

Understanding the art and science of new-age advertising: A neuromarketing perspective

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Abstract

Marketers often rely on conventional marketing techniques to appeal to the purchase decisions of consumers. However, research has confirmed that human decisions are based on an unconscious process resulting in the creation of a gap between the perception of the marketers and consumer expectations. Neuromarketing can be a useful technique to study the optimization of marketing communication.

The objective of the present paper is to study the application of neuromarketing in advertising. In the first phase, two successful advertising campaign case studies and two failed advertising campaign case studies are presented to identify the need for neuromarketing in this competitive era. The perceptions toward neuromarketing were discussed with nineteen senior brand and marketing communication experts using a qualitative semi-structured interviewing technique. The use of grounded theory helped in unraveling the themes. Emerging themes suggest that neuromarketing has the potential to significantly strengthen the quality and effectiveness of advertising messages. However, there are some challenges like ethical issues and transparency in the application of neuromarketing. Zurawicki's framework on three different dimensions of emotions, involvement, and cognition was proposed to be used as the framework.

The contribution of this research would help understand how neuromarketing combined with conventional marketing approaches can create a subtler impact on audience's mind and heart. Accordingly, new age strategies around the science and art of marketing communication can be devised and a new impetus can be provided to marketing theory and practice.

Introduction

In the twenty-first-century VUCA world, the survival of the brands is getting more and more challenging due to stiff competition. Marketers are investing huge money to understand consumers' needs, aspirations and preferences. Even for consumers making choices about their purchase decision is not so easy due to information overload. In this cluttered marketplace, different brands are competing with one another to draw the attention of consumers. Marketers can formulate an effective advertising strategy only if they are aware of the consumers' lifestyle choices since research demonstrates that most of the purchase decisions are made by consumers through a very unconscious process (Dooley, 2010).

As researched by Morrin (2011), most human brain activity appears to be irrational since purchase decisions are generally based on unconscious or subconscious processes. It is therefore pertinent for advertisers to understand the subtle cognitive and emotional aspects of the human mind and heart. Depending therefore on traditional research methods to collect information about consumers' buying behavior and purchase decisions may not suffice. By adopting scientific and objective methods of neuromarketing, marketers can get to know the response of the consumers towards different products or services and will save huge amounts of money which are otherwise lost with an unsuccessful product due to failed research. Marketers should focus more on the subconscious mind which will pass information to the conscious mind (Kumar, 2015). This will also help the consumers as they will get customized choices based on their subconscious choices. Herein lies the role of neuromarketing as a scientific tool for marketing research.

Although the concept of neuromarketing is relatively not very old, the present study is an attempt to identify the relevance and challenges of neuromarketing in the Indian context based on the perception of

marketers. The research makes a significant contribution to academicians and practitioners alike deriving some important learnings and developing a conceptual model.

The paper begins by differentiating traditional marketing approaches from neuromarketing ones as part of the Literature review. Then the concept of neuromarketing and neuromarketing methods are defined. Two successful marketing campaigns and two failed ones are then presented as case studies to understand what makes an advertising campaign successful and what may go wrong despite huge investments by brands. The next phase of the work deals with the qualitative interviews of marketers to understand their views on neuromarketing. Broad themes are identified and an analysis and discussion of these findings follow. Finally, the recommendations, implications, and limitations of the study are presented.

Literature Review

Traditional Marketing Research vs. Neuromarketing Approaches

Traditional marketing research includes quantitative or qualitative approaches such as survey methods, focus group discussions, and interviews. These are primarily self-reported means which have some inherent disadvantages. Sometimes the target audience may face problems in proper articulation or at other times responses may not be accurate due to some bias. This is how neuromarketing methods are different from conventional methods of research as it gives an opportunity to the marketer to know how the human brain of the target audience is psychologically or physiologically impacted (Madan, 2010)

Neuromarketing Defined

Smidts was the first scholar to introduce the term neuromarketing in 2002 in the marketing literature though the neuromarketing technology was being offered by the American BrightHouse in as early as 2001. In fact, the idea of linking marketing with human psychology and biology originated in the 1980s. In the 1990s, specific programs were developed to link marketing with neuroscience and neuroimaging. Gradually, the idea started gaining momentum in the areas of science, business and media studies. Neuromarketing can simply be defined as a study of the human mind and psychology through brain mapping. It is “a subset of neuroeconomics” where the objective is to solve marketing problems through knowledge and methods of brain research. Huber and Kenning (2008); and McDowell and Dick (2013) elaborate it further while explaining the science as knowledge of unconscious motives of human action using biological measurement techniques. This combination allows marketers to study consumer behavior and purchase intentions and to study “the role of emotions in decision-making”. This increases the effectiveness of marketing communications by predicting underlying or suppressed intentions and controlling purchase decisions Javor et al. (2013). A comprehensive definition is given by Lee et al. (2007), which defines neuromarketing as a discipline that applies “neuroscientific methods to analyze and to understand human behavior in relation to markets and market exchanges

Neuromarketing Techniques

The neuromarketing techniques can be divided into two types:

EEG, MEG OR TMS: these are used to measure the changes by directly observing the changes in the electric and magnetic fields of the brain. For example, EEG can be effectively used to identify brain activity in the right or left spectrum. Since the right spectrum of the brain is related to emotions and the left to logic, the investigation would lead to observing the impact of the logical or emotional appeal of the advertisements respectively. Magnetoencephalography or MEG though provides a better resolution of the image. Roullet and Droulers (2010) [25] suggest the use of MEG to examine purchasing decisions. Transcranial Magnetic stimulation is used to observe but to alter induce or suppress brain activity and therefore can be used effectively to draw inferences about the role of different parts of the brain on a particular thought process.

PET, fMRI, and biometric methods are indirect measurement techniques where changes are measured by monitoring the changes in the metabolic processes such as consumption of energy or loss of oxygen or glucose. 23. Some techniques like Positron emission tomography (PET) are invasive where the subjects are injected with radioactive substance however a few others such as Biometric techniques include the direct

monitoring of physiological processes and changes. For example, through monitoring the eye movements, and enlargement of the eye pupil conclusions are drawn based on the attention span, and the focus of the subject.

Successful advertising campaigns

Case Study I

Creating emotional appeal by working on the human mind and heart helps tap advertisers to create new markets and compel viewers to take desired actions as per the requirement of the advertisers. One of the very successful brands in this direction is Gillette. It is unimaginable how Gillette made a \$34 billion-dollar enterprise. In the 1900s, razors were only used by men. During this period the concept of women using razors for shaving their body hair was unusual. Women were not bothered about their body hair. However, this got changed drastically due to the efforts made by established brands like Gillette. When it created the first women's razor in 1915. It was made an issue and a problem was created out of it. What is interesting to note is that they not only created a problem but offered a solution also. The company came out with advertisements such as "utilized by the nicely-groomed female to hold the underarm white and clean." The next target for the marketer was leg hair. "Let's Look at Your Legs – Everyone Else Does."



Gradually instigating the emotions of shame and fear a novel marketing strategy was devised. With commercials creating prejudice against body hair, shaving soon got normalized. Slowly, with time it has grown to have an inherent sex attraction attached to it. During the 1980s the company started focusing on women shaving themselves to create sex appeal for men. Thus, working on loneliness, self-esteem, and sex appeal issues among women, a massive women's shaving industry was created.

Gillette emerged as one of the fastest-growing women's personal hygiene care brands in the world. And every year, girls not only in the US but around the world spend huge amounts on razors. Working on human psychology and emotions it became one of the fastest-developing brands. Basically, Gillette could create the entire shaving industry for women and made billions out of it.

Case Study II

The story of the success of De Beers' creative idea is a testimony of the fact that successful advertising needs a subtle understanding of human psychology. Since the discovery of a large number of South African diamond mines in 1870, the supply of diamonds was in abundance. When De Beers was established in 1888, it started stockpiling diamonds to manipulate prices - by means of controlling all areas from mining, refining, distribution & even to marketing, with a view to establish themselves as the price setters! De Beers had to find out a method to control the demand and supply of this gemstone in the world. By restricting supply, the diamonds were created as rare gemstones. And therefore, unique and

special. In fact, it created a strong feeling of artificial scarcity – which even now gets reflected in the exorbitant prices of diamonds. In reality, diamonds are not very rare but are one of the more common gemstones!

An advertising agency was then hired in 1938 and a narrative was created around the product. It started a campaign, and the impact was tremendous. Even though diamonds are destructible and technically would not last “forever” – De Beers started creating an emotional appeal by selling their diamonds with the slogan “a diamond is forever”, making diamonds a symbol of eternal love. The sales of the company started skyrocketing from \$23 million to \$ 2.1 billion between 1939 and 1979. And before anyone could realize the diamonds became not only a pricy possession but also an emotional asset – a symbol of true love and long-lasting commitment! The gemstone has now become a new symbol of wealth, power, and ultimate love.

Thus, the credit goes to De Beers for establishing this successful industry through a novel marketing approach. “A Diamond Is Forever” these four words became iconic and have appeared in all De Beers advertisements since then. They revolutionized the way people perceive diamonds – compelling them to buy for their loved ones and thus changing scenario for the entire diamond industry as a whole. De Beers devised a new marketing strategy, instead of marketing the product, they marketed the value.



Failed Advertising Campaigns

Case Study

Coca-Cola - changing the formula

On April 23, 1985, the Coca-Cola Company made a critical decision when it announced changing the taste of its most popular soft drink. The decision was taken because Coke wanted to beat the smart marketing strategies of Pepsi. Instead of countering it with smart advertisements and better advertising campaigns, Coke changed its formula. When consumers started buying this new taste formula, its sweet taste was not liked by the people who were so habitual of the taste of Coke. In other words, brand integrity was challenged. The widespread protests started in the United States, and people started hoarding the cans of the old formula, the phone calls started flooding the offices of the company and the public started blaming every employee of the company for this decision. Some people started getting panicky over the loss of their favorite drink. This decision was termed “one of the worst blunders of advertising history.” Protesters demonstrated with placards such as “We want the real thing” and “Our children will never know refreshment.”



The protests ended when after 79 days the company announced its decision to go back to the original formula which was later on called “Coca-Cola classic”, a few months later. Though for quite some time, both the flavors co-existed side by side and the “new coke” revolutionized the organization’s history, the lesson for the marketers was to be cautious while experimenting with the new product as it can break consumer trust. Proper research and planning are required before making any crucial decision as consumers’ emotions may be attached to a product.

Case Study II

Starbucks: Collapse into Cool

The company came out with a simple new advertisement with a visual of chilled Starbucks drinks, two different colored glasses placed together side by side on a grassy field with a few shining tiny insects and butterflies hovering around. The caption: “Collapse into Cool” was shown immediately above this picture.

There was a hue and cry against this visual as the word “collapse” reminded people of 9/11. Moreover, the word and the imagery together were reminiscent of the very insensitive approach of Starbucks when they charged the EMT workers \$130 after the collapse of the World Trade Towers. The company had to announce the withdrawal of the poster.



This is a perfect example of the point that any advertisement or campaign can be misinterpreted by the target audience. Despite the fact that marketers are generally aware of the ethos, the context, the culture, and the people, many things may go wrong. This mishap could have been avoided had any feedback based on some objective research might have been taken and the word collapse could have been replaced with some other word.

Neuromarketing research can be a step further in this direction. To study the perception of marketers in India an exploratory study was conducted.

Methodology

Use of Grounded Theory

The reasons for using a particular research design are primarily determined by the objectives of the study being undertaken. Qualitative research techniques are usually employed when a particular

phenomenon must be described or explored (Morrow & Smith 2000). The aim of this study was to investigate the role of the relevance of neuromarketing methods in the field of advertising. As this is an area that has not yet been studied in depth, the use of grounded theory facilitated a more in-depth analysis of the phenomenon.

The essential grounded theory methods that were employed to research the subject included coding and categorization of data; concurrent data collection and analysis; constant comparative analysis; and open, axial, and selective coding (Glaser & Strauss, 1967)

Methods of Data Collection

Initially, 24 middle to senior-level executives working in the marketing area in different organizations were contacted from the NCR region in India. The NCR has a working population that comprises citizens from most of India's states, so the sample is representative of the country's working population. Convenience sampling was employed to select these participants of the first phase. The sample comprised professionally qualified executives who had given up successful careers. Years of professional work experience ranged from 7 to 20+ years. Face-to-face interviews were arranged with these executives. However, after 19 interviews, data collection ceased as theoretical saturation had been reached (i.e., no new concepts or findings emerged from the data). The interviews were then transcribed for further data analysis. Each face-to-face interview lasted between 40 to 60 minutes. The conversation was kept flexible and open in structure. Open descriptive questions, such as, "what are the challenges they have faced while designing their advertising campaigns?" "What is their perception of neuromarketing techniques?" "What are the challenges they will have to face for the adoption of this technique?" After each interview, informal but detailed notes – called 'memos' in grounded theory – were prepared. These memos helped in the data analysis and the generation of codes. One of the authors transcribed all the interviews personally to maximize the respondents' confidentiality and anonymity.

Discussion

Most of the participants felt that this method is novel and more attention is required to be given to the use of neuromarketing techniques since this is critical to understanding consumer psychology and may help provide some conclusive evidence of consumers' responses. The results are according to existing literature when in research by Ohme et al.(2009) while testing two versions of television advertising. Neuromarketing methods were found to be more effective than conventional methods.

Neuromarketing can also be used to for product development to predict the success of any product even before the product is launched in the market. The results here also extend the existing finding in the literature (Ariely and Burns, 2010)

However, most of them admitted that they still trust conventional advertising research methods like surveys, interviews, and getting feedback through online research where the target audience can express their requirements in a candid manner. The reasons for the lack of trust in the use of neuromarketing are the following:

Many of these techniques are very expensive, and the cost of creating initial infrastructure is huge.

The tests are conducted in an unnatural environment which may affect the results. These results may not always be conclusive.

Some techniques are invasive ones where radioactive substances are injected into the body. It is therefore difficult to convince the target audience.

There are ethical issues as data obtained through these experiments may be misused by marketers.

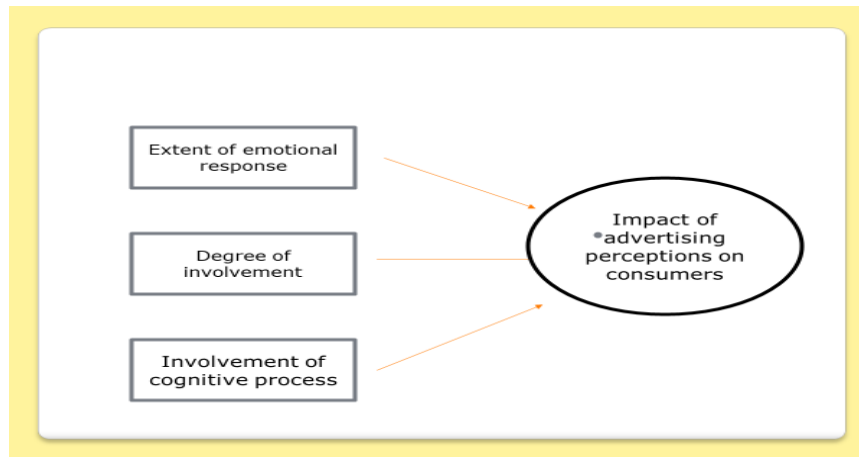
Transparency issues are also associated with the usage of many of these techniques. As the results can be manipulated by the decision-makers.

Many questioned the reliability of results based on the credibility of techniques. This is as per the existing literature. In a seminal research experiment by Bennett et al. (2009) , where fMRI was used to monitor the brain activity of Atlantic salmon and the results were contradictory in nature.

However biometric methods like eye gaze, movement of the eye pupil, and face reading are simpler, useful, and less challenging and are being used by marketers. Experiments are also being conducted by monitoring heart rate, and blood pressure levels though in highly specialized areas.

The following model based on the research of Zurawicki (2010) on the impact of neuromarketing research on consumers' perception may be relevant for marketers (see exhibit I):

Exhibit 1: Model based on the research by Zurawicki



Neuromarketing as an advanced technology is necessary in this age of AI and Machine Learning. It cannot be ignored in these competitive times of survival of the fittest. The fundamental advantage of this technique is to predict human behavior in an objective scientific manner. These techniques would help understand not just apparent thought processes or outward emotions and expressions of the human brain but also the unconscious or subconscious thoughts and feelings. If appropriately used it can predict consumer purchase behavior and marketers can customize their products as per consumers' requirements and preferences. While neuromarketing may help provide some critical insights into marketing-related issues. However, thinking of it as the "magic wand" or "panacea" of all marketing problems may be unrealistic. Since the concept is not very old some more research is required to implement this in real-life scenarios. Neuromarketing should not be considered an alternative to conventional marketing but complementary to existing practices.

Contributions and Future Research

This research uniquely studies the neuromarketing techniques in the Indian advertising context. From a theoretical perspective, this is one of the few empirical exploratory studies to understand the role of the neuromarketing concept in India. From a practitioner's perspective, the findings have major implications for the advertising industry. Marketers can leverage by deriving value from both by combining some of the neuromarketing techniques like biometric analysis with some existing conventional techniques. Future research using the Zurawicki model using survey method will be relevant for the generalizability of research. Experimental research in the natural environment can be conducted for understanding the relevance and challenges of the application of neuromarketing in advertising.

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Notes

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