

BUCHAREST UNIVERSITY OF ECONOMIC STUDIES
The Council for Doctoral Studies
Doctoral School of Marketing

NEUROSCIENCE DEVELOPMENTS IN MARKETING
RESEARCH: ATTENTION, VISUAL PERCEPTION,
AND EMOTIONS

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Bucharest, 2025

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Keywords: Neuromarketing, Consumer Neuroscience, Consumer Behavior, Attention

Summary

The measurements carried out in the studies and experiments on which this work is based have highlighted the relationships between attention and the duration of exposure to different stimuli, on the one hand, and the accuracy of visual perception, the intensity and valence of the emotions generated by the respective stimuli, on the other hand. In addition to self-responses, cognitive and emotional processes were studied using metrics developed based on recordings made using an electroencephalography (EEG) headset and a gaze tracking device. The visual fields, exposure duration, documented valence and documented intensity of the images used were chosen to be closer than in most previous studies to the situations of interest for Consumer Behavior, and one of the approaches aimed precisely at the influence of the ease of finding a searched image on the change in its attractiveness.

The results obtained largely support the importance of capturing attention as quickly as possible and ensuring a longer exposure time to the image of interest; these two factors have been shown to be statistically significantly correlated with improving the valence and intensity of the emotions generated, as well as with perceiving the respective stimulus as greater than another, in reality identical. The research has targeted relationships of interest between cognitive and affective processes of interest in most acquisition situations, rather than particular cases. Even if the results were consistent with those of many previous studies with different parameters, it should be noted that their validity is proven strictly within the exposure intervals used.

The studies used a series of research techniques and tools such as electroencephalography (EEG), pupil tracking, computer applications for predicting involuntary attention allocation, and images with valence and intensity assessed using classic questionnaires, as well as self-responses, in line with the author's position that developments in neuroscience should be used in Marketing as an additional source of information, not as an alternative source, in competition with classic ones.

Benefiting from the major improvements in the effectiveness of neurometrics based on EEG sensor recordings, two of the presented studies use these neurometrics in a way that raw sensor data could not have been used: these metrics allow for the second-by-second tracking of various cognitive and emotional processes for longer time intervals – including those of interest in this paper, with documented effectiveness in the various presented studies of over 80%. Drawing on his own research in the field of developing such metrics, the author presents the advantages of developing and using such metrics by researchers from all socio-human fields, also mentioning the methods by which such efforts can be achieved.