

Eye-tracking for Marketing and Advertising

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Abstract

Eye-tracking is used as a methodological tool to conduct research studies with many different goals. One field that is taking advantage of this tool to become more successful and explore consumer behavior is the field of Marketing, more specifically the area of advertising with the goal of finding better strategies through understanding consumers. But why is eye-tracking the most useful method to conduct such studies? What type of information can we obtain from eye trackers?

Keywords: eye-tracking, marketing, advertising, marketing strategies, sensory marketing, emotions, attention, choice, mental stimulation.

Introduction

What does an eye-tracker do? Eye trackers are sensitive devices that capture attention as it tracks or monitors where your eyes are moving (saccades), and how long you spend in certain areas of a page (fixations) as you try to capture and process what you are looking at. The most common tracker used is the one that has a chin rest. Once the participant gets in a comfortable position, the tracker is calibrated to obtain the most accurate data possible, and it will be re-calibrated during the study if needed. The way studies are designed varies with the purpose and goals of each respectively needed to collect the data that is relevant. Participants might be asked to watch videos and answer questions about them, maybe pretend they are doing online shopping or grocery shopping, or something as simple as reading and answering comprehension questions. This information that we try to process and understand during the tasks assigned for the experiment is of great value when conducting research studies in which consumer behavior and user experience are the focus. Eye-tracking has become increasingly valuable as researchers keep conducting studies in different fields such as Marketing, to understand human cognitive behavior.

Attention and Choice

As for Marketing or the Advertising sub-field more specifically, eye tracking data provides researchers with significantly accurate data that captures attention in which depending on how long attention is focused on an image researchers can for example, determine choice likeliness when the participant is trying to choose a product to buy. The article “From desktop to supermarket shelf: Eye-tracking exploration on consumer attention and choice” (Bialkova et. al., 2020) extensively discusses attention and choice as top-down vs bottom-up processing, what the

patterns are, how attention leads to making choices, and other various factors that influence the consumers at the time of making a choice. Bialkova et. al. conducted a study in two different settings lab, and in-store grocery shopping which was as effective as using eye-tracking technology since in-store shopping involved an environment rich in various stimuli that competed for the consumers' attention, also referred to or characterized by eye movements. In short, attention is identified with eye fixations, the time eyes spend fixed on something becomes a measure of exposure which initiates the decision stages until the consumer makes a choice. The longer the exposure, the higher the likeability of a choice. Where the eyes go, attention is. But what drives our eyes? What catches our eyes' attention? Is it the visuals, brand preference, brand popularity, maybe familiarity with the environment, or even emotions?

In both settings, consumers were asked to choose the healthiest product or a product of their preference, and fixations were recorded. Results show that brand and product flavor are leading factors when consumers are looking for a product to purchase and that the product that consumers end up buying are the ones with the highest number of fixations recorded which translates to products that received the most attention from the consumer are the ones that were bought. On the other hand, some limitations found are more particularly with the real-life supermarket setting. Researchers had a difficult time studying the real-life experience setting because it was found that attention is driven by stimulus and for this setting, there was a stimuli overload for the consumer to be able to specifically test how consumers study or analyze supermarket shelves. This led to inconclusive results for the real-life experience setting since eyes could not be tracked properly. Even though limitations were found, they concluded that goal-directed (top-down) processing is slightly more dominant than stimulus-driven (bottom-up)

processing, but stimulus interaction is still a strong way to attract consumers' attention. So how can we attract more attention using stimuli manipulation?

Sensory Marketing in Advertising

Sensory marketing has become very powerful in the last couple of years as it focuses on driving consumers' attention through sensory interaction. As the marketing field grows, the area of advertising, which is the branch whose goal is to get the product known to people and sold; has been diving into different strategies to attract consumers' attention. One very powerful strategy has been to get to the consumer through their five senses, vision, taste, smell, sight, and hearing. As we explore some of these different strategies it is worth noting that strategies are used in different settings for example, it is very unlikely to get to the consumers' olfaction sense through a television advertisement.

So how does sensory marketing work? It engages with the consumers' senses to affect their perception, judgment, and behavior and ultimately it influences the consumers' final decision through subconscious triggers. For example, for visual stimuli, the way marketers engage with this sense in particular is through stimulus orientation and mental stimulation of interacting with the product by generating either a positive or negative experience. Results show that if a product does not look appealing to the consumer, then there's a significant decrease in product purchase intention. For example, we have two images of a slice of pie, but one has the fork on the right and the second image has the fork on the left. The orientation of the fork would be known as the stimulus orientation which generates a mental stimulation that can either be positive or negative. In this example, a person that is left-handed is going to have a more positive experience when looking at the image that has the fork at the left of the slice of pie, which will increase the purchase intention of the consumer. However, not enough research has been

conducted on other senses such as olfactory, tact, and acoustic. A posing question by the authors of this paper is if there's a specific sense that might be dominant over the others. With further research on this, sensory marketing could have a greater impact on understanding consumers and the use of sensory marketing more successfully.

Emotional triggers through images as a marketing strategy

In the article "Like more, look more. Look more, like more: the evidence from eye-tracking" (Maughan et. al., 2006) the authors state that images can trigger emotions that are either positive or negative, but how can we recognize emotions in eye tracking? The eye-tracking method used to conduct this study was a gaze plot. This method of ET shows a roadmap of the eyes' attention by tracing eye movements (saccades) and the time the eyes spend on certain spots (fixations). According to research the authors conducted, some factors such as personality type, age, and gender have a great impact on the attention they designate to certain stimuli. For example, a person that is optimistic would look for a longer time to positive stimuli and would rapidly avoid negative unpleasant ones. Another example presented is their research associated with fear as a strong memorable emotion. People that fear spiders will have a significantly shorter fixation on the spider than people that do not have a negative feeling towards it. This concluded that negative stimuli attracted more attention during the first ten seconds of exposure, and it was avoided later on.

Advertising is a small part of what marketing is. Marketing is the entire process of deciding on a product, promoting it, and deciding the price. As previously stated, the goal of advertising is to make the final product known to people through attention, and because attention is a key element, we need studies that use eye-tracking as a method to find what consumers' eyes look at or dedicate most of their attention to. An important remark from this paper is that in

marketing and advertising, the most important information about people is how well they absorb and remember the stimulus in memory.

Results show that the more emotional load an image generates then the most likely an image is to be remembered. But as we take a look at the results, we get a contradictory understanding of what these results portray. We understand that the stronger the emotion then the more likely it is to remain in memory but, the key element is the type of association the person has with that product or image as it is stored in memory. Strong emotions like fear are well remembered but the association that we as people create with that feeling is a negative one, and in marketing, the goal is to create memorable positive associations in the consumers so that they are more inclined to purchase a product rather than avoid it. On the other hand, we can't control everyone's emotions. In this study, some relevant exceptions that they found to be uncontrollable in the real world compared to a lab setting are consumers with low working memory and an interesting phenomenon called Inattentional Blindness, an event in which a person fails to perceive a stimulus in plain sight. Such characteristics can't be predicted in a consumer which poses challenges when planning strategies to reach as many consumers as possible.

Conclusion

While using the eye-tracking method to study consumer behavior can help us understand a great deal, there's a lot more information left to be accounted for that can't be understood using this method yet. For example, as we learned from the first paper that brand and product flavor are key factors for consumers when choosing a product, we are left with the question of what can brands do to be more successful in the consumers' eyes? Although clear communication of product benefits such as a gluten-free or sugar-free label can significantly attract consumers' attention, we learned that consumers are strongly goal-driven and have strong preferences when

it comes to the choice of a product. We can influence the consumers' decision-making process using sensory marketing strategies but, in the end, how does this relationship work? Can we make a consumer change their mind completely or product preference due to brand, product flavor, or even familiarity, remains strong above any strategy that we look to implement? To understand this better, further research needs to be conducted to determine better strategies to maybe break or loosen that existing preference bond and make room for new products.

References

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