

NEURO MARKETING TECHNIQUES IN MODERN CONTEMPORARY ERA

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About 95% of all thought, emotion, and learning occur in the unconscious mind – that is, without our conscious awareness.

- Gerald Zaltman, in 'How Customers Think' (2003).

The Neuro of Neuromarketing

“If the human brain were so simple that we could understand it, we would be so simple that we couldn't.”ⁱ

In this Disruptive Marketing Era, Managers today are under excessive pressure to ascertain factors motivating customers' attitudes and behavior that can serve a basis of competitive advantage. The human brain is the central organ of the human nervous system. Neurons is the basic units of the nervous system and its most important part is the brain. The brain is physiologically affected by several advertising and marketing strategies. Neuromarketing is a marketable message that applies neuropsychology to marketing research and consumer behavior. The purpose of this paper is to identify how Neuromarketing as a technique has been emerging in the Marketing Context.

NeuroMarketing

Neuro Marketing is defined as theⁱⁱneuroscience of consumersⁱⁱⁱ.

Neuromarketing is based on the assumption that information can be gathered directly from the brain. This includes information that consumers are incapable of saying clearly into words and also many information they are not willing to disclose. To gather this information, traditional marketing tools like customer surveys, product presentations and advertisements are combined with electroencephalography (EEG) recordings, eye-tracking apparatuses and skin conductance measurements.

Neuroeconomics emerged from the crossing of boundaries between economics, psychology and neuroscience and its original idea was to investigate a large number of theories of decision-making, bearing irrationality and emotions in mind, in an effort to advance models of choice and decision and to simply better understand people's economic behavior^{iv}. However, instead of just focusing on decision-making processes, neuromarketing is also concerned with evaluating whether a person will respond positively to marketing efforts and potential impact of marketing elements, and can therefore be considered as an essential one.

Neuromarketing is the analysis and optimization of marketing strategies by using neuroscience methods.

Neuromarketing Research

In recent years, several researches have been made to get more insight into the consumers' minds. There are several techniques used, such as fMRI (Functional Magnetic Resonance Imaging), SST (Steady State Topography), EEG (Electroencephalography), Eye Tracking and Galvanic Skin Response.^v

In 2006, the Radiological Society of North America (RSNA) presented the results of the first fMRI study examining the brain's response to branding. Twenty males and females had their brain activities monitored while they were presented with images of familiar and unfamiliar brands.

Functionalism Approach

Functionalism was founded by William James in 19th century and he described and discussed in his publication 'The Principles of Psychology' (1890). Built on structuralism's concern for the analysis of the mind, functionalism led to greater concern about the functions of the mind, and later on to behaviorism. William James's functionalist approach to psychology was less concerned with the structure of the mind than with examining the ways in which the mind adapts to changing situations and environments. In functionalism, the brain is believed to have evolved for the purpose of bettering the survival of its carrier by acting as an information processor^{vi}. In processing information the brain is considered to perform functions similar to those accomplished.

The following Figure shows a complex adaptive system of brain.

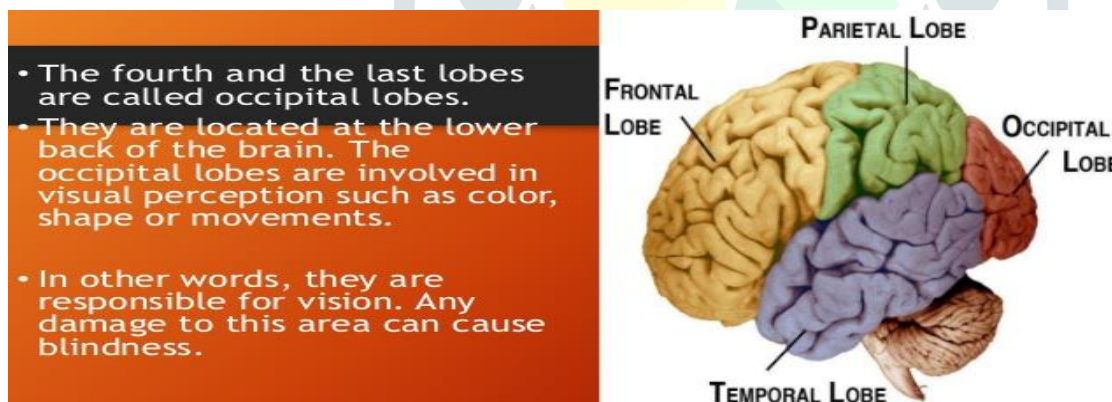


Cognitive psychologists discussed how emotion and environment or events result in specific perceptions. Biological psychologists study the human brain in terms of specialized parts, or systems, and their complex relationships. Studies have shown neurogenesis.^{vii}The results showed that strong brands activated a network of cortical areas and areas involved in positive emotional processing and associated with self-identification and rewards. Furthermore, strong brands were processed with less effort on the part of the brain. Weak brands showed higher levels of activation in areas of working memory and negative emotional response.

Functions of the Brain.

Different parts of the brain are responsible for different things. The brain comprises four lobes:

- ✓ **Frontal lobe:** It is also known as the motor cortex. This portion of the brain is involved in motor skills, higher level cognition, and expressive language.
- ✓ **Occipital lobe:** It is also known as the visual cortex. This portion of the brain is involved in interpreting visual stimuli and information.
- ✓ **Parietal lobe:** It is also known as the somatosensory cortex, this portion of the brain is involved in the processing of other tactile sensory information such as pressure, touch, and pain.
- ✓ **Temporal lobe:** It is also known as the auditory cortex and this portion of the brain is involved in the interpretation of the sounds and language we hear.



Now-a-days several Indian companies have been trying to integrate Neuromarketing within their marketing efforts:

- Microsoft tried mining EEG data
- Frito-Lay analysed female brains
- Google associated with MediaVest for a biometrics study
- The Weather Channel used EEG, eye-tracking and skin response techniques.

The field of neuroscience seeks to understand the biological basis of behaviour through the study of the nervous system. It concerns the study of the structure and function of the brain, this being distinct from the study of the mind, which belongs to the area of psychology and cognitive science^{viii}.

Neuroscientific Tools

Neuroscientific tools are used in neuromarketing to have a better understanding of the relationship between stimulus and response, and of complex thoughts such as decision-making, reasoning, object depiction, emotion and memory, which overlap marketing concepts such as positioning, brand loyalty, hierarchy of effects and consumer. Neuromarketing is, in other words, the attempt of mapping brain activity in relation to buying. In neuromarketing, systems neuroscience, which is the study of how different brain areas or complex brain systems interact, is the main focus^{ix}.

Neuromarketing Techniques For Every Marketer

Neuromarketing Technique #1: Seeing Through Consumer's Eyes

For this Eye Tracking is the most suitable technique. It consists of measuring the eye movement patterns of customers. It's a tool that helps the marketers see their brand, store or commercial through the eyes of their customers. Because modern eye tracking equipment is very light and portable, it's possible to create real time scenarios and register the natural eye gaze of consumers.

Eye Tracking is used in retail stores to analyze how the customers view the retail store.

- How the customers look at the promotion articles near the entrance?
- Is the signage actually being read?
- What kind of viewing patterns do consumers show when browsing a product category?

In short, eye tracking serves as a good technique to find out things that are hard to discover using traditional marketing research. Besides in-stores, eye tracking can measure the eye-gaze of consumers online as well. For example, it can be used to measure if product displayed during TV programs actually makes people look more at a product.

Neuromarketing Technique #2: Taking A Look Within The Consumers' Brain: EEG And FMRI

If a business wants to know a bit more about what people think rather than what they see, there are some other techniques to use. There are certain devices such as fMRI and EEG equipment that can read the consumers

'brain activity. Neuromarketers use these brain scanners to look at people's brains in order to create alluring ads, websites and packaging that press the customer's buy buttons.

The Neuromarketers can understand

- Whether the consumers like or not like a product,
- Whether they feel more like approaching or avoiding a product,
- Whether they get excited or bored by a certain advertisement.

This technique is very useful information for the marketers so that they can create products that really speak to the consumer, and it can also be useful to the consumers to get products that make them satisfied.

EEG scans measure the variables to analyze brainwaves to get great temporal resolution, meaning that the effects of a certain stimulus on brain activity can be read at incredible speed. For example, this is very useful to analyze which exact sequences in a commercial are viewed as positive and which ones are not.

Constraints of EEG

- Though EEG is used as a neuromarketing technique, it can provide only poor temporal resolution.
- It is very difficult to locate the source of the brain activity exactly in the brain. This means we can see clearly what's happening inside the brain, but we don't really know what caused it.

Neuromarketing Technique #3: Everything is The Smile: Facial Coding

- Through Neuromarketing, marketers can learn a lot from the consumers' faces too. Sensors can be attached to the face and it can measure minute movements of muscles.
- For example, when consumers smile, they use specific muscles to achieve this.
- The same principle applies to other emotions such as anger or surprise.
- A slight expression of a weak smile does not always mean that the consumer is happy. But the facial coding equipment can measure subtle and subconscious reactions to stimuli that hold information about how people feel about something. Besides, it can predict what behavior will follow said expressions.

Neuromarketing Technique #4: Have To Touch, Smell, See And Hear: Sensory Marketing

- Some practical forms of neuromarketing such as Sensory Marketing give consumers a little drive in right direction.
- The different forms of sensory marketing are touch, sound, or smell, and they aim to influence a brand audience by sensory stimulation.

SMELL

- For example, it is sometimes possible that by letting people simply smelling something can make them to buy a soap or perfume.
- Normally even little pleasant smells can give customers a whole new experience and will make products seem more exclusive and high end.

SOUND

- People normally pay more attention to light objects when they hear more high pitched sounds.
- Any sound changes in the in-store environment can have quite intensive impacts on sales.

Neuromarketing Technique #5: Mind Tricks used as Psychological Methods

- Psychological techniques can be quite subtle. For example just by removing the dollar sign listed for the products can increase the sales. Seeing a dollar sign – or for the European reader, a euro sign – subconsciously shifts people's attention to loss and not gain. Studies have shown that people spend significantly more cash on products and food when a money sign is absent.
- Similarly, people are more likely to choose healthy menu options when displayed on the left side of the menu and unhealthy items on the right.

Neuromarketing – A tool used in Supermarkets & Malls

- Whether right or wrong, shopping is a long series of decisions and mere decisions only.
- If an individual visits a shop or a mall, his/her brain unendingly processes incoming stimuli, compares this information with past experiences, makes a decision and finally translates it into muscle movement. Immediately, he/she picks an item and adds it to the shopping cart.
- While shopping in the supermarket or at the mall, the consumers have to choose at every turn,
 - For or against apparels in all designs, shapes and colours,
 - Between bathing soaps in different colours and smell,
 - Perfumes in various fragrances.

Whenever, a person can smell the aroma of rose or jasmine while taking a shower it hardly matters. Making a buying decision then becomes practically arbitrary which will open the doors for someone to force us into believing there's a decision to be made but actually there might not be so. The aim of any marketing drive is to bias this process in the customer's mind to make an essentially worthless buying decision in favor of some brand.

There are some other factors also which influence the buyers' purchasing decision. For example, the ambience inside the supermarket, the behavior of the sales personnel, the customer's own mood and the brand values. Their respective weights are combined and computed in the prefrontal cortex. It is the hub that finally extracts a conclusion from the various neuronal processes and makes the decision such as Dairy Milk or Milky Bar, Hamam or Cinthol etc.

Neuro Scientists have created a neuronal map outlining the decision-making processes for purchasing and the corresponding parts involved in the brain. In fact, brain research has failed to detect the activation of certain processes only in individual cases, particularly those involving spatially limited areas. Scientists observed that the same neural networks are activated every time for certain tasks which is correlated with specific activation patterns. Several such individual processes add up to a purchase decision. The reward value i.e the pleasure of acquisition is calculated by the brain and along with a deterring value called the pain of paying price as well as various other conditions contribute to decide whether or not to make a purchase.

The reward value is a measure of how much a product is able to stimulate the deep-seated reward pathway in the brain. The nucleus accumbens in the brain is activated when an action performed is rated as particularly positive, like drinking coffee in the cool climate. The nucleus accumbens is also activated when a pleasant visual stimulus is processed.

But the attractiveness of a product alone does not decide a purchase. Scientists identified that the display of the price tag was associated with activity in the insular cortex, a buried part of the cerebral cortex, approximately at the level of the temples. In the supermarket, the insula is the rival of the reward pathway. If the insula is stronger in its activation, more likely the product remains on the shelf itself.

Limitations of Neuromarketing

Several critics of Neuromarketing claim that this new science is exploiting people and trying to sell them things they don't need. Others are also considering the possibility of political brainwashing with the help of Neuromarketing.

Marketers try to look directly into the consumer's mind, to know what he/she's going to decide before he/she knows it himself/herself, to find the decisive "buy-button" and to create the completely see-through consumer. With the advent of neurological imaging techniques in the 1990s, 'scientific' marketing seemed to promise these advertisers success. However, the consumer has not experienced many of these neurologically optimised sales strategies. Mere lack of financial resources in the advertising industry alone is not the reason. In India, advertisement expenditure reached nearly Rs 61,204 crore in 2017, 10% higher than the year before, according to a report by the media agency Group. Worldwide, expenditure on marketing is expected to hit almost Rs 38 lakh crore (\$580 billion).

A comprehensive scrutiny of neuromarketing is difficult as it links various overlapping disciplines: economics, marketing and management, the behavioural sciences, psychology and neurology. That's why it was very difficult even for a professor of Indian Institute of Management, Ranchi, who recently co-authored a book on neuromarketing to explain what neuromarketing could do.

Among the manufacturers and retailers, neuromarketing studies are often viewed as the fight to include a certain product on the shelves of a retail outlet. Even though the fMRI measurements are definite there is often more than one method to interpret them, even without the right controls. While considering the large amount of data generated, false positives ought to be common.

Reverse inference is the another basic problem. Detecting activation in certain neuronal networks while a participant solves a problem does not actually mean that the two events are correlated but marketers often jump to this conclusion. This is like a gunman who draws a target around the bullet hole after the shot and then claims to have hit the bull's eye. Neuroscientists often conclude that certain emotional networks are at work from measured brain activation patterns. These results must be examined critically to understand their importance. Ultimately, the question remains as to whether results measured in only a few subjects can be generalized for the population at large.

Neuromarketing studies could reveal hidden information. However, it is reasonable to assume that the tastes of the buyers have been decided by their cultural inputs which are homogeneous. Their emotional content is quite high; and it can easily be identified by a brain scanner.

For example, in India, Indian consumers have a vast variety of cultural, religious, educational and economic backgrounds and different languages and have diverse preferences for food, clothing, fragrances and music. This diversity makes the generalization of data as very complicated. The EEG imaging methods are yet to be increased and the real shopping preferences are yet to be simulated effectively.

Nick Lee, a professor of marketing at Warwick Business School in the UK and one of the world's leading experts on consumer neuroscience, also mentioned that neuromarketing does not have any magical powers. "It is just another way of gaining information. There is no button in the brain that we can push and that would turn people into consumer zombies." In a paper published in May 2017, Lee reviewed a decade of neuromarketing research and concluded that it still is an "embryonic field". He wrote that "we remain in the same basic position as we did in 2007" and that few articles appear to have addressed "whether neuroscientific insights can help us build new and improved explanations of marketing phenomena".

Neuro marketers still have a long way to go in order to predict how human brain makes a decision accurately. The neuromarketing studies need to be designed carefully and the measurable parameters are yet to be defined very well. The scope for arriving a valid interpretation is narrow by using neuromarketing as a tool and that conclusions cannot be generalised. Besides, the results coming out of neuromarketing researches may

not compensate for its high cost and the complicated procedures. Few companies labeling them as Neuromarketers will try to jack up their prices in future. Further, the neuromarketing will continue to evolve with new scientific findings in the coming years.

Conclusion

Neuromarketing methods offer useful and valuable tools and insights to Neuromarketers. But not all methods are effective in all contexts. The key is knowing when to use which techniques. To learn more actionable insights about Neuromarketing, how to use them, and to stay updated on the newest trends in field, the marketers must be sure to subscribe to New Neuromarketing techniques.

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