

Chapter 29

Towards Ethical Neuromarketing 2.0 Based on Artificial Intelligence

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ABSTRACT

Eighty percent of consumer behaviors and purchases rely on subconscious processes. The use of neuro-marketing tools to study consumer behavior is not clear, notably regarding its practices and intentions toward consumers. This chapter aims to understand how neuromarketing can explain consumer behavior thanks to Neuromarketing 2.0 tools, how companies can manage the collected data in a responsible way and build a neuroethical charter to regulate the way companies use it. Most companies choose to not communicate about it when they use neuromarketing tools, and therefore, this chapter aims to pave the way towards solutions and recommendations and democratize its use by making Neuromarketing 2.0 more responsible and ethical.

INTRODUCTION

Between 80 and 97% of new product launches on the market fail from a lack of understanding of the market challenges and consumer behavior and needs (Mediamarketing, 2017). Neuromarketing is an area of marketing that uses neuroscience frameworks and techniques, such as psychophysics or brain imaging, in order to further understand these underlying processes, and to influence consumer behaviors (Droulers

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& Roullet, 2010; Morin, 2011; Nilashi et al., 2020). One of the objectives of neuromarketing is to adapt the methods and theories from neuroscience and artificial intelligence (AI) research with behavioral theories, and develop experimental designs to better understand consumer behavior and decision-making processes (Plassmann et al. 2015). Cognitive neuroscience examines how the central nervous system generates psychological processes that typically come into play when purchasing a product, such as perceptions, feelings, memory, intentions, judgment, planning, decision-making, action, behavior, etc. Therefore, neuromarketing is of prime interest for managers, in order to get an overview of the current market and its challenges. Multinational companies such as Coca Cola, McDonald's, Google, Facebook, Apple, Ebay, to name a few, have used, or use, neuromarketing tools to refine their marketing strategies, increase the frequency rate and consequent sales to ensure profits (Bayle-Tourtoulou & Badoc, 2020). However, if neuromarketing attracts managers by its opportunities and benefits, most companies that use neuromarketing tools still hide this information, stating confidential intellectual property (de Sousa, 2018). On one side, companies can increase sales and profits whereas on the other side, consumers can get better products and services, and access to better-targeted information about those products and services (Wieckowski, 2019). Neuromarketing 2.0 uses tools driven by AI, such as facial and movement coding. With neuromarketing and AI, marketing tools have become more efficient. Thus, the ethical issues raised regarding neuromarketing and AI are similar to the ones raised regarding advertising and marketing in general. The use of neuromarketing 2.0 with AI tools seems to be a wise response to address complex ethical problems, notably because they are innovative, non-invasive and they do not rely on medical data collection. Therefore, neuromarketing 2.0 tools include algorithms that are capable of collecting then interpreting data, in order to mimic cognitive decisions and predict future behaviors. For this reason, researchers and consumers may perceive neuromarketing as an immoral deviation of neuroscience, and this chapter aims at proposing an ethical way of using neuromarketing 2.0 tools. Therefore, we aim to define a neuroethical charter to protect consumers' personal data and regulate the use of neuromarketing. The main goals of the proposed chapter are the following:

1. To better understand and explain consumer behavior through conscious and automatic processes;
2. To discuss which neuromarketing 2.0 tools could be used in market research as non-intrusive and high human valued technologies;
3. To understand and change the negative perception of neuromarketing by making it more relevant, ethical and transparent to managers and consumers;
4. To build a neuroethical charter to regulate the way companies use neuromarketing through AI tools.

BACKGROUND

Marketing Research: Understanding Consumer Behavior

Researchers describe the notion of subconscious as a system or process existing in consumers' brain, and strongly determined by the environment that emit signals requiring attention, and engender emotions and memory (Guelfand, 2013). Thanks to neuromarketing, marketers can observe consumer behavior through cognitive processes such as attention, emotions and memory which all influence consumer perceptions toward the brand, and then can predict consumer behavior. Firstly, the literature distinguishes several types of attention (i.e., the ability to focus consciously or subconsciously on specific things in

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