire survey of respondents before the study. According to M. Lindstrom, people answered questions about the effect of warning labels about the dangers of smoking in the affirmative because they actually thought so or believed that such an answer was expected from them by researchers [3].

It should be noted that the conceptual apparatus of the concept of neuromarketing is quite diverse: to designate neuro-marketing research, such terms are used as "neuroimaging", "neuroimaging of emotions", "neuromarketing visualization", "methods of neuroimaging", etc.

Neuromarketing eliminates the subjectivity that inevitably arises when interviewing respondents in the course of marketing research, and, as a consequence, eliminates the time costs associated with interviewing a large number of respondents to increase the representativeness of the sample.

In general, we can assume that the effectiveness of neuro-

marketing is quite high, its use allows us to conclude with what probability the respondent will make a purchase decision. This conclusion is based on the well-studied activations / deactivations and interactions of a wide range of brain areas presented in neuromarketing studies. For example, a number of studies have shown that some areas of the brain are activated when the respondent switches to the so-called risk behavior (when the expected gain / profit outweighs the expected losses), and completely different when the respondent begins to avoid risky behavior (i.e. when the expected losses outweigh the expected benefits / gains).

At the moment, with the help of neuromarketing studies, the areas of the brain that are activated every time:

1. the person sees products (including food) or brands that they prefer;
2. there is a situation of trust (the buyer to the seller or the product, to a loved one, friend or family member);
3. you need to make a decision based on an assessment of the balance between immediately received pleasure (purchase of goods / products) and immediately received disappointment (waste of money);
4. there is pleasure or perception of beauty;
5. a person experiences altruistic feelings;
6. negotiators give free rein to emotions to the detriment of cold reason, or, conversely, maintain rational restraint, suppressing emotions.

As neuropsychology and cognitive sciences matured, a deeper understanding of higher brain functions emerged. The behavioral disciplines that emerged on the basis of neurophysiology and neuropsychology made it possible to analyze human reactions to advertising stimuli, determine the "correct" colors, track the effect on the subconscious of music and scents, analyze brain decision-making processes, determine benefits and risks. It is interesting to note that the name "neuroeconomics" has become a unifying name for the above-described areas of research.

Research using modern radiological techniques is actively developing today. Positron emission tomography (PET), single photon emission tomography (SPECT), functional nuclear magnetic resonance (fMRI), magnetoencephalography (MEG), transcranial magnetic stimulation (TMS), as non-invasive diagnostic methods, allow visualization of brain activity in real time ... These techniques make it possible to objectively judge the brain activity associated with a person's response to a stimulus (for example, a commercial product). Neuroradiologists can now answer the questions about what emotions the buyer is experiencing, whether he made a positive decision to purchase, etc., quite objectively.

To date, about a hundred results of full-fledged consumer behavior studies using neuroimaging methods have been published. Depending on the approach used, they can be conditionally divided into three groups:

1. Consideration of brands through the prism of consumer preferences. Creation of advertising and brand attributive architecture is especially effective in this direction. They include the following activities:

- research of consumer motivations;
- testing the concepts of advertising materials: as a complex

of elements (illustration, slogan, main text, font, etc.), as a logical link, as a holistic image;

- peculiarities of perception of color aspects of advertising materials;
- identification of areas of consumer attention and areas of concentration of attention on objects of printed matter;
- creating or adjusting the brand image and studying the associations that consumers have with him and his personality - the distinctive features of the brand and more.

Research conducted within this area of assessing the impact of a brand on emotions and consumer decision-making makes it possible in the future not only to obtain an effective and fundamentally different analytical tool for generating added value and optimizing a brand strategy. They also enable you to initiate the creation of a new branding language that builds on concrete advances in the visualization of emotion and will help you increase your marketing ROI.

Here's an example: scientists at the Erasmus Management Research Institute have come to the conclusion that there is a possibility of consumer persuasion through biological mechanisms. They have identified areas of the brain involved in the formation of trusting behavior through learning, coding and memory declaration, which allows you to create effective beliefs for the consumer. Another study using functional magnetic resonance imaging to determine the semantic component of comparative judgments about products and about the individual showed that the processes of perception of a product image and a human image are fundamentally different. And the researchers of the German University Diagnostic Radiological Clinic, when studying the effect of rewards through the properties of cultural objects as an image of well-being and status, by visualizing the brain areas associated with this effect, demonstrated the connection of artificial cultural objects with wealth and social dominance.

2. Representative assessment of possible alternatives of consumer preferences, through indicators of choice and making a purchase decision:

- determination of a set of properties of a product and its utility functions that affect consumer choice;
- identification of various indicators of the importance of product properties that are considered relevant to the consumer;
- establishing a set of beliefs (brand or product image) about the properties of the product and determining the degree of presence of each of them.

In the aspect of the above areas, one can cite a lot of research carried out by scientists at Stanford, Cambridge and other universities. Since microeconomic theory states that purchases are determined by a combination of consumer preference and price, these researchers investigated, using functional MRI, how consumers perceive the importance of these factors in purchasing decisions. It was proved that the choice associated with a conflict situation in the form of balancing between the desired object and its high price leads to the activation of the brain areas involved in the decision to purchase a product, and the corresponding conclusions were drawn.

3. Determination of the cognitive functions involved through attention and memorization of events in the process

of consumption. As a rule, such studies are of a two-level nature:

- establishment of the consumer's "pyramid of values" (emotional, spiritual and cultural beliefs and values);
- testing the consumer's ability to retrieve previously offered product information.

Among many studies devoted to the third of the considered categories of neuromarketing research, M. Rothschild was one of the first to study how EEG activity will change in response to the visual presentation of advertising material. Analysis of EEG signals is no less a unique means of controlling higher-order neurocognitive processes than other, more expensive research methods.

The use of classical qualitative and quantitative research methods (focus group discussions, in-depth interviews, polls in various forms, etc.) is often associated with the problem of hiding the true feelings and actions of consumers through psychological screens:

1. Screen of consciousness - consumers are not aware of their true motives and attitudes. The presence of a measure of consumer bias in the process of introspection and the impossibility of assessing their behavior in an unconscious state.
2. Screen of irrationality - despite the consumer's desire to logically substantiate their choice, it defies rational explanation.
3. Screen of tolerance - the consumer tends to have a negative attitude towards certain norms and rules, which causes him a subconscious feeling of guilt, from which he tries to get rid of, not publicly admitting his opinion.
4. Screen of courtesy - the consumer, by virtue of his character or upbringing, is not inclined to say unpleasant things, believing that he can offend the interlocutor.
5. Screen of conformity - the consumer wants to feel belonging to a group and passively accepts the prevailing attitude towards the subject of research, which does not diverge from the established norms of society.
6. Screen of verbalization - the consumer perceives perceptually (color, smell, sound, tactile sensations), and this subjective assessment significantly reduces and simplifies knowledge about the attitude to the subject of research.

Gradually influencing the results obtained, these screens do not lend themselves well to correction by classical methods that could be applied in a standardized research methodology. At the same time, it is knowledge in the field of neurosciences that allows us to fill these gaps as much as possible and, in addition, provide some convergence of the two types of research into a single whole. At the same time, it is important to note that it is neuroresearch that makes it possible to appeal to the origins of this activity, directly studying the functional responses of neuronal structures and their interaction with each other within the framework of the implementation of a particular task.

In marketing circles, there is an attitude towards neuromarketing as a procedural component, containing not always clear systemic approaches (mainly, it concerns neuroimaging), which is destructive for it as a promising discipline [4].

According to O.E. Klepikov and M.A. Draft, neuromarketing is a personally differentiated marketing approach in the

study of consumer behavior, a new area of practice that uses the achievements of neuroscience, which allow us to determine the characteristics of consumer behavior in response to various kinds of marketing incentives. Neuromarketing is a scientific discipline that faces not only global challenges, but the opportunity, within the framework of synergistic interaction, to enrich the toolbox of related disciplines.

The growing interest in marketing neuroscanning technologies with the simultaneous emergence of similar problems and concerns imposes a number of restrictions in their application, which are mainly the result of the absence of a legal framework regulating the use of neuroscanning technologies for commercial purposes, which is a significant obstacle in the implementation of the concept of neuromarketing. The academic and marketing community expresses a lack of confidence in neuromarketing research. In fact, this may be due, first of all, to the fact that recent advances in neurotechnology have revealed a lack of ethical principles: studies of human mental activity are personified in comparison with classical marketing research. In this regard, one should understand the problem of responsibility of business structures for the ethical aspect of activities in the field of neuromarketing. It is advisable to note that O.E. Klepikov and M.A. Chernov speaks about the delay in the formation of the neuroethical approach, both from a theoretical and a practical point of view [5].



Fig.1. The five phases of consultative selling

Today we can say that the market for the application of neurophysiological research in marketing is in the process of formation. The promotion of neuromarketing services in the world inevitably encounters not only a number of difficulties, but also the insufficient development of interdisciplinary communications, the lack of their transparency and the high material and financial costs associated with this. It is important to mention the many opponents of the use of neuroscience in marketing and the concept of neuromarketing in general, which creates additional barriers to the implementation of the concept. From the point of view of the author of the article, it is important to correctly interpret the goals and objectives of marketing neuro-research in order to exclude the possibility of misinterpreting and discrediting the results of

research in the field of neuromarketing.

Modern society is developing rapidly, the service market is growing, putting forward more and more new and complex rules, the number of competitors is increasing, economic relations between countries are becoming closer. Under these conditions, companies that are ready to accept scientific and technological progress, are not afraid of it, increasingly began to pay attention to such a direction as neuromarketing.

Neuromarketing is a marketing area that combines many areas: neurobiology, psychology and medical research and, directly, marketing itself.

The five diverse phases of consultative selling are illustrated in Figure 1 and are described below:

Phase 1: Create a connection to the customer. The purpose of the first phase is to acknowledge the presence of the customer and make them feel welcome.

Phase 2: Understand customer needs. The second phase emphasizes listening to the customer and understanding their needs, experiences, and feedback. If the salesperson does not understand customer needs adequately, the likelihood that the proposed solution will address their needs is probably not high enough to support closing the sale.

Phase 3: Address customer needs. This phase includes determining the customer's problem, identifying a suitable solution, and proposing a solution alternative. Although the customer may have learned of the providers' product range previously, the customer often needs professional help to identify the most suitable solution for the problem, especially in the high-tech industries. An in-store demonstration of the solution should help clarify the customer's needs. As the retail salesperson performs a product demonstration, the marketing activities are concentrated on lowering the customer's purchase barrier for a particular product that is identified as a potential solution to the customer's problem.

Phase 4: Close the sale. The goal of the fourth phase is to close the deal. Meeting the customer's needs and adding value to their daily life increases the likelihood of a repeat purchase and customer loyalty. When a mutually beneficial result has been achieved, the act of closing a deal can be anticlimactic: it does not necessarily require a specific technique if the customer has already received value in the previous phases of the selling process.

Phase 5: Establish a sustainable customer relationship. In the fifth phase, sellers acknowledge that the process is about building a business relationship that may later result in a repurchase. Therefore, marketing focuses on ensuring that the newly founded relationship with the customer will continue after the customer walks out of the store. [9]

In modern market, social, political and economic conditions, it becomes more and more important for companies to timely identify the needs of the buyer, to predict his reaction to a particular product or service, as well as marketing incentives.

This is where neuromarketing comes into play.

The emergence of neuromarketing as a branch of behavioral economics is not over yet. Therefore, the conceptual apparatus of science has not yet received a unified and accurate interpretation. The only thing that unites researchers is the recognition of the fact that neuromarketing originated at the intersection of several branches of knowledge: economics, psychology, neurobiology,

neurophysics, mathematical methods in economics, information programs, etc.

The concept of neuromarketing boils down to the recognition of commercial applications, a better understanding of consumer behavior, the need to study consumer responses to marketing incentives using methods such as quantitative electroencephalography, functional magnetic resonance imaging, galvanic skin response, oculography, heart rate, respiration, body temperature measurements, and also studies of the reactions of the human brain to irritations of the human senses: sight, smell, hearing, touch and taste

A number of scientists distinguish three innovative concepts of modern marketing: neuromarketing, cognitive marketing, and sensory marketing.

However, most scientists believe that neuromarketing includes cognitive and sensory marketing.

Some scientists consider neuromarketing to be nothing more than manipulation of customer behavior, and not at all a science.

Despite the controversy of scientists, many specialists began to increasingly turn their gaze towards neuromarketing. This is due to the fact that standard, well-studied and even reliable marketing approaches do not give the desired results in modern conditions.

The point is that traditional marketing tools do not create the necessary, strong enough emotional irritants. Modern consumers have become more discerning, learned to adapt and more carefully select information coming from outside: from posters, banners, flyers, television and radio broadcasting.

Neuromarketing promises to identify consumer pain points and create stronger emotional stimuli.

The ability of people to perceive stimuli from the environment, primarily at the level of neurophysiological signals, lies at the heart of the science of neuromarketing. On the basis of biophysical and biochemical processes, the human sense organs translate stimuli into the language of emotions at the subconscious level.

The main neuromarketing methods are:

Air tracking. The eye tracking method is used to observe the direction of a person's gaze, the size of his pupils, and the delay in gaze at a particular object. Based on this analysis, the color, font, and style of the brand are determined, product packaging is made, advertising materials are placed, videos, advertising posters and banners are shot.

Study of heart rate, pulse and detection of increased sweating. To assess the emotional involvement and experiences of the client using a polygraph, a study of the heart rate, pulse is performed, and increased sweating is detected.

Observing involuntary facial expressions. With the help of high-resolution video cameras, emotions and involuntary facial expressions of a person, including joy, surprise, irritation, interest, discontent, are recorded, which help analyze the respondent's reaction to video and contextual advertising and the design of a tourist product.

Analysis of the brain reaction. Human brain scans are performed by two of the most advanced technologies: magnetic resonance imaging and a modern analog of the electroencephalogram, known as topographic mapping of the electrical activity of the brain. The analysis of the results obtained allows us to identify the most memorable types of tourist advertising products. At the

same time, one does not even need to ask what the subjects themselves remember.

To date, based on neuromarketing research, the areas of the brain have been studied that are activated every time:

- 1) the person sees the products or brands that he prefers;
- 2) a situation of trust in the seller or the product arises;
- 3) you need to make a decision based on an assessment of the balance between the immediately received pleasure associated with the purchase of goods and at the same time received disappointment in connection with spending money;
- 4) pleasure or perception of beauty arises;
- 5) a person experiences altruistic feelings;
- 6) the negotiators' emotions prevail to the detriment of a cold mind, or, conversely, rational restraint remains, which suppresses emotions.

4 CONCLUSIONS AND RECOMMENDATIONS

Obviously, the main obstacle to the implementation of neuromarketing technologies in the development strategy of the organization is the need for significant financial investments.

Not every company can afford to purchase such expensive equipment, and especially to create its own laboratories.

But companies that do not have sufficient financial capacity for this kind of costs, ready to introduce innovative approaches to neuromarketing, may well use the services of research centers.

Neuromarketing is developing more actively abroad, and it is natural that large neurolabs are located in the countries of the West and Europe.

The experience of neuromarketing testing by the research center for Brand Management and Brand Technologies (RCB & B) is well known. He designed the style for the Fonty Fler flower chain, the BEC manufacturing and trading company and other trading companies. Nicholas Corot is Principal Curator of the RCB & B Research Center and Board Member of the Guild of Marketers.

Some global marketing experts believe that it is not necessary to conduct your own expensive neuromarketing research. In their opinion, it is enough to take advantage of foreign developments and ready-made results of neuromarketing research. This position fits well into the imitation strategy of diffusion of innovations.

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