

Neuro Marketing in Chocolates

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Abstract

The chocolate industry employs neuromarketing, which uses neuroscience-based technologies like EEG, fMRI, eye tracking, and biometric sensors, to understand the unconscious forces influencing consumer preferences and purchase decisions. Through the analysis of sensory reactions, emotional arousal, attention patterns, and reward-center activations triggered by chocolate flavors, textures, packaging, and advertisements, neuromarketing assists brands in improving their product design and marketing strategies. The knowledge acquired aids in determining the stimuli that raise emotional engagement, improve brand recall, and increase buy intent. Overall, neuromarketing offers a scientific basis for creating more effective chocolate marketing strategies that fit with consumer psychology and improve market performance. Neuromarketing blends marketing and neuroscience to understand how consumers subconsciously react to products, packaging, and advertisements. Marketers can gain precise insights into consumers' emotional and cognitive responses that are not achievable with traditional surveys by utilizing technologies such as galvanic skin response, eye tracking, EEG, MEG, and fMRI. This study examines the foundations of neuromarketing and explores how the leading chocolate manufacturers apply these concepts to its product design, branding, packaging, and advertising.

Keywords: neuromarketing, chocolate, eye-tracking

1. Introduction

Neuromarketing uses neuroscience and marketing to study and regulate consumer behavior. Consumer perception, encoding, and processing of marketing stimuli are thus revealed by neuromarketing and psychophysiological tests. This method enhances consumer-resonance and successful marketing methods. Neuromarketing integrates psychology, neurology, and economics to study how the brain responds to marketing stimuli. Understanding the fundamental mechanisms that underlie purchasing decisions—which are frequently more powerful than logical ones—is the primary objective. To improve marketing strategies, fMRI and EEG are used to measure the brain's reaction to

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marketing stimuli. Advertising, shop design, and product feel are all included in neuromarketing [1]. By delving into the details of the brain, it investigates how customers' psychology and decision-making are impacted by colors, noises, and fragrances. This approach aids marketers in comprehending customer behavior and modifying their marketing tactics to suit the demands of consumers. Studying only the color and tone of advertisements and commercials or the memorable melody is not a new science. It also looks at how customers' experiences and choices might be influenced by the way a product feels, how it is packaged, and how a store smells. As a result, marketers can design environments and products that naturally draw in and involve customers. Many leading chocolate brands, including Ferrero, Hershey's, and Mondelez, employ neuromarketing techniques to understand consumer preferences, emotions, and behaviors at a subconscious state. Consumers may identify blue with safety and trust, according to research. As a result, a lot of financial institutions use it in their advertisements and logos. Additionally, neuromarketing examines how consumers react to digital advertising. The study examines how neuromarketing can enhance target group engagement, attachment, and consumer branding loyalty in the designated area. Emotional branding is one example of an execution strategy. Since advertisements should elicit feelings in the target audience, execution strategies are required [2]. Additionally, the study suggests responsible neuromarketing by addressing ethical concerns such as permission, anonymity, and manipulation. Marketers can establish immensely stronger relationships and penetrate deeper into the target when they are content to match their products with the ideas and behaviors of Generation Z. This improves brand resonance, relevance, and perceived importance.

1. Review of literature

The link between neurology and marketing is called neuro marketing. It is a novel idea in marketing that has flourished and has solid roots in both marketing and neuroscience. Since 2002, this idea has gained traction in scholarly studies (Fortunato 2014). It is convergent in nature and has been used to research customer preferences as well as brain activity during shopping. Customers react both consciously and unconsciously, according to Daugherty and Hoffman (2017). In order to comprehend the neurological responses to marketing stimuli, neuroscience aids in comprehending the fundamental ideas of the human brain and nervous system [3]. Additionally, they reaffirm that consumer behavior, neuroscience, economics, and psychology all overlap with neuro marketing. According to Morin (2011), neuroscientific methods for measuring and mapping brain activity, such as electroencephalography (EEG), magnetoencephalography (MEG), and functional magnetic resonance imaging (fMRI), are safe and widely used. Marketers focus on each consumer's search, selection, and purchasing behavior. Morin has talked about brain activity and its use, further reiterating that the brain is in charge of consumer behavior. He

emphasizes that an individual's R-complex, or reptilian brain, controls only 20% of the brain. The brain of a reptile is pre-verbal and cannot comprehend complicated signals. Customers are more drawn to ads and pictures because of this. More than words, these have a significant influence on customers [4]. In their research, Zară and Tuñã (2013) took into account the psychological aspects of memory and learning, perception and attention, and emotional involvement. The brain activity has been reduced by the authors to psychological characteristics. Consumer psychology is the phrase used to describe this idea of using psychology in marketing. Santos et al. (2019) found that eye-tracking metrics, including fixation duration and pupil dilation, help identify which packaging elements draw maximum attention in confectionery products [5]. Together, these studies establish that neuromarketing techniques provide measurable, neuroscience-driven insights into consumer preferences, enabling chocolate brands to design more persuasive and emotionally engaging marketing strategies.

2. Scope of the Study

The present study helps to understand the concept of neuro marketing and how neuro marketing techniques are used by leading chocolate brands. Scope of this study is limited to reputed brand of Chocolates.

3. Objectives of the study

- To understand the concept of neuro marketing.
- To know about various technology used in neuro marketing.
- To find how neuro marketing technologies are applied in Chocolates

4. Statement of the problem

Neuromarketing is recently found in the marketing.it is the practice of using technologies in developing a product, It is relevant to study about the concept of neuro marketing and how neuro marketing techniques are adopted by leading brands of chocolate companies like Amul, Nestle Cadbury, Ferrero, Hershey's, and Mondelez.

5. Methodology

These technologies measure subconscious emotional responses that cannot always be captured through verbal questioning. For instance, answers to “Are you satisfied with the product?” may not always reflect true feelings, whereas brain responses provide more accurate insights. Neuromarketing helps marketers design products, packaging, advertisements, and brand elements that meet consumer preferences and unmet needs more efficiently. It enhances the effectiveness of the 4Ps of marketing—Product, Price, Place, Promotion—by providing deeper consumer insights [6].



Fig.1 Product life cycle in neuro marketing

This is a relatively new area of marketing that has recently gained significant popularity. There are major techniques used in neuro marketing. Neuroimaging gives better measure of a consumer preference. For example, the verbal response got for the question “Are you satisfied with the product” is may not be correct always [7]. This chance gives relevance to neuro marketing by recording brains response. This helps the marketers and producers design product according to the taste & preferences of the consumers.

6.1 Neuro techniques used by Chocolate companies

Lotte a South Korean company entered Indian market in 2014 which introduced many sales promotion schemes like pranky, free gifts etc to attract the consumers. Cadbury is the most popular chocolate brand in India, offering everything from premium celebration packs to 1-rupee chocolates. Among its most well-known chocolates are dairy milk, eclairs, silk, temptations, diamonds, and perks. The British multinational candy company Cadbury, historically known as Cardbury's and Cardbury Schweppes, has been entirely ruling the market [8]. In 1824, John Cadbury established Cadbury in Birmingham, Warwickshire, England. Additionally, its main office is in London.

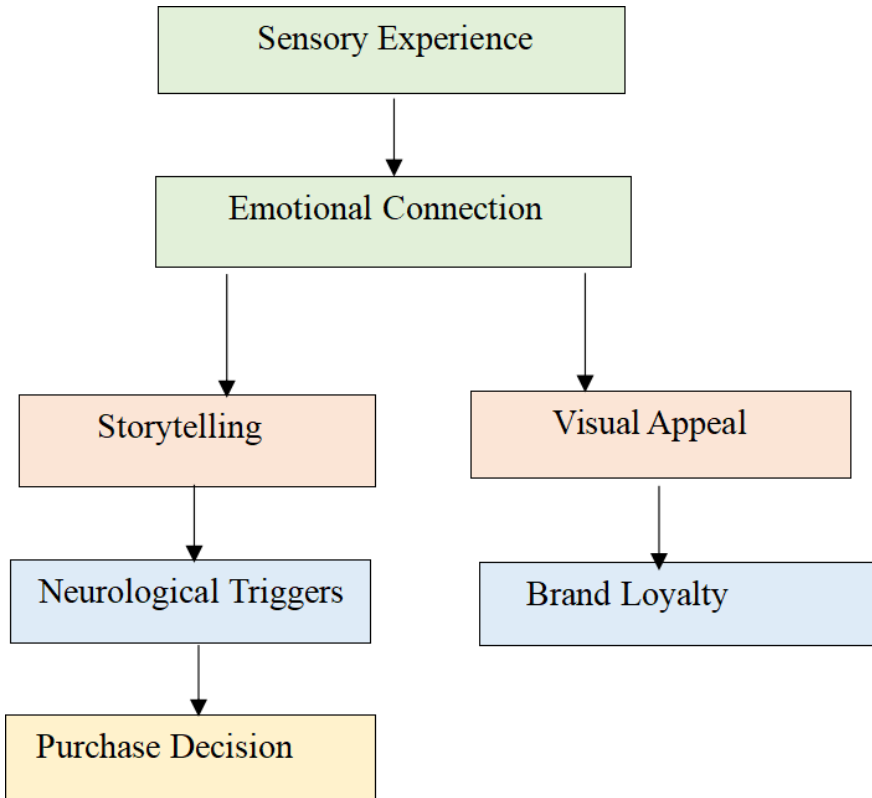


Figure 2: Overall Diagram

Kids and teenagers are dependent group of people Nestle mainly targeting on attracting this dependent group visuals and science are created to make in a way of quick attraction by using enlighten colour themes.by showing new life style in a meaning of new trends of teenagers' life. Packaging is the process of designing evaluating and producing packages. Designing of cover is playing a major role in getting consumers preferences. Chocolate companies uses attractive colours and materials for packages to get quick attention of focused group. Amul, Hershey also have wide range of products with strong depth and width of product lines [9]. This differentiation is a competitive advantage among the chocolate companies satisfying all types of consumers by producing such diversified products. Every product is designed to attract consumers. product designing is the process of deciding the shapes and size of the product. Chocolate design and wrappers are solely made for the intention of attracting a targeted group like design of kinder joy for attracting kids by toys with chocolate. Hershey uses neuromarketing to promote its chocolates by creating memorable ads that is appealing to the consumer's emotions.

Thousands of product lines are produced. And all these products are available in every nook and corner of India. It make's public attracted to branded product which is easily available and this make higher reach of products in the minds of people. Advertisement is the main technique of marketing. Sometimes every single advertisement for chocolates is focusing only just one group of consumers, not for all age group and not for all people [10]. This technique makes a feel in the minds of targeted group that these products are solely designed for him/her.

6. Results and Discussion

A brand's tagline serves as its initial impression. This creates a long-lasting perception that leading brand chocolate products are healthy and provide greater joy during the happiest moments. Certain chocolate companies like Amul,Lotte, Nestle and Hershey Cadbury has so many product lines.it always try to launch new products, seasonal products in short intervals.it makes a feel in mind of consumers that being in the waves of trend.

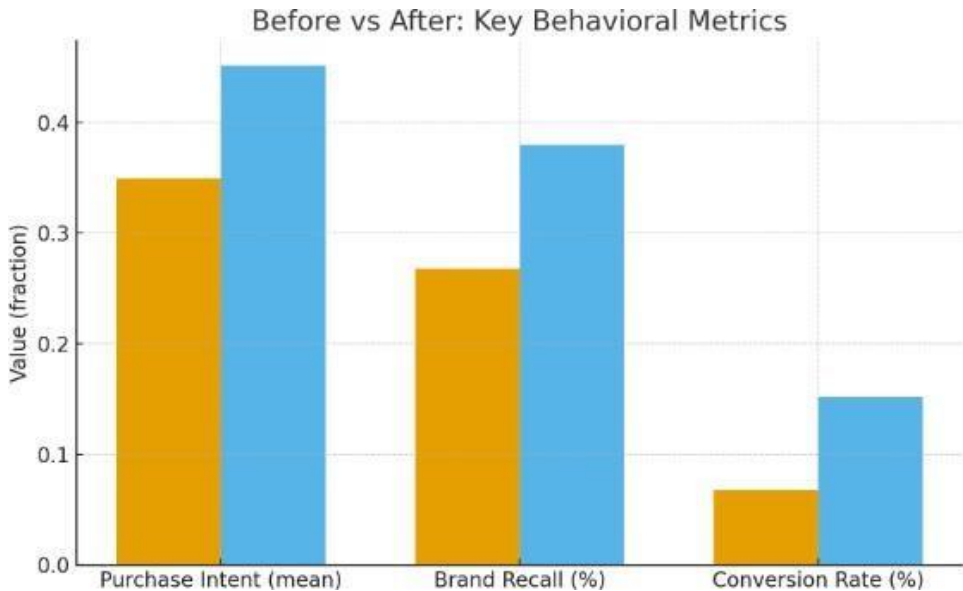


Figure 3: Key Behavioural Metrics

Neuromarketing is the application of neuroscience technologies in the field of marketing to understand how consumers' brains respond to products, advertisements, and brand cues. Using tools such as fMRI, EEG, MEG, eye-tracking, and GSR, marketers can analyze consumers' neural and emotional reactions to stimulation.

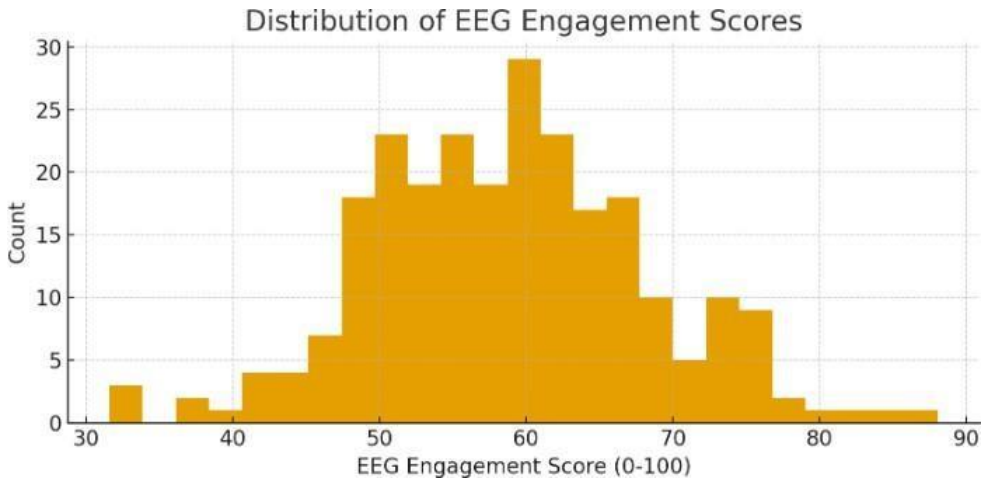


Figure 4: Distribution of EEG Engagement Scores

By studying brainwaves and neuro-imaging outputs, marketers obtain deeper insights that traditional surveys cannot capture. This study focuses on the basic concepts of neuromarketing and how chocolate companies use these techniques in its chocolate products. Ranging from ₹1 chocolates to premium celebration packs, Cadbury remains India’s most popular chocolate brand with products like Dairy Milk, Eclairs, Silk, Temptations, Gems, and Perk. Lotte’s chocolate range of products include Lacto king, Fruitz uses attractive package to change the image of its chocolates in consumers minds

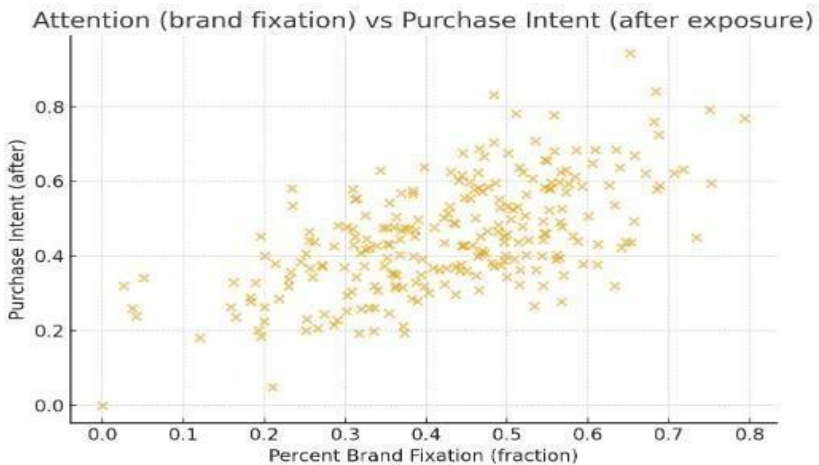


Figure 5: Distribution of EEG Engagement Scores

Neuro- marketing will help the marketers for what the consumer reacts to, whether it is about colour of packing style or may be extra tagging which are not held by others (other consumers). The study of how people's brains react to advertisements and other brand-related messages using scientific brainwave monitoring is known as neuro-marketing.

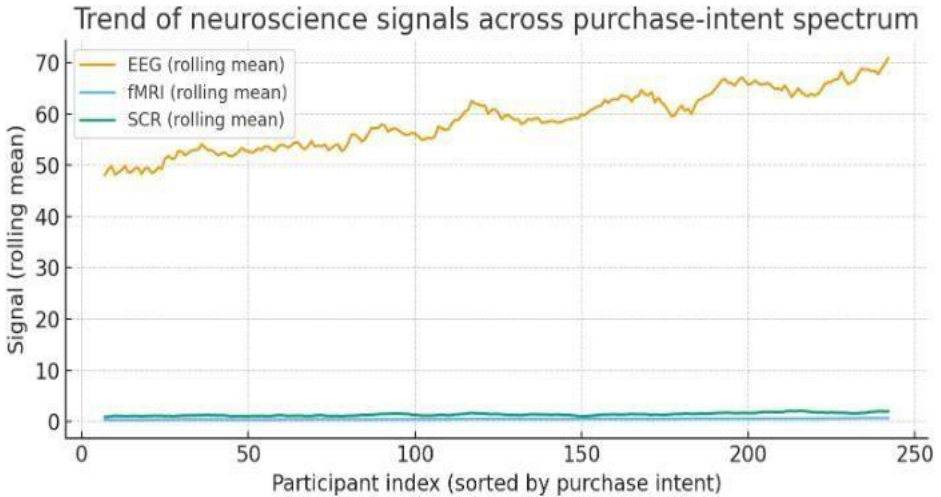


Figure 6: Trend of neuroscience signals across purchase - intent spectrum

Our goals as we embark on this journey are to clarify the fundamental ideas behind neuromarketing and the strategic toolset utilized by marketers seeking to establish enduring connections with their target audience.

1. Conclusion

Marketing is the art of selling. And neuro marketing is the application of science in marketing. Because of neuro marketing is a scientific method, validity and higher degree of accuracy.it considered as a costly method of marketing therefore high capital base companies are only adopting it. Small and new companies use the final results and findings for their product designing called “scent marketing”. Neuro marketing combines psychology, neuroscience and economics for studying the consumer behaviour by using neuro scientific technologies for designing and developing products. But often questioned about the trustworthiness of their analysis, because of in early stages it made some exaggerated unverified and scientifically irresponsible claims. Cadbury, Lotte ,Nestle etc are very reputed brand producing many lines of chocolates. The leading brands uses neuromarketing techniques to get attention and make buy drive on the minds of public. For that they use tactics in packaging, Advertising, often launching of new products etc. These techniques give positive results to these branded chocolates. However, while introducing a new product, it is needed that to understand and analyse the mind-set of consumers first for the progression and success of the product. And this method is strong with scientific base and technological application.

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