

Overview of Neuromarketing: Theoretical Framework and Techniques

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ABSTRACT

In the world of marketing, neuro-marketing is a new idea. It's an idea where different scientific instruments and approaches are applied to analyze customer behavior. Neuro-marketing, often known as neuro-science, is the study of consumers' brains to forecast their behavior. Immersion of neuroscientific methods in the neuro-marketing world allows marketers to improve their communications by exposing the true decisions of customers. It has become more challenging for firms to understand consumer behavior these days. With the internet, the word-on-the-street has become the web-rooming—a term for the process of consumers shopping around for similar products online before making the final decision on which product they will buy. In understanding what customers demand, academic entertainment becomes the must. A small section of a larger field of marketing research that is limited to branding, product design, advertising, and client decision making is termed neuro-marketing.

Keywords: Consumer psychology, Consumer behavior, Neuromarketing, Techniques of Neuro-Marketing, Neuro-science.

1. INTRODUCTION

The application of cognitive science and neuroscience to marketing is known as neuro-marketing. Neuromarketing involves using neuroimaging and physiological tools to capture the brain's responses to marketing stimuli, such as brands and advertisements, in order to understand consumer behavior. Neuromarketing involves using neuroimaging and physiological tools to capture the brain's responses to marketing stimuli, such as brands and advertisements, in order to understand consumer behavior. Neuromarketing is the field of studying neural signals to comprehend consumer behavior, which can help improve marketing strategies. This includes market research, which looks for consumer demands, motives, and preferences that are hidden from view by more conventional techniques like surveys, interviews, focus groups, and field trips. Neuromarketing is a marketing technique that leverages neuroscience research to study consumer behavior, aiming to enhance the effectiveness of marketing efforts. It allows marketers to gain insights into consumer reactions to different marketing strategies. As a scientific approach to understanding consumer behavior, neuromarketing offers exciting opportunities and new areas for exploration within the marketing field. While there is broad agreement among researchers that neuromarketing is still in its early stages, it has significant potential but must overcome various challenges to become a key tool in marketing research. It is anticipated to play a crucial role in global marketing, especially with the advancement of high technology. Three elements come together to form neuro-marketing: neuro-science, marketing, and marketing research. It's a method of using psychology and neuroscience to communicate and market products effectively. The fundamental principle of neuro-marketing is to ascertain the precise desires of the buyer. It examines consumers' subconscious thought processes and assesses how they arrive at decisions. Thus, using various tools and strategies, neuro-

marketing is a technology that aids marketers in comprehending how a particular person's brain functions in a given scenario.

2. OBJECTIVES OF THE STUDY

Objectives of the study are as follows:

- ❖ To comprehend the concept of neuromarketing.
- ❖ To examine the different techniques used in neuromarketing.
- ❖ To identify the key principles underlying neuromarketing.
- ❖ To identify the importance of neuromarketing in current market situations

3. RESEARCH METHODOLOGY

The study is based on secondary data from books, articles, papers, reports, theses, and other publications that have been published nationally and internationally and that cover a range of neuro-marketing topics.

4. NEURO-MARKETING

Neuro-marketing is the assessment of particular packaging, content, marketing, and advertising in order to better understand how consumers behave subconsciously. The term "Consumer Neuro-science" is synonymous with "Neuro-marketing." It examines consumers' subconscious mindsets in order to assess their behavior. One of the specializations within marketing is neuro-marketing, which investigates the enigmas surrounding customer behavior and choice. One of the main areas of marketing research is neuro-marketing, which measures the impact of marketing by using a variety of brain-related approaches and techniques. Neuro-marketing investigates the thoughts that run through a consumer's mind when they are exposed to marketing incentives. It describes how the brain converts these kinds of reactions into decisions and behaviors made by consumers. A few of the most common responses from customers that neuromarketing explains include changing brand loyalty, buying a new product, etc. Gerald Zaltman and his colleagues established "neuro-marketing" at Harvard University in the late 1990s. Because of his outstanding contributions to the field of neuro-marketing, Gerald Zaltman is known as the "Father of Neuro-Marketing."

5. PRINCIPLES OF NEURO-MARKETING

The most recent advancement in the marketing industry is the field of neuro-marketing. Marketers used to exclusively rely on conventional methods of market research prior to the advent of neuro-marketing. Conventional market research provides less insight into consumers than Neuro-marketing does. Marketers can attract new customers and keep their current ones by using neuro-marketing. Some of the Principles of Neuro-marketing are as follows:

❖ Scarcity

There is no denying that consumers are more likely to purchase a certain good or service if they perceive it to be limited or scarce. The reason for this is that sometimes the urge to acquire something can be outweighed by the fear of losing something or of missing out. Astute marketers leverage the notion of scarcity to stimulate demand for their merchandise.

❖ Habit

The logic behind developing a habit is all about repetition. It is said that if you want to make anything prominent let the people crave for it by making it a habit, whether consciously or unconsciously. The same applies for marketing, that's why gamification and subscription services have recently become popular. People got used to these games after playing them repeatedly.

❖ Understand emotions

Everybody wants someone who can emotionally connect with them; if technology can do this, it's the greatest thing. The primary goal of neuro-marketing is to comprehend people's emotions using various neuroscientific procedures in order to gain insight into how people think about a given topic. It's a fantastic approach to adapt your marketing campaigns to the demands of your target audience. Numerous well-known businesses have achieved great success for themselves by employing neuro-marketing technology for this reason.

❖ **Social proof**

Since humans are social creatures, a variety of cultural conventions have an impact on their behavior. Individuals who observe others acting in a particular manner are more inclined to follow suit. Demand for a product or service rises when multiple people purchase it; this phenomenon is known as "social proof," and it inspires more people to follow suit. For instance, including client testimonials in marketing might help draw in business because it can be extremely inspiring to see how others have benefited from a product or service.

❖ **Reciprocity**

Typically, individuals exhibit an inclination to settle debts and reciprocate favors, influenced by societal expectations and underlying emotions like gratitude, pride, and sometimes guilt. The sense of reciprocity transcends cultural boundaries, manifesting when someone extends kindness, prompting a natural inclination in the recipient to reciprocate. Effectively applying the reciprocity principle in marketing involves providing customers with something valuable, like a discount or other benefits, fostering a profound commitment and cultivating lasting relationships with them.

6. TECHNIQUES OF NEURO-MARKETING

Neuromarketing employs tools like functional magnetic resonance imaging (fMRI) and electroencephalogram (EEG) to examine customers' brain activity in response to various stimuli, including advertisements, packaging, and design. Analyzing these neural and physiological signals offers valuable insights into customer needs and preferences. The use of brain scanning enables marketers to monitor diverse activities such as eye movement, pupil changes, facial expressions, heart rate, and emotions, providing a comprehensive understanding of customer reactions. With these insights, marketers can make informed decisions to enhance their advertising, content, product packaging, design, and website layout. The techniques of Neuro-marketing are explained in the ensuing paragraphs.

❖ **Eye-tracking (gaze)**

Eye tracking consists of studying the eye movements of consumers. It is a tool that allows the marketer to see their products through the eyes of consumers. Modern eye tracking devices are very small and light, consumers can wear them while going for shopping or while watching TV. Based on this, marketer can get answer for various questions such as how much attention do consumers pay to particular product, do they read posters and billboards, or just glance at them without reading etc. Eye tracking opens up a whole world of possibilities for marketing studies. With its help, marketer can find out which colours, fonts, advertisements, designs have grabbed more attention of the consumers. Through eye tracking marketer can come to know about the brand recognition speed and that allows marketer to improve their website design, packaging etc.

❖ **Pupillometry**

Eye tracking involves analyzing the eye movements of consumers, providing marketers with a tool to perceive their products from the consumer's perspective. Modern, compact eye tracking devices allow consumers to wear them while shopping or watching TV. This technology helps marketers answer various questions, such as the level of attention consumers give to specific products, whether they read posters and billboards, or simply glance without reading. Eye tracking unveils a plethora of possibilities for marketing studies, enabling marketers to discern which colors, fonts, advertisements, and designs attract more consumer attention. By utilizing eye tracking, marketers can determine brand recognition speed, facilitating improvements in website design, packaging, and more.

❖ **Facial coding**

This method examines consumers' facial expressions to discern their emotional reactions. The process is straightforward: when consumers smile, express anger, or display any facial expression while observing a product, it indicates their emotional response to that particular item. This technique allows marketers to decode a range of emotions, including happiness, fear, anxiety, surprise, satisfaction, and more, helping them understand the consumers' sentiments towards the product.

❖ **Biometrics**

This method gauges the degree of engagement and positive or negative reactions by measuring skin respiration, conductance, and heart rate. Biometrics empowers marketers to tailor their advertising content to align with the preferences of consumers. Typically, the biometric technique is employed in conjunction with eye-tracking to enhance

overall effectiveness.

❖ **Electroencephalogram (EEG)**

This method allows marketers to discern the precise thoughts of consumers by utilizing specialized devices that read the brain's electromagnetic activity, such as electroencephalograms. Although costly, this technique facilitates the rapid assessment of changes and enhances the quality of advertisements and branding.

❖ **Functional magnetic resonance imaging (fMRI)**

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ADVANTAGES OF NEURO-MARKETING

Advantages of Neuro-marketing are as follows.

- ❖ When considering consumer behavior, neuro-marketing tools provide a more thorough knowledge than conventional market research techniques.
- ❖ Understanding consumer behavior is improved through the use of neuro-marketing to the study of subconscious thought. Even while customers could intentionally give false information, their subconscious responses reveal more accurate information.
- ❖ Neuro-marketing collects data from observations such as mouse cursor movements, eye movements, and facial expressions in addition to information supplied by the customer. These unconscious responses assist companies in understanding the true preferences and sentiments of their customers.
- ❖ Marketers can make well-informed strategic decisions that are in line with customer needs with the help of neuro-marketing.
- ❖ Neuro-marketing helps marketers establish enduring connections with customers by building on a profound understanding of them.
- ❖ Neuro-marketing provides cost-effective information that yields more valuable insights that are essential for marketers to formulate successful marketing strategies.

DISADVANTAGES OF NEURO-MARKETING

Disadvantages of Neuromarketing include:

- ❖ **Manipulative Nature:** Neuromarketing can be manipulative, as marketers may use its techniques to sway consumers' decision-making in their favor.
- ❖ **High Costs:** Implementing neuromarketing techniques is expensive due to the need for specialized scientific equipment, laboratories, and machinery to analyze consumer behavior.
- ❖ **Need for Expertise:** Neuromarketing demands a strong scientific background and specific skills, making it challenging to execute effectively.
- ❖ **Privacy Concerns:** Neuromarketing may pose a risk to consumer privacy and personal life, as it delves into the subconscious mind, potentially exposing sensitive information that could be misused.

CONCLUSION

Neuromarketing is a marketing technique that leverages neuroscience research to study consumer behavior, aiming to enhance the effectiveness of marketing efforts. It allows marketers to gain insights into consumer reactions to different marketing strategies. As a scientific approach to understanding consumer behavior, neuromarketing offers exciting opportunities and new areas for exploration within the marketing field. While there is broad agreement among researchers that neuromarketing is still in its early stages, it has significant potential but must overcome various challenges to become a key tool in marketing research. It is anticipated to play a crucial role in global marketing, especially with the advancement of high technology.

REFERENCES:

1. Agarwal, S., Dutta, T. Neuromarketing and consumer neuroscience: current understanding and the way forward. *Decision* 42, 457–462 (2015). <https://doi.org/10.1007/s40622-015-0113-1>
2. Ahmed H. Alsharif, Nor Zafir Md Salleh, Rohaizat Baharun & Alharthi Rami Hashem E | (2021) Neuromarketing research in the last five years: a bibliometric analysis, *Cogent Business & Management*, 8:1, 1978620, DOI: 10.1080/23311975.2021.1978620

3. Arthmann, C., & Li, I.P. (2017). Neuromarketing - The Art and Science of Marketing and Neurosciences Enabled by IoT Technologies. *IIC Journal of Innovation*, 1–10.
4. Butler, M. (2008). Neuromarketing and the perception of knowledge. *Journal of Consumer Behavior*, 7, 415-419. <https://doi.org/10.1002/cb.260>.
5. Fisher, C. E., Chin, L., & Klitzman, R. (2010). Defining Neuromarketing: Practices and Professional Challenges. *Harvard Review of Psychiatry*, 18(4), 230- 237. <https://doi.org/10.3109/10673229.2010.496623>.
6. Kajla, T., Raj, S., Kansra, P., Gupta, S. L., & Singh, N. (2024). Neuromarketing and consumer behavior: A bibliometric analysis. *Journal of Consumer Behaviour*, 23(2), 959–975. <https://doi.org/10.1002/cb.2256>
7. Lim, W.M. (2018). Demystifying Neuromarketing. *Journal of Business Research*, 91, 205-220. <https://doi.org/10.1016/j.jbusres.2018.05.036>
8. Narayana, Surya, and Raj, Praveen (2020). Neuro-marketing: The Science of Consumer Behaviour”, 4th International Conference on Marketing, Technology and Society 2020 organised by Indian Institute of Management Kozhikode.
9. Prakash S and Alalageri. Prof. Saroja S, (2019). Neuro-marketing – Exploring the Consumer Mind, *International Journal for Research in Engineering Application and Management*.
10. Ramsoy, T.Z. (2014). Introduction to Neuromarketing and Consumer Science. Dinamarca: Neurons Inc.
11. Singh, Priyanka (2019). Neuro-marketing: An emerging tool of Market Research, *International Journal of Engineering Business Management*, 530-535