Chapter 8
Traditional Market Research and Neuromarketing Research:
A Comparative Overview

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ABSTRACT

Marketing research, dedicated to comprehending consumer behavior and purchasing practice, comprises methodical gathering, analysis, and interpretation of related data. Since the understanding of consumer behavior is a comprehensive and complicated task, the contemporary marketing studies argue that traditional marketing research should be supported by neuromarketing methods to explore consumers' psychology, motivation, and behavior. In this chapter, the advantages and disadvantages of traditional marketing and neuromarketing research methodologies and the differences between them are discussed. The traditional market research methods are explained through their qualitative and quantitative dimensions. The most commonly used grouping scheme of techniques in neuromarketing research is presented, namely, neurometric, biometric, and psychometric techniques. The marketing research supported by neuromarketing approaches enables us to look at the consumers' mind as closely as we have never experienced before and opens up new horizons in understanding consumer and marketing relationship.

INTRODUCTION

The marketing targets, which have been updated from increasing sales to create value for all parties, have been specialized in order to understand the consumer's mind and behavior in the early 2000s. This evolution led to the addition of a new field to the qualitative and quantitative research methods that are frequently used in marketing research, and the field of "*neuromarketing*" made a very rapid introduction to the marketing literature. The term neuromarketing defined by Marcel et al. (2009) as; "neurology and marketing union in a wide range of studies for a desire for knowledge about the human brain," was born during the beginning of the 21st century.

Although Ale Smidts (Lewis & Phil, 2004), who used the term neuromarketing for the first time in 2002, the development of neuromarketing and studies without using this term are actually much older, in the 1960s, studies, which were generally focused on consumer psychology, started to take advantage of neuroscience devices and methods. The early research work, recognized as the pioneering neuromarketing studies, were conducted with pupillary dilation and electrodermal response methods (Solnais et al., 2013). In the study by Herbert Krugman in 1964, he examined the attention on the greeting cards over pupil dilation and observed whether there was an inconsistent change in the participant's verbal scores. In 1970, Krugman (1977) and Hansen (1981) began to review the activity of the right and left hemispheres of the human brain through encephalography. Zaltman and Kossyln made a patent application to Harvard University in 1998 under the name "neuroimaging as a marketing tool", but the term "neuromarketing" has not yet entered the literature. One of the first uses of magnetoencephalography (MEG), which is also a neurological imaging method, has been realized by Ambler et al. (2000) and the decision-making processes of the participants were examined. Finally, in 2002, Ale Smidts from Rotterdam University used the term "neuromarketing" in his research. This term, which refers to the methods and devices borrowed from neuroscience, has quickly become prevalent and has had a great effect on the field after this period. One of the well-known neuromarketing studies known as the "Pepsi paradox" was conducted by Read McClure et al. (2004), and it accedes as one of the revolutionary studies in the field.

Why is the beginning of the 2000s considered as a milestone even if the origin of neuromarketing is almost as old as marketing? The answer to this question is actually quite involved. First of all, it is simply because of the term neuromarketing's tardy introduction to the field. Previously, studies conducted by using borrowed methods from areas such as experimental psychology (Oswald, 1959), neurology (Hill, 1956), aviation (Jones et al., 1949), law and forensic studies (Lykken &Tellegen, 1974) were commonly named as consumer psychology, and thereafter those kinds of studies gathered together under the title "*consumer neuroscience*." Secondly, "the initial approaches have not been able to fully meet expectations due to methodological issues such as the difficulties to evaluate the valence of consumers' reactions" (Kenning, Plassmann, & Ahlert, 2007), since, the devices used were still at a very primitive level in the relevant period. Moreover, despite today's sophisticated methodologies where it is possible to compensate for the disadvantage of one device with the advantage of another, back then the data from only one device could be processed. This was increasing the concern of reliability in the research studies. In addition, imaging methods with high spatial resolution and fast imaging algorithms such as fMRI and PET had not yet been developed and adopted. Similarly, electroencephalography (EEG) and eye-tracking devices did not have enough practical and ergonomic designs to be used in challenging studies for dynamic and simultaneous detection of the targeted consumers' behavior during their anticipated experience.

Finally, the subject of ethics in the field and the methodology of the scheme started to be examined after this period under the title of neuromarketing (Murphy et al., 2008). As Garcia et al. (2008) remark,

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