

NEUROMARKETING IN ACTION – TOWARDS A NEW MODEL OF PERSUASION

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Abstract

Francis Crick once said, “There is no scientific study more vital to man than the study of his own brain. Our entire view of the universe depends on it.” Neuroscience focuses on the most fascinating object in the universe i.e. the brain and its impact on behaviour and cognitive functions. Neuromarketing is the branch of neuroscience that applies the principles of neuroscience to study consumer behaviour. It is the formal study of the brain's responses to advertising and branding with the help of technologies such as functional Magnetic Resonance Imaging (fMRI), electroencephalography (EEG), biometrics, facial coding, eye tracking and other technologies to measure changes in activity in parts of the brain. Neuromarketing is the new field of enquiry which is introduced to study how the human brain experiences, interprets, decides and acts in response to advertising. This research paper will study and analyze the concepts, scope and methods of neuromarketing on the basis of secondary data. It will how the shift has taken place from traditional marketing practices and developed new marketing avenues. This paper will also highlight the challenges in the implementation of neuromarketing and suggest ways to overcome.

Keywords – *Neuromarketing, consumer behaviour, advertising, human brain*

1.1.Introduction

If you could get inside the heads of all of your current and potential customers to find out what they really think about your marketing efforts and products, would you? Of course you would. Unfortunately, there is no magic pill that can provide that kind of untainted access. But there is neuromarketing, and it can come pretty close. Instead of relying exclusively on focus groups and filtered feedback, neuromarketing goes to the source – the consumer’s brain.

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The term neuromarketing which is also known as consumer neuroscience has been around for well over a decade, and the process can be utilized to glean different types of data. Some researchers use it to determine what goes into the consumer's decision-making process, while others use neuromarketing to 'read' people's thoughts as they watch a targeted ad or video. In short, neuromarketing evaluates the brain to study consumer behaviour.

To do this, scientists must move well beyond the standard question and answer tactics that have historically been used to gain insight into consumer's decision-making process and purchasing habits. In order to get organic, more accurate results from their test subjects, scientists who engage in neuromarketing research use either functional magnetic resonance imaging (fMRI) or electroencephalography (EEG) equipment on their subjects. By attaching electrodes to the heads of willing participants, researchers claim they can measure the intensity of a person's emotions, such as excitement, disgust, desire, and anger.

While the participants are watching an ad, testing a new device, or tasting a new food product, the staff conducting the research can read the brain activity of the subjects in real time. Based on the results of the experiments, as well as other consumer studies that have been conducted on the same product or advert, the company or marketing agency that is promoting a product or advertisement can determine what direction to take next.

Why Is Neuromarketing Important?

Neuromarketing matters because, when combined with other qualitative data, it can be a powerful tool in creating hypotheses related to predicting consumer habits. Using the results, marketers can fairly accurately gauge whether a tentative promotion will yield a positive or negative reaction from consumers. They can also determine whether or not a product's appearance, usability, and packaging will do well in the marketplace. The results gathered from neuromarketing studies shouldn't be used by marketers as a sole determiner of their next move, but they certainly provide insight into the consumer's mindset that traditional marketing test methods cannot offer.

1.2.Literature Review

- In 2002, Ale Smidts, a professor of Marketing Research at the Rotterdam School of Management at Erasmus University Rotterdam and expert in Neuroeconomics, first introduced the term neuromarketing. While termed for the first time in 2002, the concept was developed by Harvard University psychologists who based their research on the notion that over 90% of human activity, including emotion, takes place at subconscious level that is below conceived controlled awareness. This idea led to

learning techniques to effectively manipulate subconscious brain activity and perceptions.

- Harvard Professor Gerald Zaltman, who patented the idea of using neuroimaging as a marketing tool, though he did not use the term neuromarketing. He first submitted this idea on February 24, 1998 and it was patented on August 8, 2000.
- Nobel (2013) discusses the idea that two scientists at McGill University discovered an area of the brain called the “pleasure center”, or the reward center of the brain, that was located deep in the nucleus accumbens. This discovery was inadvertently made while observing lab rats - when given the opportunity to stimulate their own pleasure centers via a lever-activated electrical current, they would choose to press the lever repeatedly, sometimes hundreds of times per hour. In doing so, they would choose pleasure and allowed it to surpass their basic needs of food, drink, and sleep. As a result of this self-stimulation, many of the lab rats died from exhaustion. This observation led to the discovery that similar pleasure centers exist in the human brain. While the human brain is far more complex, we are largely motivated by what makes us feel good, especially in relation to our purchasing decisions. It was through this study that many major corporations began to take special interest in how understanding the functions of the human brain aid in the understanding of consumer behaviors
- Douglas L. Fugate, (2008) "Marketing services more effectively with neuromarketing research: a look into the future", *Journal of Services Marketing*, Vol. 22 Issue: 2. The ability to examine what specific brain function or functions are activated during various stages of the consumer's decision-making process should help service marketers improve their efficiency and effectiveness. While neuromarketing has applications to all forms of product marketing, it is of particular interest to services marketers because of the intangible nature of services; thus making conventional research more difficult and speculative.

1.3.Objectives Of The Study

The research is conducted to fulfill following objectives:

- To present the concept of neuromarketing
- To study the techniques of neuromarketing
- To analyze the shift from traditional marketing to neuromarketing
- To identify the challenges of neuromarketing

1.4. Research Methodology

To understand the influence of neuromarketing on the marketing practices, this research paper analyzes few relevant literatures on the topic of neuromarketing. This research used the technique of content analysis to study the discovered findings of the previous research on the topic of neuromarketing. Apart from that data available on blogs and articles have also been studied and considered. Due to the high requirement of time and cost primary research can not be undertaken.

1.5. What Is Neuromarketing?

Neuromarketing is the application of neuroscience to marketing. Neuromarketing includes the direct use of brain imaging, scanning, or other brain activity measurement technology to measure a subject's response to specific products, packaging, advertising, or other marketing elements. In some cases, the brain responses measured by these techniques may not be consciously perceived by the subject; hence, this data may be more revealing than self-reporting on surveys, in focus groups, etc.

1.6. Techniques Of Neuromarketing

Neuromarketing techniques are used to understand the influence of marketing activities on the response upon that from consumers. The varieties of methods are available in the field of neuromarketing which can be classified into two categories i.e. Outside reflexes and Inside reflexes.

1.6.1 Outside Reflexes

Outside reflexes are those methods which do not measure the brain activities but perceive the reactions which have their origin in the brain. These methods, on the basis of biological reactions, can determine what the brain of a person actually thinks, feels or does, without considering what the person says, or even when person does not say anything (Roth 2013). These methods exist for a longer time period since the technology was not that advanced and were the most appropriate in order to collect information about the brain. Methods namely body language, empathic design, facial coding and eye tracking, all together are known as outside reflexes.

- 1. Body Language** – Body language is a form of non-verbal communication which includes gestures, postures, mimic and other body movements. It is the oldest and the simplest method to analyze behaviour.
- 2. Empathic Design** – It is another method where no device is used to analyze human beings.

Under this method, observation is made in the consumer's own environment and observer silently observes how the consumer uses the product in a natural environment. This is an attractive, low-cost and low-risk method to potentially identify consumer needs and wants.
- 3. Facial Coding** – It is a specialized form of body language where facial expressions systematized and coupled to emotions of a human being. Under this method test persons are confronted with the stimulus and at the same time their facial expressions is observed, determined, interpreted and analyzed.
- 4. Eye Tracking** – It is a method which consists of measuring the eye movement pattern of test persons. This method is easy to apply to brand, store, commercial or web pages since it is easy to track what a person actually sees and to which things they pay special attention and the chronological order in which things are being looked at can also be determined.

1.6.2 Inside Reflexes

Inside reflexes are those technological advanced methods originally developed for the medical area to look inside the brain. This is done by using methods such as EEG, fMRI, MEG and PET. These methods under neuromarketing analyzes about the influence of packaging, advertising and association with brands.

- 1. fMRI** – fMRI stands for Functional magnetic resonance imaging. It is a form of non-invasive neuroimaging technology that is primarily used for marketing purpose. Under this method, first a brain scan is made when there is no stimulus is being presented. Afterwards, a stimulus is presented for example an advertisement which activates certain brain areas and increases the oxygen-rich blood flow to certain regions. Due to the fact that oxygenated blood has distinct magnetic waves compared to deoxygenated blood, this difference can be picked up in form of a signal by the fMRI scanner. This method provides deeper insights into the brain but the use of this technique is expensive.
- 2. EEG** – EEG is the abbreviation for Electroencephalography, which means an electrical reproduction of brain activity. Under this method numerous electrodes that

are attached to the individual's scalp through bands or helmet recognizes the electronic signals which represent brain activity. Under neuromarketing when a researcher presents certain products or services to test person, then neurons fire some electric current which can be measured and recorded with EEG. Under this method participants should be relaxed otherwise result would not be appropriate.

3. **MEG** – MEG is the abbreviation for Magnetoencephalography which captures the magnetic fields of neural activity. Under this technique highly sensitive detectors are used to measure the electromagnetic field without contact with the scalp. The cost of the acquisition of the necessary equipment and of the magnetoencephalography session is very high, which contributes to the greater popularity of EEG than MEG.
4. **PET** – PET stands for Positron emission tomography which measures the blood flow and metabolism of the participant. It is a technique with validity and spatial resolution similar to those of fMRI. However, radioactive particles (positrons) must pass through the participant for the collection of results, making this technique highly invasive and difficult to use in neuromarketing.

1.7.Shift From Traditional Marketing To Neuromarketing

Neuromarketing is simply neuroscience applied to marketing. Researchers use technologies that observe brain activity and biometrics (such as eye tracking, emphatic design, galvanic skin response, facial coding, etc.) to determine how people respond physiologically to marketing messages.

Neuromarketing examples might include:

- Tracking eye movement to see which parts of a webpage grab the user's attention first
- Using EEG imaging of the brain to determine one's emotional response to an ad or product
- Determining which version of an ad generates the most brain activity, as seen in an fMRI scan

The goal of neuromarketing is to better understand consumer behavior by gaining insight into the reactions and decision-making happening at the unconscious level. Since 90 percent of the information that comes into the human brain is processed unconsciously, neuroscience gives us valuable insight into automatic human responses that influence consumer behavior.

By contrast, traditional marketing research methods involve consumer surveys, focus groups and external observation to gather data about what people think, feel and believe. These traditional methods are better at revealing conscious decision-making processes.

Advantages of Neuromarketing

The biggest advantage of neuromarketing is that it can fill in the gaps left by traditional marketing methods, because neuromarketing provides insight into situations where consumers say they want one thing, but then act (i.e., buy) in a different way.

Neuromarketing has an advantage because it:

- Does not rely on consumers to willingly and accurately report emotions,
- Can closely tie physiological reactions to specific parts of an ad or message, and
- Provides insight into automatic responses that take place at the subconscious level.

Limitations of Neuromarketing

However, it's important to keep in mind those variances in how individual process information and the limitations of testing can make it difficult to generalize results with certainty. Limitations include:

- The high cost in doing neuromarketing research means it is conducted with small sample sizes which may not be significant.
- Since brain science is still evolving, there's not a completely reliable way to connect the marketing stimuli to the emotions triggered.
- Reactions observed in a lab test environment may be somewhat different than they would be in an actual buying environment.
- Neuromarketing lacks credibility of information as the findings can be biased to the benefits of the company.
- Neuromarketing violates the consumers' privacy.
- Unstable mindset of the participants can cause misleading results.

We Need Neuromarketing AND Traditional Marketing

A key point to remember is that people are naturally contradictory in nature. Human beings often say one thing and do another, and think one way and feel the opposite at the same time. We also may hold one view consciously while subconsciously believing something else.

This doesn't mean that all people are hypocrites. It's just that humans are complicated creatures with many competing desires, who live in a world where we're constantly being sent conflicting messages. In fact, one of the biggest opportunities for marketers is to help relieve this internal conflict – either by guiding people through their options so they can make a clear decision, or by providing a new option that allows them to have their cake and eat it too.

Although all the stimuli humans encounter are filtered through the unconscious processing system first, the conscious decision-making process is also important. Traditional marketing research has given us plenty of valuable insight into why people make the buying decisions they do – or at least why they think they make them.

So while it may be tempting to get caught up in a debate over which type of research gives us better data

– traditional or neuromarketing – savvy marketers would be wise to utilize both, because each method measures different factors and gives us different information, all of which is valuable to some degree.

1.8 Conclusion

To conclude this research, there must be a reiteration that neuromarketing is, in its simplest definition, is a tool of research to better understand consumer behavior and purchasing decisions. “Neuromarketing is not a new kind of advertising that plans to replace traditional or native ads. It's simply a methodology that can be implemented with existing marketing strategies to improve the effectiveness and to double, or maybe triple, the lead generation and ROI. However, with neuromarketing opening doors to the minds of consumers and allowing us to understand their behavior, marketers now have a chance to use current findings to create much more successful advertising campaigns that persuades people to take action. It is also important to make an emotional connection with the consumer and build better customer relationships. The science behind Neuromarketing is still new, but researchers are already making new advancements in this field to build better marketing based on persuasion, emotion and influence.

The implementation of neuromarketing and neuro scientific techniques resulted in the attainment of more objective results than without these techniques, which are expected to reveal unknown internal information about human behavior in general. By making use of neuromarketing techniques, marketers can analyze the effects of consumer buying behavior, advertising, pricing, distribution of products and decision making on a much more scientific basis by evaluating upon the test person as well as the marketing input itself

The goal of this research has been to not only show what neuromarketing is, but also to understand what it is not. Neuromarketing is a research tool that holds the great potential to help us to more fully understand purchasing decisions. It is a tool that can save companies from putting out campaigns that could be potentially damaging to their brand image and reputation. It is a tool that, with proper research, can help us truly understand the mind of the consumer.

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