



Neuromarketing: The Science of Consumer Behavior

Surya Narayanan V¹
Praveen Raj N²

Abstract

Neuromarketing is a field of research activity that studies consumer's behavior, sensory nerves, cognitive and effective response to marketing stimuli. Undoubtedly, neuromarketing is a field that bridges the measurement of consumer behavior and insights. It deals with how human emotions are influenced on first sight of brands or products. Consultative selling is the best way to know about a customer by a salesperson. We know that consumer's preference changes often. Here, marketers are akin to scientists, who are reading consumers brains to understand how they are making decision and which part of the brain is urging them. Normally our brain becomes subconscious to the color of the product, packaging style of the products, advertisement of the products, price of the product, and henceforth. It's really hard for a consumer to choose a product as there are myriad substitutes. To put it simple, "Choice overload problem". There is a special tool for tracking human physiological and neural signals to gain insight of customers which is named as fMRI (Functional Magnetic Resonance Imaging), EEG, Galvanic Skin Response, electromyography and eye tracking. It detects the blood flow in the brain associated with increased neural activity. It is estimated that over 90% of all the thoughts happening are driven by our subconscious mind. Moreover, neuromarketing is also related to branding. It measures how a brain response with an unfamiliar product to those of familiar ones. With these responses, marketers will arrive with myriad branding strategies. As a whole, we will be discussing about how the purchasing behavior of consumer is influenced by the sensory nerves of our subconscious mind.

Keywords: Neuromarketing | fMRI | Consultative selling | Consumer Behavior

1. Introduction

Neuromarketing is an emerging field in marketing. The term "Neuromarketing" was introduced in 2002 by Dutch marketing professor Ale Smidts. In the late 1990s, marketing professor Gerald Zaltman patented the ZMET (Zaltman Metaphor Elicitation Technique). It is tool and a technique which elicits both conscious and unconscious thoughts by exploring people's metaphoric expression. It gained popularity among hundreds of major companies Coca-Cola, General Motors, Nestle and Procter & Gamble. Then in 1991, he used fMRI to show correlation between consumer brain and marketing stimuli. Traditional methods of market research include sizeable surveys used to evaluate features of the products. This includes the companies store data of each customer in order to understand them more thoroughly using the past behavioural data. The feedback system plays a vital role in marketing in order to make betterment for the customers and make them intact with the company. Conventional techniques used in this type of study are the measurement of ECG and electrical activity of the dermis. Human decision is both a conscious and non-conscious process in the brain. Non-conscious information has large influence in the decision and purchase making process. Ultimately, neuromarketing combines marketing, psychology and neuroscience. These include Electroencephalography (EEG), Magnetoencephalography (MEG) and Functional Magnetic Resonance Imaging (fMRI), eye tracking, electrodermal responses and other neuro-technologies. Researches investigate how consumers are responding when a product is exposed to them. Branding, does it sounds good? Branding is one of the methods where customers will get driven away by the marketing strategies. Neuromarketing can measure the impact of branding. Choice overload is one the major problems that customers are facing now days in such a that they are not purchasing the product at the end of the day.

¹ Student, ITM Business School, Chennai, [Email: praveen.raj@itm.edu](mailto:praveen.raj@itm.edu)

² Student, ITM Business School, Chennai, [Email: surya.narayanan@itm.edu](mailto:surya.narayanan@itm.edu)

2. Literature Review

It is the attempt to find where and how our brain reacts when exposed to advertisements and marketing stimuli. Generally, neuroscientific methods are used to study consumer behaviour, the decision-making process and emotions in purchase process (Javor et al. 2013, p.2).

Recently, the International Journal of Psychophysiology called neuromarketing “*The application of neuroscientific methods analysing and understanding Human behaviour in relation to markets*” (Lee, Broderick, and Chamberlain 2007, 200). Indeed, with these improved technologies marketers could be able to sense the decision-making process of the consumers.

In the paper “*Influence of price and quality to customers satisfaction: Neuromarketing approach*”, Arimas DapKevicius has made an attempt to understand how important factor customer satisfaction has become for business to attain success. A satisfied customer tends to buy more of the same product and spreads about the product through word of mouth. The term price is said to be used as an indicator of the products quality which gives better expectations from the product it also determines the higher level of satisfaction.

An interesting paper written by Prof. Wealdo Cuesta, Prof. Luz Martinez-Martinez, Pro. Jose Ignacio on “*Study in Neuromarketing: Analysis of the influence of music on advertising effectiveness through Eye tracking, facial emotion and GSR*”, has evaluated the important role of music in advertising music produces a strong influence on the cognitive process of attention and also in the emotional process of evaluation and in the attributes of a product. Stories conveys emotions irrespective of advertisements.

In “*Evolutionary Neuromarketing: Darwinizing the neuroimaging paradigm for customer behaviour*” has successfully evaluated evolutionary psychology points that a human mind has a set of domain specific computational systems that have evolved to some recurring adaptive problems. Neuromarketing is a representation of the intersection between consumer behaviour and cognitive neuroscience. These both have been infused with neuromarketing based theorizing albeit. Neuromarketing has not as of yet. The neuroimaging technology allows researchers to observe and understand how neuromarketing cultivate subsequent human behaviour.

3. Research Methodology

Research methodology implies the framework or blueprint for conducting the market research project. It details the procedure for obtaining the information needed to structure or solve marketing research problems. This paper determines the exploratory and conclusive research to understand the conceptualization of Neuromarketing in the minds of consumers and marketers. Apart from that, qualitative research is also being conducted with the help of secondary data, previous articles and questionnaire.

4. Neuromarketing- An Emerging Tool

As aforesaid, neuromarketing is an emerging and development tool for an advertisers to make them assess cognitive decision-making based on the brain activity, skin, eye stimuli and blood flow. Here are some companies which cleverly used this strategy to bring up innovation in their products.

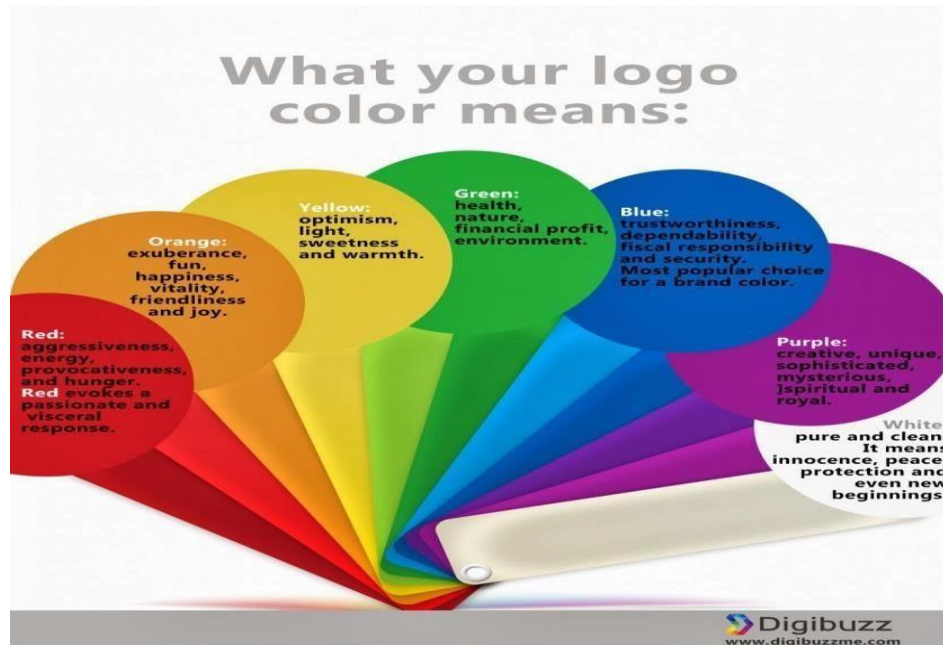
Hyundai Motors used EEG-tests in the design process of their cars before starting their production. This is done to measure customers’ reactions to certain parts of the cars- interior and exterior design. They want to know what customers think about a car before they start manufacturing thousands of them.

Yahoo, a giant company, has a 60 seconds television commercial that features happy, dancing people. But it tested to EEG cap-wearing customers before spending the money to air the add on prime and cable TV. Thus, it rolled out to bring more users to the search engine.

Microsoft used this technique on gamers to measure how engaged the gamers are when they are using Xbox. They put the EEG on the heads and showed advertisements on the video system. It tracked which parts of the brain were stimulated by the ad. Ads that are attractive makes the viewers to likely go out and influences them to buy the products.

5. Effect of colours on Human behaviour

Colours play a significant role in framing consumer's decision and it acts as a bridge between feelings and colour. It triggers specific emotions in the brain and body. For example, red raises the blood pressure whereas blue lowers the blood pressure. Therefore, it proves to be a brand identity. It is said that 85% of shoppers place colour as a primary reason for why they buy a product.



5. Tools and Techniques of Neuromarketing

5.1. EEG Analysis: EEG is the abbreviation of Electroencephalography. Although this method is considered as one of the oldest methods, but it gives an appropriate result in measuring the changes in the electrical field in certain brain regions. The electrodes are placed on the scalp of the brain and it picks up subtle changes in electrical activity. The data is recorded on the screen or in a paper as waves and is analysed.

5.2. HD EEG: It is an updated version of the above. It gives accurate results of the brain activity when customers are exposed to stimulus. It has 256 channels and very deep brain signal analysis.

5.3. Galvanic Skin Response: It is also called as skin conductance, used to measure the temperature of the skin and its electrical conductance. It is mainly used to measure the physiological and psychological arousal. This is most commonly used in lie detecting technology. Apart from measuring skin, pulse rate is also measured. The fluctuations in the pulse measures the level of excitement of a customer on seeing an ad, product or service.

5.4 Eye Tracking: Eye tracking is used to track the position of the eye as its focus shifts along the surface of the visual trigger. Mostly they are used in product and software design. They have a custom made eye tracking camera which tracks the movement of the pupil. Pupil shows different enlargement when exposed to a luxury brand and ordinary brand.

5.4. Cognitive Analysis: This is a digital model that combines the output obtained from EEG, Galvanic and Eye-tracking to give a holistic view of customers' perception.

5.5 fMRI: fMRI stands for Functional Magnetic Resonance Imaging, is a tool which makes an anatomic representation of the brain using magnets. It measures the blood oxygen level of the brain and measures the increased brain activity. The interest towards the usage of fMRI has increased in marketing because it can make distinction of neurons that are connected with specific regions.

6. Conclusion

With this paper, I would like to convey that people are dumped with myriad data and information. They have plethora of options in such a way that they are spending much time in making a decision even in buying a single product. Rather, I would to say the rate of rejection a product is more than rate of purchasing it. This is in the case of modern customers who are soo choosy. Companies are dying from orthodox marketing, which means they can no more attract customers with their elegant advertising or even with celebrity endorsement. Customers will get to know the true face of the products or companies with the information they are getting and peeping from every corner. Also, few companies don't know to customize their advertisements with the data they are getting from each customers. The company which make use of that data and target the customers in a right way will survive in the market.

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