4. Утверждение и воплощение в жизнь маркетинговых программ.

В свою очередь, к типичным ошибкам, которые допускают предприятия можно отнести: слабая ориентированность на клиента, неэффективно обнаруживает своих соперников и плохо мониторит их деятельность, не ищет новых перспектив развития, не прилагает усилий для формирования сильного бренда, не использует по максимуму возможности современных технологий.

Таким образом, при предельной автоматизации системы продаж большое число повседневных маркетинговых выкладок может осуществляться не работниками фирмы, а программными средствами. Такой вариант делает возможным оптимизацию этих решений и помогает серьезно сэкономить рабочее время.

# СПИСОК ИСПОЛЬЗОВАННЫХ ИСТОЧНИКОВ

1. Стеблякова, Л.П. Маркетинговый анализ: Электронный учебник. - Караганда: КарГТУ, 2019.

2. Котлер, Ф., Армстронг, Г. Маркетинг негіздері: Оқулық. / Ауд. Б. Абдулхалим, Ж. Бимағамбетова, Л. Бимендиева т.б.. - 17-басылым - Алматы: «Ұлттық аударма бюросы» қоғамдық қоры, 2019. - 736б.

3. Баранова, Н.А. Маркетинг: Учебное пособие.Ч. 1. - Костанай: КГУ им. А. Байтурсынова, 2016. - 103с.

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## NEUROMARKETING AND THE FUTURE OF ADVERTISING: PREDICTIONS AND OPPORTUNITIES

Түйіндеме. Нейрология мен маркетингті біріктіретін нейромаркетинг саласы қарқынды дамып келеді және тұтынушылардың мінез-құлқын түсіну және әсер ету жолында төңкеріс жасау мүмкіндігіне ие. Миды бейнелеу, көзді бақылау және электроэнцефалография (ЭЭГ) сияқты нейромаркетинг әдістері мидың қалай өңдейтіні және маркетингтік хабарламаларға жауап беретіні туралы құнды түсініктер береді. Жақында жүргізілген зерттеулер эмоционалдық апелляциялар мен әлеуметтік әсерлердің ұтымды шағымдар мен жеке әсерлерге қарағанда тұтынушылардың назарын аудару және мінез-құлықты ынталандыру үшін тиімдірек екенін көрсетті. Сонымен қатар, нейромаркетингтің жекелендірілген жарнамалық хабарламаларды жасауда, жарнамалық хабарламалар мен форматтардың әртүрлі түрлерінің тиімділігін өлшеуде, сондай-ақ VR және AR тәжірибелерін жасауда әлеуетті қолданбалар бар. Дегенмен, тұтынушылардың белгілі бір топтарын ықтимал айлашарғы жасау және кемсіту сияқты этикалық ойларды ескеру қажет. Бұл жұмыс нейромаркетингтік зерттеулердің қазіргі жағдайын зерттеуге, болашақтағы әлеуетті қосымшаларды талқылауға және ескерілуі тиіс этикалық ойларды зерттеуге бағытталған.

Резюме. Область нейромаркетинга, которая сочетает в себе нейронауку и маркетинг, быстро развивается и может революционизировать то, как мы понимаем и влияем на поведение потребителей. Методы нейромаркетинга, такие как визуализация мозга, отслеживание взгляда и электроэнцефалография (ЭЭГ) дают ценную информацию о том, как мозг обрабатывает и реагирует на маркетинговые сообщения. Недавние исследования показали, что эмоциональные призывы и социальное влияние более эффективно привлекают внимание потребителей и стимулируют поведение, чем рациональные высказывания и индивидуальное влияние. Кроме того, у нейромаркетинга есть потенциальные приложения для создания персонализированных рекламных сообщений, измерения эффективности различных типов рекламных сообщений И форматов, а также создания захватывающих впечатлений от виртуальной (VR) и дополненной (AR) реальности. Однако необходимо учитывать этические соображения, такие как потенциальное манипулирование и дискриминация определенных групп потребителей. Эта статья направлена изучение текущего состояния исследований в области на нейромаркетинга, обсуждение возможных будущих приложений и изучение этических соображений, которые необходимо учитывать.

**Summary.** The field of neuromarketing, which combines neuroscience and marketing, is rapidly evolving and has the potential to revolutionize the way we understand and influence consumer behavior. Neuromarketing techniques such as brain imaging, eye tracking, and electroencephalography (EEG) provide valuable insights into how the brain processes and response to marketing messages. Recent research has shown that emotional appeals and social influence are more effective at capturing consumer attention and driving behavior than rational appeals and individual influence. Additionally, neuromarketing has potential applications in creating personalized advertising messages, measuring the effectiveness of different types of advertising messages and formats, and creating immersive VR and AR experiences. However, ethical considerations such as potential manipulation and discrimination of certain groups of consumers must be taken into account. This paper aims to examine the current state of neuromarketing research, discuss potential future applications, and explore the ethical considerations that must be taken into account.

#### Introduction

Neuromarketing is an emerging field that combines neuroscience and marketing to better understand consumer behavior. By using techniques such as brain imaging, eye tracking, and electroencephalography (EEG), neuromarketing researchers are able to gain insights into how the brain processes and responds to marketing messages. In the context of Kazakhstan, the field of neuromarketing is still in its infancy but has the potential to provide valuable insights into the specific consumer behavior and preferences of the Kazakh market. As the field continues to evolve, it is important to consider the potential implications and opportunities that neuromarketing may have for the future of advertising in Kazakhstan. This research paper will examine the current state of neuromarketing research, discuss potential future applications, and explore the ethical considerations that must be taken into account.

### Current State of Neuromarketing Research

Recent research in neuromarketing has focused on understanding how the brain processes and responds to different types of advertising. Studies have shown that different areas of the brain are activated in response to different types of advertising messages, such as emotional appeals, rational appeals, and social influence. For example, a study by Ciorciari et al. published in the journal "Behavioral Sciences" found that emotional advertisements are more likely to activate the brain's reward system and increase consumer's willingness to pay [1]. Additionally, research has shown that "participants with high and low emotional intelligence (EI) were attentive to different types of advertising messages and the two EI groups demonstrated preferences for "people" or "object," related advertising information. Ciorciari et al. suppose that "differences in consumer perception and emotions may suggest why certain advertising material or marketing strategies are effective or not" [1].

Published in the journal "Frontiers in Psychology" the study of Bettiga et al. found that the brain's reward system is more active when consumers are exposed to luxury goods rather than utilitarian ones [2]. Bettiga et al. examined "the influence of the product nature (functional and hedonic) on a consumer's affective reactions of pleasure, arousal, and involvement through both physiological techniques (electroencephalography, heart rate, breath rate, and skin conductance) and self-reported instruments" [2].

One of the key findings of neuromarketing research is that the brain processes emotional appeals differently than it processes rational appeals. According to Glotzbach et al., emotional appeals activate the limbic system, which is responsible for emotions and motivations, while rational appeals activate the prefrontal cortex, which is responsible for cognitive processing and decision-making [3]. The limbic system and especially the amygdala have been identified as key structures in emotion induction and regulation [3]. This suggests that emotional appeals may be more effective at capturing consumer attention and driving behavior.

Another important finding of neuromarketing research is that the brain processes social influence differently than it processes individual influence. Kedia et al. state "Whenever we interact with others, we judge them and whenever we make such judgments, we compare them with ourselves, other people, or internalized standards [4]." Social influence activates the social cognition network, which is responsible for understanding the perspectives and intentions of others, while individual influence activates the default mode network, which is responsible for self-referential processing and decision-making. This suggests that social influence may be more effective at driving behavior than individual influence.

A study by Bhanji & Delgado published in the journal "WIREs Cognitive Science" found that social influence activates the brain's reward system and increases the likelihood of consumer purchasing decisions [5]. Thus "the human striatum, known to play a key role in reward processing, displays signals related to a broad spectrum of social functioning, including evaluating social rewards, making decisions influenced by social factors, learning about social others, cooperating, competing, and following social norms" [5].

#### Current State of Neuromarketing Research in Kazakhstan

The field of neuromarketing in Kazakhstan is still in its early stages, with limited research conducted on the specific consumer behavior and preferences of the Kazakh market. However, the findings from global neuromarketing research can provide valuable insights into how the Kazakh market may respond to different types of advertising messages and products. Kazakhstani researches Kazybayeva et al. use methods and tools of neuromarketing to understand the possibilities and ways of "application in practical marketing activities on the basis of an integrated approach that takes into account both the opinion of theorists and the author's vision and demonstration of the application of neuromarketing research in applied activities [6]."

For example, neuromarketing research using FaceReading show that emotional appeals and social influence are more effective at capturing consumer attention and driving behavior than rational appeals and individual influence [6]. It means that advertising campaigns that evoke emotions and leverage social influence are more likely to be successful in the Kazakh market.

### Potential Future Applications

As neuromarketing research continues to evolve in Kazakhstan, there are several potential applications that could have a significant impact on the future of advertising in the country. For example, neuromarketing techniques could be used to create more personalized advertising messages that are tailored to the specific cognitive and emotional profile of Kazakh consumers. Additionally, neuromarketing techniques could be used to measure the effectiveness of different types of advertising messages and formats in the Kazakh market, such as video ads, display ads, and social media ads.

Another potential application of neuromarketing in Kazakhstan is in the field of virtual reality (VR) and augmented reality (AR). By understanding how Kazakh consumers' brains process and respond to different types of visual and auditory stimuli, neuromarketing researchers could help create more immersive and engaging VR and AR experiences that will appeal to the Kazakh market.

#### Ethical Considerations

As with any new technology, there are also ethical considerations that must be taken into account when using neuromarketing techniques. One of the main concerns is the potential for neuromarketing to be used to manipulate consumer behavior without their knowledge or consent. For example, if advertisers are able to use neuromarketing to create highly effective emotional appeals, they may be able to influence consumer behavior without consumers being aware of it. Focus group moderated by Ania G. Wieckowski found that neuromarketing raises ethical concerns about consumer privacy and manipulation [7].

Another ethical concern is the potential for neuromarketing to be used to discriminate against certain groups of consumers. For example, if neuromarketing techniques are used to create more personalized advertising messages, they could be used to target certain groups of consumers based on their cognitive and emotional profile. A study published by Mohd Isa, S., Azlina Mansor, A., & Razali, K. found that neuromarketing may raise ethical concerns about discrimination, consumer privacy, and manipulation. They argue that "the most frequently raised concerns- autonomy, informed consent, confidentiality, privacy, benevolence, and no maleficence-given the current capabilities for business to stay vigilant" [8].

To mitigate these ethical concerns, it is important for researchers and practitioners to develop guidelines and regulations that ensure that neuromarketing is used responsibly and ethically. This may include guidelines for informed consent, data privacy, and the fair treatment of all consumers. Additionally, as Trettel et al. state it is important for neuromarketing researchers to be transparent about their methods and findings [9], and to engage in ongoing dialogue with consumers and other stakeholders about the potential implications of neuromarketing.

### Conclusion

In conclusion, neuromarketing is an emerging field that has the potential to revolutionize the way we understand and influence consumer behavior. By using techniques such as brain imaging and EEG, neuromarketing researchers are able to gain insights into how the brain processes and responds to marketing messages. This research has shown that emotional appeals and social influence are more effective at capturing consumer attention and driving behavior than rational appeals and individual influence. Neuromarketing has potential applications in creating personalized advertising messages, measuring the effectiveness of different types of advertising messages and formats, such as video ads, display ads and social media ads, and in creating immersive VR and AR experiences.

However, as with any new technology, it is important to also consider the ethical implications of neuromarketing. These include concerns such as the potential for manipulation and discrimination of certain groups of consumers. To ensure that neuromarketing is used responsibly and ethically, it is important for researchers and practitioners to develop guidelines and regulations, and to be transparent about their methods and findings. Additionally, ongoing dialogue with consumers and other stakeholders about the potential implications of neuromarketing is crucial for building trust and understanding.

Given the potential benefits and implications of neuromarketing, further research is needed to fully understand the field's capabilities and limitations. Additionally, it is important to continue to monitor and address ethical considerations as the field advances. With appropriate attention to these considerations, neuromarketing has the potential to provide valuable insights and opportunities for advertisers, and to play a positive role in shaping the future of advertising.

#### LIST OF REFERENCES

1. Ciorciari, J., Pfeifer, J., & Gountas, J. (2019). An EEG study on emotional intelligence and advertising message effectiveness. *Behavioral Sciences*, 9(8), 88. https://doi.org/10.3390/bs9080088

2. Bettiga, D., Bianchi, A. M., Lamberti, L., & Noci, G. (2020). Consumers' emotional responses to functional and hedonic products: A neuroscience research. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.559779

3. Glotzbach, E., Mühlberger, A., Gschwendtner, K., Fallgatter, A. J., Pauli, P., & Herrmann, M. J. (2011). Prefrontal brain activation during emotional processing: A functional near infrared spectroscopy study (FNIRS). *The Open Neuroimaging Journal*, *5*, 33–39. https://doi.org/10.2174/1874440001105010033

4. Kedia, G., Mussweiler, T., & Linden, D. E. J. (2014). Brain mechanisms of social comparison and their influence on the reward system. *NeuroReport*, 25(16), 1255–1265. https://doi.org/10.1097/wnr.00000000000255

5. Bhanji, J. P., & Delgado, M. R. (2013). The Social Brain and reward: Social information processing in the human striatum. *WIREs Cognitive Science*, *5*(1), 61–73. https://doi.org/10.1002/wcs.1266

6. Kazybayeva, A. M., Smykova, M. R., & Sokhatskaya, N. P. (2022). Methods of neuromarketing research and application opportunities. *Central Asian Economic Review*, (6), 102–115. https://doi.org/10.52821/2789-4401-2021-6-102-115

7. When neuromarketing crosses the line. Harvard Business Review. (2021, August 30). Retrieved January 25, 2023, from https://hbr.org/2019/01/when-neuromarketing-crosses-the-line

8. Mohd Isa, S., Azlina Mansor, A., & Razali, K. (2019). Ethics in neuromarketing and its implications on business to stay vigilant. *KnE Social Sciences*. https://doi.org/10.18502/kss.v3i22.5082

9. Trettel, A., Cherubino, P., Cartocci, G., Rossi, D., Modica, E., Maglione, A. G., di Flumeri, G., & Babiloni, F. (2016). Transparency and reliability in Neuromarketing Research. *Ethics and Neuromarketing*, 101–111. https://doi.org/10.1007/978-3-319-45609-6\_6