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ETHICAL ISSUES IN NEUROMARKETING
-MASTER THESIS-

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ABSTRACT

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Keywords: Neuromarketing, neuroscience, neuromarketing research, ethical issues, marketing ethics, ethical theories, ethical codes, textual analysis.

Thesis purpose: The purpose of this study is to define ethical issues that raise criticism towards neuromarketing and explore how companies are currently addressing these issues.

Methodology: Due to the sensitivity of the subject authors decided to use the least biased researched method – document analysis. 17 ethical codes or codes of conduct were analyzed.

Theoretical perspective: The thesis is based on traditional marketing ethics and marketing research ethics theories. After reviewing existing ethical theories Crane & Matten (2007) model of solving ethical dilemmas was chosen as a basis for the data analysis.

Empirical data: Ethical guidelines provided in companies' ethical codes were used as empirical data for the research. Some ethical codes were found on internet, on companies' websites. However, the majority of ethical codes were acquired after contacting the companies personally by email.

Conclusion: Neuromarketing is a field that offers considerable potential for market research; efficiently helping the match of consumer needs and provided goods and services. Manipulation or violation of autonomy and privacy cannot be reached through the tools that today's neuroscience disposes of; therefore companies involved in this kind of research should direct efforts towards the aim of making the large public aware of this. This includes measures regarding updating their ethical codes with more specific and explicit sections related to neuromarketing but, more importantly, efficiently informing the stakeholders about the existence of such ethical codes and the commitment towards respecting them.

TABLE OF CONTENTS

1. INTRODUCTION	3
2. METHODOLOGY – DOCUMENT ANALYSIS	7
1.1. Research question.....	7
1.2. Theoretical framework description	7
1.3. Research design	7
1.4. Collection process of ethical codes	10
1.5. The process of documental analysis.....	12
3. THEORETICAL FRAMEWORK	14
2.1. Neuroeconomy and neuromarketing	14
2.2. The way neuromarketing works.....	16
2.3. Critique in neuromarketing	18
2.4. Marketing ethics	20
2.5. Ethics in marketing research.....	24
2.6. Ethics in neuromarketing	27
4. ETHICAL CODES ANALYSIS	30
3.1. Ethical codes’ evaluation.....	30
3.1.1. Ethical codes of marketing research associations	30
3.1.2. Internal ethical codes of neuromarketing research organizations	32
3.1.3. Ethical codes of corporations.....	33
3.2. Ethical codes’ textual analysis	34
3.2.1 Ethical theory of rights and justice.....	35
3.2.2. Utilitarian ethical theory.....	39
3.2.3. Egoism ethical theory	41
3.2.4. Virtue ethical theory.....	43
3.2.5. Ethics of duties theory	47
5. DISCUSSION	53
6. CONCLUSIONS	56
7. LIMITATIONS AND FURTHER RESEARCH	59
8. LIST OF REFERENCES	60

1. INTRODUCTION

For many years, researchers relied on the assumption that consumers use only the rational mind in their decision-making (Camerer and Fehr, 2006). The impact of emotional factors and subconscious mind was neglected for one very simple reason – explaining and predicting rational consumer behavior was much easier than trying to understand emotional influences, considering that the probability of defining emotions-driven behavior patterns was almost impossible. However, the development of technologies and the growing collaboration between science and business had opened a new door for marketing researchers, bringing the role of emotions to the spotlight of consumer research (Camerer and Fehr, 2006). Increasing usage of neuroscience, as a popular marketing research method (neuromarketing), reveals that the rational part of the brain acts only as an “advisor” in decision-making (Fugate, 2007) It means that emotions are the main factor that has the final word in the buying decision. These findings were made using neuroscience technologies that provide the opportunity for actually capturing what is happening in consumers’ brains when they face various market stimuli.

Since the discovery about the importance of emotions was made, research firms and big corporations are increasingly using neuroscience in order to gain new and valuable insights. However, the technique has received noteworthy criticism, being called “abusive” or “invasive” (Senior et al, 2011). The main reason for this is that emotions are a more sensitive area that consumers are not always willing to reveal. In addition to this, it is believed that capturing people’s unconscious thoughts and using them with commercial purposes might award companies with a power to manipulate with consumers needs. That is why the usage of neuroscience for market research raises ethical considerations, which represent one of the main obstacles that withhold the emergence of this new field (Ariely and Berns, 2010). Is this method used by the companies only by trying to satisfy consumer needs better or it is immoral to intrude into human brains with commercial purposes (too much power for the companies)? Do companies have the right to reveal the “black box” of consumers’ minds or they should rely only on things that are actually told by the consumers? These are questions that have not yet received a clear answer.

During the past decade, neuromarketing has increasingly gained popularity in both the academic and business society. There are a fair number of scientific articles that approach the subject and explain its processes and evolution, but the majority only mentions the existence of some ethical issues, failing to provide deeper analyses and insights (Lindstorm, 2008). The limitation of the present literature is represented by the fact that none of the problems that relate to neuromarketing are discussed based on empirical data and solutions to handling them are scarce.

These shortcomings in the literature create a one-sided perspective - that neuromarketing is an unethical activity and companies that use this technique seek only to manipulate consumers' minds. However, what is hard to understand from existing literature, is corporations' and market research companies' position in this situation and how they deal with raising ethical considerations. There is also a gap between marketing ethics and neuromarketing ethics. Academic attempts to connect these two areas are limited and they don't look to ethical issues in neuromarketing through the prism of marketing ethics theories. However, this kind of disjuncture should not exist, since neuromarketing is just a branch of marketing field.

In order to separate real ethical threats from general public mistrust in the new market research technology, the purpose of this study is to define ethical issues that raise criticism towards neuromarketing and explore how companies are currently addressing these issues. With corporations increasingly focusing on their ethical practices, controversy in neuromarketing needs a clear, objective study that analyzes the fairness and ethicality of the research methods that they use. One of the main reasons is that a company's reputation regarding best practices is one of its most important assets. Moreover, in the era of Internet and new technologies, every unethical behavior will be brought to the public's attention right away, meaning that marketers must protect the company's reputation even more than before.

Therefore, the study involves several tasks. Firstly, before going deeper into the neuromarketing field, it is necessary to define the concept of neuromarketing, provide explanations regarding how this technique works and what are its possibilities. General understanding is crucial for further analysis, because without it, one could hardly be able to understand the nature and importance of ethical issues.

Secondly, we will analyze the literature that defines ethical issues, which emerge from usage of neuroscience in market research. Moreover, existing marketing ethics theories will be used to construct the framework, along with existing ethical issues. By creating a theoretical framework from already existing marketing ethics theories and using it for neuromarketing ethics analysis, we will try to eliminate the gap in existing academic literature, trying to demonstrate that neuromarketing ethics could be explained and understood by using already existing marketing ethics theories.

Thirdly, the study aims to collect ethical codes or codes of conduct from the companies that use neuromarketing in their activities. We decided to use ethical codes of conduct, as a source for analysis because these codes provide guidelines which companies must follow in their activities, including neuromarketing ones. Moreover, it has been suggested that the ethical issues arise due to gaps in the existent ethical standards and lack of bilateral communication. Therefore, analyzing these documents we will prove that the gap exist or will find evidence that denies it.

Fourthly, we will attempt to analyze the contents of ethical codes using the created framework and explore if those ethical codes respond to the issues in neuromarketing. The analysis should facilitate defining companies' position when facing arising ethical issues in their neuromarketing activities and explaining neuromarketing ethics in the context of business ethics. An interpretivist approach was chosen for the analysis. Using this approach we will begin their analysis with the assumption that there is nothing absolute about ethical issues in neuromarketing. In this way biases from will be avoided and a clear uninfluenced view of the situation will be formed.

Finally, if the analysis will reveal that companies using neuromarketing practices are facing shortcomings in their ethical guidelines that could lead to increasing controversies, the study's last task will be to suggest solutions on how to fill the respective gaps and improve communication with the interested parties.

1. METHODOLOGY - Document analysis

1.1 Research question

Since it has been suggested that most controversies in the field are due to the lack of bilateral communication or insufficient regulations, we aim to explore the ethical issues related to neuromarketing and to determine if existing guidelines and recommendations reply to the ethical issues properly or other methods are needed. Therefore, the research question of our paper is to define ethical issues that raise criticism towards neuromarketing and explore how companies are currently addressing these issues.

1.2 Theoretical framework description

A reliable, objective and comprehensive study must have a strong basis on which it will be based. For this particular study, we decided to use marketing ethics theories as a basis for the analysis. There is a gap in academic literature between marketing ethics theories and neuromarketing; the opportunity of an approach that uses marketing ethics theories as a lens for looking at neuromarketing issues was not yet seized. Considering this, we aim to dissolve that gap by analyzing ethical issues in neuromarketing with the help of the framework, which will be constructed after analyzing marketing ethics theories. Created theoretical framework will be used to analyze ethical codes of the companies that use neuromarketing in their activities. It should facilitate answering to the research question as well realizing the purpose of the research.

1.3 Research design

The topic of ethical problems is usually sensitive area for the companies; therefore, we had to find the method that would help to collect reliable data in a delicate manner without confronting companies with uncomfortable questions. Since the aim is to explore how are the present ethical codes of companies involved in neuromarketing address the ethical issues, we consider that a qualitative document analysis, examining organizational

documents (ethical codes or codes of conduct) that directly or indirectly relate to neuromarketing activities, is the approach that is most suitable for the completion of the study. The ethical codes of conduct, standards and agreement forms and participant protection regulations will be used as a platform for developing insights relevant to the research question.

Several reasons have influenced this decision. First of all ethical codes or codes of conduct are the guidelines in companies' ethical behavior. It means that in all their activities as well as in neuromarketing activities companies must follow the rules that are stated in ethical codes. Documents will provide information how companies are dealing with the ethical issues that they are facing. Organizational documentation is a form of unobtrusive measures (Brymann and Bell, 2011), representing the most objective, reality-assessing approach, allowing us to create a reliable view how companies are dealing with ethical issues. As Merriam (1988) pointed out, 'Documents of all types can help the researcher uncover meaning, develop understanding, and discover insights relevant to the research problem' (Merriam, 1988, p. 118). A hermeneutics approach (Brymann and Bell, 2011) will be taken, meaning that we will interpret written text for a better understanding of the matter.

Moreover, interpretative skills are further required (Brymann and Bell, 2011) to clarify the meaning of the materials. However, diverse research, creative and multidisciplinary abilities, along with different educational backgrounds of the authors represent an asset that will provide us with the necessary knowledge to successfully complete the study. Moreover, the theoretical framework will serve as the most important instrument in the document analysis.

The analysis will refer to documents that have not been produced specifically for the purpose of academic research, but for business reasons. Because of this reason, they are considered non-reactive (Brymann and Bell, 2011); the possibility of a reactive effect (when the subject of the research is affected or influenced either by the instruments used

in the research either by the researchers themselves) could have been considered a limitation on the validity of the data.

In order to avoid influencing the study and being biased, the research design will be of constructionist nature – we will start from the assumption that there is no absolute truth regarding the ethical issues in neuromarketing and continuing by establishing how various claims for truth become constructed in everyday life (Easterby-Smith et al, 2008). This will lead to increased credibility of the research results. Moreover, by using this method, our ambition is to be able to stay neutral without supporting any side in the debates of neuromarketing ethicality.

The selected documents will be analyzed through qualitative procedures that assess the significance of particular ideas present in the documents (Jupp, 2006). The approach will assist us in probing the research question and reflecting on its complexity. The qualitative research is particularly valuable in the early stages of a field's development, as the case of neuromarketing and its ethical issues.

The textual analysis is considered a part of the qualitative and interpretivist tradition, emphasizing the meaning that the documents might have. A content analysis, which seeks the transformation of qualitative data into quantitative data, using explicit rules of coding (Weber, 1990) was considered unfit for the purpose of this study, which requires a fully qualitative approach.

In order to be able to generalize, we will try to approach the ethical issues from similar point of views, and then apply the conclusions to different cases, in order to contribute to the development of the theory field. The theoretical framework will serve for this reason. An important aspect that will constantly be in our attention is the relevance of the research design to the research question (Easterby-Smith et al, 2008).

We will use only those organizational documents that are relevant to the research question. Some of the documents are codes of business conduct from the corporations such as Yahoo

or P&G. Even though these documents are not directly related with neuromarketing and might seem not relevant in the analysis from the first sight, these corporations apply them in all their activities. And since neuromarketing is one of their activities, it means companies apply standards stated in mentioned codes of conduct in neuromarketing activities as well. Some of those documents are available to the large public on Internet. However, in order to access other documents, we had to contact companies personally.

1.4 Collection process of ethical codes

The search for relevant documents was an extensive process. Organizational documents represent a very heterogeneous group of sources (Brymann and Bell, 2011), some of them not being available for public access. Therefore, a challenge that was taken into account from the beginning of the study was the difficulty of gaining access to such documents. In order to overcome this challenge and obtain as much documents as possible, companies were contacted personally early on in the research, obtaining their approval for access to organizational documents.

Therefore, over 60 companies that are doing neuromarketing research were contacted, in order to determine (if not specified on their website) what ethical code of conduct (if any) they follow. As a result, the 30 companies that responded provided a total of 17 documents, summing 408 pages. Moreover, we were granted access to nonpublic documents that are used internally by the respective companies. Positive response rate and willingness to collaborate could be explained by the fact, which was mentioned before – sensitivity of the subject. If companies conduct their activities ethically there should not have been a problem to indicate which ethical codes they use. The summary of all collected documents is presented below.

Table 1

Collected documents for analysis

Company	Name of the document	Number of pages
The Mind Lab, Neuromarketing labs	ESOMAR “Passive data collection and observation recording code”	31
BVA, The Mind Lab, Millward Brown	ICC/ESOMAR “International code on market and social research”;	36
BVA, Brain Impact, Neuroinsight, Exakti, AAT Research, The Mind Lab, NeuroHM, Neurosense, Neuromarketing labs, Neurensics, Buyer Brain, Walnut, Sales Brain	Neuromarketing Science and Business Association’s (NMSBA) “Code of ethics”	3
Buyology INC	“Non conscious research ethical standards”	3
Mindware psychological Research lab	The British Psychological Society’s “Code of ethics and conduct”	31
Brain Impact	Information sheets for fMRI experimentation	6
Millward Brown	Wire and Plastic Products’ “Code of business conduct”	4
Campbell	“Code of business conduct and ethics”	40
Procter & Gamble	“Worldwide business conduct manual”	42
Walt Disney	“Code of conduct”	25
Daimler	“Code of ethics”	16
CocaCola	“Code of business conduct”	49

PepsiCo	“Global code of conduct”	38
Microsoft	“Global code of conduct”	8
Yahoo	“Code of ethics”	50
Nielsen	“Code of conduct”	26
		TOTAL: 408 pages

Three main categories of ethical codes that were collected for the research could be identified: ethical codes by the corporations that hire market research companies to conduct neuromarketing researches, internal documents of market research companies and ethical codes of associations to which market research companies belong. Among market research companies, members of the Neuromarketing Science and Business Associations (NMSBA), following this association’s ethical code, represent the majority. The second ethical codes according to frequency were the European Society for Opinion and Market Research (ESOMAR) and International chamber of commerce (ICC) guidelines. The companies’ membership to these associations, committing to respect their ethical codes, reflects the fact that companies are aware of ethical issues in neuromarketing field. Moreover, companies’ voluntarily membership and applications of associations’ ethical codes show that they are willing to follow ethical guidelines.

Corporations that hire neuromarketing research companies for their studies have broader behavior guidelines, which include the desired behavior with other stakeholders (e.g. employees, suppliers), besides the relationship with the consumer. Therefore, these ethical codes are not specifically related with consumers as research subjects. However, since consumer-based neuroscience is one of the activities that the participating companies have in common, the guidelines in the companies’ ethical codes are applied to this area as well, making the documents relevant for our research.

1.5 The process of document analysis

The analysis of ethical codes will be constituted of two parts. Firstly ethical codes will be evaluated according to their suitability for further research. It will be done using four criteria, originally developed by Scott (1990): authenticity, credibility, representativeness and meaning. An authenticity criterion evaluates the origin of the document (Bryman & Bell, 2007). Determining the nature of the document (e.g. was it produced by an author or organization assign to do this) leads to different issues related with circumstances of document production. The credibility of the document stands for the truthfulness and accuracy of the document and if document is biased or not (Wharton, 2006). Representativeness describes how well documents reflect the research phenomena. It defines if the document is typical of the kind or not. Meaning criteria establishes if the document is clear and comprehensible (Bryman & Bell, 2007). Ethical codes' assessment will allow us to select ethical codes that could facilitate in answering the research question and reaching research purpose the best. In this way study's credibility and objectivity will increase.

The following step will be textual analysis using theoretical framework created in the previous chapter. Ethical codes will be categorized and analyzed according to marketing ethics theories, taking into consideration their correspondents to ethical issues in neuromarketing. Since ethics is a sensitive and complex matter, we aim that our research will be systematic and analytic, but not rigid. Certain underlying themes will initially guide the research, but others are expected to emerge during the study. Through a constant comparison of relevant meanings, the initial themes and categories will be refined and complemented by the generation of new ones (Brymann and Bell, 2011).

It will be a very delicate process to establish if the company's regulations and internal codes contain sufficient amount of information or to determine if they act ethically in their marketing research. Business ethics is, in itself, a subjective and sensitive matter; therefore our analysis will be more complex than simply providing a verdict of ethicality.

As a result of our analysis, we hope to provide clarifications regarding the method's intrusiveness and future suggestions for dealing with the related ethical matters, contributing at the same time to the theory field, proving that neuromarketing ethics can be analyzed with the help of existing marketing ethics theories (Bryman & Bell, 2007). Therefore, we believe that this study will constitute a good basis for further researches in the fields.

2. THEORETICAL FRAMEWORK

2.1 Neuroeconomy and neuromarketing

The rapid evolution that characterizes today's markets generates continuous challenges for contemporary marketing. In the following section, the conceptual aspects of one of these new challenges – neuromarketing - will be shaped. One of the issues that need clarifying is whether this technique represents a management tool in behavioral researches or rather constitutes a new, broader, science.

The classic economy theories rely on the assumption that consumers are rational when making choices, accurately assessing the options. (Camerer and Fehr, 2006). However, more recent research shows that, most of the times, their choices are highly irrational, influenced by emotions. Globalization, instant communication technologies, changes in consumption behavior – are all changes that make marketing one of the most dynamic fields in business today (Pop & Iorga, 2012). Since marketing seeks to match products and services with customer needs, it is fundamentally characterized by its interdisciplinary nature (Zaharia et al., 2009).

Neuroeconomy is one of the interdisciplinary fields that impacts marketing – one that brings the economic context into the neuronal model for decision-making (Egidi, 2008). Neuroeconomy emerged as an independent field as a result to the increased interest in investigating how the decision-making process actually takes place. The factor that influenced the popularity of this field was the decreasing cost of using neuroimaging techniques, allowing researchers to study the processes on a larger scale, discovering the brain reactions that determine complex cognitive processes. Therefore, researchers now have the possibility to correlate neuroscience concepts like decision making, memory or emotion with marketing ones, such as positioning, reaction to brand advertisements or brand loyalty (Perrachione, 2008).

Neuroscience researchers have concerns regarding the physiology and functionality of the brain, while economy specialists are more interested in the interpretation of its reactions through economic concepts and the applicability of results in the field of consumer behavior. A successful cooperation between the two fields consists in the manner of phrasing questions that research answers to – phrasing an economic objective that is in direct relationship with the brain’s functionality.

One of the most important applications of neuroeconomy is neuromarketing. The term started to be used around 2002, but it cannot be attributed to any particular scholar. At that time, a few US companies like Brighthouse and SalesBrain were the ones that were beginning to offer research services that implied the use of this kind of technology.

Constensen (2011) considers that neuromarketing is a new and controversial field of marketing research, where “one interprets psychological and neuro-psychological knowledge from a marketing perspective”. According to Hubert & Kenning, neuromarketing is a sub-area of neuroeconomics, which “addresses marketing relevant problems with methods and insights from brain research.”

As Ariely & Berns (2010) suggest, the trend of using neuroscience tools to product marketing has two main roots: the first one, the possibility that neuromarketing becomes a cheaper and faster marketing method compared to the traditional ones; the second one, the hope that it will provide answers that are not otherwise available. The areas of application of neuromarketing research have various and complex applications, as Ariely and Berns (2010) present in their study: designing products in which taste, texture or smell are crucial, architecture and design for new buildings, movie trailers, ad effectiveness, website design – all of which can be the result of a broad area of emotion, interest, trust, loyalty or fear.

Neuromarketing is a revolutionary and revealing research method, providing insights on how consumers perceive certain stimuli coming from advertisements or product characteristics, and on how their subconscious – the “irrational”, emotional part of the

brain – interprets them and influences the decision making processes. However, scholars are far from suggesting that the classic tools should be ignored – the ideal approach is to use them in such a way that they complement each other, resulting in a better understanding of the factors that motivate and influence purchase behavior. According to an ESOMAR study from 2011, the worldwide value of marketing research was around 31 billion USD in 2010. Therefore, the fact that marketers are interested in any new technology that might reveal new insights about consumer behavior is not surprising, despite the highly sensitive ethical issues surrounding the neuromarketing field.

The fact that simpler methods, like focus groups and surveys are, for the moment, easier and cheaper to implement is counterbalanced by the risk of obtaining biased results, assuming that the brain contains information about preferences that is hidden in traditional communication (Ariely & Berns, 2010). According to Moore (2005), a medium-sized neuromarketing study costs between \$94,000 and \$188,000, only slightly more expensive than conducting a focus group.

Neuroimaging can, at least theoretically, reveal not only what consumers like, but also predict their future buying behavior. Such studies can be made even before a product or a service is launched on the market, eliminating those that are not promising as early as possible in the process.

Leaving the ethical issues aside, there is no question that the market understood that neuroimaging provides powerful lenses through which the consumer's mind can be understood. However, despite its popularity in the business environment, the field has not yet fully penetrated the research academia society (Morin, 2011).

2.2 The way that neuromarketing works

Neuromarketing is considered a complex field, since it involves the cooperation of neuroscientists, academics and marketing professionals (Alasdair, 2005). It offers cutting

edge methods for directly probing minds without requiring demanding cognitive or conscious participation (Morin, 2011).

One of the most frequently quoted study by scholars (McClure et al., 2004; Pispers and Dabrowski, 2011), is “Cola Brains”, an experiment carried out by researchers at the Baylor College of Medicine in Huston, Texas. The group of people who agreed to have their brains scanned using functional magnetic resonance imaging was exposed to two scenarios: one, having to choose between Coke and Pepsi knowing which is which, and the other, without knowing the brand. The subjects stated that they preferred Coke in the detriment of Pepsi when knowing what they drank, but preferred Pepsi during the blind tasting. However, the study failed to provide a rationale for how our brain handles brand choices (Morin, 2011). The activity in certain brain areas related the tasting experience with the brand, making the decision a irrational one, based on emotional triggers (McClure et al, 2004; Pispers & Dabrowski, 2011).

It has been suggested that a “buy button” in the brain could be triggered through neuroscience tools (Lindstrom, 2008); however, current research demonstrates that the cognitive processes associated with purchasing decision-making depend on several factors and cannot be reduced to a sole area of activation. The responses to marketing efforts are connected to an array of neurobiological processes; however, it is possible that some regions of the brain are more involved than others.

There are three well-established, non-invasive methods for mapping the brain activity: electroencephalography (EEG), magnetoencephalography (MEG) and functional magnetic resonance imaging (fMRI). Due to the fact that they are safe from ethical points of view, they are the methods involved in the studies that have been published in the past years.

Even though EEG is a rather old technology, it is still regarded as a good tool to measure the brainwaves, involving the placement of a helmet with electrodes on the head of the subject. The relative low cost of EEG studies made them popular for neuromarketing; however, they are insufficient for understanding how the choices are triggered.

MEG measures and images the magnetic fields in the brain, offering better insights into the “black box”, but at a much higher cost than the previously mentioned technology. Even though it offers almost instant responses to cognitive processes, in the context of marketing research it is limited in terms of investigating emotional and higher cognitive functions and it is usually combined with fMRI in order to optimize the results.

Unlike the previous technologies, fMRI uses a scanner to measure the changes in blood flow in the brain. Since it offers the deepest images of the brain structures, it is also the most widely used method in neuromarketing studies. Participants view the experience positively, considering the procedure “interesting” and the technology “fascinating”, the friendly approach of the researchers being essential (Senior et. al, 2007).

2.3 Critique in neuromarketing

As previously mentioned, neuromarketing has several benefits that are not to be ignored. Even though it offers the possibility to do marketing research without the “biased consumer” risk, critiques have been expressed by consumer groups, scientists, and scholars (Murphy et al., 2008; Senior et al., 2011). There is a multitude of opinions on the subject, but most of them are not backed up by hard data. Therefore, the study of this work aims to clarify these issues using empirical data.

As a result to the above-mentioned Coke vs. Pepsi study, heavy criticism started to target the field. In 2004, the question of neuromarketing ethics was raised for the first time in an article suggestively named “Brain Scam”, strongly criticizing the morality of neuromarketers.

There are scholars that support the idea that neuromarketing gives corporations and advertising agencies insights that lead to the manipulation of purchase decisions (Lewis & Brigder, 2005) or the fact that companies that produce tobacco, fast food or alcohol should be banned from using this techniques (Ziegenfuss, 2005), since it leads to damages in

health. However, a study carried out among neuroscientists and academia revealed that they do not consider neuromarketing a manipulative technique for selling the product or service (Eser et al, 2011).

Further critics were made by Ruskin (2004) “marketing is deeply implicated in much serious pathology; neuromarketing is a tool to amplify these trends” and Lace (2005), arguing that organizations already know too much about their “glass” consumers. Brain scanning is able to predict the strength of an advertisement in determining specific actions.

Moreover, problems of ethicality have been discussed. Pure neuroscientists reject the idea of their discipline’s commercialization (Medina, 2004), supporting the idea that the available technology is too imprecise to predict purchasing behavior (Morin, 2011). The protection of human subjects is one of the ethical questions that are usually addressed; mainly due to the fact that the current regulations regarding neuroscience do not apply to advertising research and neuromarketing companies. Guidelines have been published in the Journal of Advertising Research and by the American Marketing association (2011), but they are not legally enforceable.

Concerns have also been expressed regarding the violation of thought privacy (Murphy, et al., 2008; Wilson, et al., 2008) through neuromarketing, despite the fact that published studies demonstrated that the current technology has limited access to a subject’s thoughts (Fisher et al., 2010). Furthermore, the fact that participants provide their consent before being involved in the study has to be considered as a given.

One of the most frequent reactions to hearing the word “neuromarketing” is “Orwellian” (Lindstorm, 2008). Another ethical issue that has been discussed is the fact that the near future may bring the integration of neuromarketing findings into ways of consumer manipulation (Wilson et al., 2008). There is one study (Ariely and Berns, 2010) demonstrating that there is no evidence for believing this, even though it admits it is theoretically possible.

2.4 Marketing ethics

For many years well – established concept of what is moral and what is not in business was dominating among top executives and managers. According to it, all actions, that were legal and were bringing profit to the company, were considered as morally right. However, since markets are structured and managed by people and ideally should work for the welfare of society (Williams & Aitken, 2011) businesses' activities should not avoid moral judgments according to socially acceptable ethical norms. Business ethics according to Crane & Matten (2007) is “the study of business situations, activities and decisions where issues of right and wrong are addressed” (Crane & Matten, 2007, p. 5). In this situation understanding what is right or wrong should be viewed from the moral perspective rather than commercial or financial. Since business encompasses many areas (e.g. finance, accounting, human resources etc.) business ethics has many subfields with their specifications.

Marketing is one of the business fields, which is criticized most often. Whether it would be pricing, promotion marketing research or any other area, marketing practitioners always receive accusations of being dishonest, manipulative, intrusive or exploiting vulnerable consumers such as children (Jamnik, 2011). That is why it is of vital importance for marketing managers to consider all their decisions from ethical point of view. Marketing ethics deals with the issues of how moral standards are applied to marketing decisions, behaviors and institutions (Murphy, 2002). Or in other words marketing ethics refers to what is morally right and wrong, good and bad in marketing practice. More precise marketing ethics could be defined in two ways: systematic study which involves moral evaluation or marketing decisions, practices and institutions or marketing ethics could be considered as standards and norms which are used while judging marketing activities as morally right or wrong (Smith & Murphy, 2012). Ethical questions related with marketing can be examined at micro level (individual firm) or macro level since marketing related ethical issues influence society in collective way (Laczniak & Murphy, 2010).

In order to understand and explain emerging ethical problems in marketing field various ethical theories are applied. Majority of scholars distinguish three approaches (theories) to

marketing ethics – descriptive, analytic and normative (Murphy, 2002; Jamnik, 2011; Laczniak & Murphy, 2010).

Descriptive (or empirical) marketing ethics studies existing moral values, beliefs and practices of marketing. Most of the marketing ethics studies fall under this category. This kind of studies research moral values and beliefs that managers hold when taking decisions, as well as conditions that might affect ethical decisions (Jamnik, 2011). Examples of these kinds of dangerous conditions could be targeting vulnerable consumers such as children or disabled people, as well as promotion of controversial products such as tobacco or alcohol (Murphy, 2002). In order to explain ethical decisions that marketers make, researchers distinguished two categories that influence individuals' ethical decision making: individual and situational. Individual category involves variables related with individual itself. It could be gender, age, nationality, education, religion etc. Situational category involves peer group influence, organizational culture, top management influence, organization size, sanctions etc. In general these theories usually move from ethical problem recognition, to the search of alternatives, later evaluation, choice and lastly behavior. Descriptive marketing ethics studies might play a significant role in directing marketers' attention to the ethical conflicts and tendencies that marketers would not have thought about before. And this might lead to the reorganization of strategic mechanisms for improving ethical decision making (Jamnik, 2011).

Analytic ethics approach studies the nature of ethically relevant marketing concepts and justifications that could be used for normative ethical marketing claims. These kinds of studies are more theoretical than applicable nature and often raise disagreements if marketing ethics should be separated from general business ethics or even more from non-business (societal) ethics (Jamnik, 2011).

Normative marketing ethics is values, principles and ideals that marketers should apply (Jamnik, 2011). In other words normative perspective focuses on what can be, what marketing organizations should consider in order to improve their ethical behavior instead of investigating situation and moral values which exist now (Laczniak & Murphy, 2010).

Normative theories attempt to formulate the values and standards which marketers could follow in their work and which could facilitate in resolving disputes and other moral considerations in the field of marketing. Four basic values are applied by normative perspective in order to criticize marketing for various failures: truth, freedom, well – being and justice. Regarding the value of truth, marketers should never intentionally mislead or manipulate customers. It is advertisements, promotions or purchase agreements that are usually accused for this kind of unethical behavior. The value of freedom stands for protection of vulnerable consumer groups that are usually exploited by various promotions. Marketers are usually accused of not respecting freedom of choice of more vulnerable consumer groups such as young, elderly or mentally feeble consumers manipulating them to buy products that these consumers do not need. In other words marketers must be extremely cautious when engaging in exchanges with vulnerable segments. The well – being of people is primary related with safety and quality of products. More precisely marketers should not do harm when performing their work. In many countries tobacco companies are being accused for the lack of concern regarding the consumers. The last underline value is justice. It means that marketers have an obligation to evaluate fairness of their marketing decisions taking into consideration the parties that will be affected by these decisions. Justice value often applied to the product pricing, debt arrangements or children targeting. In reality marketing practitioners are often accused of either failing to apply and safeguard the values mentioned above in their work or prioritizing one value over another. That is why the aim of normative theories is to formulate the values, standards and ethical behavior guidelines that managers would be eager to apply in their marketing practices (Jamnik, 2011; Laczniak & Murphy, 2006).

Murphy & Laczniak (1993) in their book discuss normative ethical theories that could be applied analyzing ethical decisions in marketing. These are egoism/ managerial egoism, duty based (deontological), utilitarianism and virtue ethics. Egoism ethics focuses on the outcomes of decision maker and morality of self – worship. Duty based (deontological) according to which operational criteria are based on standards of conduct in relation with penalties (Murphy & Laczniak, 1993). Utilitarianism ethical theory focuses on the social outcomes within a community. The rule of utilitarianism comes from analyzing each

situation's "right" and "wrong" and concludes with offering possibility of establishing certain principles that would be applicable to all such situations. And lastly, virtue ethics according to which morally right decisions come from managers with virtue character. That is why it is of crucial importance to form characters with virtue characteristics. While first three theories are considered as more traditional theories, virtue ethics could already be attributed to contemporary ethical theories category. Contemporary ethical theories instead of analyzing separate actions, research the character of decision maker (Crane & Matten, 2007).

Manager's character and moral values he or she holds play very important part in decision making and ethicality of those decisions. Murphy & Laczniak (1993) distinguished five manager types according to their ethical approaches. The first type is "crooks". These managers understand their unethical behavior, but still behave in the same manner for their own and for the companies' usually short term benefits. The second type is "legalist", these managers act according to the law but morality they consider only as an opinion. The third type is "moralists" who consider decisions with their possible ethical consequences. These people follow their moral principles and do not give up for organizational pressures. Usually (but not often) this type of managers are met among senior or top managers. On the other hand, young and less experience managers fall into "seeker" category which means that they sincerely want to behave morally right, but seek more information about their possible actions. The last type is "rationalizers". They seek moral justification for their decisions and recognize possible ethical consequences of their actions. These types of managers usually are met among senior managers (Murphy & Laczniak, 1993). "Moralists" or "rationalizers" should be dominating type in order for company to be considered as ethical. Since these types of managers are usually met among top executives, these people should encourage young employees ("seekers") to follow their good practice in this way making company ethically aware.

Finally, for marketing decisions to be ethical managers should apply stakeholder approach in their activities. Stakeholder orientation realizes the idea that marketing organizations operate in and on behalf of society. Very often companies and managers take into

consideration only investors' or owners' interest, trying to satisfy only their wishes and expectations. By focusing only on one group of stakeholders, managers neglect other groups such as employees, suppliers or even communities in which companies operate. This kind of situation usually causes unethical behavior towards one of the stakeholders groups. That is why, when taking decisions companies' managers should consider all stakeholders that will be affected by their actions, in this way bringing their decisions to more ethical level (Laczniak & Murphy, 2010).

As it was mentioned above business ethics is a wide field which is divided in subfields according to their specifications (e.g. marketing ethics). Moreover, marketing is a broad perspective as well. That is why, different areas of marketing (such as pricing, promotion, distribution etc.) will have their own guidelines in ethical behavior. Marketing research is not the exception. In the following chapter, we are narrowing down their attention even more, focusing specifically on marketing research ethics.

2.5 Ethics in marketing research

According to Murphy & Laczniak (1993), ethical reasoning is a process of systematically analyzing an ethical issue and applying ethical standards to it. They illustrated this process through three steps: defining the ethical issue, selecting the ethical standard that is to be used and applying the standard to the problem.

In the context of organizational activities that relate to marketing research, marketing research ethics is a subfield that draws both from ethics, in general and business ethics in particular (Yallop, 2012). Therefore, standards from both areas could be applied. Due to the fact that marketing research is a field highly responsive to performance pressure and emphasizing the role of relationships, ethical issues are considered essential (Yallop, 2012). Issues that were previously relevant to psychologists, sociologists or anthropologists gradually became relevant in marketing with the start of experimentation usage in research (Tybout and Zaltman, 1974).

As far as ethical issues are concerned, marketing research has been one of the most discussed subareas of marketing. Discussions about the ethicality of miscellaneous research tactics and misuse of data are constantly topical (Yallop, 2012). Moreover, in an era when technological advancements happen quickly and techniques like neuromarketing rapidly become popular, data collection in marketing research is dramatically influenced (Yallop, 2012).

One of the problems that marketing research is confronted with is the fact that the process of documenting consent to often focuses on respecting the legal requirements, but researchers fail to develop a process through which the subject reach a completely informed and voluntary decision regarding their participation (Citro et al., 1998).

According to Citro et al. (1998), there is a need for guidance that includes specific examples regarding when is acceptable to omit information about the study. Social, behavioral and economic science (SBES) researchers should develop methods through which the participants fully comprehend the benefits, harms, risks and confidentiality issues that are involved in the study.

The law cannot keep up with rapid developments in technology; therefore there is a need of constant adaptation of organizational codes of ethics. In this regard, scholars developed frameworks for ethical conducts for the past decades. Tybout and Zaltman (1974) promoted a structure of 3 basic rights that any marketing researcher has to respect in relation to the participants: the right to choose, the right to safety and the right to be informed.

Even though the legislation regarding the protection of the human participants in marketing research is limited, three major ethical principles have been developed in the Belmont report (1979) and constitute the basis for any study. The first principle, the respect for persons, refers to the obligation to treat subjects as autonomous individuals whose choices and decisions are fully respected by the researchers involved in the study. Moreover, whenever a person is constrained regarding their age, capacity or autonomy,

special recognition should be given. The second principle, regarding beneficence, refers to the researchers' obligation to ensure participants' protection to the highest possible extent and to maximize the benefits, especially to society. The third and last principle refers to justice, namely the obligation to be fair in selecting the study's participants concerning the benefits/risks of the research. More specific, the researchers should ensure that certain groups are not systematically excluded or included in the research.

In order to build credibility with the stakeholders that influence the industry and to ensure consistency regarding which ethical standards are to be used, increasing pressure to apply specific ethical standards and guidelines defines the marketing research industry (Peterson, 1996).

Studies that research how the codes of ethics are used in organizations that are performing marketing research are scarce. Few examine the codes of ethics' role and content in the organizational environment, but fail to address how they are applied and implemented in marketing research organizations (Segal & Giacobbe, 2007).

The literature (Ferrell et al., 1998) provides an analysis regarding the existence and enforcement of codes of ethics of the three main actors involved in marketing research: corporate research departments, marketing research and data subcontractors. The study promotes the idea that marketing research firms and subcontractors tend to have and enforce internal codes of ethics. At the same time, they are aware and enforce external codes of ethics to a greater extent than research departments.

A study conducted by Marnburg (2000) among Norwegian professionals suggests that internal codes of ethics did not influence the employees' attitudes, being considered an inferior document. Moreover, this study, along with others (Lee & Yoshihara, 1997, Schwartz, 2001), supports the idea that the foundation of ethical behavior is in the individual's mind.

In order to produce quality research, scholars argue that it is essential to understand the ethical issues that revolve around marketing research (Tybout and Zaltman, 1974). The results of the study and the quality of data can be compromised unless ethical aspects are carefully considered and dealt with.

2.6 Ethics in neuromarketing

The goal of neuromarketing is to obtain the information about how consumers' brains are functioning while facing various market stimuli. The advantage of this measurement technique is that obtained information is unaffected by consumers' biases and unwillingness to reveal the truth. There is of course nothing wrong in using technologies in consumer research, but the biggest problem with those used in neuromarketing is that with these technologies researchers can observe beyond the limits that research objects might set for these tests. That is why usage of neuromarketing raises ethical concerns that might be divided into two categories: protection of consumers' autonomy and protection of various parties that might be harmed or exploited by these researches (Murphy et al, 2008).

Going deeper into this field four major areas regarding ethic in neuromarketing can be distinguished: protection of research subjects, prevailing exploitation of niche populations, responsible business – to – business advertising and public representation (Murphy et al, 2008).

Privacy of individuals participating in neuroscience researches that are held in medical institutions are usually protected by the laws. However, when neuroscience is used for commercial purposes or, in other words, outside medical research centers, these laws lose their power what basically means that privacy of research objects depends on researchers moral values (Murphy et al, 2008).

Exploitation of niche populations or more vulnerable segments is the second ethical problem of neuromarketing. More vulnerable audiences in this case are children, elderly people, people with psychological disorders etc. Neuroscience researches could provide

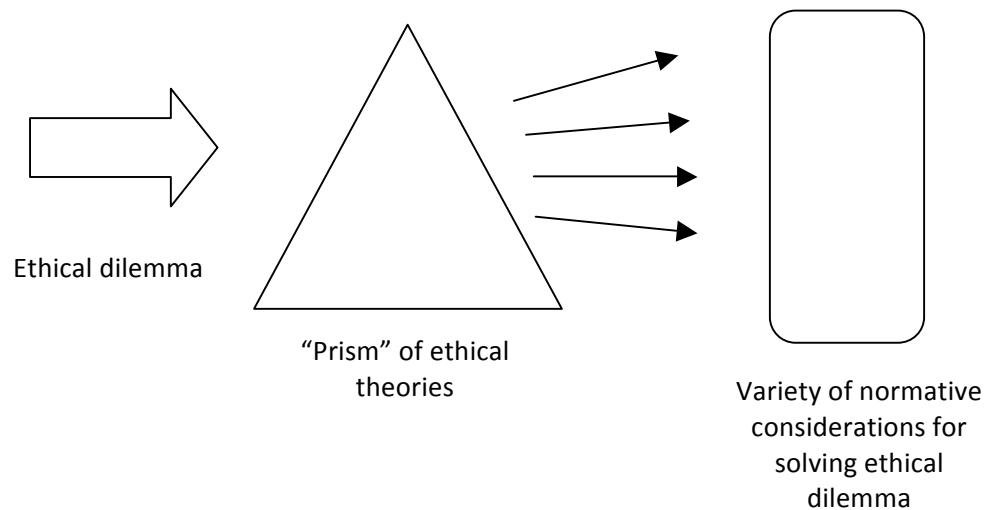
information about vulnerable consumers to the marketers, who will be able to manipulate these niche audiences much easier than other. For example, video game industries use kids for these kinds of researches in order to create new games (Murphy et al, 2008; Acuff, 2005).

Responsible business – to – business advertising means that neuromarketing research companies must be extremely cautious about advertising their services. What managers in huge corporations often fail to take into account is that human brains are the most complex biological organs known in the universe, with ten billions of cells that make connections to each other. The process of explaining how the brain works is extremely difficult and the probability of mistakes always exist. However, color – coded brain pictures, accompanied with neuroscientific explanations often looks convincing enough and create “neurohype” among corporations. It leads to the situation when marketers usually are eager to invest huge amounts of money to neuroscience researches without considering the validity of their results. And if neuroscience-based advertising does not fulfill the expectations, companies are suffering losses (Murphy et al, 2008).

Public representation is another important issue. The lack of information about neuromarketing researches creates mistrust and rumors in the society. However, any new, unknown technology arises more negative rumors together with fear and mistrust than positive ones. And with the lack of information, those rumors are not denied and do not disappear.

Neuroscience usage in marketing research receives a huge amount of critique. However, since this method is comparatively young in the whole marketing research field, very little has been done in order to explore or create deeper understanding of neuromarketing. Despite the fact that neuroscience is a new method for consumer researches, it is still a part of marketing research and of the overall marketing field. That is why existing theories in marketing ethics could be applied in order to bring neuromarketing to the more ethical spotlight.

All theories that were discussed above approach ethical dilemmas from different angles and offer diverse ethical problems' solutions, allowing marketers to understand the ethical issues and their possible solutions in a deeper manner. Moreover, it allows managers to understand better the ethical dilemmas and possible solutions. Moreover, in the real business world, business decisions involve several actors with different opinions of what is ethical and what is not. Approaching the problems through the prism of different ethical theories helps to understand different views and to find the way to the best solution in particular situation (Crane & Matten, 2007). The schematic view of this approach is given in picture 1.



Picture 1. Pluralistic perspective on the value of ethical theories for solving ethical dilemmas in business (Crane & Matten, 2007)

Market research companies and multinational corporations apply different ethical standards in their activities. Diverse ethical guidelines correspond to different ethical theories that were discussed above. That is why, in order to reach the research purposes, we are firstly going to categorize the ethical codes according to which ethical theory they correspond best. Following, in the textual analysis of ethical codes we are going to take

most common ethical issues in neuromarketing and analyze them through the prism of ethical theories to which the ethical codes were assigned. Therefore, we will attempt to analyze how ethical guidelines provided in ethical codes solve the major ethical issues. Ethical theories will be used as a basis for this analysis. Even though ethical codes will be assigned only to one specific ethical theory, we will not be single-minded and if features of other ethical theories will be detected, we will take them into consideration. Using this framework, we expect not only to prove that neuromarketing ethics are related with general marketing ethics, but as well to examine if ethical codes employed by the companies respond to the ethical issues existing in the society.

3. ETHICAL CODES' ANALYSIS

As it was mentioned in the methodological chapter, the analysis of the documents will start from evaluating their suitability for further research. The following step will be textual analysis, using the theoretical framework created in the previous chapter. Ethical codes will be categorized and analyzed according to marketing ethics theories, taking into consideration their correspondents to ethical issues in neuromarketing.

3.1 Ethical codes' evaluation

3.1.1 Ethical codes of marketing research associations

Since the majority of the market research companies are members of Neuromarketing Science and Business Association (NMSBA), the ethical code created by this association (authenticity criteria), provides the main guidelines for companies' ethical behavior. One of the main responsibilities of NMSBA is "the contribution to the development and the implementation of international guidelines and standardization in the neuromarketing discipline" (NMSBA, 2013, p.1). It means that the ethical code of this association was created specifically for neuromarketing companies, taking into consideration ethical issues related only with neuromarketing. For this reason, the NMSBA code of ethics meets the representativeness criteria perfectly. As for the credibility criteria, the fact that this code is created by the company that is not directly related with any particular researches (unbiased), but whose main interest is a honorable and ethical conduct of neuromarketing, leads to the high credibility of this document. When analyzing NMSBA code according to the meaning criteria, it needs to be mentioned that the code is divided into several articles, each of which discusses different aspects of neuromarketing activities. The document is well structured, understandable, clear and easy to follow.

Two following ethical codes are created by the International Chamber of Commerce (ICC) in collaboration with the European Society for Opinion and Market Research (ESOMAR) - authenticity criteria. Similar with NMSBA, these organizations are concerned with the

ethical behavior of market researchers. The ICC/ESOMAR ethical codes also highly fulfill the representativeness criteria, because they were written with the purpose of ethical behavior in market research field. Even though they do not have that strong representativeness as the NMSBA code, because ICC/ ESOMAR ethical codes embody all market research fields, not only neuroscience research, they are still applicable in majority of the areas in the neuroscience field. Similar with the NMSBA ethical code, ICC/ESOMAR ethical codes could be considered credible and unbiased documents since the organizations that created them are not related with any research conducted by the market research companies. Both documents are well structured; the main definitions and principles are explained in the beginning. For this reason, it is easy to follow and understand these codes (meaning criteria). NMSBA and ICC/ESOMAR codes of ethics were mentioned most frequently among the companies that conduct neuroscience researches.

One of the less frequently mentioned codes of ethics was Wire and Plastic Products (WPP) code of business conduct. Wire and Plastic Products is the world leader in marketing communications services. WPP is made up of leading companies in: advertising, consumer insight, public relations & public affairs etc. (WPP, 2013). WPP is the creator of the code (authenticity criteria). Even though WPP's code of conduct takes into consideration many fields, its representativeness is comparatively high. Nevertheless, if neuromarketing research companies use this code in their activities it means they find it useful and applicable to neuroscience researches as well. Credibility is also high, because this code is created again by organization whose interest primarily is honorable and benefits from ethical behavior of its company members. The structure of the document, however, is quite unclear, all ethical standards are put into one section without distinguishing them according to the areas that they protect (meaning criteria).

The last ethical code in this section is the ethical code created by the British Psychological Society (authenticity criteria). It was created as working guidelines for professional psychologists. Some neuromarketing research companies claimed that they use the same code in their practices. It seems logical, due to the fact that psychologists are often among the members in neuromarketing research teams, since their knowledge is required in the

interpretation of research data. Therefore, it is crucial that psychologists would be ethical and would not distort research data. For this reason, it is logical that companies also apply ethical codes for psychologists. That is why representativeness for this code is also high. Credibility is high as well, since the document is created by a third party, unrelated with any neuromarketing company, but which is concerned about the ethical behavior of those who apply this code. The document also fulfills the meaning criteria, since it is clearly structured, comprehensible and easily understandable.

All ethical codes mentioned above are characterized by the fact that are made by third parties who are not directly related with neuromarketing researches or the companies that conduct neuromarketing researches. For this reason, documents can be considered unbiased and reliable sources for ethical guidelines.

3.1.2 Internal ethical codes of neuromarketing research organizations

The difference between ethical codes created by the associations to which neuromarketing companies belong and ethical codes created by neuromarketing companies themselves is that the latter documents are specifically related with companies' activities and are written by companies' employees.

Buyology INC "Non-conscious research ethical standards" internal code was released for the guidance of the company's employees in their daily activities. It is written by the employees in the organization (authenticity criteria); for this reason it could reflect biases of the authors or of the organization itself. So, in this case, credibility will not be as strong as in the cases of ethical codes that were discussed above, because the company might create standards that are more favorable to them regarding the ethical behavior. However, the representativeness is high, since it is related specifically to company's main activities. When it comes to the meaning criteria, the document is clear and easy to follow, however it could be better structured e.g. explaining concepts, purposes of the code, dividing it to the separate articles.

Nielsen Company's code of conduct is another example of an internal ethical code created by a market research company (authenticity). Similarly, credibility in this case will not be as high as in the cases of documents created by societies to which companies' belong. The reason is the same as in the case above. The document is created by the people inside the company who are biased towards the success of the company. However, representativeness in this case will be high as well. The main reason for this is the fact that Nielsen is a huge market research company, focusing only on consumer researches. As for the meaning criteria, company's code is well – structured, easy to follow and understand.

Compared with the section above, documents in this section have lower credibility. This comes only from the fact that the companies' employees who are interested in the well being of the company create these documents. However, the textual analysis will reveal how biased (if at all) these documents are.

3.1.3 Ethical codes of corporations

According to Forbes (2012), the corporations doing different forms of neuromarketing research (in the majority of cases, outsourced to a marketing research company) that publicly admitted it during the same year, were: Campbell, PepsiCo, Microsoft, Yahoo, Procter & Gamble, Walt Disney, Coca Cola and Daimler.

When assessing the ethical codes created by corporations according to the four criteria, the conclusions are rather similar. The documents provided by Coca-Cola, Campbell, Pepsi, P&G, Walt Disney, Yahoo and Microsoft follow, more or less, the same structure and include the same kind of information. However, despite their similarities, the content is adapted to the values and beliefs of each company. The documents' authentic nature cannot be questioned, since they were provided by the companies' official websites or by employees that are directly responsible for that sort of guidelines.

If we consider neuromarketing as a milestone to which we relate when assessing the documents' representatives, they might not be considered fit. However, since we only took into consideration companies that are intensively doing neuromarketing research, and our

purpose is to determine if the documents contain sufficient guidelines that can apply to consumer protection and marketing research, they are highly representative. Even though, usually, they do not perform the research themselves, but rather externalize it, the criticism and ethical problems target the big corporations directly, since they are responsible for every action that is taken in their name. Therefore, the documents are representative for our study.

The above-mentioned documents are well structured, offering definitions and explanations for the majority of possibly confusing concepts. The documents are easy to understand and offer clear arguments, therefore fulfilling the meaning criterion.

These guidelines are created by the companies themselves, relying on internal forms of sanctions whenever they are not properly respected. For this reason, they might be considered biased and the credibility criterion might be affected. However, the fact the respective companies are always in the spotlight of media, consumer groups and even governments, forces them to have a flawless behavior and to constantly refer to their ethical codes. Therefore, the credibility factor could rise (although, not fully).

An exception to this assessment of the corporate ethical codes constitutes the document provided by Daimler. Even though it is representative for the research purpose, showing that the lack of relevant information might be a gap that needs to be filled in the near future, and it is authentic, it fails to fulfill the criteria of credibility and meaning. It is poorly structured and rather unclear, offering only a few, general, guidelines. Moreover, there are several concepts that are not defined and vague formulations, making it challenging to be analyzed.

3.2 Ethical codes textual analysis

In this section, the ethical codes will be categorized according marketing ethics theories and analyzed using the theoretical framework, taking into consideration the most relevant ethical issues in neuromarketing.

3.2.1 Ethical theory of rights and justice

The majority and most important ethical codes that were analyzed fall under the category of right and justice ethical theory. This includes NMSBA, ICC/ESOMAR, “Buyology.Inc” and Disney ethical codes. This particular ethical theory emphasizes the importance of respecting and valuing the basic human rights such as truth, freedom or privacy. It is stated in the theory that rights of one actors’ typically result in the responsibilities of other actors who must respect those rights. It is, basically, similar to two sides of one coin. The rights of the research participants are the responsibilities of the companies that conduct the research (Crane & Matten, 2007).

The responsibility of protecting research participants’ rights is clearly stated in the ICC/ESOMAR ethical code: “the rights of respondents as private individuals shall be respected by market researchers and they shall not be harmed or adversely affected as the direct result of cooperating in a market research project” (ICC/ESOMAR, 2007, p.4). This statement perfectly corresponds to one of the main ideas of right and justice ethical theory: marketers should never mislead, manipulate or intentionally harm consumers (Laczniak & Murphy, 2006). In the NMSBA ethical code there is even a separate article under the title of “participant rights” where the rights of participants are outlined and explained. The rest of the articles also reflect the requirement to protect human rights even if it is not stated directly. The same situation occurs with the “Buyology.Inc” ethical code.

Manipulation and violation of autonomy

In order to protect research participants from manipulation or violation of their autonomy, the fifth article of NMSBA code of ethics guarantees that “participants shall be fully

informed about the project before neuromarketing technique can be used to collect their neuromarketing insights” (NMSBA, 2013, p.2). It means that research participants should get full coverage about neuroscience possibilities and what kind of information is sought by that particular research. In addition to this, the same code’s second article claims “neuromarketing researchers shall not deceive participants or exploit their lack of knowledge of neuroscience” (NMSBA, 2013, p.2). According to this article, researchers cannot use their superiority against research objects, which lowers their possibilities to manipulate research participants. Finally, article seven of the same code declares that participants “shall be able to withdraw from the research at any time” (NMSBA, 2013, p.2). It means that if the research subjects feel threat to their autonomy they can withdraw from the research anytime. The rights of free will and possession of information related with the research are protected by those articles. These articles correspond to the right and justice theory, because by protecting those rights, companies will ensure that no abuse or manipulation with research participants will be used (Laczniak & Murphy, 2006).

In a similar manner, research participants’ autonomy is protected by ICC/ESOMAR ethical code. Article two (honesty) claims that research “shall not abuse the trust of respondents or exploit their lack of experience or knowledge” (ICC/ESOMAR, 2008, p. 5). Moreover, according to the article three (professional responsibility) respondents’ participation is entirely voluntarily at all stages and researchers must ensure that “respondents are in no way harmed or adversely affected” (ICC/ESOMAR, 2008, p.6). Even more detail this protection is explained in ESOMAR’s passive data collection and observation ethical code. According to article 3.2 (informed consent) “the respondent must know about the nature of the data being collected, the reasons for processing it and what will be done with it. Data subjects should not be misled, lied to or tricked” (ESOMAR, 2009, p.4). It assures what Laczniak & Murphy (2006) would call “right for fairness”, meaning that market researchers must evaluate fairness of their activities taking into consideration research participants, as well.

“Buyology.Inc” also guarantees that they use collected information “for the purpose explicitly explained to the respondent prior to their participation” (“Buyology.Inc”, 2012,

p.1). Moreover, “the participants will be made aware of the purpose of the study and how their data will be used prior to leaving the research facility” (“Buyology.Inc”, 2012, p.1). Again, all details of the research should be explained to the participants. In this way, their right of knowing for what purposes they are going to be used is respected. Therefore, companies must be fair about their intentions. If the research subject still agrees to participate in the research, it means there should not be any issues related to abuses of his privacy or manipulation.

Protection of privacy

Another major ethical issue related with neuromarketing is protection of privacy. One could argue that privacy is not related with ethics. However, neuroscience technologies create the opportunity for scientists to observe human feelings and emotions, which in other cases would probably be concealed. If research participants agree to reveal those emotions to the scientist, researchers must make sure that this information will not be revealed to third parties, because it would be unethical, at least. But again, the main ethical codes that neuromarketing companies use cover this area as well.

Privacy is one of the main natural rights of individuals that have to be protected by the companies. NMSBA code of ethical code pays special attention to the protection of privacy. Articles six (privacy) and seven (participant rights) come into action regarding this issue. According to those articles, researchers must guarantee that participants’ data is not available to others, that the identity of participants will not be revealed, that insights collected during research will be carefully protected by the research company and will not be used to any other purposes than to those that participant had agreed (NMSBA, 2013, p. 2). These responsibilities that research companies take not only protect the identity of research participants but also contribute to the purpose of avoiding manipulation. It makes research subjects faceless and research, itself, basically harmless. This duty is specified in ICC/ ESOMAR code of ethics: “researchers shall ensure that adequate security measures are employed in order to prevent unauthorized access, manipulation to or disclosure of personal data” (ICC/ ESOMAR, 2008, p. 7). ICC/ESOMAR and ESOMAR ethical codes, in contrast with NMSBA ethical code, allow disclosure of personal information to the clients, if

the research participant agrees. The difference between different attitudes of these codes might be explained by the fact that NMSBA code of ethics deals specifically and only with neuromarketing, where research data and insights are more sensitive and sometimes obtained from research participant unconsciously. For this reason, keeping research subjects' identity in secret is of high importance.

"Buyology.Inc" ethical code is unclear about protection of privacy. Even though it states that companies have to "vigorously protect the individual privacy of respondents" (Buyology Inc., 2012), there are no further specifications; it is hard to understand what the company considers as "vigorous protection". The lack of accuracy leaves a lot of space for interpretation and it does not inspire trust in company's ethicality.

Even though Walt Disney does not have a section on ethicality in marketing or research activities, they are explicit when it comes to sharing personal information. Every employee has to respect the company's view on confidentiality – personal information only being disclosed in cases that are permitted by law. Moreover, before sharing such information, the employees have to make sure that the recipient is authorized to receive the information and he understands its confidentiality and its use. Defining personal data as "any information that directly or indirectly relates to a person", Walt Disney considers that it should be used for legitimate business reasons only, but they fail to explain what this means and how far does the legitimacy of business reasons go, in their opinion. However, the document states that there are strict rules regarding the protection of customers' privacy, and that any breaches will lead to legal penalties and loss of reputation.

The problem of protection of research subjects (their personal information, in this case) is correspondingly treated in the documents provided by P&G, Campbell, Coca Cola and Microsoft. Even though the tone of these documents is not one that is reflected fully in the theory of justice ethics, this specific problem is treated differently. All documents stress the meaning of "confidential information" and clearly explain it, while describing the strict obligation of confidentiality that any employee in possession of such information has. They

commit to monitoring the evolving standards regarding the protection of the consumers in each country in which they operate, protecting their rights.

Exploitation of niche populations

When it comes to protection of vulnerable niches, NMSBA and ICC/ ESOMAR codes of ethics approve usage of children in researches only if the parents of the children give their permission. However, since neuromarketing researches with children are a very sensitive topic, more attention in the codes should be addressed to this issue, specifying in which areas these researches could be done and when they should be avoided. Moreover, other niche populations, such as elderly or disabled people, are not even discussed in the codes. Even though inappropriate behavior towards other minorities might outrage society as much as exploitation of children in neuromarketing, “Buyology.Inc” is lacking information about protection of niche populations in their ethical code.

In terms of corporations’ documents that treat this problem, from the analyzed codes, Pepsi shortly mentions respecting the regulations of marketing to children and their rights, but fails to provide further explanations or guidance. However, Yahoo is committed to partner with law enforcement, child advocacy groups, and industry peers in order to ensure that children rights are fully protected.

Again, companies in their activities take into consideration research participants’ rights. In this case, companies guarantee the protection of niche populations, which is also one of the main rights in the rights and justice theory. As Laczniak & Murphy (2006) pointed out, marketers are usually accused of not respecting freedom of choice of more vulnerable consumer groups such as young, elderly or mentally feeble consumers, manipulating them to buy products that these consumers do not need. In other words, marketers must be extremely cautious when engaging in exchanges with vulnerable segments (Laczniak & Murphy, 2006).

Responsible advertising

When it comes to responsible advertising, NMSBA ethical code underlines that in the second article (integrity) stating, “neuromarketing researchers shall be honest about their

skills and experiences” (NMSBA, 2013, p.1). Similar position is expressed in ICC/ ESOMAR code of ethics “researchers shall not make false statements about their skills, experiences or activities or about those of their organization” (ICC/ESOMAR, 2008, p. 5). The last statement fits better the idea about honest advertising. Even though these statements could be applicable to companies’ advertising, they were originally not intended for the implementation of ethically correct advertising. For this reason, it should be specified that companies should not make false statements about their abilities in all channels of their communication, including advertising. Again, there are no guidelines for responsible advertising in “Buyology.Inc” ethical code.

Another aspect that can be linked to the attitude towards neuromarketing practices is reflected in the Pepsi Code of ethics. They support the idea of marketing their products as a direct reflection of the company’s high ethical standards, not misrepresenting the qualities of the products or make claims without adequate legal clearance.

3.2.2 Utilitarian ethical theory

Wire and Plastic Products’ (WPP) code of ethics, along with Coca-Cola’s “Code of business conduct” could be put under the category of utilitarian ethical theory. According to this theory, an action is morally right if it results in the greatest amount of good for the greatest amount of people (Crane & Matten, 2007). And this is one of the goals stated in the WPP’s code of ethics: “we will continue to strive to make a positive contribution to society and the environment by: maintaining high standards of marketing ethics; respecting human rights; respecting the environment; supporting community organizations; supporting employee development” (WPP, 2013, p.2). As utilitarian ethical theory explains, the ethical code of WPP aims to maximize the goodness for as many parties as possible.

Manipulation and violation of autonomy

The ethical code of WPP emphasizes that companies that use this code must not tolerate manipulating or misleading research subjects or violating their autonomy. “We will not undertake work which is intended or designed to mislead, including in relation to social,

environmental and human rights issues” (WPP, 2013, p.1). In the last statement, reflections of right and justice theory could be found. Social and environmental issues are signs of the utilitarian theory, showing that the company cares about the wellness of a broader amount of people - not only their consumers; human rights issues are the signs of right and justice theory since it involves issues related with protection of human rights.

The code also states that companies will not “consider the potential for clients or work to damage the Group’s reputation before taking them on. This includes reputational damage from association with clients that participate in activities that contributes to the abuse of human rights” (WPP, 2013, p.1). The conclusion that could be drawn from the statements above is that companies which belong to this association not only should avoid conducting unethical behavior themselves, but they also should not conduct business with the parties that are abusing human rights. Again, the reflection of the utilitarian ethical theory is visible here. The code of conduct encourages companies to behave in the way that brings goodness to as many parties as possible.

The document provided by Coca Cola presents a guideline that could apply to neuromarketing research – they want their products to be presented in an honest and forthright manner, meaning that untrustworthy neuromarketing practices would be eliminated from the scenario, furthermore reflecting an utilitarian influence.

Protection of privacy

When it comes to the protection of privacy, WPP’s code states that companies are committed to “protecting the consumer, client and employee data in accordance with national laws and industry codes” (WPP, 2013, p.1). However, as in the case of Nielsen ethical code, this code’s promise to protect data according to the laws does not mean that it will be protected following all moral rules. Often, what is according to the law does not necessarily have to be ethic, too. Moreover, WPP companies hold the right to handle personal data by themselves rather than involving research participant into deciding to which third parties their private information should be revealed. And this kind of policy might bring misunderstandings in some cases. In this case, signs of egoism ethics appear,

since the companies are more focused on their own well being, while the well being of other parties is minimally referred to.

Exploitation of niche populations

As for the protection of vulnerable populations, WPP's code of business conduct expresses in one of its articles that they will not knowingly create work which contains statements, suggestions or images offensive to general public decency and will give "appropriate consideration to the impact of company's work on minority segments of the population, whether that minority be by race, religion, national origin, color, sex, sexual orientation, gender identity or expression age or disability" (WPP, 2012, p.1). This code involves more minorities. However, there are no specifications on how market research companies should behave with these minorities, what the limits are and what special treatment these niche populations should receive.

However, the company is committing to respect all the industry's codes of conduct and assures the reader of not undertaking work which is intended or designed to mislead, as it neuromarketing, from the critics' point of view.

Responsible advertising

Regarding the issue of responsible advertising and public representation, the sections on marketing practices in the Campbell, Coca Cola, Millward Brown and Pepsi documents express strong utilitarian influences. The documents suggest that claims about their products in marketing, advertising and sales materials must be accurate and not misleading to their audience, meaning that neuromarketing should only be used in its truthful purpose. However, when referring to unfair or deceptive practices, Pepsi uses the word "avoid", leaving the reader with the impression that such practices might still be acceptable in certain conditions.

3.2.3 Egoism ethical theory

Nielsen's code of conduct falls into this category. It is stated in Nielsen's code of conduct „company's primary objectives are profitability and aggressive competition in the marketplace" (Nielsen, 2011, p.10). In addition to this, companies' interests, as the primary object of all employees, are emphasized throughout the whole document. It is often reflected by the phrases such as "employees must avoid any action that might interfere in the best interests of the company" or "company seeks to outperform its competitors fairly and honestly" (Nielsen, 2011). The last sentence proves that Nielsen's behavior should not be interpreted as selfishness. Rather, it can be called enlightened egoism. It means that even though the company's primary goal is the well being of the company itself, it also pays attention to other parties that are related with the company. Reputation and respect are some of the company's interests, and to reach them, the company must take care of the people who are related with it (Carne & Matten, 2007). One category of those people is research participants. Ethical and honest behavior with research participants is crucial if company wants to reach its own goals.

Even though the ethical code of Coca Cola can be, overall, analyzed from a utilitarian perspective, some parts of the document could be viewed from the egoism ethics' perspective, suggesting that ultimately, "it's about each of us knowing that we have done the right thing and feeling good with it". It continues by emphasizing the fact that they want to do what is right for "ourselves and for the Company", failing to provide information about what is right for their customers or business partners.

Manipulation and violation of autonomy

When it comes to solving ethical issues in neuromarketing, such as abuse of research participants' autonomy and manipulation, Nielsen has a strict policy: "no employee should take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misinterpretation of material facts or any other intentional unfair - dealing practice" (Nielsen, 2011, p. 11). According to this statement, the company condemns any manipulation or misinterpretation of data. In addition to this, the invasion to a person's

autonomy would be considered as highly “intentional unfair – dealing practice”. Therefore, any action that leads to that is forbidden in the company. Moreover, it is also stated in the code that “there should be no compromise of an individual well – being in anything we do” (Nielsen, 2011, p.13). Rights and justice ethical theory’s influence is visible in this case, since the company is considering the well being of individuals. And well being is considered as one of the human rights that companies should respect. Getting access to personal information against one’s will or using information against the research subject would be also considered as damage of person’s well – being. At this point, the conclusion that can be drawn is that the company in its practice (neuromarketing practice among others as well) is aware of relevant ethical issues and uses this code of conduct in order to fight with them.

Protection of privacy

Nielsen also takes care of their research subject personal data. “The company is committed to handling personal data responsibly and in compliance with applicable privacy laws. Employees may collect process and use personal data for legitimate business purposes only” (Nielsen, 2011, p. 11). In this statement, reflection of egoism theory is visible. Even though the company guarantees protection of personal data, it is used for reaching the purposes of the company. This reflects a dual situation: in order to reach its goals, the company must pay attention to their research participants’ requirements. Once again, the guidelines from the company’s ethical code provide solutions on how the ethical issues related with privacy protection are solved internally. However, the drawback of egoism ethics arises when dealing with research participants’ privacy. Nielsen (in contrast with some other market research companies) remains right to handle personal data by themselves rather than involving research participant into deciding what kind of third parties might use their information for their researches.

3.2.4 Virtue ethical theory

British Psychological Society’s (BPS’s) “Code of Ethics and Conduct”, Procter & Gamble’s “Worldwide business conduct manual” and Yahoo’s “Code of ethics” could be assigned to the virtue ethics category. The emphasis in virtue ethics as well as in BPS’s “Code of Ethics

and Conduct” is put on the character of decision maker: “the aim of the code is that it should apply to all psychologists with the focus on the quality of decision making, allowing sufficient flexibility for variety of approaches and methods but providing ethical standards which apply to all” (BPS’s, 2009, p.3). It also emphasizes that “the code provides the parameters within which professional judgments should be made” (BPS’s, 2009, p. 25). This ethical code is even divided into articles, each of which corresponds to different kinds of virtues that psychologists should possess in their work: respect, competence, responsibility, integrity (BPS’s, 2009). As stated in Carne & Matten (2007), these virtues are not acquired by birth, people acquiring them by learning. The ethical code of BPS works as a facilitator for the psychologists in their learning process.

Coming back to Murphy’ & Laczniak’s (1993) categorization of marketing managers, we can draw the conclusion that BPS’s ethical code aims to educate managers that would fall into “rationalizers” category. It means these managers seek moral justification for their actions and recognize possible ethical consequences of their actions (Murphy & Laczniak, 1993).

From the corporations whose documents were analyzed for this research, Procter & Gamble appears to be one that is most straightforward and explicit regarding its ethical conduct. They state that they “put their purpose, values and principles above the desire for winning” (P&G, 2012, p. 5), being focused, besides on their business results, also on how their results are achieved. Again, utilitarian ethics reflections could be noticed here. The company considers putting consumer needs above the desire to win. Moreover, a strong opposition to egoism ethics is visible - winning should be put aside. The information in the document insists on following the standards and the law at all times, adding that it is extremely important for every employee to understand how they apply to their activities. What is clearly and rather often emphasized is the need of consistency of every action with their goal of making the lives of their consumers better, each day.

In terms of respect for customers, the documents provided by Yahoo appear to be the most overt. They put the respect for customers above all, and “never forget that they come to us by choice”, thus giving them the responsibility of maintaining their loyalty and trust. This is,

to some level, similar to what Microsoft declares about their passion for and openness towards customers, aiming towards harmonious business practices. Moreover, Yahoo states that “Our values shape the culture and define the character of our company. They are at the heart of who we are and what we do” (Yahoo, 2011, p.2).

Manipulation and violation of autonomy

When it comes to solving ethical issues BPS’s code of ethics provides guidelines for psychologists’ behavior in relation to moral virtues that psychologists should apply in their work. For example, when it comes to the issue of manipulation of research participants of intervention in their autonomy, BPS’s code provides guidelines according to which researchers should to “avoid harming clients, but take into account the interests of different clients may conflict” as well psychologists should “avoid personal and professional misconduct that might bring the Society or reputation of the profession into disrepute” (BPS’s, 2009, p. 18). Manipulating research participants or abusing their privacy would definitely do harm to both research subjects and psychologist’ profession. The guidelines for this behavior stand under the value of responsibility, which mean that if researchers want to avoid ethical issues mentioned above they must develop responsibility virtue in their characters. Utilitarian ethics signs are visible as well. The psychologist must take into consideration the impact of his behavior to the whole Society, which means that the individual psychologist must take into consideration the well being of the broader society.

Along with the BPS document, there is a specific part in Campbell’s code of ethics that reassures the reader of their customer orientation and fairness. It is emphasized that their quality is not ultimately determined in research laboratories or by expert opinion, but is determined by their consumers. Therefore, at least theoretically, the company would not use neuromarketing practices in a way that might harm the benefit of the final consumer.

Protection of privacy

When it comes to protection of privacy, BPS’s ethical code puts research participants’ privacy protection under the moral value of responsibility as well. According to this code,

the psychologist must “record, process and store confidential information in a fashion designed to avoid inadvertent disclosure” (BPS’s, 2009, p.11). However, there are some exceptions mentioned when privacy of research subjects might be intervened. For example, it might be due to legal actions or it might be done when a third opinion is needed for reaching better results. The big advantage of this code is that it presents exceptions - when psychologists have the right to violate research participants’ privacy. Examples of this kind of situation: when information about subject is required by legal authorities in the cases of criminal investigations.

In contrast with the other analyzed documents, the P&G code of ethics explicitly defines and categorizes the customer personal information that employees must protect. Moreover, the document emphasizes that the respective principles apply to any means of collecting and using consumer personal information - implicitly neuromarketing, too.

Yahoo’s code of ethics also addresses this issue. Being a business that is built upon technologies and managing information, Yahoo commits to protect the privacy of their customers. They provide customers with assurances that they “take measures to protect the security of their personal information” (Yahoo, 2011, p. 34).

Exploitation of niche populations

BPS’s code of ethics puts the ethical threat of exploitation of niche populations under the value of respect. According to it, the psychologist should “ensure that clients, particularly children and vulnerable adults are given ample opportunity to understand the nature, purpose, and anticipated consequences of any professional services or research participation, so that they may give informed consent to the extent that their capabilities allow” (BPS’s, 2009, p. 12). This code encompasses the essence of the principle itself but more specificity is needed in order to distinguish safe and questionable practices.

Responsible advertising

BPS’s code of ethics states that the psychologist should “be honest and accurate in representing their professional affiliations and qualifications, including such matters as

knowledge, skill, training, education and experience” as well “be honest and accurate in advertising their professional services and products in order to avoid encouraging unrealistic expectations or otherwise misleading the public” (BPS’s, 2009, p. 21). Utilitarian ethics signs are visible here, as well. Taking into consideration the general public, the company seeks to be fair to the general society as well, not only to its consumers. These guidelines stand under the integrity virtue. Basically, the main virtues that the psychologist working in neuromarketing must develop and use are responsibility, respect and integrity. Having a virtuous character should, at least theoretically, be sufficient to avoid any unethical misconduct in their activity.

Moreover, the code of ethics of Procter and Gamble has strong influences that belong to the ethics of duty theory. “At P&G, doing the right thing means upholding our Purpose, Values and Principles” (P&G, 2011, p. 1). Moreover, they state, “our business has grown and changed, but our fundamental values have endured” (P&G, 2011, p.1). The code contains standards that the employees have to live up to, in order to uphold their values.

The P&G document reveals that their neuromarketing actions are taken according to their beliefs related to marketing ethics, in general – stating that all their activities are truthful, and all the marketing claims must be substantiated and live up to the promises.

3.2.5 Ethics of duties theory

An aspect that all the Corporate codes of ethics have in common (except Microsoft) is the recommendation of asking oneself a set of questions, whenever there is uncertainty about the ethicality of a business decision. These questions are similar from one company to another; a few examples: “Will the action protect the company’s reputation?”, “Would I feel comfortable if it was reported in the news?”, “Am I being truthful and honest?”, “Is the action consistent with the Code of ethics?”. The set of questions is reflecting the recommendation of applying a set of unchangeable principle to all ethical problems, regardless of who is involved.

Neuromarketing is a field in which the legal requirements don't set the needed standard of conduct, as discussed in the theoretical framework. To support the commitment to doing what is right, the document provided by Campbell suggests that, in similar situations to the neuromarketing one, employees must act according to the established set of values and principles, not only according to the law, further reflecting a duty approach.

A further similarity between the analyzed documents that is characteristic to the duty-based theories is the fact that all the corporate guidelines encourage that all employees and partners, without exception, should respect the principles and rules presented. This applies, indirectly, to their neuromarketing practices, that have to be aligned with the companies' view on fair business practices.

4. DISCUSSION

It has been shown that both research firms and corporations hiring those firms are well aware of the two main ethical issues that are present in today's neuromarketing industry - manipulation and privacy violation. Therefore, they are properly addressed in the documents that were analyzed - more than committing to respecting the law in this matter, most of them have values and principles that are in line with avoiding such situations.

The analyzed documents have shown that most companies have a clear understanding of and respect for the protection of personal information, demonstrating that from their ethical codes' perspective, they would never use data obtained from neuromarketing studies for deceitful causes. However, in terms of marketing practices, the corporations whose codes were analyzed lack concrete and firm arguments, only superficially mentioning a few guidelines. Further proof to this represents the fact that the document representing Daimler's standards of conduct fails to offer any information or guideline regarding the protection of their consumers or truthful marketing practices.

Both documents of corporate and marketing research provenience presented a gap in guidelines regarding responsible advertising. From this point of view, the criticism and the discussed ethical issues that arise are well founded, since the standards to which companies must live up to are scarce or even nonexistent. Since it is a matter that is poorly regulated by governments, the responsibility of fair marketing and advertising practices falls all the more on the shoulders of companies. Being a subject constantly in spotlight, consumer groups or other interested parties quickly sanction publicly any malpractice. Therefore, in order for their reputation to remain unaffected, companies need to alter their ethical codes of conduct, in the sense of emphasizing their attitude and standards towards responsible advertising.

From the analysis, one can understand that the lack of specific information about the ethicality in relation to the consumers appears to be a weak point of most companies using neuromarketing research. However, considering the fact that, at least from the declarations that were made, none of them performs this kind of research in-house, but externalize

them to specialized companies (whose ethical codes were also analyzed), it is of high importance to understand how the market research firms address the criticism and ethical issues presented in the framework, through their guidelines and official documents.

When it comes to the exploitation of niche populations, gaps have been identified in some of the analyzed documents. Even though the companies are aware of this issues, shortly mentioning it, the guidelines do not offer enough information for the reader to be assured that the exposed groups are, indeed, protected by all means. Since this represents a sensitive issue, it should be more extensively address by most of the analyzed codes.

One of the gaps, and, at the same time, what has been identified by as the main problem that leads to increased criticism, is insufficient communication. Its lack is both bilateral - a dialogue between the companies and the criticizing parties - and unilateral, - efforts from the involved companies to make the public aware of the existence of their ethical codes of conduct and their content. This leads to decreased trust in the technique of neuromarketing, groundless affirmations and ill-founded critics. As long as companies involved in neuromarketing are failing to deny the accusations and the ethical issues that arise, the mistrust in the field continues to exist.

Moreover, many of the critics that surround neuromarketing, such as the idea that it unfairly persuades the consumers into buying products or services they do not necessarily need, belong to the much broader field of marketing critics. The techniques used by neuromarketing are ultimately just measurement tools; therefore they are not harmful. However, one critique that is well-founded is that the actions specific to neuromarketing can be used to obtain insights about damaging products (such as tobacco, fast food, etc.) that otherwise would not be obtained, insights that can be used to “inorganically” increase the sales. Moreover, as neuromarketing develops, it will be able to predict buying decisions more accurately, and ethical issues will, probably, become more prevalent.

Therefore, it is important that the parties involved understand the urgency of clearly communicating the purposes and ethical standards that neuromarketing comprises;

furthermore, the need to fill the gaps held by the ethical codes needs to be addressed as soon and as openly as possible.

Analysis also reveals differences between ethical codes of neuromarketing research companies and corporations that hire them. Ethical codes of neuromarketing research companies had strong positions of one particular ethical theory while ethical codes of corporations had several ethical theories' reflections in their codes. This could be explained by the fact that corporations' work is much more complex and involves much more different task. That is way it is hard to apply only one kind of ethical guidelines to all companies' activities.

As mentioned in the beginning of the study, our research did not aim to provide a direct answer of right or wrong, ethical or unethical, to any of the issues presented. This is due to the fact that business ethics is a complex and sensitive field that does not offer direct solutions or interpretations. As our analysis revealed, the angle from which a matter is looked at or the ethical theory prism through which it is analyzed can offer different interpretations to the same issue. Therefore, there is no "right solution", but rather gaps that have been identified. It was also proven by the analysis that neuromarketing ethics could be researched using marketing ethics theories. This contribution to scientific literature should dissolve the gap between general marketing and neuromarketing. It should also help to position neuromarketing among general marketing theory in this way creating awareness of this new field and making easy to understand it.

5. CONCLUSIONS

In the past decade, technological developments grew at an incredible pace, creating new possibilities in many areas. Not exceptionally, market research is one of those areas. Improvements in neuroscience and collaboration between businesses and scientists opened new doors for consumer insights. Finally, the possibility of an opened consumer “black box” appeared. However, the emerging field of neuromarketing brought not only new possibilities, but new challenges as well.

As discussed in the paper, neuromarketing is a market research technique that uses neuroscience tools for marketing purposes. It is a measurement tool, and considering the state of neuroscience today, it cannot induce any thoughts or tendencies for the research subject. Therefore, its purpose is to compare consumer reactions to different advertisements or features of a product.

However, the lack of knowledge and public information about neuromarketing has formed the perception of neuromarketing as being intrusive and manipulative. Growing fear among consumers of losing their autonomy for the huge corporations, labeled this new field as unethical, intrusive and abusing. Other ethical issues, such as violation of privacy, exploitation of niche populations (such as children, elderly people or mentally disabled people) or exploration of consumer needs for damaging products (e.g. tobacco or alcohol) further increased distrust and dissatisfaction among consumers.

The purpose of this work was to define the ethical issues that raise criticism towards neuromarketing and explore how companies are addressing the issues.. A document analysis approach was chosen, since it is most neutral and unobtrusive way to analyze this sensitive subject.

The analysis revealed several things. Firstly, there is a gap in the academic literature of marketing ethics, where neuromarketing is not approached from other marketing ethics theories’ points of view. The analyses proved that the ethical behavior of the neuromarketing companies could be approached using existing marketing ethics theories,

meaning that neuromarketing ethics should be better integrated in the marketing ethics literature. In this way, a better awareness and knowledge about neuromarketing ethics will be formed in the common context of marketing ethics. Neuromarketing ethics will not appear anymore a mysterious and incomprehensible field, if it will be presented in the context of marketing ethics.

Moreover, the existing literature does not provide empirical studies regarding ethics in neuromarketing, despite the fact that it represents an intensively discussed issue. The majority of the articles only bring critics to the use of this technique, failing to provide studies that would support these arguments. Therefore, the field of neuromarketing ethics has a gap in empirical evidence, and further research should aim to fill that gap.

Secondly, the analysis revealed that not only the companies involved are aware of ethical issues that surround neuromarketing, but also have ethical codes that correspond to those ethical issues providing guidelines for ethical behavior. The exploration of the ethical codes showed that ethical issues such as protection of privacy violation of consumers' autonomy are covered quite extensively in the ethical codes. However, more specifications should be made regarding the guidelines for the protection of niche populations. Since it is a very sensitive area, ethical directions in neuromarketing activities should be extremely specific.

Thirdly, the analysis showed that the biggest problem in the neuromarketing ethics field is communication with the public. Companies do have rules on how to behave ethically; there are even special organizations with ethical codes that focus entirely on neuromarketing activities. However, the lack of publicity and failure to communicate these ethical codes to the society creates the situation when ethical issues and critics are intensively discussed and almost nobody is denying them. Many ethical codes that were used for the analysis were obtained only after personally contacting the companies or looking for the codes in the third party websites. For this reason, companies should emphasize more their ethical behavior, publishing their ethical codes on their website or using other public sources.

Finally, we concluded that there is no single way to approach neuromarketing ethics. The ethical behavior of the companies could be approached differently, depending through which prism of ethical theories one looks. For this reason, there cannot be one strict set of

rules on how to deal with ethical issues in neuromarketing. Each company must find its own way of approaching the ethical issues according to the ethical theory that suits the policy of their firm the best.

In our opinion, neuromarketing is a field that offers considerable potential for market research; efficiently helping the match of consumer needs and provided goods and services. Manipulation or violation of autonomy and privacy cannot be reached through the tools that today's neuroscience disposes of; therefore companies involved in this kind of research should direct efforts towards the aim of making the large public aware of this. This includes measures regarding updating their ethical codes with more specific and explicit sections related to neuromarketing but, more importantly, efficiently informing the stakeholders about the existence of such ethical codes and the commitment towards respecting them.

6. LIMITATIONS AND FURTHER RESEARCH

For the methodological part of this research, we initially intended to conduct a study in collaboration with the Psychology department, a replication of a neuromarketing study that would have determined how intrusive the technique is and would have explored its characteristics. However, considering the time and resources limitation, we chose to investigate the matter using already existing data. Nevertheless, the possibility for further studies in this direction remains open, as it represents a great opportunity to deepen the knowledge in this field.

The conducted study revealed how do the ethical codes of over 30 companies involved in neuromarketing address the existing ethical problems. The issue of the respective companies actually respecting the codes and acting ethically represents one of the limitations of the research. An in-depth study on this matter could represent further research in this area, investigating the relationship between companies and the ethical codes that they commit to respect.

Moreover, one of the valuable findings of this research was the fact that companies and associations do not construct their ethical guidelines having a single-sided view, using only one ethical theory approach; they rather address the issues that might arise by combining different theories. The complexity of such documents is an interesting area that could be explored through focused studies that would analyze their nature – not only from a neuromarketing point of view, but also from a more general one.

In addition, in order to raise awareness regarding the identified problems, one must seek to publish the studies related to the matter of ethics and neuromarketing that are being made and seek for solutions in the academic society that would permit insightful, interdepartmental studies.

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