

Neuro Marketing-An Emerging Concept

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Abstract - Modern management approaches are nowadays focusing more on human behavior. Whether it's human Resource management, marketing management or advertisement and publicity the behavior and attitude of humans towards various aspects of life have been under a scanner. The purpose is to enhance both the productivity at operational level and marketability for sales revenue generation. Thus the combination of technology along with brain to study consumer behavior has gained immense importance today. Neuro Marketing can be hailed as one of the marketing innovations in today's times. The research paper is related to exploring the finer nuances of neuro marketing, its relation to neuro science and its usage by companies to enhance their sales. Many companies are using the techniques and methods of neuro marketing to revise their earlier perception of consumers regarding their product with success. The study reveals that there is a lot of potential for neuro marketing to be used as tool for studying the buying behavior of an Indian middle class consumer.

Key words: Neuro marketing, brain activity, advertisement, consumer

I. INTRODUCTION

Neuro-marketing is a new concept in marketing. It is one of the most frequently used practices and approaches adopted by the marketers nowadays. Modern management approaches are nowadays focusing more on human behavior. Whether it's human resource management, marketing management or advertisement and publicity, the behavior and attitude of humans towards various aspects of life have been under a scanner. The purpose is to enhance both the productivity at operational level and marketability for sales revenue generation. Neuro Marketing can be hailed as one of the marketing innovations in today's times. Precise attention are the part of neuro design and neuro branding which emphasizes on sentiments, feelings and emotions. The purpose is to incite the preferred sentiments and reactions in customers by exposing them to several marketing tools like colour, aroma, scheme, tune, design, liking and many more.

II. CAUSE OF EMERGENCE OF NEURO MARKETING

The modern business era is an era of advertising. Greater the advertising budget higher the demand for your product is business mantra. However despite spending billions on various modes of advertisement the results at times are not as desired or expected. The main reasons being cited are that the conventional methods which make use of questionnaires work only on the outward responses of a consumer when exposed to an advertisement. But there is

more to it than mere exterior rationality of a consumer. The essence of Neuromarketing is that there is surely more to it than meets the eye. According to *Neha Kasana* (<http://neuromarketing-india.blogspot.com/>) the buying decisions made by a human brain are 90% subconscious and only 10% rational. Literature on Neuro marketing cites that our responses to advertising campaigns are only a tip of an iceberg.

III. LITERATURE REVIEW

According to *Dan Ariely and Gregory S Berns (2010)* the use of neuro imaging in conducting product marketing has gained considerable popularity in recent times. It is hoped that it will provide information which one is unable to get through conventional methods of market research. The most promising aspect of this is that it may provide ways to market a product prior to its launching in the market. According to *Harit Kumar, Neha Mathur and Sangeeta Jauhari (2017)* Neuro marketing has an important role to play in understanding consumer's perception towards Consumer Buy-ology and Purchase Decisions and helps to improve the marketing efficacy. Their research adopts an integrated approach to study about Consumer Perception through Kano's model. *Vivian Alexandra Roth (2013)* has conducted an in depth study based on reviews and provided evaluation of influence of neuro marketing on important marketing inputs such as consumer buying behavior, pricing, advertising, new product development, communication, decision making, branding, product design and distribution

of products. According to him the 'neuro-area' comprises of neuroscience, neuro economics and neuro marketing. The combination of all these three and its objective analysis is to design feasible strategies to attract more and more customers. However the study showed that neuro-marketing was not profitable for all aspects of marketing inputs. Potential influence of neuro-marketing was seen on consumer buying behavior, pricing, advertising, and distribution of products where as no perceivable effects could be seen on new product development, communication, decision making, branding, product design. According to *Sarker S, et al; (2013)* personality is one of the important concepts while studying the buying behavior. Personality affects an individual's buying behavior and what he buys ultimately is driven by personal traits of a person. Thus all companies are keenly interested to know this aspect of a consumer's behavior. *Leila C (2013)* opines that the concept of marketing has changed a lot in almost half a decade because of complexity of the behaviour of individual customer. In postmodern society, mass advertising and marketing is decreasing as the concept of neuro marketing is increasing because of the marketers belief that every individual is different and so is his purchasing pattern and in such cases, how can the marketing strategies be same for everyone. In the figure below *Nick L (2017)* visualizes the process of neuromarketing study, although of course we do recognize that there will be variance here, and also that some studies may operationalize a subset of these tasks and links. The diagram presents a useful starting point from where the various key issues germane to neuro marketing research. Specifically three critical points of interest are being considered by the researcher, which have not received enough discussion in neuro marketing-relevant literature. Taken together, they have substantive implications for the development of a more reflective neuromarketing, which in turn has greater potential to make a positive impact on marketing knowledge, marketing practice, and public perceptions of marketing activity in general.

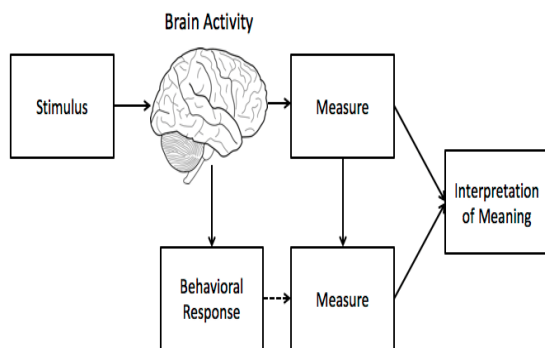


Fig. 1

IV. THE SCIENTIFIC ASPECT OF NEURO MARKETING

Neuro marketing is based on the study of brain and how each part of the brain reacts towards advertisements. This new concept of marketing relies on unraveling the mysteries of the most important of a human body's organs i.e. the Brain. The Human Brain is divided into various parts from front to back known as Frontal lobe, Motor Cortex, Sensory Cortex, Partial lobe, Occipital lobe and Temporal lobe. Neuro marketing makes an attempt to study the activation aspect of these lobes as to whether an advertisement is going to be liked by them or not. In other words it tries to know about the reactions of potential consumers towards its products. Besides the lobes, the waves generated by the brain also play an important part in determining one's state when exposed to some stimuli exterior to the body.

V. MODUS OPERANDI OF NEURO-MARKETING

Brain activity on which Neuro marketing is based makes use of a few basic methods. They are functional magnetic resonance imaging (fMRI), and electroencephalography (EEG) and Eye tracking. In all the cases technology and medical science play a prime role where the natural responses of brain are mapped to study the reaction of the consumers. All the methods however have their own advantages and limitations.

Functional magnetic resonance imaging aims at studying the deeper part of a consumer's brain known as the 'pleasure centre'. It seeks to know the consumer response through the flow of blood inside the brain when certain audio/video elements are shown to him. Thus very real and in depth responses of a person can be elicited through fMRI. However this method is very expensive (the machine cost being high) and causes some inconvenience to the target subject as the person has to lie completely still and inactive within the machine till the mapping is done.

On the other hand the electroencephalography (EEG) method is relatively simple and makes use of a cap of electrodes which is fitted on to the scalp of the consumer to draw responses based on electric waves. In this the movement of the consumer is also not restricted. The responses are studied on the basis of human feelings and emotions of excitement, curiosity, anger, annoyance etc. EEG is relatively less expensive. However it is superfluous as compared to fMRI and does not delve deep into the subject's brain.

Eye tracking makes use of webcam and allied kits to record a person's eye movement as to where and what is one looking, for how long and in what order. It is an easy to use technique which maps eye activity as the web camera and the kit can be placed anywhere or can be carried to any location respectively. This makes the method quite portable and effective.

VI. IMPORTANCE OF NEURO MARKETING

Modern management approaches are nowadays focusing more on human behavior. Whether it's Human Resource management, marketing management or advertisement and publicity the behavior and attitude of humans towards various aspects of life have been under a scanner. The purpose is to enhance both the productivity at operational level and marketability for sales revenue generation. Thus the combination of technology along with brain to study consumer behavior has gained immense importance today. Neuro Marketing can be hailed as one of the marketing innovations in today's times. It is different and also conducted in a more intense way as compared to traditional way of marketing. Traditional way of marketing relates more to verbal and exterior reactions of the consumer. On the other hand Neuro marketing as the name suggests is more biological as it tries to extract a more subtle and deep rooted thought process embedded in the mind and brain of the consumer.

VII. USE OF NEURO MARKETING BY COMPANIES

In recent times many companies are making use of neuro marketing techniques for studying the consumer behaviour and reaction patterns towards their products, prices and packaging etc. Moreover these techniques are actually helping them to make changes in the above aspects according to consumer's brain deep psyche. Be it any field neuro marketing is being used in many areas of market research and advertising such as branding, advertising effectiveness, product design, product innovation, shopper's decision making, on-line experiences, entertainment effects and politics.

To cite a few examples Campbell Soup used it in 2010 when they found their sales dipping. With the use of brain scans they determined that the positioning of the logo of the company at the top and the picture of the spoon on the packaging did not go well with the customer's emotions as did not create any brain activity. The company on realizing this replaced the spoon with steam on the packaging and also shifted the logo positioning at the bottom. Surprisingly on conducting the same tests again it found a lot of brain activity which resulted in increase in sales revenue. Facebook researched on how its advertisement system influenced the unconscious perceptions and emotions of individuals (neurological engagement). Yahoo also used neuro-marketing before expending on their advertisements on prime time TV, online marketing and cable TV. Adopting the EEG method, neuro-marketing was adopted by them to maximize their return on investment. Yahoo! tested its advertisements with neurometrics in order to maximize the return on investment. The test found stimulation in the limbic system and frontal cortices of the brain which is the centre of memory and emotional thoughts. Their advertisement comprised of a 60-second television

commercial that featured happy, dancing people around the world. The advertisement, which was a part of Yahoo's new \$100 million branding campaign, brought more users to the search engine. Google used neuro-marketing in order to determine the effectiveness of two forms of Internet advertising for YouTube i.e. pre-roll and overlay. They found that the overlay advertisements are more effective because the advertisements do not interfere with the content and the user does not leave the site, converting clicks into sales. Microsoft used neuro-marketing to gauge the effectiveness of some of its campaigns on the Xbox platform (how engaged gamers are when they use an Xbox). They wanted to get a clearer picture of how stimulated the brain was during 30 and 60-second TV advertisements compared with in-game advertisements run on the Xbox. While viewing TV advertisements for an automotive brand, the most brain activity happened in the first half of the advertisement. However, when watching the Xbox Live via in-game advertising, brain activity peaked at the repeat image of the car, reinforcing the advertisement's memorability, claims Microsoft. Advertisements that excite several parts of the brain are supposed to make viewers more likely to go out and buy the product advertised. eBay, through its online payment company Paypal, used neuro-marketing. Frito Lay tested their advertisements, products and packaging using neuro-marketing. One study focused on the reactions of the women's brains in order to find a way to be more attractive to that market. Mercedes-Benz Daimler used neuromarketing for a campaign in which the fronts of cars were simulating human faces, linking directly to the pleasure center of the brain. Sales rose with 12% in the first quarter. 20th Century Fox tested the trailers of their films, video games and advertisements in outdoor advertising campaigns using neuromarketing. Hyundai asked for a neuromarketing study having 30 men and women in order to test a sporty silver model of 2011. The 15 men and 15 women were asked to stare at specific parts of the vehicle, including the bumper, the windshield and the tires. Electrode-studded caps on their heads captured the electrical activity in their brains as they viewed the car for an hour. Their brain activity is supposed to show preferences that could lead to purchasing decisions. Unilever ice cream applied neuro-marketing and found that the ice causes greater pleasure than chocolate or yogurt. Coca cola has their own in-house neuroscience lab, where they use neuroimaging techniques in real time while volunteer subjects watch various commercials, using the scientific method and completely unbiased neural responses to what the subjects are hearing.

VIII. NEURO-MARKETING IN INDIA

A major portion of Indian population belongs to middle class. A section of society which is neither rich or elite nor poor can be reasonably termed as middle class. In Indian context it is understood that there is a large potential of conducting market research through Neuro-marketing. Over

the past five years Neuro-marketing has made huge strides and India too has submitted itself for probing of the subconscious. 'Neurofocus' the global market leader in Neuro-marketing sees huge opportunities for the same in India with his prime target of gathering hidden information being the Indian middle class consumer. The Indian middle class consumer is a big consumer of the Fast Moving Consumer Goods (FMCG) and with rising incomes of the middle class, neuro-marketing can provide some very important information which one may not be able to procure through the conventional methods. This is based on the premise that India is highly emotional towards culture and that the old Indian scriptures and philosophical writings provide that Indian culture is highly obsessed with the brain.

IX. CONCERNS OVER ETHICALITY

Neuro-marketing as a method of conducting market research also faces some issues related to ethics. It is facing some challenges and limitations related to ethical aspects in terms of strategies, procedures, tools and techniques used to study the inner emotions and feelings of potential customers and also the influence they can have on the free will buying behavior of a person. It is held that Neuro-marketing makes use of science and technology to delve into some very deep and hidden nuances of human mind. This also deprives them of their own free will which is considered unethical. In fact it is being hinted in literature that the use of very strong and purposive marketing strategies are the reason for over-consumption and addictive buying habits leading to obesity, alcoholism, smoking, gambling and diabetes etc.

X. CONCLUSION

The use of neuro-marketing is still in its nascent stage. In a free market where firms are looking for maximizing their profits through maximization of sales revenue, this technique can provide some very useful latent information about the deep rooted psyche of a consumer, his likes and preferences. A customer's reactions to various advertisements with regards to the colours used in the advertisement, placing of text on the advertisement, the design of the advertisement etc. can be gauged with better success in case of neuro-marketing. This is because the method does not depend only on exterior responses but tries to connect and integrate the brain which is supposed to be the epicenter of our ideas and thoughts with science and technology for enhancing the world of marketing research and advertising. This has been made quite clear through its usage by various companies around the globe with success. Neuro-marketing thus gauges the consideration of scientists and marketing practitioners to the inevitability of this field and proper usage of neo concept which can attract customers towards this kind of branding.

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