

Chapter 1

Importance of Brain Reward System in Neuromarketing

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ABSTRACT

Neuromarketing is a relatively new concept. It is simply focused on the relationship between consumer behavior and the brain. For this purpose, it analyzes various customer behaviors towards the product and purchase by using various brain imaging techniques and behavioral methodology. Some limbic structures of brain such as ventral tegmental area (VTA), nucleus accumbens (NAc), and amygdala have a link to prefrontal cortex (PFC) by dopaminergic mesocorticolimbic pathway. This functional link is called brain reward system (BRS). BRS has a crucial role in the decision-making process of humans during shopping as well as addiction processes of brain. Studies investigating BRS in neuromarketing are very limited. In the chapter, working principles of BRS in neuromarketing and association with human shopping behaviors and shopping addiction/dependence has been investigated and discussed.

INTRODUCTION AND BACKGROUND

The declaration of the new millennium as the brain century has further increased the popularity of the brain and the brain researches. In the past, brain research was carried out exclusively in the fields of medicine such as neurology, psychiatry, brain and neurosurgery, the biology of basic science and the psychology of social sciences. In this century, law, history, philosophy, various engineering fields, politics, economics, communication and ethics are joined to the neuroscience area and the period of interdisciplinary (multidisciplinary) brain studies started. Although some are challenging, new fields such as neurolaw, neurohistory, neurophilosophy, neuroengineering, neuropolitics, neuroethics and neuroeconomics have emerged and the number of interdisciplinary researches is increasing.

Recently, a new tool of marketing research called “neuromarketing” has evolved from brain researches that investigate an association with customer behaviors (i.e., decision-making processes during shopping) and brain activity. It is an adaptation of neuroscience to marketing. Neuromarketing has gained growing popularity in the academia as well as the commercial world and includes the direct use of brain

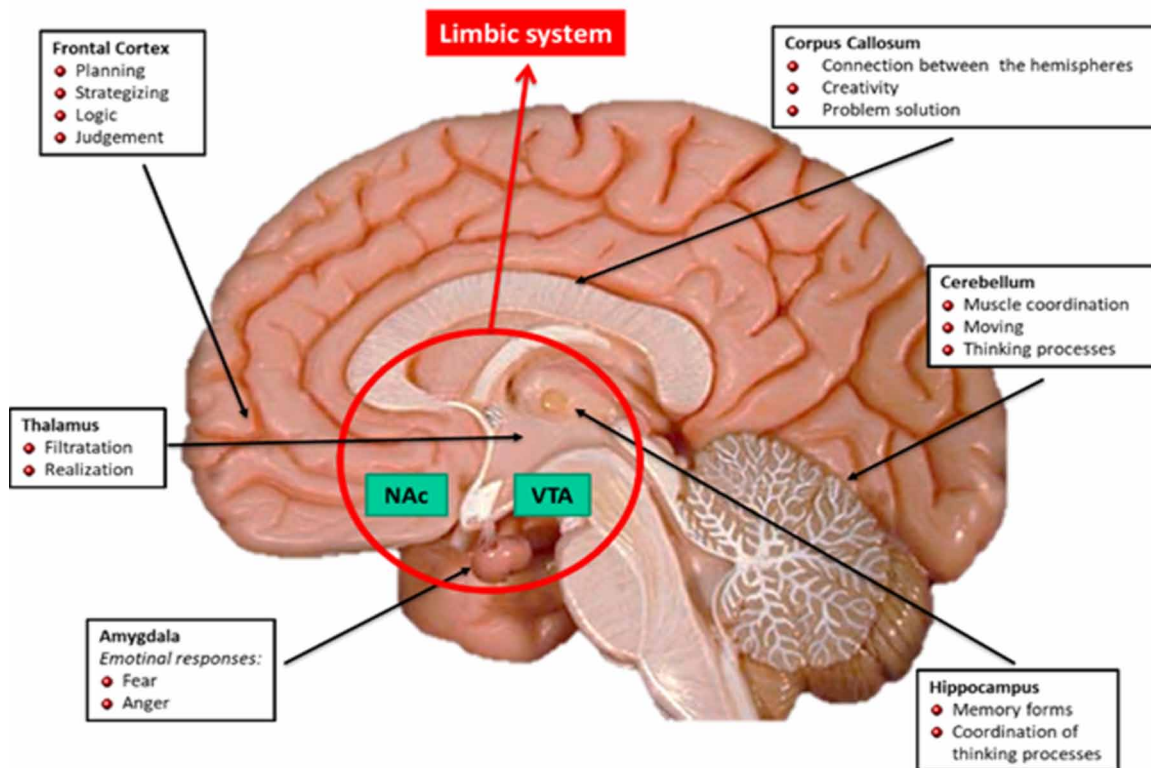
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imaging, scanning, or other brain activity measurement technics such as functional magnetic resonance imaging (fMRI), positron emission tomography (PET), electroencephalography (EEG), eye tracking, pupil dilatation reflex (PDR) and magnetoencephalography (MEG) to record an individual's response to marketing products (Javor et al., 2013; Kumar and Singh, 2015). Thus, neuromarketing is a new exciting field with great potential for application in the practical zones of marketing, brand management and advertising. Human behavior and psychology, psychiatry, neurology and some other disciplines of social sciences such as sociology, ethics, economy, management and even law have a robust connection with neuromarketing (Breiter et al., 2015).

The human brain is approximately 1.5 kg in weight and places into our skull which a safe place. It is composed of %75-80 water, more than %10 lipid and %8 protein. It is divided into two part named hemisphere, left and right hemispheres connected by the corpus callosum. In Figure 1, a sagittal section of the right hemispheres of the brain including some important structures and formations are seen. Simply, we can evaluate the brain in two essential parts in aspect to emotion, drive, decision and behavior. These parts are the limbic system seeing in the red circle and frontal cortex.

Figure 1. Brain and some important structures and formations (NAc: Nucleus Accumbens; VTA: Ventral tegmental area)

Source: Modified from Morley, 2009; with the approval of the author.



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