

Strategy of ethical approach in neuromarketing

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Abstract. Traditional demand-based marketing research methods fail - because they depend on respondents' willingness to describe their feelings. Neuromarketing focuses on directly examining how respondents feel and what they think about a product or advertisement. This paper discusses the evolving and potential field of neuromarketing. Respondents, participants in the research are human beings and have the right to their privacy and protection of their own identity. The ambition of the contribution is to point out the possibilities of applying the strategy with regard to ethical principles in neuromarketing in the conditions of the Slovak republic.

Keywords: Strategy, ethical approach, neuroscience, neuromarketing, market research

JEL classification: *M31, M39*

1 Neuromarketing and its place in marketing research

The use of neuromarketing activities has often provoked heated debate, one side, critics in this case believe that neuromarketing tools in this situation may affect consumers' ability to choose not to choose the products on the market. This may mean that consumers would be prone to respond in a different way than they would naturally, simply put, they would become easy victims of advertising campaigns. (Wilson, Gaines Hill, 2008).

On the other hand, in addition to critics, we also know other personalities such as Lindstrom (2009a, 2009b) and Dooley (2010), whom we perceive through the optics of proponents of neuromarketing tools. They mainly discuss the benefits of neuromarketing methods. These authors argue that consumers could only benefit from the introduction of neuromarketing methods in consumer and marketing research. Consumer decisions could be simpler rather than more manipulative by introducing these methods.

In the research itself, it is important to consider the subject of the research, namely the consumers - respondents. Those as human beings have their fundamental rights, principles and values, which must not be denied them, and it is important to respect them. The purpose of this paper is to clarify neuromarketing in comparison with traditional marketing methods.

The main goal of the paper is to clarify neuromarketing and identify its specifics with regard to the specifics of traditional marketing methods. We specified the main goal into two partial goals:

- point out the importance of an ethical approach to neuromarketing,
- propose a strategy for an ethical approach in neuromarketing.

Based on the analysis of resources, we were able to identify several concepts of neuromarketing. Neuromarketing has been described as a field of research (Murphy et al., 2008), a field of study (Lee et al., 2007 and Eser, 2011) & a scientific approach (Senior & Lee, 2008), a field of applied neuroscience (neuroeconomics, neuropsychology, neurobusiness, consumer neuroscience) (Perrachione, 2008), and the marketing part (Fisher et al., 2010), the interconnection of systems of perception (Butler, 2008), the sub-area of neuroeconomics (Hubert & Kenning, 2008).

A large group of authors perceive neuromarketing primarily as a means of acquiring scientific knowledge (Lee et al., 2007; Fisher et al., 2010). Other authors perceive neuromarketing as a potential commercial marketing tool (Perrachione, 2008; Fugate, 2007). We can therefore clearly state that Neuromarketing already has an unquestionable place in marketing studies. As the subject of the neuromarketing research is the consumer himself, his research must respect his rights and adapt the research process itself.

Based on the analysis of the literature, we can state that neuromarketing uses all the latest devices and resources for brain scanning, from understanding the process of consumer decision-making (Eser et al., 2011). Schneider & Woolgar, 2012). Marketing is basically the only thing - understanding consumer behavior.

The second very important thing is the way and why customers choose products, it is primarily a consumer choice. What are the primary reasons why customers make decisions? Neuromarketing can play a crucial role in determining the likelihood and unlikely of purchasing decisions. Neuromarketing has also been identified as a way to shape and design or adapt companies' marketing strategies (Eser et al., 2011).

Of course, there have been several definitions of neuromarketing since 2007, and we are trying to approach in this section those that we think describe this word perfectly. Thus, neuromarketing examines areas in the brain that are activated during various marketing stimuli and cognitive processes. It is for this reason that marketing as a technique and method has the greatest potential to describe the triggers of purchasing decisions and to describe the answers to the questions why customers buy and why the products in question. Therefore, the development of effective social campaigns from the social marketing environment, such as promoting the use of seat belts in cars while driving or quitting cigarette smoking, seems to be an ideal form of neuromarketing application. (Orzan et al., 2012).

2 Methodology

The aim of the paper is to define neuromarketing and clarify it in confrontation with traditional marketing methods. The second important goal is to point out the importance of an ethical approach in the conditions of neuromarketing and to propose a strategy of an ethical approach to market research in neuromarketing.

The research took place in two stages. In the first, we looked for information in articles, blogs, and websites of neuromarketing companies. Non-academic journals and marketing blogs were selected using Google's blog search tool. Articles and blogs dealing with the concept of neuromarketing were selected. He culminated the first step by understanding the topic and identifying new areas of research for the next phase. A recurring point was the definition of neuromarketing as a new technique for market research.

In the second step, only peer-reviewed academic articles were analyzed. The EBSCOhost research platform was used to access the articles, which provided access to more than 320 databases. With regard to the subject of research, we have defined keywords: neuromarketing, neuroscience, ethical approach, marketing. In total, we analyzed 21 academic articles.

To prepare the paper, we used the analysis of systematically collected empirical material on the issue. We have defined the basic concepts by the method of analysis, synthesis and abstraction. When evaluating neuromarketing methods, we used the method of comparison.

3 Traditional methods of marketing research in comparison with neuromarketing methods

Neuromarketing is recommended as an important and revolutionary form of marketing research. Fisher et al. (2010) evaluate neuromarketing as a type of qualitative research that yields graphical and quantifiable results. Bercea (2013) explains that it is difficult to classify research in this new field as qualitative or quantitative and that the types of equipment used and the research protocol adopted are determinants of this classification. Regardless, the importance of neuromarketing lies in its ability to evaluate emotional processes. Thus, this technique provides access to richer and less interested marketing knowledge than other traditional research techniques, such as surveys and qualitative research (Murphy et al., 2008).

Neuroscientific methods are ahead of traditional marketing research methods for understanding and examining consumer behavior. This enhanced understanding allows managers to innovate and develop their products and processes across companies, gl

Very well-known methods of market research, or methods of questioning, whether online or in person, as well as methodologies and surveys of target groups and the creation of ideal staff representatives of consumers are full of limitations. The limitations are precisely what the survey respondents are able to allow us to do. Thus, the mentioned metrics really only measure what the respondents tell us and are willing to say about themselves. In the past, well-known researchers have often been able to

identify significant differences in research methodology between this intention and the actual behavior of respondents (Jamieson and Bass 1989).

Thus, this problem was discovered in the early beginnings of marketing science. The research method captures the respondent's stated intention towards the product, but the actual behavior can really be very different from what the respondent said in the research. Cognitive neuroscience techniques today offer a great opportunity to improve marketing methods and perhaps to redefine marketing through a deeper understanding of consumer behavior. The number of techniques available for studying cortical activity will help the marketer to better understand the motives for purchasing and thus save considerable funds that would not lead to successful steps in marketing. Individuals not only act according to their feelings, but many studies also show that they act under the influence of the expected rewards for decision-making in the short and long term. The combination of both research techniques and methods provides more valuable insights into consumer preferences and the consumer purchasing process (Hubert & Kenning, 2008).

4 Discussion

Neuromarketing has a very important place in the analyzed texts. The subject of research is always the consumer and his consumer behavior. Therefore, it is very important to pay special attention to him and create an approach that would not affect him in his actions.

4.1 Ethical approach in neuromarketing

Activities in the field of brain mechanisms have brought a very interesting interdisciplinary area, which we know today as neuroethics (Roskies, 2002). Neuroethics deals with social, moral or ethical issues, which are related, for example, to the implementation, but also the design of all neuroscientific experiments, as well as their impact on all existing legal, social and ethical issues.

The emergence of neuroethics is partly due to a growing sense of aversion and protest against technological devices such as functional magnetic resonance imaging or electroencephalogram, which uses neuromarketing. This area is often suspected of manipulative abuse, which results from reading consumers' thoughts and guiding their shopping options. Neuromarketing research has also been criticized for its impact on human dignity - speaking of the integrity of moral growth and the dignity of identity based on the set of rights of a part of the human being (Ulman et al., 2015) - as well as its potential violation of bioethical principles and individual values. They are autonomy, self-determination, confidentiality, and respect for private life (Ulman et al., 2015). Some responded to these claims by claiming that neuromarketing could not interpret consumer ideas or control individuals' purchasing opportunities.

According to several authors, neuromarketing is the application of neuroimaging and physiological tools to record the neural correlates of consumer behavior (eg decision-

making, emotions, attention and memory) against marketing incentives such as various brands and advertisements. (Alsharif, Salleh, Baharun, 2021)

Traditional research methods have been widely used as feedback to study consumer responses (eg, consumer decision-making) to marketing incentives such as advertising and branding (Harris, 2018). Such an assessment relies on awareness of consumer behavior and overlooks unconsciousness; thus, the discrepancy between what the consumer says and does, and here we come to the very turning point and identifying the difference between classical marketing methods and a new neuromarketing approach that can eliminate these differences or deviations. Traditional research methods provide inaccurate and unreliable information on consumer behavior (Alsharif, 2021; Alsharif, Salleh, Baharun and Effandi, 2020), leading to the conclusion that most products and advertisements fail in the basic setting of the marketing mix and marketing strategy (Jordao, 2017 Vecchiato, 2015). Therefore, most consumer behavior (eg, decision-making, perception) takes place unconsciously, which cannot be predicted by traditional research methods (Alsharif, Salleh, Baharun, & Effandi, 2021).

All used neuromarketing methods have their limits without a doubt. It is not only the instrumentation itself that matters, but also the staff and personnel who manage the research process (Fugate, 2007). Many authors still point to cases where neuromarketing researchers have tried to manipulate respondents in neuromarketing research by affecting their emotions (e.g., Wilson, Gaines, & Hill, 2008).

In neuromarketing research from the point of view of ethical approach, it is necessary to focus on three ethical areas:

- the degree of knowledge and understanding of the participants as to the objectives and possibilities of the experiments;
- transparency of research protocols, in particular as regards the implications of marketing strategies carried out by companies or other organizations;
- the creation of appropriate legislation to accompany the rapid development of this new discipline (Murphy et al., 2008).

Neuromarketing tools and practices fascinate the professional public on the one hand, but outrage the general public on the other hand and raise some ethical concerns. The most important problem with regard to the analysis of professional texts can be identified violations of respondents' privacy. Consumers believe that neuromarketing tools can read their minds (Hubert and Kenning, 2008). This would make consumers transparent to companies, which could at any time challenge their private decisions and force their preferred behavior and product choices (Fugate, 2007).

Another ethical issue in neuromarketing is the use of this technique for other purposes (Lee et al., 2007). When examining cognitive processes related to the consumption preferences of individuals, firms gain great power to influence purchasing decisions (Murphy et al., 2008 and Fisher et al., 2010). Many sources report a lack of ethics regarding the ability of neuromarketing to "create irresistible ads and products."

Neuromarketing has since moved significantly forward, and marketing agencies have begun to organize independent research, which is conducted in a very similar period at universities in all countries around the world, even in China (Molchanov, Yang, 2019). Private doctors already work in research agencies and universities, who can negate the previous objection. Neuromarketing would then pose a major threat to

consumers' autonomy, as it would remove their defense mechanisms. The above issues concern ethical approaches in neuromarketing.

It is therefore demonstrable that the positive impact of neuromarketing outweighs the possible unwanted negative effects that could endanger consumers. This is an important argument that may also play a role in the creation of new neuroscience, neuromarketing centers with different neuroimaging technologies. Such a space is certainly being created on the premises of the University of Economics in Bratislava. The connection between economics and neuroscience has great potential for the university's research activities.

Other authors also claim that neuromarketing has aroused criticism because doctors and academics work in marketing research companies. According to Dinu et al. (2010) it is possible to hide possible damage to the health of participants or negative aspects of marketing research, and therefore the results would be biased. From our point of view, there is room for the discovery of possible health problems of respondents, because the examined objects are analyzed in detail and doctors can discover hidden potential health problems. Following a consultation with the respondent's security and privacy, treatment of the identified problems can begin.

Of course, the use of scientific technologies to promote commercial interest is not inherently problematic, but the use of technology that examines the inner workings of the human brain, especially beyond what might reveal traditional behavioral studies, raises significant ethical concerns. These issues fall into two main categories:

- protection of various parties that may be harmed or abused by neuromarketing,
- protecting consumer autonomy (Murphy, Iles, & Reiner, 2008).

For some, neuromarketing raises worrying questions about the extent to which advertising agencies, marketing researchers, and their corporate clients should be able to intrude on consumer privacy, and the perceived power will allow them to manipulate consumer purchasing decisions (Lewis, 2007).

Introducing neuroimaging methods into an environment where the ultimate goal is to sell more products to the consumer can raise ethical issues. In the next section, we provide an overview of ethical issues that may arise:

- Businesses will be able to read consumer thoughts. This concern concerns the privacy of thoughts. Is it possible to use neuromarketing to find out the preferences of a person outside of a specific task? This concern can be alleviated by transparency of purpose: operators need to know what kind of efforts they are helping, and their data should only be used for that purpose.
- Private versus public preference information. Individuals must be able to control what they choose to disclose about their personal preferences. An invasion of privacy occurs when neuroimaging methods reveal private preferences that are outside the research question of neuromarketing research.
- The information will be used to discriminate against individuals or to misuse specific neurological traits found in a subset of individuals. Many people would find this tactic disgusting because it exploits a biological "weakness" that only exists in some people. Similarly, this information could be used to time upward price movements in product pricing in order to exploit individual weaknesses

that are known to coincide with specific biological conditions (for example, rising beverage prices when someone is known to be thirsty).

- Medium versus peripheral path of influence. The aim of the central route is to influence consumer preferences regarding the functional aspects of the product (for example, fewer calories in beer). The peripheral path tries to manipulate preferences through motifs that are peripherally related to the product (such as the sex of people in ads). Neuromarketing could potentially be used to increase both types of impact, but some find attempts to optimize the peripheral route more ethically questionable.
- Brain responses obtained from a small group of subjects will be used to generalize to a large population. This, of course, is constantly happening in the scientific literature. If neuromarketing data is used in a product design and the product injures someone, this is partly due to the setting up of neuromarketing research and poor evaluation of results. Particular attention should be paid to this, but it is not just about neuroscience research.
- Lack of regulation of traditional marketing methods, as they are not usually considered experimentation, nor are they subject to the supervision of various state institutions. For example, MRI scanning is approved in the United States by the US Food and Drug Administration (FDA) for clinical use, but because no diagnosis is made in the marketing environment, there is potential to circumvent FDA requirements. The emerging neuromarketing industry should make a good decision to adopt an industry standard of independent review. Clients should request it.
- Perception management. How will the public react when they find that neuromarketing research has been used in product design or product marketing? The public's response to genetically modified foods could provide an opinion, because we still live today at a time when the Sars-COV-2 virus vaccine was developed and people have adopted it. Acceptance of this form of human examination is also a prerequisite.
- Companies do not have to be primarily concerned with the best interests of the consumer. Companies and consumers maintain complex relationships in which some of their goals are compatible while others are in conflict. On the one hand, companies strive to design, manufacture and sell products that customers seek to buy, leading to the achievement of compatible goals for the benefit of both parties. On the other hand, companies also focus on maximizing their short-term or long-term profits, sometimes to the detriment of their consumers. Like marketing itself, an understanding of consumer preferences can be applied to goals that are in the best interests of society and their consumers, or to goals that are in the interests of society and to the detriment of their consumers. What approach neuromarketers choose is an open question.

4.2 Ethical approach in neuromarketing research

In order to reassure the public and to work in some way with potential discoveries on the one hand and moral beliefs on the other, we need to develop a special approach

that reflects these two values. This neuroetic approach would implement the use of all smaller micro- as well as larger non-invasive devices. In marketing research, we must adopt a framework that respects the privacy of respondents. Ethical issues can be exacerbated by the introduction of smaller diagnostic devices and nano-devices in all marketing practices. Small nanodevices have the advantage of being easy to carry, inconspicuous and often imperceptible to the naked eye. They can remove a sense of aversion and a deeper message of control over everyday consumers and consumer behavior, whether at home or in a store or business space, with the prospect of forcing people to consume products even if consumers do not directly want or seek them (Ariely & Berns, 2010).

Consumers have three main areas of interest when using their own data by companies, which we have described above:

- transparency,
- security,
- responsibility.

It is quite understandable that consumers with a growing sense of mistrust need a certain depth of understanding. When conducting marketing surveys, we should respect the control over the handling and handling of personal data about respondents. In this context, their demand for privacy is absolutely understandable. We perceive a growing argument that the new dimension and current in marketing - nanomarketing, which is a kind of link between marketing and the use of nanodevices, in assessing consumer attitudes and preferences, must clearly protect human dignity. It is also necessary to protect the privacy of respondents and neutrality, or the autonomy of consumers, and last but not least to protect groups of the most vulnerable people, such as the elderly - retired or young people, namely children of all categories.

Conati (2004) identified in his research that, for example, children perceive these devices very naturally and even think that these devices in neuromarketing are not disruptive for them. Nanomarketing devices, with their small size, have raised a number of questions as to whether they may not be a black tool for manipulating consumers or whether they can improve consumers' lifestyles by measuring them. The answers are clear. With the growing number of neuromarketing studies, we are clearing these concerns, and the study clearly states that neuromarketing and nanomarketing devices are beneficial to humans. For example, continuous real-time monitoring offered by portable nano-devices that can provide a better understanding and treatment of some compulsive messages, such as shopping addiction, alcohol, smoking, or gambling. In addition, thanks to the results of neuromarketing measurements, consumers have the opportunity to improve their shopping habits and make their shopping efficient. In the same way, thanks to neuromarketing measurements, they can get their emotions under control - they can identify an emotional state when they do not pay to enter the store, because they would miss their savings on unnecessary products. This particular code of conduct, if we can call it that, should also respect the protection of all vulnerable entities, especially children, the elderly, the mentally ill but also prisoners (Murphy et al., 2008). This established code of ethics must be based on the WMA Universal Declaration of Helsinki.

Third, ethical recommendations should include the dissemination of:

- data,
- experiments
- risks
- the benefits of experiments.

Fourth, all results obtained from neuromarketing experiments should be transparent and available to the public, both professional and in a certain version of the ordinary one. They should be professionally described in publications and in the form of reports made available in the mass media. In every respect in research, we must guarantee the privacy and anonymity of all respondents, because already in the initial phase of the research, it was agreed between researchers and respondents that all information will be for scientific purposes only (Slowther & Kleinman, 2009). It is not possible to further trade this data. In this context, another serious problem may arise, namely in the diagnosis of respondents' abnormal health. In case of finding an abnormal object on a healthy observed subject - the respondent is strongly recommended to consult this condition with a doctor who is a specific person from the project team, capable of consulting treatments or treatment procedure.

Our proposal for a strategy for an ethical approach in neuromarketing is to seek knowledge with respect to the truth. We divide the strategy of ethical approach to neuromarketing research into 4 basic phases:

- acquaintance with the legislation in the examined area,
- informing respondents about the objectives and risks of the research,
- acceptance of informed consents,
- protection of data and privacy of respondents.

At the beginning of the whole process, it is important that the research respondents are acquainted with the whole research process and the possible risks, if any will have to be taken during the research. The basis of the information provided is informed consent. Before entering the research, each research participant should be clearly and intelligibly informed of:

- the objectives of the specific research,
- potential risks,
- the possibility for the participant to withdraw from it freely at any time without any consequences, possibly not to participate in it at all.

Ethics is often felt by researchers as unnecessary administration, hindering or even hindering research. The fact is that adherence to ethical research requirements places a line between what is ethically acceptable and what is no longer. In no case does ethics have the ambition to regulate research, nor does it restrict academic freedom, as guaranteed by the European Charter of Fundamental Rights in Art. 13. If the project addresses ethically sensitive issues, a detailed justification of the need and adequacy of the use of, for example, personal data or human subjects is necessary.

An important part of the strategy of this ethical approach to research is the absence of the influence of influence, leading to the subject to decide to participate arbitrarily in the survey. The rules that should guide the ethical approach to neuromarketing are:

- Nuremberg Code.
- Declaration of Helsinki.
- Convention on Human Rights and Biomedicine.

- UNESCO declaration.

In the process of setting up a strategy for an ethical approach to research, it is important to focus on the first phase - providing information about research. This phase can be described as a critical part of the whole strategic process. We must provide research participants - respondents with information in a comprehensible form, either in writing or orally, optimally both. It is very important that we formulate appropriate and easy-to-understand expressions and use information technology in an ideal state. A suitable form is the creation of an online questionnaire, which will provide us with fast and adequate feedback, available in real time and at any location.

Informed consent should be obtained if the research involves human subjects, human genetic material, human biological samples, or if it includes data on human subjects. Informed consent can be given to us by a person able to understand the research, its objectives and risks and to be able to make free decisions. Complications may arise with the provision of informed consent by persons in the case of:

- people serving prison sentences - prisoners,
- adolescents - small children,
- mentally retarded people,
- seriously injured people.

We can give informed consent individually with regard to local cultural customs in various forms - orally, in writing. It is important to maintain the autonomy of the respondents. In the case of community surveys, the presence of a community representative or lawyer representing a group of respondents is recommended.

The last phase in the strategy of ethical approach in neuromarketing research is the protection of data and privacy of respondents. This phase has a high priority and its importance is in principle from the preparation of the research proposal to its implementation. The responsibility for data protection lies with the organization where the neuromarketing research itself is carried out. The project proposal needs to describe in detail how to ensure data protection, privacy and confidentiality of personal data in their collection, archiving and processing so as not to misuse them, which could result in stigmatization, discrimination.

In particular, the Helsinki Declaration addressed the interests of research participants and can be applied appropriately in neuromarketing research. It contained elements such as: (Strand, Keizer, 2015)

- Medical research protects the life, health, privacy and dignity of human research participants / subjects over the interests of society
- Necessary measures must be taken to protect the interests of human subjects from harm
- The importance of the objectives must outweigh the inherent risks and burdens on participants - no abuse, no harm to human health
- Research must be clearly formulated and submitted for approval with a clear statement of ethical considerations
- Entities must volunteer and be informed of the implications of the research
- Scientists, research participants and all other parties have ethical obligations that must be clearly defined. This should ensure the accuracy of the results

published, all necessary information, sources of funding and any possible conflicts of interest, which must be clearly stated.

- Compensation for harm resulting from participation and justice for all.

Neuromarketing can, in certain cases, create a negative consumer attitude towards a company that uses such practices if the consumer is convinced that they are unethical. Given the discussions about the ethics of neuromarketing, it is quite understandable that brands actively using neuromarketing, especially in the US, prefer not to talk about it out of caution. On the other hand, it is clear that marketing researchers are rather mysterious due to concerns about the disclosure of sensitive information (Miláček, 2016). The question is whether the results obtained through neuromarketing research cannot be misused to induce excessive or irresponsible consumption.

5 Conclusion

The most important advantage of neuromarketing, which we identified in the analyzed texts compared to classical surveys, is mainly the independence of neuromarketing. We do not need the opinion of the respondent, we simply measure his emotional reaction and evaluate it completely independently. By analyzing the text, we found that it is important to protect the privacy of respondents. In the article we managed to identify several other benefits. One of them is simultaneity of data with the identification of emotional reactions processed in a second or millisecond, which will allow to demonstrate the triggering factor of this particular emotion. Another advantage is the possible diagnosis of respondents by doctors in case of health complications during the research.

From a consumer perspective, we have identified three basic pillars for building trust between researchers and respondents: transparency, security and accountability.

The main ethical issues surrounding neuromarketing include the invasion of privacy and consumer autonomy. Another ethical issue is the presence of doctors and academics conducting research for commercial purposes. Another problem is the concern about the exploitation of vulnerable groups, such as juveniles, the mentally retarded or the injured.

In this paper, we have identified four basic phases of an ethical approach strategy in neuromarketing research, starting with familiarity with the legislation in the research area, followed by finding and informing respondents about the objectives and risks of the research. This is followed by the phase of receiving informed consents from respondents, to whom they express consent to the research process and management and are aware of the objectives and risks of the research. The last phase of the ethical approach strategy in neuromarketing research is the protection of data and privacy of respondents, which takes place continuously from the beginning of the entire research process.

Furthermore, it is necessary to evaluate the burden-benefit ratio for participants, describe the possible potential consequences of research for human dignity, society, environment, culture, simply demonstrate the ability of the researcher to sensitively address the ethical dimensions of the research project. In the future, we recommend to

develop the individual phases of the strategy of ethical approach in neuromarketing and to supplement them with specific steps of the whole research process, so that the pillars of trust between respondents and researchers are preserved.

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