Chapter 7

The Influence of Emotions on the Purchasing Decision-Making Process: A Neuromarketing Perspective and Theoretical Foundations

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Abstract

This study examines the relationship between emotions and purchase behavior, with a particular focus on theories that explain how emotions influence consumer decisions. Within this context, the Somatic Marker Hypothesis, Affect-as-Information Theory, Emotional Contagion, Appraisal Theory, and Constructionist Approaches are explored in detail. Then, neuromarketing literature addressing the relationship between emotions and purchasing behavior is reviewed to further elaborate on the topic. Studies in neuromarketing that employ techniques such as electroencephalography and eye tracking have demonstrated how elements such as packaging and advertisements can influence consumers emotionally. The findings suggest that neuromarketing studies provide valuable insights into the discussed theoretical frameworks. Furthermore, these findings support the ongoing development of these theories. Studies using neuromarketing techniques indicate that positive emotions directly influence purchasing behavior, while negative emotions affect decisions only when paired with specific environmental triggers. Additionally, the intensity and context of emotions have been found to significantly influence decision-making processes. Consequently, neuromarketing methods have provided a profound, real-time understanding of the impact of emotions on consumer behavior.

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1. Introduction: The Shift in Consumer Behavior from Rationality to Emotionality

Early theories of consumer behavior proposed that individuals act based on self-interest and make rational choices. Based on the neoclassical economic concept of homo economicus, this perspective views consumers as rational agents who aim to maximize utility and make rational decisions (Urbina & Ruiz-Villaverde, 2019). However, over time, research and observations have shown that consumer behavior is unpredictable and cannot be fully explained by rational reasoning alone. As a result, the homo economicus model falls short of capturing the complexity of consumer actions. Once the influence of emotions and subconscious processes on consumer decisions became evident, researchers began shifting their focus in that direction.

Traditional methods often fail to reveal the effects of emotions and subconscious processes, or only yield limited insights. However, recent technological advancements and novel approaches have given rise to new interdisciplinary fields. One such field is neuromarketing. It can be conceptualized as measuring the neural or physiological effects of marketing stimuli with neuroscience methods (Akan & Atalık, 2024, p. 603). This discipline allows for a more scientific and in-depth exploration of consumer behavior by employing a variety of techniques. Methods such as electroencephalography (EEG), eye tracking (ET), and functional magnetic resonance imaging (fMRI) provide insights that surpass the limitations of classical approaches. Thus, neuromarketing helps overcome the constraints of traditional methods.

This book chapter aims to is to examine the role of emotions in consumer decision-making from both theoretical and experimental perspectives. In addition, it aims to highlight the contribution of neuromarketing to our understanding of these processes. The study evaluates the emotional influences present at the moment of decision-making using the frameworks of the somatic marker hypothesis, affect-as-information theory, emotional contagion, appraisal theory, and constructionist perspectives. It explores how emotions are explained from different theoretical standpoints in detail. Furthermore, it discusses the contributions of experimental studies employing neuromarketing methods to these theoretical models. By doing so, the chapter provides a comprehensive perspective on the role of emotions in purchase behavior by considering behavioral and neurophysiological dimensions. Finally, by examining how variables such as the timing, intensity, and context of emotional responses influence the purchasing process, the chapter aims to address gaps in the existing literature. Overall, this section

offers researchers a detailed investigation into the central role of emotions in consumer behavior and their practical implications by synthesizing theoretical and methodological approaches.

2. Exploring the Theoretical Basis of Emotional Influence in Consumer Behavior

Emotions play a significant role in shaping consumer behavior. Consumers often form emotional bonds with products and brands, which influence their purchasing decisions (Koshkaki, 2014). Theories exploring the role of emotions in purchasing have approached this relationship from diverse perspectives and contexts. This study examines and discusses the somatic marker hypothesis, affect-as-information theory, emotional contagion, appraisal theory, and constructionist approaches in depth.

2.1. Somatic Marker Hypothesis

The somatic marker hypothesis (SMH) emerged from observations of behavioral changes in individuals with damage to their ventromedial prefrontal cortex (VMPFC). While these individuals perform well on neuropsychological tests, they struggle to express emotions and respond appropriately to emotional stimuli. Despite having intact intellectual capabilities, they often face significant challenges in personal and social decision-making. For example, they may be unsuccessful at making daily plans or choosing friends and partners, which often results in a decline in social status (Damasio et al., 1996). They also fail to learn from previous experiences, repeatedly making poor decisions that lead to negative consequences (Bechara & Damasio, 2005).

According to this hypothesis, decision-making involves both cognitive processes and emotion-based signals. These emotions are rooted in bodily physiology, the nervous system, and past experiences (Verweij & Damasio, 2019). The hypothesis suggests that emotion-based signals originating from the body are integrated within the VMPFC region of the brain, where they influence decision-making, especially in complex situations (Damasio et al., 1996). In other words, the SMH proposes that decisions are guided by neural signals associated with emotional processes. As each alternative decision is assessed, a somatic state arises, driven by sensations from internal organs or muscles. In difficult or uncertain contexts, these somatic markers help narrow down options, supporting more efficient decision-making. Somatic markers are not solely triggered by physical signals, however; they can also be generated by the brain through imagined scenarios, a mechanism

referred to as the "as-if loop." This process enables quicker decisions by reducing the time required for deliberation (Dunn et al., 2006).

Somatic markers are physiological imprints formed from the bodily traces left by emotions associated with past experiences. These internal guides influence our responses in similar future situations (Ojha, 2020). In the context of consumer behavior, somatic markers carry emotional residues that influence purchase decisions, whether they are made consciously or unconsciously. For example, a consumer who was previously dissatisfied with the customer service or delivery of an e-commerce platform may feel anxious or hesitant when revisiting the site. This emotional response can influence future decisions about that platform. Conversely, positive emotional experiences create favorable somatic markers that facilitate the decision to return to the same e-commerce site for subsequent purchases.

2.2. Affect-as-Information Theory

This theory is based on the idea that, when making decisions, individuals can use their emotions as a source of information in addition to logical reasoning. Schwarz and Clore (1983) introduced the affect-as-information theory following a series of experiments. In these studies, participants were placed in various mood states, and the researchers explored how individuals use their emotional states as informational cues in decision-making. The findings revealed that emotions serve as both reflections of mood and cognitive inputs that guide judgments. In other words, emotional awareness—such as when individuals recall past experiences or recognize that their mood has been influenced by external factors—acts as a form of cognitive information. Through this mechanism, emotions can shape individuals' evaluations and ultimately influence their decisions.

The affect-as-information approach posits that individuals perceive emotions as valuable sources of information that influence their daily decision-making processes. For instance, a someone who watches a sad movie may subsequently find themselves in a melancholic mood (Ashtar et al., 2023). This emotional state might lead them to cancel plans to socialize and enjoy time with friends. However, if the individual recognizes that their negative mood stems from the movie, this emotional awareness may reduce its impact on their decisions. By attributing the negative feeling to the film, the person may shift to a more neutral or positive emotional state, thereby enabling them to make a more positive decision (Ptaszynski et al., 2010).

The affect-as-information theory offers valuable insights into how consumers make decisions in marketing contexts. According to this theory,

consumers rely on their emotions as a source of information when deciding whether to purchase a product or service. It explains how individuals utilize their emotional states during the decision-making process. When evaluating a product or service, consumers often ask themselves, "How do I feel about this?" and base their judgments on their emotional responses. This theory is often used to interpret consumers' reactions to emotionally charged marketing stimuli (Hasford et al., 2015). Numerous studies, particularly in advertising and related fields, have demonstrated that emotional responses can lead to significant marketing outcomes. For instance, research has confirmed that the emotions individuals experience while viewing advertisements serve as informational cues when evaluating brands (Pham et al., 2013).

2.3. Emotional Contagion Theory

The transfer of emotions between individuals is a significant topic in social psychology that has attracted considerable attention (Wang et al., 2010). In this context, emotional contagion is defined as the process by which one person influences another's emotional state, either consciously or unconsciously (Elfenbein, 2014). Elaine Hatfield, John Cacioppo, and Richard Rapson introduced this concept in its modern form in their book "Emotional Contagion" (Hatfield et al., 1994). The theory aims to provide a framework for understanding how emotions spread among individuals, how this process affects interpersonal relationships, and how it influences decision-making.

Emotional contagion generally unfolds in four distinct stages. When conceptualized as a four-stage model, these stages are emotional awareness, mimicry, physiological feedback, and emotional experience. During the first stage, individuals perceive and identify emotional cues. The mimicry stage involves the unconscious imitation of emotional expressions and is closely associated with empathy. This process is explained by mechanisms such as mirror neurons (Herrando & Constantinides, 2021). The third stage involves physiological changes, such as increased sweating or heart rate. In the final stage, individuals consciously experience the transferred emotion. Emotional contagion can be transmitted through verbal and nonverbal communication. Body language, facial expressions, and eye contact all play vital roles. Since people tend to imitate the emotions of others, these imitative behaviors share similar emotional states (Wang et al., 2010).

Initially studied in psychology and behavioral sciences, emotional contagion has also been applied in fields such as education, communication, and marketing. For instance, a study examining how employees' emotions influence customers found that genuine emotional expressions were

reciprocated, thereby increasing customer satisfaction and loyalty (Hennig-Thurau et al., 2006). Additionally, recipients tend to form more favorable attitudes toward products when emotional contagion is conveyed by likable, smiling individuals (Howard & Gengler, 2001). A study on emotional contagion in advertising highlighted the effectiveness of genuine smiles and the importance of gender congruence. Emotional contagion has been shown to be an effective advertising strategy that significantly influences consumer responses such as product liking, perceived trustworthiness, and purchase intention (Isabella & Vieira, 2020).

2.4. Apprasial Theory of Emotion

This theory asserts that emotions arise from how individuals evaluate events. In essence, emotions emerge from one's evaluation of an experience's personal significance. People experience different emotions depending on whether they perceive events as beneficial or harmful. More specifically, the emotional response to a situation depends on how the individual assesses its impact on their well-being. This conceptual framework is known as appraisal theory (Smith & Lazarus, 1990).

The appraisal process is usually divided into two stages: primary and secondary appraisal. Primary appraisal involves assessing an event's personal relevance. For example, one might ask, "Is this event important to me?" This stage focuses on motivational relevance (How important is the event?) and motivational congruence (Does the event align with or threaten my goals?). In the secondary appraisal stage, the individual evaluates their capacity to manage the situation. This phase includes four subcomponents: accountability (Who is responsible?), problem-focused coping potential (Can I resolve this?), emotion-focused coping potential (Can I manage my emotional response?), and future expectancy (Will the outcome be favorable?). After these appraisals, individuals construct meaning around the event (Lazarus & Smith, 1988). In other words, the mind formulates a core relational theme (e.g., an uncertain threat or a violation of expectations), which represents the essence of the relationship between the individual and the event and determines the emotional outcome, such as anger.

An example from consumer behavior can help illustrate this theory. Suppose a customer purchases an electronic product that arrives defective, and the customer's attempts to contact the brand are ignored. During the primary appraisal, the customer deems the event highly significant, indicating strong motivational relevance. The discrepancy between their expectations and the actual experience results in motivational incongruence. During the

secondary appraisal, the customer may blame the brand, seek restitution, and feel unable to manage their emotional reaction, reflecting low emotion-focused coping potential. Their expectations for a favorable resolution diminish. As a result, anger becomes the dominant emotional response. This emotion may manifest as negative reviews, reduced brand trust, or increased complaint behavior. Therefore, interventions can be developed to shift emotional outcomes from negative to positive by targeting the subcomponents of this two-stage appraisal process.

2.5. Constructionist Theory of Emotion

Constructivist theories propose that social and psychological phenomena emerge from the integration of multiple factors. According to this perspective, mental processes are not biologically predetermined. Instead, they are shaped by situational, historical, and personal contexts. This view argues that emotions are not innate, biologically fixed responses. Rather than being discrete "kinds" with a neural foundation, emotions are constructed experiences formed by the brain's categorization of internal states. This framework is referred to as the conceptual act model. In other words, emotions arise from a core affective state that is interpreted and categorized based on past experiences, cultural knowledge, and expectations (Feldman Barrett, 2006).

According to this theory, emotions arise from the interaction of two fundamental components: core affect and categorization. Core affect refers to a person's current mood or emotional state, essentially their bodily condition and level of awareness. In this framework, core affect represents a biologically and neurologically encoded baseline state. By contrast, categorization involves assigning raw emotional sensations to specific categories, naming them, and interpreting them through cultural or social frameworks. This process of meaning-making is shaped by structured experience and learning (Cespedes-Guevara, 2016; Panksepp, 2007; Parkinson, 2023). According to this theory, a customer's experience in a retail setting is influenced by these two core mechanisms. For example, when a customer enters a store with a bright, minimalist design and soft background music, an immediate reaction is triggered—this reaction is a core affect. This reaction may create a positive emotional sensation, but the customer may not immediately interpret or label it. In the next stage, the customer categorizes this emotional state based on prior experiences and expectations. For example, if they have experienced a similar emotional state in a context where they felt special, they may interpret the emotion as "enjoyment." Thus, emotions are not merely

physiological responses, but rather immediate emotional states shaped by an individual's personal history and social context.

3. The Influence of Emotions on the Decision-Making Process and Neuromarketing

Scholars have consistently shown interest in uncovering the neural mechanisms underlying customer decision-making. Numerous studies have yielded significant insights into this process, particularly regarding the role of emotions in shaping consumer behavior. Yarosh et al. (2021) examined consumers' emotional responses to online food orders and their impact on purchasing behavior using neuromarketing methods. The study involved 29 participants and used ET, facial action coding (FACS), and galvanic skin response (GSR) as measurement tools. The findings revealed that, even when products were positioned in attention-grabbing locations, this factor alone did not influence decision-making. Rather, emotions were identified as the primary drivers of decisions, not attention. Participants also tended to prefer familiar products, indicating that emotions rooted in past experiences shape purchasing behavior. Additionally, the study showed that emotions during this process were variable and that decisions were made in a dynamic rather than static emotional state. Furthermore, gender-based differences in emotional responses were noted. GSR findings showed that physiological reactions are directly linked to decision-making processes.

Shah et al. (2022) developed an artificial intelligence model using EEG data to predict consumer preferences. In an experiment with 25 participants, each participant was exposed to four-second stimuli. The resulting data enabled the classification of "like" or "dislike" responses with remarkable accuracy (96.89%). This study demonstrated that consumer decisions can be accurately predicted based on neural activity, regardless of self-reported preferences.

Zeng and Marques (2023) aimed to evaluate the effectiveness of advertisements by measuring consumers' emotions and preferences. Their study, which involved 40 participants, employed GSR, ET, and FACS. The experiment was conducted on Instagram, where two advertisements were shown: a tea promotion and a Valentine's Day–themed advertisement. A significant finding was that emotional engagement increased when participants viewed human faces, activating purchase behavior. Although participants spent more time interacting with the product promotion advertisement, the emotionally themed advertisement was more effective in driving marketing outcomes. Participants' reactions to human faces

were explained as both internal emotional processes and manifestations of emotional contagion facilitated by empathic connections.

Zito et al. (2021) examined the emotional effects of donation appeals on donor behavior in the field of neuromarketing. Their study, which involved 70 participants, employed EEG, skin conductance (SC), and ET methods. The experiment compared two types of appeals: "Living After Death" (A) and "Gratitude" (B), examining responses based on parental status. Non-parents exhibited stronger cognitive and emotional responses to appeal A, and overall, the "living after death" appeal produced higher levels of brain activation and led to a 35% increase in donations compared to the gratitude-themed message.

Chaerani and Sari (2024) evaluated the influence of skincare product packaging on consumer behavior, focusing on attention, emotion, and tactile perception during the purchasing process. Conducted with 43 participants using ET and EEG, the study analyzed packaging elements such as shape, texture, layout, and eco-labels. While these features did not directly determine purchasing behavior, the study found that emotions played a mediating role. Shiny textures elicited greater emotional arousal, whereas other attributes primarily enhanced attention without significantly drastically emotional responses.

Garczarek, et al. (2021) conducted a study using EEG, GSR/EDA, and ET methods to predict preferences for familiar brands. In this research, 37 participants were shown advertisements for various brands and were then asked about their product preferences. Products that elicited high EDA responses were selected most frequently, while the impact of the other measurement methods was less substantial. Physiological responses captured through EDA were found to correlate with and influence decision-making behavior.

Pratama et al. (2024) examined the emotional and cognitive components of purchase decisions in response to advertising stimuli. In an experiment involving 15 participants, each participant watched two advertising videos and then indicated whether they would purchase the product. EEG was used to measure emotional intensity via mean absolute value and cognitive load via Shannon entropy. These indicators provided insight into how purchase decisions are formed. Higher values in both measures were associated with purchasing behavior, while lower values were linked to a decreased likelihood of purchase. The findings suggest that purchase decisions are driven by intense emotional arousal and high cognitive engagement.

Russo et al. (2022) investigated participants' emotional responses and memory recall after viewing promotional films for regionally certified cheeses. This study involved 40 participants and employed EEG, SC, and photoplethysmography (PPG) methods. Two types of videos were shown: one with a consistently positive tone and another that shifted from negative to positive. Using neurological indices such as the approach-withdrawal index (AWI), memorization index (MI), heart rate (HR), and emotional index (EI), the researchers gained valuable insights. They found that the video evolving from negative to positive enhanced both emotional intensity and memory recall among participants. These results suggest that purchase behavior is sensitive to emotional content, as well as to the sequencing and variation of emotions throughout the experience.

Levrini and Santos (2021) examined the impact of skincare product packaging on consumers' perceptions of price, quality, and purchasing behavior. They investigated the relationships among these variables. Their study involved 80 participants and utilized electromyography (EMG) and ET techniques. After undergoing a combination of blind tests and neurophysiological assessments, the participants were surveyed about their purchase intentions. The findings showed that purchase intention dropped significantly when price information was revealed, and facial analysis revealed increased negative emotional arousal. However, when participants received information about product performance, purchase intention increased substantially. These results demonstrate that consumers base their decisions on more than just price; rather, they integrate emotional reactions with cognitive evaluations in a holistic manner.

Kim et al. (2022) conducted a study examining how consumers' purchase behavior changes when they are confronted with price and rating information. Using fMRI, the researchers measured brain activity at a deeper level. The results revealed activations in areas associated with emotional evaluation and salience processing, specifically the insula and the dorsal anterior cingulate cortex (dACC). Presenting price information led to increased insula activity and a corresponding decrease in purchase intention. In contrast, presenting customer ratings led to increased activation in both the insula and the medial prefrontal cortex (mPFC), along with increased purchase intention. These findings suggest that heightened insula activation is linked to negative emotions, such as risk perception. Conversely, customer ratings can evoke positive emotions related to trust and social belonging, thereby enhancing purchase intention. Within this framework, purchase intention is interpreted as a behavioral outcome of approach or avoidance

tendencies, which are regulated by emotional evaluation systems, such as the insula and dACC, in the consumer brain.

Zubair et al. (2020) investigated environmentally friendly consumer behavior using EEG's event-related potential (ERP) techniques. The study examined how message framing (positive vs. negative) and self-conscious emotions, such as pride and guilt, influence purchasing decisions. During the experiment, participants were exposed to variations of these messages and made purchase decisions accordingly. The results showed that positively framed messages elicited higher purchase intent. While emotions such as pride and guilt did not significantly impact behavior on their own, the framing of the message played a decisive role. In other words, pride alone was insufficient; its effect depended on whether it was framed positively or negatively. Ultimately, the emotional framing of eco-friendly products influences consumer decisions.

Wei et al. (2024) examined consumer purchasing behavior toward green products using positive and negative message framing. The study, which used ERP technique, was conducted with 25 participants. Both hedonic and utilitarian products were presented, and purchase intentions were evaluated following positively or negatively framed statements. The P2 component was analyzed as an indicator of attention, and the LPP component was analyzed as an indicator of emotional arousal. Hedonic products were associated with higher LPP amplitudes, while utilitarian advertisements elicited stronger early-stage cognitive responses, as reflected by increased P2 activity. Purchase intention was higher for hedonic advertisments that generated strong LPP responses. These results demonstrate that emotionally charged advertisements stimulate and enhance purchase behavior, reaffirming the central role of emotions in the consumer decision-making process.

Duan et al. (2021) examined how advertisements for foreign brands featuring either original cultural cues or elements of Chinese culture influence purchasing behavior by gender. Using the functional near-infrared spectroscopy (fNIRS) technique with 40 participants in China, the study exposed participants to multinational brand advertisments and assessed their purchase decisions. The study focused on the dorsolateral prefrontal cortex (dlPFC), which is involved in logical evaluations, and the mPFC, which is involved in emotional responses. Women exhibited stronger purchase intentions in response to ads featuring original cultural cues than to those featuring mixed cultural cues. However, no significant differences were observed among men. The lack of mPFC activation in response to original culture ads among women was attributed to cognitive alignment of

brand identity with existing cultural expectations. In this context, emotions play a guiding role in the purchasing process, and the nature of emotional stimulation shapes the content and intensity of the final decision.

Piper et al. (2024) examined how images indicating high fat content in foods affect consumers. The study examined consumers' emotional responses and how they shaped purchase behavior. The study was conducted with 45 participants, and EEG was used to monitor their neural reactions. In the experiment, the fat content of the same product was presented in two formats: as an image and as text, yielding significant findings. Participants exhibited greater attention and a stronger negative emotional response when exposed to pictorial stimuli. Female participants responded with stronger emotional reactions, suggesting gender-based differences in emotional sensitivity. However, the study found that negative emotional states only had a limited influence on purchasing decisions and did not lead to statistically significant changes. These results imply that, for emotions to effectively influence purchasing behavior, contextual or environmental triggers must accompany emotional responses. Ultimately, while emotions can substantially impact the purchasing process, this influence is context-dependent and most effective when emotional experiences are intense enough.

Bello (2014) examined the impact of emotional framing on purchasing decisions for products offered at varying price levels. The study involved 34 participants and used EEG. During the experiment, participants were first shown a positive, negative, or neutral image from the International Affective Picture System (IAPS) within the first 200 milliseconds. Then, they were shown products from either private or national brands at different price points and asked to make purchasing decisions. The results indicated that exposure to negative framing significantly reduced purchasing behavior for both brand types. Conversely, positive framing did not significantly increase purchasing behavior; however, it enhanced late positive complex potentials, a brain response associated with the intention to purchase. Overall, the findings suggest that negative emotions tend to suppress purchasing behavior while positive emotions may facilitate it. These outcomes highlight that emotions can act as either filters or triggers in the decision-making process.

Andrii et al. (2019) analyzed customer emotional fatigue levels in various retail settings, such as supermarkets, discount supermarkets, counter stores, and marketplaces, using the GSR method. The study aimed to measure the effect of external factors, such as store atmosphere and environmental conditions, on store choice and purchase intention. The

research was conducted with 112 participants, most of whom were women, and measured physiological responses in both real and simulated settings to assess emotional arousal and fatigue. Behavioral data were also collected to support the physiological findings. The results revealed that store type significantly influenced emotional fatigue levels. As emotional fatigue increased, participants' intentions to visit and purchase from those stores decreased. Supermarkets and marketplaces were notably associated with higher emotional fatigue, while discount supermarkets induced lower levels of fatigue. Cleanliness and organizational clarity in the store atmosphere were found to diminish emotional intensity. In conclusion, negative emotional states, such as emotional fatigue, were shown to directly reduce purchase intention.

Xu and Liu (2024) examined the cognitive and emotional processes that influence consumers' decisions during online shopping. The study used EEG in combination with machine learning algorithms to predict whether participants would purchase a product. In a real shopping scenario with 66 participants and five products, 328 decision moments were analyzed using power spectral density (PSD) and the prefrontal asymmetry index (PAI). The support vector machine model was the most successful, with an accuracy rate of 87.1%, and using these parameters enhanced predictive power. A high positive PAI value, indicating emotional approach motivation, was associated with purchasing behavior. Distinct asymmetrical activity in the prefrontal region was notably observed prior to purchase decisions, and a strong correlation was found between PAI and actual purchase behavior. These findings demonstrate that purchase intentions can be neurologically predicted by emotions.

Ma et al. (2019) investigated the impacts of emotional arousal states on price perception and purchasing behavior. Using EEG to focus specifically on P300, P2, and LPP potentials, their study examined how continuous experiences of winning and losing influence pricing and the purchase process. Depending on whether they were in a continuous win or loss condition, participants were shown both high- and low-priced versions of a non-branded external hard drive and were then asked to make a purchase decision. In the continuous win condition, which is associated with positive emotions, 55.1% of participants added high-priced products to their carts. In the continuous loss condition, which is associated with negative emotions, only 20.3% of participants added high-priced products to their carts. For low-priced products, the rate was 77.1% in the positive emotion condition and 48.6% in the negative emotion condition. The study also observed a correlation with high P2 and LPP amplitudes. These results indicate that

the emotional state produced by the continuous win effect significantly influences purchasing behavior.

4. Conclusion

In recent years, a growing body of theoretical and experimental research has emphasized the complex, multilayered nature of consumer decision-making. Traditional theories have framed this process through the lens of cognitive brain functions, emphasizing rationality as the primary driver. However, more recent experimental approaches have demonstrated that this perspective alone is insufficient. Emotions have emerged as critical components of decision-making, shaping complex cognitive functions rather than being mere byproducts of brain activity. Neuromarketing methods have contributed to a clearer understanding of these mechanisms. Neuromarketing findings validate existing theoretical models and expand their explanatory scope. Biometric tools, such as EEG and GSR, have revealed that somatic markers, formed through prior experiences, are not transient sensations but rather physiological activations integral to the decision-making process. For instance, changes in frontal asymmetry observed prior to a purchase decision suggest the influence of emotions on consumer choices (Ma et al., 2019; Xu & Liu, 2024). The affect-as-information theory demonstrates that transient emotional states function as informational inputs in purchase decisions. Experimental studies have revealed that consumers use their emotional reactions to products or services as cues for making decisions. Emotional engagement, particularly that triggered by facial expressions or socially oriented messages, has been found to guide the decision-making process (Pratama et al., 2024; Zeng & Marques, 2023). Thus, emotions serve as active information sources, not merely mood states. The emotional contagion theory posits that gestures, facial expressions, and emotional states can spread among people, thereby shaping their behavior as consumers. Research employing eye tracking and facial coding techniques has supported this hypothesis. Emotional contagion has notably been observed in scenarios involving empathic storytelling, altering consumers' neurophysiological responses (Zito et al., 2021). These findings demonstrate that the emotional tone of a stimulus can transfer to others, thereby influencing their purchasing decisions. Appraisal theory, on the other hand, contends that emotions result from internal evaluations rather than objective stimuli. Studies using EEG and fMRI have detected activity in regions such as the insula and dACC when consumers are exposed to marketing messages (Kim et al., 2022). These responses suggest that decision-making is shaped more by the subjective meaning consumers

assign to stimuli than by the stimuli's external content. Constructionist theory argues that emotions are constructed experiences influenced by context and culture, not biologically hardwired. This perspective explains why a single marketing stimulus may evoke different emotional responses in different consumers. Therefore, emotions are not universal or fixed, but rather context-dependent and individually constructed phenomena (Duan et al., 2021). This challenges the notion of a uniform emotional response across all consumers. In conclusion, the evidence underscores that purchasing behavior is too complex to be explained by any single theory. Neuromarketing research provides compelling evidence of the central role of emotions in decision-making and helps to reinforce and refine existing theoretical frameworks.

Beyond theoretical explanations, neuromarketing research provides crucial insights into the relationship between emotion and purchase behavior by offering a variety of unique findings. Unlike traditional methods, neuromarketing techniques can measure the subconscious processes that influence consumers' decisions. This allows researchers to observe neurophysiological changes that occur just before a decision is made. Numerous studies have demonstrated that positive emotional arousal associated with these neural changes increases the probability of purchasing, whereas negative emotions tend to suppress or delay such behavior (Bello, 2014; Piper et al., 2024). Once again, the role of emotions in guiding and determining decision-making has been confirmed. Furthermore, neuromarketing research has shown that the intensity of emotion can also significantly influence purchase decisions. In some cases, negative emotions alone may not alter behavior; however, when combined with environmental triggers, their impact becomes more pronounced (Piper et al., 2024; Zubair et al., 2020). Additionally, greater emotional arousal has been observed to generate a stronger impulse to purchase (Russo et al., 2022). Neuromarketing also highlights the importance of the cognitive dimension in the emotion–purchase relationship. Therefore, it has been argued that emotional and cognitive components must be evaluated together. Even in instances of seemingly rational decision-making, brain regions associated with emotional processing, such as the insula and dACC, are activated. This suggests that both elements play a role under specific conditions (Kim et al., 2022). Taking a holistic approach to the purchasing mechanism that incorporates both cognitive and emotional dimensions provides a more comprehensive understanding of its dynamic and complex structure.

Future research on the role of emotions in purchase behavior should adopt a multimodal approach to enable a deeper investigation. In addition

to traditional methods, such as surveys, integrating multiple neuromarketing techniques is expected to provide valuable insight into subconscious processes. Specifically, future studies should identify and differentiate the precise moments when emotional responses are triggered and assess their intensity and duration, as well as the specific contextual conditions under which they occur. This approach would enable the development of more personalized, context-sensitive, and predictive models of consumer behavior. Furthermore, longitudinal experimental designs should be implemented to examine temporal variations in emotional responses over time, not just immediate reactions. This would improve our ability to draw definitive conclusions about the long-term impact of emotions. Finally, neuromarketing studies should consider testing multiple theoretical frameworks simultaneously. This would enable researchers to determine which theoretical perspective offers the most explanatory power under specific conditions.

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