

**THE REPUBLIC OF TURKEY
BAHCESEHIR UNIVERSITY**

**THE NEW CONCEPT OF CONSUMER
BEHAVIOR: NEUROMARKETING**

Master's Thesis

MERVE GİZEM ÖZDEŞ

ISTANBUL, 2018

**THE REPUBLIC OF TURKEY
BAHCESEHIR UNIVERSITY**

**GRADUATE SCHOOL OF SOCIAL SCIENCES AND
HUMANITIES
MBA (ENGLISH, THESIS)**

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Supervisor: PROF. DR. ÖZGÜR ÇENGEL

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MERVE GİZEM ÖZDEŞ

April, 2018

ABSTRACT

THE NEW CONCEPT OF CONSUMER BEHAVIOR:NEUROMARKETING

Merve Gizem Özdeş

MBA (English, Thesis)

Thesis Supervisor: Prof. Dr. Özgür Çengel

April 2018, 55 pages

This study deals with the insights on neuroscience, human brain and neuromarketing studies. More importantly, the research tries to define connection between neuromarketing and consumer behavior. Neuromarketing is the brand new concept which is increasingly used as a research method to understand and analyze consumer behavior among marketing professionals. Especially in Turkey, method still is not well accepted in marketing community, since most of them have many questions and concerns about it.

Theoretical framework is based on the literature review of neuromarketing in terms of techniques, applications. The research's main goal to understand decision-making process of consumers with analyzing human brain to neuromarketing research tools. In this study the empirical data was collected by conducting seven interviews mostly at the corporate management level of marketing department April 2018. The aim of the thesis was explained in detail to the interviewee's and consent of declaration was also sent in order to use their name or their company's name in the study.

Keywords: Neuromarketing, Consumer Behavior, Neuroscience

ÖZET

TÜKETİCİ DAVRANIŞLARI İÇİN YENİ BİR KONSEPT:NÖROPAZARLAMA

Merve Gizem Özdeş

MBA (İngilizce, Tez)

Tez Danışmanı: Prof. Dr. Özgür Çengel

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Bu çalışma nöropazarlama, nöroloji ve insan beyni konuları ile ilgili derinlemesine bir bakış açısı sunmaktadır. Daha da önemlisi, araştırma nöropazarlama ve tüketici davranışı arasındaki bağlantıyı tanımlamaya çalışmaktadır. Nöropazarlama pazarlama uzmanları arasında kullanımı giderek yaygınlaşan tüketici davranışlarını analiz etmek ve anlamak için kullanılan yepyeni bir kavramdır. Özellikle Türkiye'de, pazarlama camiasının bu yöntem ile ilgili birçok sorusu ve kaygıları olduğundan tam anlamıyla kabul edilmiştir denilemez.

Teorik çerçeve, nöropazarlama üzerine yapılan kaynak taramasına ve nöropazarlama teknikleri ve uygulamalarının incelemesine dayanmaktadır. Araştırmanın temel hedefi, nöropazarlama yöntemlerini kullanarak, insan beynini analiz edip tüketicilerin karar verme sürecini anlamaktır. Bu çalışmada, deneysel veriler, 2018 Nisan ayında kurumsal şirketlerde çoğunlukla yönetim seviyesindeki pazarlama çalışanları ile yedi adet görüşme aracılığıyla toplanmıştır. Görüşme yapılan kişilere çalışmanın amacı açıklanmış, kendilerinin ve şirketlerinin isimlerinin kullanılabilmesi için rıza beyannamesi alınmıştır.

Anahtar Kelimeler: Nöropazarlama, Tüketici Davranışları, Nöroloji,

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ABBREVIATIONS

fMRI	:	Factional Magnetic Resonance
EEG	:	Electroencephalogram
ET	:	Eye Tracking
FACS	:	Facial Actions Coding System
NM	:	Neuromarketing
MEG	:	Magnetic Electroencephalogram



1. INTRODUCTION

The history of marketing is as old as mankind. In the beginning, people started shopping in exchange. After that with the availability of money, currency is used in trade, a value is valued in exchange for the product. Marketing strategies developed during years and still continues to change. In early phases of marketing, companies were oriented with sales and production. In 1950s marketers begun to realize that it is simplest way to produce products that consumers ready to buy instead of trying to convince them to buy the goods that customers don't need. Marketing professionals in the last decades, through marketing research tools, tried to understand the consumers want and they become to apply more consumer-oriented strategies. (Schiffman and Kanuk 2007, p.5).

Marketers are trying to develop strategies to increase sales by developing new research techniques or using the classic marketing methods which is available. Advertisers are producing many advertisements in order to make the product easy to identify and to sell more by deciding how to use the methods to attract the attention of the consumer. Many academic studies have been conducted over the years to solve this problem. By doing various market researches on this path, many interpretations have been introduced on what the consumer wants, what factors are affected when deciding whether to purchase. However, it is not enough. For years, the golden rules of marketing were explained, but why would marketing still experience products fail?

In the light of the experiments and researches the term "Neuromarketing" comes into stage as a perfect blend of science and marketing. The knowledge of subconscious emotions is one of the most significant subjects of neuromarketing researches. Because brain waves never lie, they are closed against judgments and external factors, only show real choices. The most accurate source for understanding our choices is the brain.

The goal of this thesis is to ensure a better understanding neuromarketing concept and how it is evaluated by marketing professionals today. Neuromarketing is a brand new method among different traditional methods and used to go up the corporation between

the brand and the consumer. Using the neuromarketing techniques in a marketing field is a very new born concept and not spread enough among marketing professionals. Therefore, in this thesis mostly neuromarketing concept discussed from a theoretical point of view in order to a better understanding of the field's practice areas today.

The theoretical perspective mainly discussed; neuromarketing concept, neuromarketing research tools and usage of the scientific techniques in marketing field. The following chapters will review the existing literature in the fields that are mentioned. With the findings grown from the literature and in-depth interviews, an appropriate conceptual framework, including the construction of research questions will be shown.

After the introduction, the first chapter will provide an insight about the literature review which consists of marketing, neuromarketing, neuromarketing research techniques, neuromarketing versus traditional marketing and the chapter will be finalized by ethical concerns about the neuromarketing concept.

The second chapter will arise from the methodology for the research. The chapter will give an insight about the research design and technique. Qualitative framework used in order to examine the aims and research questions of this study. Moreover; in this chapter it will explained which tools are used in order to collect data. The limitations of the method and ethical contemplation are also mentioned. Lastly, the gathered data is analysed.

In the third chapter, it will be discussed the results that gathered from the interviewees and illustrate the construction of the research, research questions and analysis of the results within the light of the conducted in-depth interviews.

The final chapter will occur the discussion and conclusion of the entire study. During the discussion, the contribution of the research, research limitations and further reflections into this field of neuromarketing will be mentioned and examined.

2. LITERATURE REVIEW

2.1. WHAT IS MARKETING?

In general terms, marketing is organizations events that interested in consumer behavior in which buying and selling process of products or services.

2.1.1 Definition

The American Marketing Association (2013) defines marketing as “Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large”. In an another word, marketing can be described as the most effective way to meet customer requirements and satisfying those requirements by the companies and marketing professionals. Organizations and companies create value for their customers to build strong and long-term relationships. "Long-term customer relations mean that the objective of marketing is mainly to go for enduring relationships with the customers" (Payne and others 1995, p.85). Moreover, for sustainable and profitable growth in companies, organizations giving importance to improvements on marketing field.

Marketing professionals used different methods to increase sales for several years. To reach target markets and consumers, marketing professionals have been trying to understand decision making process (Rothschild and Hyun 1990).

2.1.2. Short History of Marketing

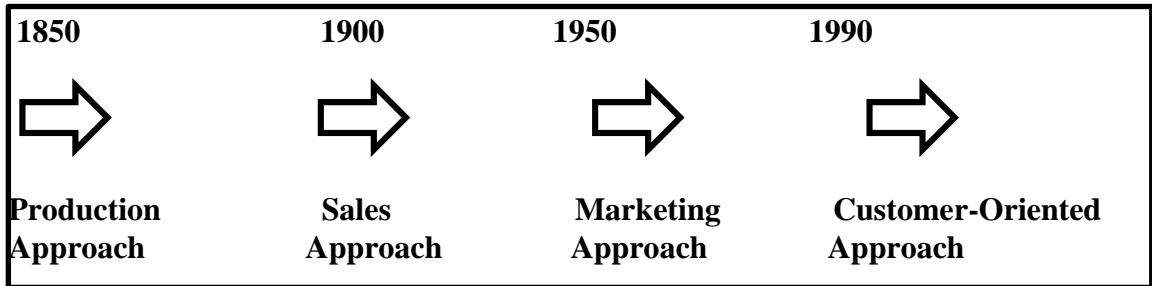
The development process of marketing can be explained in four stages.

These;

1. Production approach
2. Sales approach

3. Marketing approach
4. Customer oriented approach

Figure 1.1 Short history of marketing (Uysal ve Aksoy, 2004)



As it seen in the figure 1.1 over the years, marketing strategies continues to evolve and change in order to meet the expectations of consumer.

2.2 NEUROMARKETING

Neuromarketing can be defined as a new marketing research technique which help marketers to find out decision making process of consumer. With the help of the neurology science, marketers doing researches on human brain on behalf of neuroscience. "Neuromarketing uses the latest advances in brain scanning to learn more about the mental processes behind customer purchasing decisions" (Eser and Korkmaz 2011).

2.2.1 Definition

Surveys, focus groups, and questionnaires are traditional marketing research methods that are also used to understand consumer needs. Besides, in traditional methods it is a big question mark that, interviews or focus groups really expose the motives of customers' judgements. Are the attendees of the surveys can be honest on responses? In the light of these critical question marks, traditional research techniques have effectivity issues. In addition, the other confusing question mark is that even if participants are trying to be uncounsciously honest on responses, how the researchers take the answers correct.

Accurate knowledge is a very significant issue for the marketing professionals when giving advertisements, new product launches or branding activities. This kind of information should give a company a report about customers' expectations in their minds for their brand, product or service. Hence, a brand new method, neuromarketing, occurs to understanding consumer needs with the medical instruments to get inside of the human mind. All in all, on the contrary of focus groups and questionnaires, with neuromarketing research techniques, researchers go into the minds of consumers. Neuroscience gives the most honest responses according to the instruments that pursue the human brain in detail. Because of these significant benefits, neuromarketing studies are the center of attention for the marketing researchers, run at a trot in the last few years (Ariely and Berns 2010).

In addition, companies and marketers, to estimate consumer behaviour and understand motives, have appreciated the improvements on neuroscience. Neuroscience, in one's hand, that could be interpreted into more influential product design and communication to more productive sales and marketing operations.

Moreover, neuromarketing researchers use the instruments on the brain functions to understand the reaction mechanism of the brain to stimulus such as advertisements, branding activities, web sites or packagings (Badot and others 2014). It has been stated that variations on the brain functions supply knowledge about the decision-making process of the consumer (Yorkston 2010). Based on the variations of the brain signals, professional scientists evaluate and observe the changes on the brain activities of the consumers, while they analyze products, commercials etc. The main purpose of the researches, make contribution to marketing events by understanding the human brain and consumer impulse while marketing stimuli switches.

2.3.2 History

With the beginning of shopping among people, trade has begun to evolve. With the development of trade and the rapid advancement of technology and the increase of product diversity, marketers have turned to find new techniques. Thousands of products

are being launched every day today, but half of these products are destroyed during the introduction of the market. In order to the emergence of this situation and the presence of a lot of products in the market, marketers prefer to enter into a clearer approach when reaching consumers. Therefore, what it really wants to consume is gaining importance at this point. In this case, neuromarketing is engaged (Chandon and others 2009).

On the other hand, in these recent years, technology is the proliferation of new inventions every day, in the fields of advertising and marketing, today the name of the neuromarketing is given revolution. Today, an average person hears 11 million messages per second. All these received message fragments are stored in the subconscious. Only 40 messages can take part in consciousness (Cyr and others 2010).

In 2003, the failure of the Pepsi Challenge advertising campaign has not solved for many years until neuroscientist Read Montague has solved it. In his experiment with a group of subjects putting into the fMRI, the Pepsi Challenge ads documented the exposure of the people in their minds. It revealed the formations of consciousness and subconscious from a scientific standpoint. Read Montague has been formally launching the neuromarketing efforts in the world of advertising, as well as solving the mysterious cause of the Pepsi Challenge advertising campaign, which has been unable to find the main reason for many years (McClure and others 2010). The fact is that the known official historical journey of neuromarketing begins in the 1990s. Until the 1990s, neuromarketing was classified as confidential. In 1990, in the U.S., neuromarketing studies have been clearly started. In these years, multinational companies have made great investments in neuromarketing such as "Coca Cola", "L-Mart", "Levi-Strauss", "Ford", "Google". The results of these companies' neuromarketing studies have been kept confidential and not disclosed to the public. Many neuromarketing researches continue to be conducted today. This research is useful in examining the title of neuromarketing research.

Since neuromarketing is a young science field, there is no very deep history. The reason why these studies or researches are so minimal that the research techniques are very high-cost. Also, it is quite difficult to meet the high costs. Furthermore, neuromarketing

researches are not done sufficiently because the equipment used in the technique is not available everywhere, mostly in areas where it is used only for clinical research.

2.2.3 Results of Neuromarketing

As it mentioned before, neuromarketing is used to influence the decisions of consumers and understand their preferences. This new field of marketing uses medical technologies to measure the brain reactions given to the product. Measuring the change of activities set in different brain regions are not only why consumers choose that product but also show that the brain is active in this election (Ural 2008).

2.2.2.1 Positive results of neuromarketing

In developed countries, especially with the technological innovations, the new products emerging with 20% of the success rate. With the decrease of success rates in recent years, some of the latest data that applies to new consumer goods is 95% of the failure rate for the United States and 90% for Europe. The marketers and advertisers who know the reasons for this failure are choosing neuromarketing to minimize failures during the holding of new products launched on the market (McClure and others 2004).

The participants who responded to surveys or focus groups in ads researches are not giving the correct answers, so they are misleading the producers. But that is not the case with neuromarketing. Thanks to the techniques and devices used in, it allows marketers to clearly learn how consumers are affected. Moreover, it is scientifically revealed when and how the area of the brain is affected (Djanasbi and others 2010). Therefore, the results obtained in neuromarketing research are much more reliable than other research methods.

Marketing analysts use neuromarketing to better analyse consumer preferences. With neuromarketing marketing professionals focus on brain reactions which helps in creating more effective product designs and more focused marketing campaigns that. Neuromarketing discipline is utilized to determine what the consumer reacts to.

Neuromarketing is very important for the advertising campaign and the success of the brand, which analysis significant topics like how consumers perceive the ad, how they remember it. Neuromarketing makes advertisements more effective.

2.2.3.2 Negative results of neuromarketing

At first, there is always a counter exit and rejection at the beginning of a new branch of science or a new idea that comes out in the world. It is criticized by many cuts because it is a new and young science branch.

For example, the commercial alert organization claimed that the use of neuromarketing in particular fMRI is used to manipulate consumers' behaviour.

Furthermore, in neuroscience, there are also opinions about which center of the brain is not fully known to be used. It is thought that the branch of neurology, which has its own boundaries, will restrict the neuromarketing area.

Another criticism is that the cost of the techniques used in neuromarketing is very high. Because neuromarketing holds light on the human mind, it will be used in a more common way by marketing managers and advertisers in the future.

Consequently, human brain is a complex structure and the decision making process is all about to understanding brain anatomy. Furthermore, trying to understand the concept of neuromarketing, first of all, the topic of human brain should be study.

2.3 DECISION MAKING PROCESS OF THE BRAIN

2.3.1 Brain Anatomy

Human brain is a most complicated organ that have full of secrets which still investigating by scientists all over the world. In the past decades, researchers discover more informations about the brain with the help of neurological and behavioral science.

Brain which has just one and half kilogram organ conducts not only the basic functions of the body but also manages talent, desire, memory by using the five senses such as vision, smell, sound, taste and touch. (Hines 2004). There are different parts of the brain manages functions and the feelings when given to stimuli (Coon 1989).

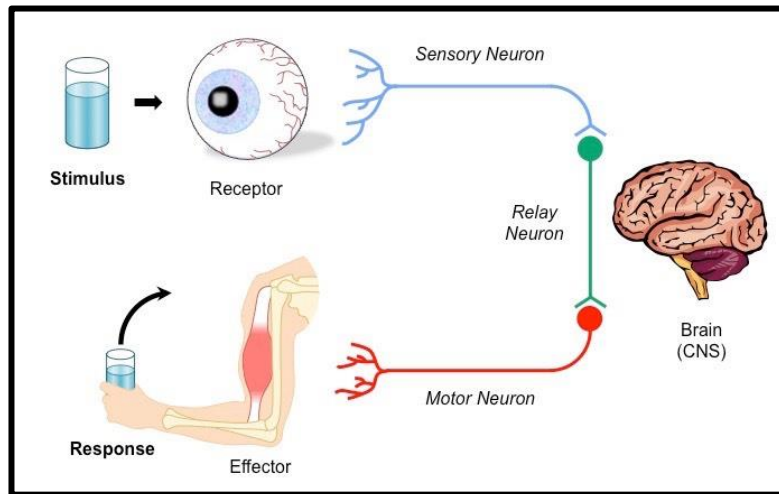
Senses, such as smelling, tasting or feeling the products impress our desire. As well as, brain can effects positively or negatively our perception on a product or service. Understanding the mechanism of the brain can disclose customers' view that would help marketing professionals to comprehend consumers. (Georges and others 2014).

Eventually, the evolvement of the technology brings new research techniques that enhanced the scientific studies about the structure and functions of the brain, cellular structure and nervous system. Moreover, nervous system organized core activities such as data saving and learning (Zurawicki 2010).

Therefore, esseantial communicating system of the human body is nervous system. To communicate with the brain, neurons procure chemicals. The electrical impulses produce sensations, memories and ideas by transferring the signals within the brain. Neurons transfer the chemicals that known as a transmitters that the other neuron in this manner signals can be delivered (Fugate 2008). Synapses transmit the signals through the neurons then the other cells. Transmitters occur several types of chemicals and all of them are uniq and different that influence various parts of the human brain. Approximately fifteen different neurotransmitters discovered by the scientist.

For instance, as it seen on the figure 2.1, basically stimulus detected by a receptor, in this case it is an eye, and then electrical impulses transmit by an neurons where decision making arise from. After that the signal transmits to the effector again by neurons. This action can be happen consciously or unconsciously. Lastly, effector execute response which is an organ of human body.

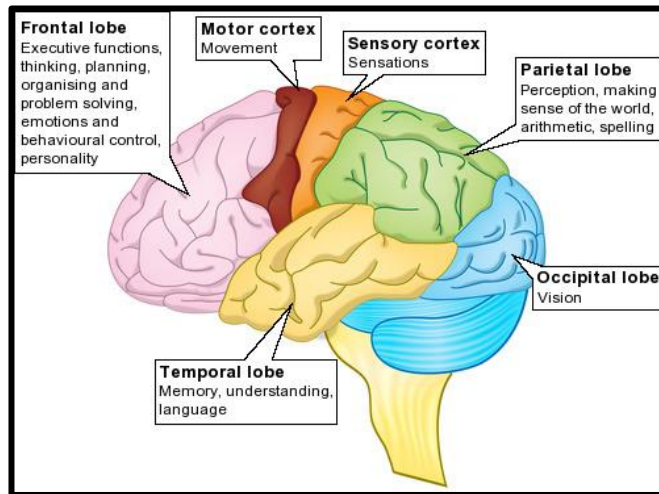
Figure 2.1: Overview of the stimulus-response pathway



Source: ib.bioninja.com.au/standard-level/topic-6-human-physiology/65-neurons-and-synapses/stimulus-response.html

Furthermore, the forebrain, the midbrain and the hindbrain are the main parts of human brain. First of all, forebrain inspect memory senses, emotional activities that biggest part of the brain. Forebrain contain the cerebrum that divided down the middle known as right and left hemispheres. Right hemisphere is relevant with imagination and cognitive thought such as music, craft the left hemisphere language, algebra and rationale. Cerebral hemispheres have four lobes named frontal lobes, parietal lobes, occipital lobes and temporal lobes that can be seen in the figure 2.2 in detail. The frontal lobes carry out decision making, problem solving, designing. In addition, frontal lobes responsible from the muscle activities. Parietal lobes, liable for senses such as taste, heat, feel. Occipital lobes provides the connection between eyes and brain, therefore memory occurs. Because of the optical tansaction of the lobe, damages can cause blindness. Temporal lobes, collect data from ears and transfer the memories and it add sensuality to the memories (Kinser 2000).

Figure 2.2: Parts of human brain



Source: <http://brainjackimage.blogspot.com.tr/2013/08/brain-functions-diagram.html>

The midbrain, in charge of transmission of data between the forebrain and the hindbrain and responsible from the blood pressure, heart rate, hunger, thirst, sexual arousal, sleep-wake cycle, breathing which are the vital signs. The hindbrain contains cerebellum adjust volutational act (Meenaghan 1995).

2.3.2 Learning Process and Memory

Will power, memory, stress, practice, environmental effects can increase or decrease the ability of learning process. The brain secures the data through senses. Moreover, sleeping have a significant role in to setup a strong long-term memory. Learning process improves behaviors, ideas, attitudes, choices of human beings and it is influenced by physical, mental pressure or feelings. Learning and ability to hold in the mind are connected to one another. Changing on physical, mental pressure or feelings affect the learning process adversely when infact beneficial mental state diminishing the stress level and it encourage learning and memory (Degan 2011).

Also, abundant determinants affect the decision-making process of the human brain such as emotions, motivations and persuasions that have generous role in neuromarketing researches. According to Jonah Lehrer (2009), the decision-making process of the brain powerfully includes emotional, rational and logical parts. However,

when brain tries to go by a rational decision, emotional stimulus affect the result behind the close doors. Prefrontal cortex of the brain is critical part to analyze emotions like beneficial and avoidable ones while making a decision (Lehrer 2009). Emotions examines as aspects of the body occasioned by rewards and punishments system. Besides, motivation, generates the enthusiasm to get into the act like getting the reward or staying away from the punishment (Zurawicki 2010). Moreover, it is an another vital feature of the decision making process that can be defined as the irresistible mental power within human beings that boost them into the action.

Neuroscientists and marketing professionals claims that ninety-five percent of human ideas occur without knowledge. This circumstances proposes that consumers' buying habits are mainly have charge of subconscious brain actions. In the light of affecting consumers' decision-making process, persuasion has a essential role for marketing professionals that can increase product sales enormously. Researchers gathered into same opinion that consumer decision is generally controlled by the unconscious part of the human brain.

2.4 NEUROMARKETING RESEARCH TECHNIQUES

In the following part of the study, brain imaging tools briefly expressed to understand the terms of neuromarketing and neuroscience more comprehensively. Moreover, analyzing what is happening on human brain, to learn how consumer prefers a product and why do they do that and examine consumer behavior deeply that is significant to comprehend the measurement methods such as fMRI, EEG, ET, FACS, other methods in detail.

Zurawicki (2010) explains neuromarketing research tools, first one is recording metabolic activity in the brain it is called fMRI, second one recording electric activity in the brain is EEG and the others without recording brain activity; ET and FT.

2.4.1 Functional Magnetic Resonance (fMRI)

Functional Magnetic Resonance technique basically evaluates cerebral blood flow that is the most well known techniques which applied by the neuromarketing researchers. In Fact, this machine aim to determine the differantiation in blood oxygenation that becomes because of the neuronal activity (Yang and Raine 2009). Due to the neurons require oxygen to ensure their movement, fMRI turns to account the grade of oxygen in the blood. Reduction of blood oxygenation occasion blood activity difference due to the neurons useage of oxygen (Asbury 2011). In summary, Lindstrom (2008), in his book *Buyology*, claims that fMRI's system is to evaluate the magnetic feature of red blood cells which called hemoglobin, that carry oxygen over the body.

fMRI is a beneficial research technique because of the simplicity of implementation. The person who is willing the part of the study is laying down into giant fMRI machine it can be seen in the figure 2.3 and different stimuli such as commercials, videos are presented (Lee and others 2009). When the volunteer track the flashlight the visual cortex of the brain evolve into activity and stimulates were started blood flow to. Most important characterictics of the fMRI technique is while the research volunteer take any injections such as radioactive isotopes.

Figure 2.3: fMRI device



Source: <https://www.stabroeknews.com/2013/news/stories/04/05/dr-balwant-singhs-hospital-unveils-cardiac-catherization-mri-services/>

Moreover, the technique excessively beneficial for the studies that measures consumer buying habits and willingness to give money to the product. Besides, this tool can help to understand by neuromarketing professionals consumers' mental state such as concerns, desire, anger of a product or brand. All in all with the help of fMRI technique researchers can evaluate emotions, brand loyalty, strong desires, reliability and brand recall (Girişken 2015). This special tool can be useful for marketers and the companies while new product launches, testing new products, packaging, giving price, new special offers, improving commercials, understanding consumer needs. To sum up, fMRI mapping the human brain and scientist uses that knowledge to understand consumer behavior why their preferences on that product or how did they choose and which part of the brain play specifically role on decision.

In other respects, Lee (2009) states that fMRI can be a stressful method for volunteers to practice because of this reason studies may be affected. In an addition, fMRI is an very expensive and not moveable big device that is why it is the difficult to use (Lee and others 2009). Another restriction of fMRI technique is the responsiveness to stimuli that volunteer motion such as small body movements. It can be give researchers images beside the mark.

2.4.2 Electroencephalogram (EEG)

Electroencephalography (EEG) gives variations in brainwaves such as beta waves (wakefulness) , alpha waves (relaxation), theta waves (calmness) and delta waves (sleep). This tool is the one of most useful neuromarketing research technique after fMRI which was lay out in early 1900's. It is stated that alpha waves are activates left frontal lobes of the human brain that remark positive feelings, while right frontal lobes remark negative feelings.

While brain activity on going, dendrite is executed by negatively or positively. The result of that it generates electrical knit to scalp. To evaluate participants mindset the scalp of electrodes should be positioned on significant parts that their intended purpose is to record signals. EEG scalp, it can be shown in the figure 2.4, is portable and cheaper

device to apply that can use everywhere and everytime like at home while watching advertisements or when buying products. To take true and trustable results, it is important to do researchs in relaxing environment and more important thing is that doing this researchs in consumers natural environment.

Figure 2.4: EEG scalp



Source: <http://hearing4all.eu/EN/Research/C/Task-Group-7.php>

Above all, with the knowledge taken by EEG, new advertisements, new campaigns, movie trailers, websites, product design or testing in-store experience can be apply (Bercea 2011). Moreover EEG research technique can be used for choosing new slogan of pricing strategy of company. Indeed, it can be show companies to understand consumers' reasons to buy or not to buy a product or service.

On the contrary way, this tool's spatial differentiations evaluate the stuation not the accurate way. Researchers claim that data taken from the EEG can be useful and helpful, hence it is not enough to be able for completely analyzing the mental state of human and the reason to cause.

2.4.3 Eye Tracking (ET)

Eye tracking technique measures the participants reaction to stimulus by analyzing the motion of eyes. This method, basicly gives results by tracking the changes on frequency and speed of eyes. Significant case is the importance of subjects' looking place. Moreover, in this realtime reaction method, there are two types of eye movements

named fixations and saccades. Fixation means that eye movements stop at a specific point. On the other hand saccade means that eye movements shift the other positions. ET device is shown in the figure 25 and it can be uses to evaluate of consumers' attention to a product by tracking eye movement in various fields such as, advertisements, brochures, websites, computer screen, packaging and preferences in the supermarket. Also ET technology can give researchers an idea about where the consumers attention is centered and what the consumer feels about it (Duchowski 2003).

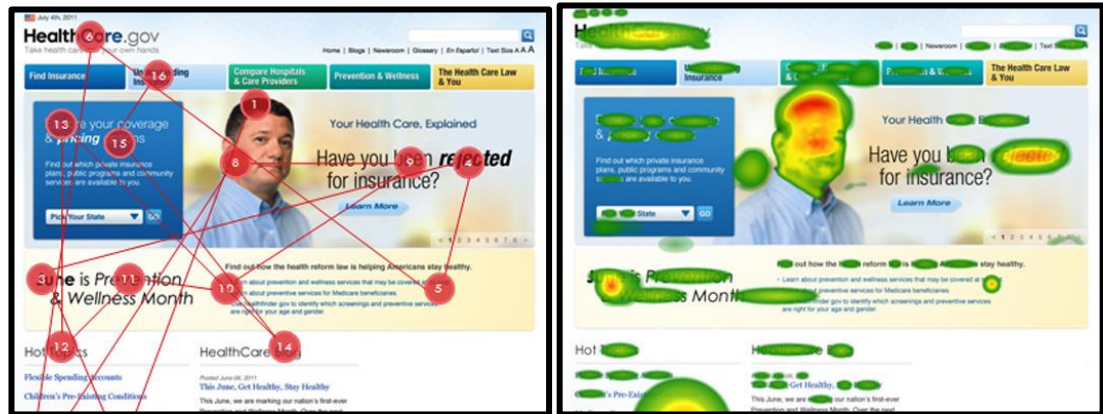
Figure 2.5: ET Device



Source: <http://www.getbusymedia.com/small-business-insights-eye-tracking/>

As an illustration, in the figure 2.6, ET method used for the analyzing the web site deeply. It can be seen that some parts of the site taking more attraction which color is reddish. Companies can learn with that way web sites most attractive part, and then with this knowledge they can make arrangements to get better feedback from consumers (Menon and others 2016)

Figure 2.6: ET Results

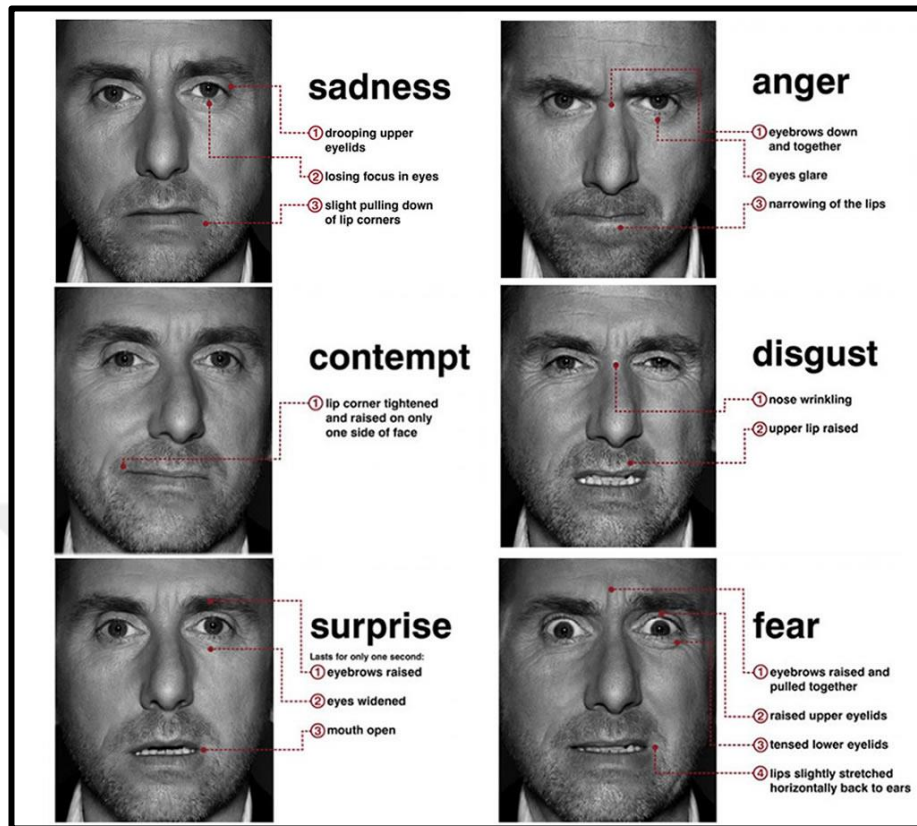


Source: <https://www.usability.gov/how-to-and-tools/methods/eye-tracking.html>

2.4.4 Facial Action Coding System (FACS)

The other method is face reading that analyzes the activity of the facial muscles which is a computer based program. It measures participant reactions given unconsciously like gestures, micro-mimics on the face (Bercea 2011). American psychologist Paul Ekman (1996) co-invented the system which gives extremely correct results hence this research tool need scientist to expend a lot of time. Figure 2.7, the most used micro-mimics shown by Paul Ekman.

Figure 2.7: Micro-mimics



Source:<http://sites.tufts.edu/emotiononthebrain/2014/12/08/am-i-in-trouble-interpreting-facial-expressions/>

In human face there are forty-three variant muscles that are classified by FACS. These classification have seven part like, happy, sad, angry, surprised, scared, disgusted and neutral. This tool can be used for new product launches, packaging, tasting activities etc. It also helps researchers to find out consumers' attraction and distraction.

2.4.5 Other Techniques

Biometrics, measure psychological reactions in the complete body and it involves heartbeat rates, skin responses and hormone levels. This research technique used as a great deal of advertisements to evaluate sensual reactions. In these days, TV ads can easily pass through by the audience that is the biggest issue. This research method preferable for the scientist due to the effectiveness of TV ads.

Magneto encephalography is a technique, which participants have not get in touch with the sensors, it measures magnetic potentials to remark brain activity. On the contrary of the EEG technique, MEG evaluations are better in the way of signal resolution and time determination. On the other hand, MEG is more complicated and high priced method (Zurawicki 2010).

2.5 BENEFITS OF BRAIN IMAGING TOOLS FOR MARKETERS

Neuromarketing researchs, which has been rapidly the focus of attention in the following years, will guide marketing professionals with more accurate knowledge about human brain by investigating it in detail. This studies will ensure better comprehension on consumer behavior for scientists. Moreover, people can hide information or lie about their ideas when they questioned in surveys but brain data can not lie anyway (Goldber and Emerick 2000). Brain information will guide marketers about the consumer preferences which effects their buying habits. In recent days, barin imaging methods started to use for not just usual marketing activities but new movies that are uncalled. It can be very important benefit to predict box office return for producers.

Using neuromarketing tecniques in businesses can be useful and profitable if companies can collect data with this methods. For instance, before product launches, changing product designs, new ads or pricing strategies, this data can lead marketers directly about the action taken to be. After these informations that gathered from consumer, marketers can be change their strategies in a right way and may be they can return into a fail project. Although neuromarketing techniques are expensive, reducing the number of fail projects can be more profitable than other cheaper solutions.

Every day, new products releases, new ads featured on the TV's and so on but important issue is that what is the hit ratios. The main point is that, the marketing activities are how well or how fruitful without using brain imaging techniques? Shortly, it reduces possibility of making mistakes, in an other word, for marketers, studying with these tools like hit the bull's-eyes.

2.6 NEUROMARKETING VERSUS TRADITIONAL MARKETING

For marketing professionals, most common marketing research tools are traditional methods such as, surveys, focus groups, interviews for years. In the last decades neurological science get improved, which is why new studies came up in marketing field to understand buying habits, specify the needs and behaviors of consumers. It provide marketers examine marketing activities and efficiency of advertising. Traditional research methods mostly based on consumers' responses that can be affected by the memories, daily mood, one who conducts a survey or previous experiences. In addition to that, the biggest issue for traditional research is basically, consumer purchase unconsciously and don't know what they need and why they buy it. In the light of the information, new products that have been launched by companies end up with unsuccessful stories and companies lose money and the percentage of the fail is eighty.

In contrast, neuromarketing researches clarifies the consumer buying habits by examining human brain in detail. These study results are more complicated and accurate about decision making process of consumer. On the contrary to traditional research, in neuromarketing research, consumers are not giving ideas about their purchasing process or preferences. Preferences and decision making processes of consumer are analyzed by neuromarketing tools such as fMRI, EEG that observe participants brain acitivity. Human brain acitivities more trustable, reliable and gives more scientific results than human responses.

On the contrary, to understand and analyze neuromarketing researches, it require to be well equipped about the neuroscience and human brain topics. It is a huge limitation but at the same time zone of development. Scientist should be trained, students should be thought at school, the method should be more common for merketing professionals. If the number of educated people increases, price barrier will be eliminated then the frequency of use can be increase.

2.7 APPLICATIONS OF NEUROMARKETING

Neuromarketing has been applied different research areas to develop and describe consumer behavior by analyzing human brain. Criteria can be measured by this research method such as consumer attention, emotional attachment, preferences. After these measurements, marketers use that knowledge in new product development, branding activities, advertising, in-store shopping, online marketing, politics and moreover.

2.7.1 New Product Launches

Neuromarketing researches provide scientists to try the product on consumer before the product is launched to the market. Most food and beverage companies use fMRI before releasing the product into the market. In the study, to try the perception of flavor the computer-controlled tube executes a liquid in volunteers' mouth. Besides, with this experiment which the brain areas initiated can be learned. This is a pretty viable method especially for food products before releasing them into the market.

Packaging, pricing, giving ads, organizing marketing activities and other specialties are the part of new product launch strategies to the market. Under high competitive market conditions, it is significant that the new product attract notice on the consumer's side more than that the rival's products. The new product that launched require to catch the consumer interest with its package design like shape or color or aggressive prices. With the brain imaging techniques marketing professionals try to understand features that can improve to buying decision of the consumer.

Scientists study differentiation of preferences on consumer side and which product features effects on it. Therefore different shapes of products, color effect and price most common subjects that influence product choice and judgements.

2.7.1.1 Effect of product shape

First of all consumer disposed to prefer curved objects more than the sharp objects. The reason of this attitude that human brain feels threatened with the sharp objects. Moreover consumer tend to choose expressive and meaningful objects more than the meaningless objects.

2.7.1.2 Effect of product color

In addition to shape of products, the color of the objects trigger the consumers buying habits and decision making process unconsciously. Companies uses color power on their products packages or brand images. In the table 2.1 below, there are examples of companies that uses which color and what is the meaning of the color on the marketing language.

Table 2.1 Product colors and meanings

COLOR	MEANING	COMPANY
Red	Power, Activity, Rescue	Coca- Cola, Nestle
Pink	Calm, Feminism	Barbie
Orange	Movement, Construction, Energy	Cingular Wireless, SalesBrain, Home Depot
Yellow	Light, Future, Philosophy	Kodak, National Geographic,
Green	Money, Growth, Environment	Starbucks, Garanti Bankası, Seven up
Blue	Trust, Authority, Security	IBM, Microsoft, Nivea
Purple	Royalty, Spirituality, New	Sun, Yahoo, Milka

Source: Renvoise A, Merhej V, Georgiades K, Raoult D., 2011. Intracellular Rickettsiales

In order to increase the purchasing impulses of buyers in the commercial world, color selection is made in a conscious manner. Products with colors and well-designed packaging in stores and markets are sold much more than other products.

Colors do not only affect individuals. Many societies and cultures have uploaded different meanings to the colors from the past to the present. Moreover, red, black and yellow are masculine colors, white, blue and green are feminine colors. In Central Asia, the red and yellow color between Hindus is sacred. In return, it is not loved in blue. In

Islamic culture, green is a sacred color. Therefore, the domes of mosques are generally prefer green color. It described meanings of colors in the below shortly.

Red: A vibrant and ambitious color. It easily multiplies the eye. It symbolize love, danger and sexuality. It is also known that the red color is appetizing. Therefore, red tables and chairs are used frequently in fast food restaurants. As an example, McDonald's Pizza Hut, etc.

Green: The most resident color. A sense of confidence in your subconscious vaccines. That is why banks often place logos in green color for example Garanti Bankası. It is often used in hospitals due to its soothing properties. Green is also preferred in holiday resorts because of its environmental color.

Blue: It represents silence, calmness and tranquility which is why the evil eye bead is blue. They paint the bridge feet blue to reduce suicides in the west. Again, the walls of the schools are blue to prevent children from being naughty. Blue is an appetite-cutting color. Therefore, food companies do not prefer it.

Purple: Red and blue are born from the mixture of color. It expresses dreams and expectations.

2.7.1.3 Effect of product price

Marketing professionals study on anchoring which is a significant for marketers pricing strategies. It represents the price that consumer is prepare to sacrifice money willingly for a product. For example, the price of bread is two dollars and consumer are used to paying two dollars for bread long period of time. After that bread prices increase up to three dollars. This sudden change in price, effects consumers' brain negatively that all of a sudden feel the pain. After a while consumer get used to the new price of bread and pays three dollars for it. Then buyers reset their base price of bread to the three dollars, it means they reset the price and it is the new price to willing to pay for bread and human brain anchor of it the new price. (Dooley 2012).

Another study for pricing effect is attempted on male participants who like to drink red wine. Attendees were taste four different types of wine but there is a trick on it. Two bottles are not different therefore, there were actually three different types of wine bottles that were tasted. The first tasted bottle of wine was shown with the price that a forty-five dollar tag, which was five dollar wine in the market. The second tasted bottle of wine was shown with the price that a ten-dollar tag, which actually is ninety dollars wine. The last tasted bottle was shown with its real price, which is thirty-five dollars. The result of the study, participants prefer the expensive price tag wine bottles. (Dapkevičius 2009). On the light of the studies, right pricing strategies is a significant issue for the marketers.

2.7.2 Branding

The science of neuromarketing aim is to understand and analyze the center of attraction of consumer reactions and uses these reactions to enlighten the relations between brands and consumers. Research indicate that consumers are exposed to various brands that have many impacts on those brands. Human brain tend to remember good or bad experiences and memories with commercials, product packages, usage experiences when consumers are exposed to a brand.

Furthermore, marketing professionals can use neuromarketing for the market segmentation, brand positioning and brand loyalty strategies. Studies indicate that different gender have different way of thinking, which is why gender differentiation is one of the most significant demographic category that marketers try to analyze insisntently. In addition, brand loyalty is anaother point of interest of marketing professionals. Reward activities, building trust are the important ways of increasing brand loyalty on the consumer eyes.

2.7.3 Advertising

Advertising is the other topic that marketing professionals can be use for their marketing activities with using neuromarketing techniques. Consumers emotional reactions and attention can be evaluate by using these techniques like eye tracking or EEG method. Scientists can be use two methods together for the same study after that collect data and analyze results comparatively. More data from human brain for the study can be enlighten the marketers and the results can be more realistic. Furthermore, while researchers use the EEG and ET methods, they can measure emotional reactions when they are warm home environment which means consumers exposed to commercials such as TV advertisements, billboard advertisements in their natural environment. Neuromarketing techniques help marketer to understand consumer's emotional reactions like likeability, feelings or persuasion.

Moreover, marketers big contend for TV advertisings were keep the attention of audience and prevent the TV commercials through zapping the channel. Emotional connection with the consumer is an important component to persuade them to watch the all advertisement. If emotional bond catch the consumer in the introduction part of ad, people tend to carry on to watch the commercial (Zurawicki 2010).

2.7.4 Political Marketing

Neuromarketing techniques arouse interest by not just marketing professionals but also politicians. For neuromarketing studies, it is new, thriving and promising area that have specific applications on elections. Scientists predict that next couple of years neuroimaging techniques will start to use and take over the election predictions because of reliable results thereby datas coming from directly human brain. While actualizing presidential elections in 2008 in USA, researchers used fMRI device and collect data from participants brain. It was one of the most significant research for political field studies by using neuromarketing.

2.8 NEUROMARKETING APPLICATIONS IN TURKEY

In Turkey, neuromarketing research continues to increase with each passing day. Studies were beginning with the leadership of the United States and now more known neuromarketing, it has begun to be applied, researched and popular in all developed and developing countries. By opening a master's degree program in universities in our country, more awareness has begun to increase.

Also consultant companies established such as, ThinkNeuro, Neurolize, Nueroscience that are measure neuromarketing techniques in Turkey. Not only does it offer the research results to its customers, but also by commenting out these results, it develops an application model, taking into consideration the company strategy, brand awareness, and best practices around the world.

The followings are some researches conducted in Turkey under the leadership of Thinkneuro consulting company.

Coca Cola in 2013 was subjected to an ad film, by using brain EEG and eye tracking analysis in Ramadan. The study was attended by 24 experiment with the brain EEG and the subjects' attention, sensory effects and sensory strain scores were measured. Using eye monitoring technique, which scenes the subjects were focused were determined. When the ad reviewed in terms of attention, emotional impact and emotional strain curves in seconds; it seems that the 'attention' curve continues to fall until the music starts to risk the ad being watched. Meanwhile, the rising 'emotional strain' curve points to a troubled beginning. On the other hand, it is positive that the 'emotional impact' curve is showing a strong rise at the same time. With the appearance of the bakers in seven seconds, the movement of the music begins to rise to the 'attention' curve. In the 21st second the appearance of Karagöz running in the wilderness, 'attention' and 'emotional impact' curves, while lowering the curve of 'emotional strain' is the most critical scene that requires rereview. In the 29th second, the 'attention' curve is on the stage where Karagöz and Hacıvat run towards each other, and it begins to rise. This sudden rise in the decline is 34th is an external sound that interferes with the emotional process by entering the ad in seconds. The convergence and hugging scenes are among

the reasons that increase the effectiveness of the ad, and thus the consumer is emotionally connected and the viewers feel as part of the brand.

(<http://www.thinkneuro.net/coca-cola-2013-yili-ramazan-reklam-filmi-eeeg-goz-takibi-analizi/>).

The Akbank twins ad is another neuromarketing research of Thinkneuro. Kıvanç Tatlıtuğ and İlker Ayryk are twin brothers in the commercial. This research also uses brain EEG and eye tracking methods. A total of 24 subjects were determined by the extent of which the images were focused on the research group. The negative thing about the ad is that the viewers get the illusion that they think it is over. The audience thinks the ad film is finished, and then he is having difficulty understanding the coming scenes. One of the most important breaking points of the commercial film is the time when they realize that Kıvanç Tatlıtuğ and İlker Ayryk are twin brothers. The viewers really loved the opposite twin. We looked at this in the eye monitoring data, and every Akbank article on the screen was monitored at least once and the viewer was connected between the brand and the consumer.

(<http://www.thinkneuro.net/category/arastirmalar/page/2/>).

Another research was Technosa the Mother's Day ad, which was also made by Thinkneuro. A total of 20 subjects from women and mothers were selected in all research subjects. The children and mothers who are Teknosa's target were watched. The data revealed that, although the emotional impact curve starts at the beginning of the ad, the attention curve that begins with the rising of the ad allows the watch. Even if the landing exits are seen, the ad's attention curve is constantly increasing until the end moments. With the 'food ready' line, both attention and emotional impact curves are performing a significant leap. The emotional impact curve also shows a variety of landing outputs, such as the attention curve, while performing the most important leap in 74th second. Maybe one of the most critical spots in the ad is the scene where the mother told her child that she fell in the plum tree in '89th second. In the 99th second, the emotional strain curve, which suddenly rises with even sharper momentum, makes the mother and son's hugs fall, with the feeling of those who watched them go to those days. As we see in the film Teknosa, the intimate hugs are very effective because it reduces stress and increases the emotional effect.

(<http://www.thinkneuro.net/category/arastirmalar/page/3/>).

2.9 ETHICAL CONCERNS

In the previous chapters, it is discussed the neuromarketing research tools which are used by marketing professionals and scientists have multiple advantages such as analyzing consumer needs in detail and understanding buying habits that are the future of the marketing world. Benefits of neuromarketing helps companies to choose and apply right marketing strategy for their products. In this chapter, ethical issues of neuromarketing applications will be discuss which is the most significant subject in the recent days for researchers.

When it comes to ethics in neuromarketing researches, it shows that there is a system that organizes and guides researchers and participants' relationships. As in the emergence of every new science, neuromarketing science was criticized by many critics and researchers. The fact that neuromarketing activities are related to the brain, it has brought negative criticism, especially in terms of ethics (Meyvis and Janiszewski 2002). A new groundbreaking neuromarketing practice in marketing science has become the target of a number of criticism arrows. Neuroscientists are sceptical about the development of a sub-discipline in the form of neuromarketing and think that neuromarketing practices are not ethical.

Some of the marketing professionals have a big dream about finding a button for buying products on human brain which make their life easier. However, scientists have concern about the dream and they believe that the button may permit marketers to dominate consumers ideas about buying products in point of fact they do not need that. Researchers beware of the companies data management gathered from human brain that means marketers can manipulate consumers with the collected information or companies can use the knowledge to create addictive consumers for their unhealthy products such as fast foods, alcohol. In summary, some of the scientists have concerns with the increasing the usage of neuroimaging tools. If datas were use in bad intension, it generates huge danger for marketing world (Iarobini and others 2007).

In addition to that, the other big concern topic for the researchers is privacy of the attendees who participate the studies of neuroscience. Moreover, participant can be violated that the regulations do not implement for companies which are using neuromarketing techniques. Some critics declare that with the fMRI machine, it is probable to find out private thoughts of the subject's.

In other respects, some of the scientists defend the researches ethicality. Studies done for neuromarketing companies goal to understand and analyze the consumer needs and behavior, not to manipulate or change the behaviors of consumers. Reserchers claims that brain scanning tools can only investigate the activity of the consumers brain and it cannot be effected by the others.



3. METHODOLOGY

In this study, qualitative research technique was used as a methodology. Neuromarketing consultancy companies and marketing companies selected for interviews to compare difference perspectives between both sides. It is outlined and discussed perceptions between companies giving consultancy about neuromarketing researchs and companies buying neuromarketing researchs from consultancy companies agreements and disagreements.

3.1 AIM OF RESEARCH

The aim of the thesis firstly, understand neuromarketing concept in a more excellent manner. Also, to learn effects on emotional bonds of consumers with brands. The other aspiration of the thesis was to have opinions and perceptions of seven marketing professionals in Turkey on the neuromarketing field.

3.2 RESEARCH METHOD

In this exploratory research, qualitative approach is used as the methodology which is an interpretive naturalistic approach to the world. This implies that qualitative analysts study things over their common settings, endeavoring to bode well for or decipher phenomena as far as the implications individuals bring to them. (Denzin and Lincoln 2005).

Quantitative and qualitative methods are used to case studies to gathering information. However, it is declared that those expanded utilize in qualitative systems due to the failure of quantitative strategies to inspect for late principle improvement. (Fillis 2006).

After examining different types of research methods and their strengths and weaknesses, in-depth interviews were picked for this research. Qualitative research is intended to this thesis since examine should figure out market research experts perceptions on the

neuromarketing field.

In this thesis, the qualitative research was selected in order to observe in detail the research which is the new concept of consumer behavior: Neuromarketing.

3.3 RESEARCH QUESTIONS

In this thesis, based on literature review and the aim of the thesis, the following research questions were improved:

Research Question 1:

Is neuromarketing which is a new market research concept that used infrequently by marketing professionals in Turkey?

Research Question 2:

Have neuromarketing professionals and marketing companies ethical concerns about usage of the knowledge gathered from neuromarketing researches?

Research Question 3:

Are neuromarketing researches beneficial and preferable technique for understanding the consumer behavior?

3.4 SAMPLING METHOD

First step of the study was to choose companies and marketing professionals for interview. The companies were chosen for the research to analyse differences between the companies who presents a service and choose a service. In an other word, neuromarketing research consultant companies that give consulting and marketing departments of companies which giving consultancy from neuromarketing research companies were the two types of companies used for the research. Twentyfive companies were choosen to contact for the interview via LinkedIn, mail, telephone, or website.

However, only seven companies accepted to participate the study, the others refused for the various reasons such as lack of time, company policies. Moreover, some of the companies did not reply interview request.

Participants were informed about the research before agreeing on the making the interview. Consent forms were read and signed by all marketing professionals that participate in this research. It is added to the Appendix 2. The table 2.1 shows that the participant companies for the research.

Table 3.1: Participant Companies

S.No	Company Name	Company Sector	Participant
1	ThinkNeuro	Market Research	Managing Partner
2	Neurolize	Market Research	Ceo/Co-founder
3	Flormar	Cosmetic Company	Brand Manager
4	Eli Lily and Company	Pharmaceutical Company	Brand Manager
5	Ulker	FMCG	Brand Manager
6	Anı Tur	Tourism Company	Marketing Manager
7	Euroko Sigorta	Insurance Company	Brand Manager

For this research, two market research companies and five well known marketing companies were attended. Especially neuromarketing consultant companies were important for this research to be able to follow the most recent developments in neuromarketing researchs.

ThinkNeuro was established in 2010 by Dr. Yener Girişken. It is well-known leading neuromarketing company in Turkey. ThinkNeuro have a lab for researchs named NeuroLab which has been designed as a standard living room to make participants feel watching advertisements at home like in a daily life. In that lab, they implement neuromarketing studies with EEG's. Interview was received by email on 7th March 2018 from the participant who was managing partner of the company. It is not permitted to use her name, but it is permitted to share her title in this study, according to declaration of the consent.

Neurolize is the other interviewee that established in 2013. They focus on the perception of taste and smell which are effected by outside factors for instance advertising, brand image, packaging and price. They believe that neuromarketing can help to understand the decision making process better. This new marketing approach allow them to procure better data for their consultants which would result in better products and services. Headquarter of the company is in Istanbul. Okan Özbek, co-founder of Neurolize attend for the research. Interview was received by email on 8th March 2018 from the participant who was CEO of the company.

Flormar, established in Milan, capital of fashion, and it was acquired by Şenbay family in 1970 and started production in Turkey. According to 2014 research of Euromonitor, world's leading market research company, Flormar is the number one make up brand of Turkey and they have one fourth market share in the Turkey's colored cosmetics market. Flormar intensified its operations abroad since 2008. Today they have seven-hundred shops in more than ninety countries. Flormar made an alliance with Groupe Rocher in 2012 and they give them fifty one percent of the company. Interview was received by email on 4th March 2018 from the participant who was senior brand manager of the company. It is not permitted to use her name, but it is permitted to share her title in this study, according to declaration of the consent.

Anı tur is a local tourism company that established in 31 years ago. It is the well-known company. Interview was received by email on 22th March 2018 from the participant who was marketing manager of the company. It is not permitted to use her name, but it is permitted to share her title in this study, according to declaration of the consent.

Ülker is a food and beverage company that established in 1944. Founders of the company, brothers Sabri and Asım Ülker, begin baking their first petit beurre biscuits in a small Istanbul shop. All product portofolio gathered under name Yıldız Holding in 1989. In 2005, company become partners with Kellogg's, the world's largest cereal manufacturer. After that several acquisitions made for the future of the company. Interview was received by email on 23th March 2018 from the participant who was marketing manager of the company. It is not permitted to use her name, but it is permitted

to share her title in this study, according to declaration of the consent.

Eureko Sigorta is an international insurance company that a leading position in its field. Its expertise at damage management and risk assessment. Eureko Sigorta was at first established in 1989 as “Garanti Sigorta” and got its current name in 2007 with 22.000 employee in 8 countries of Europe. It providing services and products in the category of “non-life insurance” such as fire, accident, transport, engineering, agricultural insurance, and liability, legal protection, business, credit insurance. Interview was received by email on 15th March 2018 from the participant who was brand manager of the company. It is not permitted to use her name, but it is permitted to share her title in this study, according to declaration of the consent.

Eli Lily and Company founded in 1876 by Colonel Eli Lily who is committed himself to creating high quality medicines in the World of unreliable elixirs and peddled by questionable characters. Interview was received by email on 18th March 2018 from the participant who was brand manager of the company. It is not permitted to use her name, but it is permitted to share her title in this study, according to declaration of the consent.

3.5 DATA COLLECTION METHOD

In this research, data collection method is an interview. The interviews were conducted face to face hence, some of them because of the participants busy calendars conducted via e-mail. Furthermore, e-mail interviews are more time saving for participants.

Interview questions were prepared from open-ended questions to make sure that participants respond open as much as possible. Interview questions started to general questions then proceed with specific questions. The language of interview was Turkish, to feel participants more comfortable. Face to face interviews lasted approximately forty-five minutes long. The participants responses noted in a paper with their permission.

3.6 ETHICS AND PARTICIPANTS

In this study, marketing professionals views were collected. Consent form was read and signed by all marketing professionals that participate this research. It is added to the Appendix 2.

3.7 LIMITATIONS

During this research, the main limitation was time. Due to the participants busy calender, some of the interviews executed via e-mail. However, the e-mail answers were pretty clear, face to face interviews were more helpful to know company in detail.

The other limitation was reachability and company policies. Because of the lack of time and company policies, participation to the interviews were limited. Since, twenty-five company chosen to reach for the interview, only eight companies' answers could be implemented to this study. Some of the companies did not return calls or e-mails, the others refused to participate to interview fort his research.

4. FINDINGS AND ANALYSIS

In this chapter, the findings from the interviews will be analyzed and explained in detail. Interview questions can be found out in the appendix part. In this research, all interview data that collected from companies were coded and every answer was summarized into the tables to analyze more clearly. In the end of this part, the last chapter will be discussion and conclusion.

4.1 USAGE FREQUENCY OF NEUROMARKETING IN TURKEY

Interview questions are divided into three groups that first group of questions asked for to understand the chosen companies perspective, usage frequency and awareness to neuromarketing applications and research tools. The companies that were chosen for this study have using several methods for their marketing researches. All of the respondents agree with the idea which is the level of awareness of neuromarketing concept in Turkey that is pretty low. Most interviewees highlighted that the concept just begun to use in companies such as global accounts Turkey's cities or big local accounts but still very new for marketing professionals in Turkey. Furthermore, with the development of this field, the number of new neuromarketing consulting firms increased considerably. Also commonly, the participants mentioned that marketers in Turkey have lack of knowledge about neuromarketing studies and applications.

Thinkneuro interviewee mentioned that , they uses three types of devices, including EEG and both mobile and fixed FNIRs, in brain imaging. Moreover, five different types of eye tracking devices designed to serve different purposes. He expresses that in the researches conducted with these devices, it is possible to achieve both quantitative and qualitative results. Insights can be reached by in-depth interviews with the Neuroscore based on the continuation of each research. He also mentioned about the data set is supported by research on psychology, marketing, sociology and cognitive science literature. He believes that neuromarketing in Turkey is spreading rapidly and companies are increasingly referring to these methods for understanding consumer

insight. With the testing of methods and analyzing the results of the market, this prevalence rate will gradually increase. He underlined that to realization of the correct methods and methodologies, the use of accurate analysis and interpretation techniques is essential for the development of the field. FMCG, Automotive, banking and finance, retail, telecom sectors are the most important sectors that preferred for them to receive consulting. Moreover, the costs of neuromarketing research in Turkey remain much lower compared to Europe and America. He highlighted that, a research is evaluated with the benefits, not the costs. A right-designed, measured and interpreted neuromarketing research, provides deep consumer insight. According to him, neuromarketing researches with differentiating from the traditional research methods, reduces the gap between what the consumer is saying and what it actually thinks. Interviewee's point of view to develop and promote neuromarketing studies, they are making speeches in various universities and institutions. Moreover, they contribute to the doctoral theses that are being written on this subject. Furthermore, the companies Chairman Dr. Yener Giriken has a book titled "Perceive the Truth" that he has written about the subject.

Neurolize respondent mentioned that the company using EEG, Eye Tracking, leather conductivity, mimic reading techniques. He claims that when choosing right method in these, it is often necessary to consider the nature of the research and to observe the research needs. Because every device has its own advantages and disadvantages. So he believe that it's best to use many systems together as possible as so that the internal visions that are produced are much more comprehensive. He gives an example that the results from the skin conductivity provide reliable data on stress, while the EEG device generates information for memory retention. When these systems are used together, the effects are much deeper than the use of each device alone. Respondents point of view neuromarketing has not yet reached its potential in Turkey. The most important reason for this low potential situation is about lack of explanation. He said that in our country, neuromarketing is often used in terms of evaluating advertisements. The company see that the user experience tests on the websites are gaining importance, but they are still outnumbered. Around the term neuromarketing, there's a common sense of confusion. Therefore, he do not think that the concept is well understood in our country. Moreover

he don't think that neuromarketing researches are expensive compared to other research methods. Of course, neuromarketing is a higher-cost area because it requires advanced sensors and experts to understand complex data from these sensors. However, the new technologies are already like this, and since neuromarketing is still not a more seated sector, the costs are not reduced, but such solutions in this area will soon feel the impact. 80% of the decisions we routinely give are given by the subconscious. He gives an example, it's a routine decision human make without even realizing that an ad film is not going to draw our attention. Marketers can advertise according to consumers preferences without making a gamble if they wish, but here is a comparison of the cost of the risk taken (which may be the garbage of your entire campaign) and the research budget. He insist that, he has never seen the cost of research yet more expensive than risk. He believes, neuromarketing and traditional marketing methods complement each other and that the best solution is to be used together. As he mentioned before, neuromarketing has the ability to demonstrate instantaneous changes in the status of emotion and consciousness thanks to advanced sensors. But the way to explain these changes is through talking to the participants.

Flormar interviewee mentioned that among the methods that they use in their company are surveys, a global consultant working with, 3rd party companies reports, market research firms. She said that as a department they used to run a neuromarketing AR. What they are doing is to work eye tracking method for customer experience to analyze where complete process forced users to identify related fields where improvement can be done. This method; make buyers' better recognition and comprehension, the possibility of personalized marketing for brands, customer experience improvement, increased competitiveness, better segmentation of customers according to traditional methods is advantageous. She pointed out that there are drawbacks like cost, technological barriers, lack of qualified personnel. But she believe that, when it is getting more popular and spread the costs will decrease. But as with other marketing methods, these methods in competitive markets for the brands would become a necessity. However, it's not a lot of known area and utilization rate is low. To spread neuromarketing she has opinions that can be apply such as seminars can be arranged in related subject, encourage domestic firms in this field. She is concerned about ethical

issues. Lastly the concept may not have the same benefits for each brand/market.

Anı Tur company using the CRM system, user behavior reports and market reports (rating reports, website visit statistics etc.). She mentioned that for the company website they are receiving help from an expert. They are not using the neuromarketing techniques in a planned and systematic way. She believes that neuromarketing research methods may offer of deeper analysis by comparison to traditional methods. It can provide more realistic results that can be qualitative or quantitative. But she think it could lead to bigger experiment groups. Depending on the time and place may be difficult to measure the effect. The foreign origin brands in Turkey used the method. In the travel industry as far as she knows this is not a widely used research instruments. This method can be develop even more in Turkey, if limitations, good results can be explained in detail. Moreover, she thinks the costs are high. However, if the knowlegde is used in order to create long-term strategies, costs will be reduced. The data to be obtained here, depending on the brand's ability to use that data is very valuable.

Euroko insurance campany for our marketing studies using surveys, in-depth interviews, focus group studies, etc. Neuromarketing is a new research method that they know very well but they did not try at all. She mentioned that it would be more effective to implement to retail or fmcg sectors. The data that they gathered while using traditional research methods can be useless. Beyond that the neuromarketing researches are an alternative method and this feature is the biggest advantage. She claims that the biggest drawback is ethical issues. Unfortunately, our country following new developments on marketing field behind the world. Moreover rather than local companies, global accounts marketing departments have opinion about neuromarketing researches, but even they were highly detailed information about the subject, they don't using actively. She underlined that employees in our country can't leave their "comfort zone", that is why they still using of traditional methods without any improvements. Overseas costs are reasonable, but it can be quite costly to do this work in Turkey. Still, if a company wants to be ambitious in their market, they will afford high costs. It's worth to try.

Eli Lilly and Company respondent share that in their company they are using as a marketing tool surveys and in-depth interviews. They are not using neuromarketing research techniques in the company. As a global pharmaceutical company, she said they are focused on digital marketing strategies. However, in the following years they have different plans on neuromarketing field.

Ülker interviewee told that in the company they are preferring online and offline surveys and online tools. They are not using neuromarketing research techniques but in the future usage rate and usage area will be increase. Moreover, it can be provide more accurate results than traditional methods. Although, neuromarketing research tools have low usage rate, it has higher awareness.

Consequently, as it can be seen in the table 4.1, the most common disadvantage said by the interviewees is about the costs of neuromarketing researches. Also, even all respondents find the research prices high, most of them accept studies results quality well enough which means neuromarketing offers reliable and deeper results with respect to the traditional methods. Shortly, most of the interviewees agree that the results are very specific, unique and valuable which is why they are worth to its prices.

The common sight is that foreign countries such as USA, England and Denmark have more studies on this field and that countries have more efficient and successful results about this concept. In fact, most of the interviewees said that the number of neuromarketing researches and consulting companies in our country may remain rapidly in the coming years.

Table 4.1. Summary of responses-1

S.No	Company Name	NM Usage	Future Plans for NM	Pricing	Benefits
1	ThinkNeuro	Using	-	Not expensive	Beneficial
2	Neurolize	Using	-	Not expensive	Beneficial
3	Flormar	Using	-	Expensive	Beneficial
4	Eli Lilly and Company	Not using	Plan	Expensive	Beneficial
5	Ulker	Not using	Plan	Expensive	Beneficial
6	Anı Tur	Not using	Plan	Expensive	Beneficial
7	Euroko Sigorta	Not using	Plan	Not expensive	Beneficial

4.2 ETHICAL CONCERNS ABOUT USAGE

The second group of the questions expected to shed light on the ethical concerns about the collected data from participants and usage of the knowledge in a good way or not.

Ethical issues about neuromarketing researches are one of the most significant subject that are argue about in the marketing community. Respondents are split up in this topic, some of them believe that neuromarketing is an ethical field, the others are defend that it can be ethical but there should be some restrictions and limitations, the rest of them protect the idea of neuromarketing researches can be use an unethical way.

Eureko insurance , Anı Tur and Flormar said that they have concerns about the studies and there are grey points in that field. In their poin of view, if it can be some rules about the critical topics such as children manipulation or the usage of collecting data in a proper way, the neuromarketing researches pass through the ethical field.

ThinkNeuro metioned about the ethical concerns and as a leading neuromarketing consulting company in Turkey, have some proactive solutions about the issues. He pointed out that the company represents our country in the world's first and largest Association of NMSBA (Neuromarketing Science and Business Association). In

addition to this, he expressed that their company plays a part in Neuro-Ethics Committee. Interviewee claims that with all activities that they participate, they stand in ethical field.

Respondent from Neurolize believes that neuromarketing studies extremely ethical. He pointed that today, with neuromarketing techniques, companies understand how participants feel about and this is within their knowledge. He also mentions that he don't believe human brain have a buy button that effects easily with marketers activities.

4.3 CONNECTION BETWEEN BUYING HABITS AND NEUROMARKETING

Neurolize interviewee mentioned that with neuromarketing techniques, actually participant feelings screenshots taken against stimulus (for example, an ad). In traditional ways, it is very difficult to understand participant how it feels about at the moment and he/she can not describe their feeling accurately because unconscious are not a subject that people can be aware of. He told that, as a consultant company they did a research on taste and brand perception of different lemonade brands. They've seen one brand get lower scores in particular. After that in the interviews, tasters said due to bad taste of the product scores are low. But EEG results showed that the negative signals fell before the tasting happened. He claims that in the study all the conditions were the same except product colors and brands are not known by the participants. Later on, products were served in special cups to hide colors so that it cannot be distinguished from other lemonade. The product's appreciation scores have risen by 21%. With this study, brands realized that consumers preferred the lemonade which is the pale yellow color like the pastry shops. But until that day nobody knew it was effective on the preferences. Neuromarketing is the perfect concept to catch these kind of tricks. Shortly he highlighted that with neuromarketing studies, consumers buying habits can be more discoverable for companies. He predicts that neuromarketing will be one of three basic research techniques within the next 10 years.

Anitur mentioned that depending on the diversity of marketing campaigns, she thinks that neuromarketing will be more preferred in the future because of the the impact of

known marketing and advertising methods are reduced every day. Furthermore, with neuromarketing tools she believes she can manage the consumers buying habits properly. For this reason, she will prefer to use this method in the following years.

Eureko insurance company unlikely others interviewee believes that neuromarketing will not be preferred more in the following years. Because using such methods will monopolize more large-scale firms. Big thinkers plays big. Companies who do not want to play big or who do not want to take risks, will continue to move forward with the traditional methods that it knows very well. Neuromarketing is a scientific and complicated method and it requires knowledge, experience and long-term investment to use. She added that she thinks she have been guided by with these methods in her personal purchases,. She mentioned that she even can't explain herself that when buying a computer why preferred Apple instead of HP, although it's the same feature and price.

The other intviewees mentioned due to the company policies, they can't share any information. Moreover all of them agree that, with the neuromarketing studies, buying habits can be more controlable and orientable.

Table. 4.2. Summary of Responses-2

S.No	Company Name	Ethicality	Effects on buying habits
1	ThinkNeuro	Ethical	Positively
2	Neurolize	Ethical	Positively
3	Flormar	Depends	Positively
4	Eli Lily and Company	Depends	Positively
5	Ulker	Ethical	Positively
6	Anı Tur	Depends	Positively
7	Euroko Sigorta	Not Ethical	Positively

5. CONCLUSION

The goal of the thesis firstly, understand neuromarketing concept in a more excellent manner. Also aimed to learn effects on emotional bonds of consumers with brands. The other aspiration of the thesis was to have opinions and perceptions of seven marketing professionals in Turkey on the neuromarketing field. Accordingly , the first part of the thesis presented literature overview of what neuromarketing is about and how it can be apply. The continuing parts of the thesis tried to explore, consumer behavior and neuromarketing. Finally, the in-depyh interviews conducted pointed to discernments of the marketing professionals in Turkey. The research questions of this theses are, question 1 "Neuromarketing is new market research concept that marketing professionals infrequently used in Turkey", question 2 "Neuromarketing professionals and marketing companies have ethical concerns about usage of the knowledge gathered from neuromarketing researchs.", question 3 "Neuromarketing researchs are beneficial and preferable technique for understanding the consumer behavior".

In the light of the theoretical part, it can be said that by using neuromarketing tools for marketing studies, subconscious emotions of human brain are deeply understood and with this knowledge marketing professionals can have more detailed knowledge about consumer behaviour. The theoretical part also tried to explain superior features about the neuromarketing methods agains traditional methods. Thanks to experiments that were mentioned in the theoretical part, it can be seen that neuromarketing gives pinpoint results that are avoiding the risk. I believe that, for more succesful marketing activities and product launches, the key point is to understand and analyze consumer preferences accurately. It is clear that the barin is complicated and an open question however, the one who solves brain anatomy and neuroscience wins. Neuromarketing consultancy companies that participate the study underlined that neuromarketing concept have a lot of advantages but if a company blend traditional method results with neuromarketing researches, it was more valuable data. In my opinion, together the method results can be complementary results which are more meaningful and precious. Using methods together will increase the impact of marketing campaign.

It is a common opinion that, according to the interviewees, in Turkey neuromarketing studies and the qualified employees are very limited. It is a fact that, marketer and companies beware of using neuromarketing tools, although all of them have a great knowledge about the concept. According to the professionals that were interviewed, it is clear that neuromarketing is an brand new concept for the Turkey. Interviews show that professionals have ethical concerns about the concept ad it is still a debate topic among consumers and marketers. However, I believe that if restruictions are made on the specific topics, ethical concerns will be eliminated.

5.1 DISCUSSION

Agreement with the specified findings from the in-depth interviews, three research questions that were mentioned before can be illuminated. First of all, although among marketing professionals have high awareness about the concept, frequency of use is not increase evenly. Secondly, the two ideas mostly effects interviewees negatively, one of them the usage of the data gathered from neuromarketing tools the other manipulating consumers with buying button. Thats why respondents in ethical concerns topic split in half.. The last one, all of the participants find neuromarketing researches as a beneficial tool that can be guide and lead marketers.

In addition to that, a great part of the respondents accept that there are not sufficient qualifies personnel who are specialized in neuromarketing field. Lastly, most of the respondents accept that within the future, the utilization of the new concept will increment in Turkey. Among all seven respondents, two of them don't think about that neuromarketing companies will increment in the future. The above tables show the overall results of the research questions questions.

However, all the attendees have an idea about neuromarketing, which is brand new marketing concept. In fact, most of them are not use in their company when developing marketin strategies. In seven respondents, two of them almost neuromarketing consultant company, that is why it is natural fort hem to use. Besides, in the other five company just one of them used neuromarketing tools for once. On the contrary, all of

the respondents have future plans for using and implementing neuromarketing methods in their company strategies.

Therefore, it can be seen the tables that three in seven of the professionals believe that neuromarketing is an ethical issues. On the other hand, one of them especially thinks that it is an unethical research method and the others have hesitations about the topic. It means most of the marketers have ethical concerns about the neuromarketing studies.

Likewise, all of the attendees accept neuromarketing studies is beneficial for their company. In like manner all of them agree with the idea that neuromarketing is the method which helps to understand consumer behavior and effect on buying habits. Besides, because of the neuromarketing research tools are expensive, for professional find the studies expensive.

Research Question 1:

Is neuromarketing which is a new market research concept that used infrequently by marketing professionals in Turkey?

Research Question 2:

Have neuromarketing professionals and marketing companies ethical concerns about usage of the knowledge gathered from neuromarketing researches?

Research Question 3:

Are neuromarketing researches beneficial and preferable technique for understanding the consumer behavior?

5.2 IMPLICATION

Neuromarketing studies would be seen more on the marketing field in the following years. With the incrementation of succesful results, marketing professionals can not be remain unresponsively for their brands marketing strategies progress. With the contributions of academic institutions and professionals in Turkey, the researches can be increase on neuromarketing. In addition to that with the increase of researches, the number of academic staff will increase automatically, and therefore the qualified staff

shall be trained for the companies which is the important missing for the marketing community. As a result, the high prices will decrease after the increasing utilization which is the biggest limitation of neuromarketing researches. Besides, marketers will choose neuromarketing to avoid risk of their marketing campaigns success rate. The new research concept can help to create a better understanding of consumer behavior.

As a conclusion, this thesis is a qualitative study in order to find out the perspectives of the companies to brand new concept of marketing -neuromarketing- in Turkey in terms of awareness, usage frequency, benefits, prices and buying habits. In order to limitations for this study limited number of marketing professionals interviewed. In addition to this academic study, to gain better information and knowledge about neuromarketing, the number of participants to the interviews can be increase in order to produce more worldwide recognitions.

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APPENDICES



APPENDIX 1-Interview Consent Form

Dear Participant,

This questionnaire study is prepared for the master thesis about “The new concept of consumer behavior: Neuromarketing” by Merve Gizem Özdeş, who is a graduate student in MBA under the advisory of Prof. Dr. Özgür Çengel.

Please take attention to below points before we agree to conduct this interview:

- a) You agree to be interviewed for the purposes of the student research
- b) Your participation is voluntary
- c) The purpose and nature of the interview has been explained to you
- d) You are free to skip any questions you don't want to answer
- e) Any data recorded during this interview will only be part of this thesis research
- f) Chose i or ii
 - i. I agree that my company's name and my title may be used for and only for the thesis research
 - ii. I do not wish my or my company's name to be used for this thesis research.

You can contact with me gizemguden@gmail.com or with the advisor Prof. Dr. Özgür Çengel ocengel@ticaret.edu.tr

Thank you for your contribution to our research.

Kind regards,

Merve Gizem Özdeş

Participant Name:

Participant Company:

Date: March 2018

APPENDIX 2 – In-depth Interview Questions

1. Which methods are you progressing with when conducting neuromarketing research for the companies? (fMRI, EEG, Eye Tracking, etc.) When you choosing right method for research what criteria do you take into consideration? What are the superiorities?
2. For which concepts, companies prefer neuromarketing researchs mostly? (product design, advertising, website design etc.)
3. Do the companies have knowlegde about the method they want to work with?
4. What do you think about awareness and usage rate of Neuromarketing researchs?
5. Which kind of sectors prefer you to work with?
6. What do you think about, neuromarketing aplications affect on consumer behaviour?
7. What do you think about the advantages and disadvantages of neuromarketing research across traditional research methods?
8. How neuromarketing applications can be developed in companies can not use?
9. Do you think that the cost of neuromarketing researchs are high? Is the information that is acquired against the high costs incurred?
10. Do you think that neuromarketing methods that targeting consumers subconscious will take more role in the future among marketing professionals?
11. Do you have any concerns about ethical issues about neuromarketing researchs? In what situations, ethical boundaries pass over? What can be done to make the consumer invulnerable?
12. Neuromarketing researchs offer specific benefit for companies, is it same for consumers?
13. Did you have a project that a product/brand has shown growth/progress after neuromarketing research?

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