Cognitive Systems in Branding: Linking Neuromarketing, Emotions, and Subliminal Persuasion to Customer Choices through the IMPACT Method

Denisa Adriana Drăgoi
YourBrainiac Ltd, Edinburgh, United Kingdom
cotirlea.denisa@yahoo.com

Abstract

This paper explores the cognitive processes underlying branding and consumer behavior, emphasizing Kahneman's System 1 and System 2 framework and its extensions. Key theories, including Zhao's three-system model and Rottenstreich et al.'s focus on memory-based versus stimulus-based choices, highlight how emotional and intuitive (System 1) and rational (System 2) processes influence customer decisions and purchases. Neuromarketing strategies leverage emotions, subliminal cues, and persuasion to create intuitive brand associations, while rational deliberation reinforces logical justifications for consumer choices. Insights from dynamic dual-process models and regret theory further illuminate how urgency, emotions, and decision context shape behavior. By integrating feeling and thinking in branding strategies, this study bridges the gap between emotional engagement and rational decision-making, offering actionable frameworks for neurobranding, mainly through the IMPACT method, developed by the author – built with the aim of fostering customer loyalty and purchase decisions.

Key words: neuromarketing, branding, emotions, persuasion, subliminal
J.E.L. classification: D83, D87, D90, M30, M31, M39

1. Introduction

Neurobranding is a multidisciplinary approach that combines knowledge from marketing, psychology, and neuroscience. It focuses on how the brain creates brand attachments by interpreting memories, emotions, and subconscious clues. This interdisciplinary approach integrates psychology, neuroscience, and marketing to decode the unconscious processes driving brand loyalty, preference formation, and decision-making.

Brands constantly use a mix of emotional appeals and logical arguments to try to change consumer behavior. However, little is known about how the two cognitive systems—System 1, which controls emotional and intuitive decisions, and System 2, which handles logical thought—interact in the branding context. Initial brand perceptions are frequently dominated by emotional and intuitive processes, whereas complex purchase decisions and long-term loyalty are influenced by deliberative reasoning. Furthermore, there are ethical questions regarding transparency and consumer autonomy raised by the use of sensory triggers and subliminal persuasion. Recognizing how companies can integrate affective and cognitive systems and engage the five senses holistically, this article describes a method that the author created while developing their activity as a branding strategist. With an emphasis on incorporating emotional triggers to elicit particular actions, the approach makes use of the interaction between Kahneman's System 1 and System 2 of thinking, applied throughout the customer journey.

Since emotional appeals not only grab attention but also have a deeper impact on consumer behavior than purely rational ones, they are crucial to contemporary branding. Studies highlight their significance by demonstrating that emotional reactions to commercials are a better indicator of their efficacy than content-driven considerations.

Branding experts can use the method described in this paper to map cognitive processes to the awareness, consideration, purchase, post-purchase, and advocacy phases of the customer journey in an organized manner (Lemon and Verhoef, 2016). In order to improve customer engagement and foster enduring brand loyalty, it provides practical advice on how to incorporate emotional triggers and strike a balance between intuitive and logical appeals. This approach bridges the gap between cognitive science and practical branding strategies by fusing theoretical concepts with real-world applications, making it a crucial tool for marketers.

The IMPACT Method is a core component of the NeuroMap Branding System, a larger framework developed by the author. The NeuroMap Branding System gives branding experts structured tools, flexible strategies, and useful techniques for achieving successful positioning and differentiation for their clients. The IMPACT Method creates a dual-layered neurobranding strategy by addressing both System 1 and System 2 thinking, guaranteeing that consumers' emotional tendencies are backed by logical trust in the brand.

2. Theoretical background

From Decartes' mind-body dualism in the 17th century to Posner and Synder's formal representation of the (first) dual process model of the mind in 1975, philosophers, psychologists, and scientists have long distinguished between intuitive and conscious thinking. However, the distinction between automatic and deliberate thought processes did not gain widespread recognition until Daniel Kahneman used the terms System 1 and System 2 in his 2011 best-selling book "Thinking Fast and Slow" (Stanovich and West, 2000; O'Brien, 2012). He emphasizes essential elements of human perception and experience processing. According to Kahneman's approach, the mind functions as two separate systems:

1) System 1 - the brain's quick, instinctive, and intuitive method. The natural mental processes that we are born with, such as the ability to perceive our surroundings, identify items, focus our attention, prevent losses, and be afraid of spiders, are all included in System 1 activity. Long-term practice makes other mental processes quick and automatic (Walsh, 2014).
2) System 2 - the slower, analytical mode of the mind, where reason dominates. System 2 activity is typically triggered when we do an action that is not instinctive and necessitates a conscious mental effort.

The following puzzle is frequently used as an example to illustrate the two systems: *the total cost of a bat and ball is $1.10. The bat is one dollar more expensive than the ball. How much does each cost?* When presented with this puzzle, most people guess 10 cents right away. However, the right response is 5 cents, which most individuals can figure out after giving the question more thought. This has long been cited as the ideal illustration of how our thought processes are governed by two different brain processes: quick and intuitive and slow and analytical.

The theory's goal was to offer a useful parallel that may direct our comprehension of how our minds process information, and it succeeds admirably in doing so. Using a System 1 and 2 lens to analyze behaviors has been very helpful in expanding our knowledge of human behavior and decision-making as well as in determining how we can affect or direct actions in various directions.

Zhao (2021) brings into focus a three-system theory, based on the fact that information from the outside world simultaneously enters your conscious and unconscious levels of processing when you are in a state of focus. Here is where System 3 enters the picture: external stimuli are filtered through System 3, which then forwards conscious information to System 2 and unconscious information to System 1.

This is comparable to a closed loop in which System 1's unconscious information is converted into System 2's conscious information via System 3 and System 2, and System 2's conscious knowledge can be converted back into System 1 via System 3.

Rottenstreich, Sood, and Brenner's work highlights the tension between emotionally charged (System 1) and deliberative (System 2) processes. For example:

- Emotionally rich choices (System 1): stimulus-based branding strategies create immediate allure.
- Rationally attractive options (System 2): memory-based choices rely on long-term consumer evaluations, such as selecting a brand known for reliability and cost-effectiveness.

Table no. 1 Short comparison between the most rlevant cognitive processing models that represent the foundation of the IMPACT Method

Model	Core idea	Relevance to branding	Key differentiator	Brand application
Daniel Kahneman's ***Dual-system model***	Kahneman's foundational framework distinguishes fast, intuitive, emotional System 1 from slow, deliberate, rational System 2 thinking.	His work underpins the broader field of neuromarketing and branding strategies, showing that most consumer decisions are driven by System 1, with System 2 providing rational justifications.	Kahneman's model focuses on the inherent biases and heuristics in each system without emphasizing habitual or repeated behavior explicitly (as Zhao does).	Focuses only on Systems 1 and 2.
Rottenstreich, Sood, and Brenner's ***Dual-system insights***	emphasize how emotional (System 1) and rational (System 2) processing interact in decision-making, specifically contrasting memory-based choices (System 1 dominant) and stimulus-based choices (System 2 dominant).	Their work highlights the context-dependent dominance of Systems 1 or 2 in branding, stressing that emotional and logical branding strategies should align with whether decisions are habitual, memory-based, or stimulus-driven.	They argue for a dynamic interplay between Systems 1 and 2. Their model stays within dual-system framework but emphasizes memory vs. Stimulus choices.	Discusses dynamic dominance of Systems 1 and 2 based on choice type. • Memory-based choices: Relate to deep-seated emotional associations. • Stimulus-based choices: require immediate evaluation, such as choosing a product from a new brand based on available information or appeal.
Zhao's ***Three-system cognitive processing model***	Extends Kahneman's two-system model by introducing a third system—habitual processing. This system operates below System 1 and governs automatic behaviors formed through repeated actions.	Habitual processing explains long-term brand loyalty and repetitive purchases, emphasizing the importance of consistent branding to establish consumer habits.	Places significant weight on habitual behaviors as an autonomous cognitive layer, rather than framing it as a byproduct of System 1.	Highlights long-term brand loyalty through habits.

Source: developed by the author based on literature review

Based on these, while implementing strategies as a branding strategist, the author considered that Zhao's third system could be integrated into Rottenstreich et al.'s work to explain the continuum of consumer decisions—from habitual (automatic) to stimulus-driven (rational). From this point of view, a working flow has been developed in order to create branding strategies aimed to:
• Trigger System 1 for initial emotional appeal.
• Strengthen System 2's logical validation to build trust.
• Reinforce habitual engagement through consistent exposure and brand reliability (Zhao).

Together, these perspectives enrich the understanding of how consumers navigate decisions in branding contexts, offering nuanced applications for both theoretical research and practical marketing strategies.

3. Research methodology

By incorporating current cognitive theories and useful insights from the author's professional experience, the methodology of this paper aims to create and define a conceptual framework for NEURObranding creation. Insights from professional practice and scholarly literature are combined in the author's theoretical and experiential approach. In order to develop a conceptual framework specific to NEURObrand creation, the paper incorporates knowledge from existing cognitive models (such as System 1 and System 2) and theories of multisensory branding. It focuses on determining how cognitive models align with practical strategies to influence customer choices.

A multidisciplinary viewpoint is presented by synthesizing pertinent works from marketing, neuroscience, psychology, and artificial intelligence. Scientific publications, books, and national and international databases covering both basic and recent research in neuromarketing, psychology, and consumer behavior are examples of sources. Since no primary data was gathered, the study's analysis is framed by secondary data and accepted theories. The research is grounded in practical application through the inclusion of case studies from the author's consulting practice, which complements the theoretical review.

4. Findings

With a focus on how the principles of cognitive processing apply to consumer behavior and brand engagement, one might take into account that branding often leverages System 1 thinking because consumer choices are frequently intuitive, driven by emotions, and made quickly without deep cognitive deliberation. Neurobranding taps into System 1 by utilizing emotional triggers, sensory experiences, and subconscious associations.

Brands use colors, imagery, and storytelling to evoke immediate feelings or memories that resonate with System 1, as emphasized in Table 2.

Table no. 2 How neurobranding taps into System 1

System 1 – Fast thinking Automatic, fast, and emotionally charged decision-making Most brand-related decisions occur here.	Emotional triggers	Sensory branding	Visuals (colors, logos), sounds (jingles), and smells (product scents) evoke emotions and create subconscious associations with a brand.	Strategies focus on creating an immediate emotional impact and bypassing extensive cognitive deliberation
		Emotional storytelling	Narratives that appeal to values, memories, or aspirations.	
		Brand personality	Infusing brands with human-like traits fosters emotional connections.	
	Subliminal messaging	Implicit branding	Embedding logos, symbols, or themes in ads to influence consumer perception without overt awareness.	
		Priming	Subconsciously associating positive traits with a brand to drive preferences	
	Memory-based branding	Associative memory	Building strong brand associations tied to emotions.	
		Repetition and familiarity	Requent exposure to brand elements (logos, slogans) ensures they are intuitively recognized and preferred, as familiarity breeds trust.	

Source: developed by the author based on literature review and practical experience

By creating stimuli that avoid critical analysis and elicit instantaneous reactions, neurobranding mainly depends on System 1. Building familiarity through verbal or visual repetition fosters trust, and techniques for gently introducing audiences to cues that influence perception may be used here. When it comes to influencing customers' decisions during their initial interactions with a brand, it is crucial to use imagery that supports their emotional goals (such as happiness or belonging) and to keep messaging brief to prevent overloading System 2.

By using messages that are consistent with a consumer's values or logical reasoning, neurobranding will therefore activate System 2 (e.g., emphasizing product quality, sustainability, or value-for-money). Given this, a brand strategist must maximize the aspects of a brand that consumers anticipate remembering it in the future. Considering these, it becomes important to have a notion of the features and advantages that are unrelated to what people are actually trying to accomplish by buying the brand.

Table no. 3 How neurobranding taps into System 2

System 2 – Slow thinking Slow, deliberate, rational and analytical While less dominant, this system validates or justifies decisions.	Informational branding	Feature and benefit highlighting	Detailed descriptions of product features and how they address consumer needs.	Strategies emphasize logical appeals, detailed information, and value propositions to satisfy conscious scrutiny
		Comparison marketing	Positioning products against competitors by emphasizing measurable advantages	
		Transparency	Highlighting ethical practices, sourcing, and certifications appeals to consumers concerned with sustainability and corporate responsibility.	
	Value proposition	Cost-effectiveness	Demonstrating monetary value, such as discounts, long-term savings, or superior quality-for-price comparisons.	
		Functional benefits	For example, promoting a hybrid car's fuel efficiency as a rational choice.	
	Decision support tools	Customer reviews and testimonials	Providing logical evidence through peer experiences.	
		Technical demos	Detailed demonstrations of product functionality, common in industries like technology or appliances.	

Source: developed by the author based on literature review and practical experience

In neurobranding, one should apply Kahneman's work highlights – the biases he identified as *availability heuristic*, *anchoring*, and *loss aversion in order to* influence consumer decisions.

As previously mentioned, Zhao introduces a third layer of habitual processing as an extension of System 1. In branding, this corresponds to loyalty-driven behavior where consumers repeatedly choose brands due to ingrained habits, not active decision-making.

Based on real-world experience, the author developed the IMPACT method and insights. After working directly with small and medium-sized business branding for years, there werenoted trends, obstacles, opportunities and patterns that have been methodically examined and combined into workable plans.

Consisting of 6 steps, the IMPACT method is designed to guide brands through a structured process of building deep, emotional connections with their audience – while grabbing attention and achieving differentiation based on authenticity.

Table no. 4. The IMPACT Method, developed as a framework with specific instruments used for encompassing the neurobranding process

	Step		Phases	Output:
I	Identify core emotional drivers and neurological insights for competitive positioning	1)	Consumer analysis/Audience research – through surveys, interviews, social listening, sentiment analysis tools, A/B testing, psychographic profiling, behavioral tracking, archetypes, generational insights and emotional	A foundational understanding of emotional drivers, providing direction for the brand's identity and purpose that are appealing for emotional personas that guide all brand decisions

	Step	Phases	Output:
		triggers, consumption habits and other preferences analysis 2) Use of Psychological Models and define emotional triggers 3) Brand archetype alignment for emotional and psychological positioning	(ensuring the brand resonates with their emotional needs, fears, values, aspirations and motivations)
M	Mapping the emotional journey	1) Identifying the key emotional states based on awareness level when interacting with the brand 2) Developing an Emotional Blueprint that outlines emotional highs and lows across customer experience 3) Storytelling integration for increased engagement and guidance for transformation	A comprehensive emotional map of the customer jurney that ensures every interaction strengthens the emotional connection to the brand.
P	Personalization in terms of sensory design and brand experience	1) Sensory elements alignment: colours, fonts, sounds, textures, shapes, shadows, spaces – all aligned with the brand's emotional tone. 2) Brand rituals: routines, events, actions and reactions associated with the brand 3) Refining through further research and A/B testing 4) Create a brand community where consumers can connect with the brand and each other. 5) Celebrate – customers, their journeyand their loyalty 6) Monitor – emotional connection, experiences and feedback to identify opportunities for deeper engagement.	A multi-sensory brand experience enhanced by emtional connection that reinforces the brand's emotional identity and fosters a sense of community around shared values
A	Aligning and refining messages with persuasive, neuro-emotional copywriting	1) Persuasion techniques and curiosity-driven hooks 2) Messaged addressed to System 1 Thinking 3) Personalized and tailored messages for different emotional personas, addressing each segment's unique needs and values (Bayle-Tourtoulou et all, 2013) 4) Pulse testing for targeted, impactful copy that resonates emotionally and drives action	Deeply persuasive messages that leverage psychology and emotional triggers in order to generate action through compelling, emotionally resonant messaging that aligns with the brand's emotional and neurological insights.
C	Cultivate connection and trust through ethical principles	1) Brand manifesto crafted so that it fosters a sense of shared commitment with customers 2) Initiatives that align with the audience's values 3) Customer stories illustrating the brand's impact 4) Fostering a sense of belonging 5) Ethical review panel messaging – regularly updating and exposing the strategies and messages that align with the brand's ethical standards	An ethically grounded brand that creates meaningful connections with its audience.
T	Transform feedback and insights into ongoing innovation	1) Gather feedback 2) Real-time pulse checks	Continuously refine and adapt the brand based on consumer insights and

Step	Phases	Output:
	3) Analyze emotional data and/or patterns. Iterative documentation 4) Adapt based on insights 5) Track market trends 6) Review emotional profiles/journey maps every 6 to 9 months 7) Retrospective analysis. Adjustment	ensure it remains relevant and emotionally resonant by evolving based on new trends, and customer and market insights.

Source: developed by the author based on practical experience

By addressing both systems, the IMPACT Method creates a dual-layered neurobranding approach, ensuring that consumers' emotional inclinations are supported by rational confidence in the brand.

System 1 is automatic, emotional, and subconscious. Neurobranding techniques under the IMPACT Method align closely with System 1 by focusing on intuitive triggers that shape immediate perceptions and emotional bonds:

- instruments like colors, shapes, and sounds stimulate System 1 by triggering emotions and associations;
- storytelling components are crafted to engage System 1 through empathy and relatability, creating quick connections without requiring much cognitive effort.

These are intended to elicit strong feelings and connections with the brand, to foster loyalty and a sense of belonging. Thus, IMPACT method assists marketing strategists in developing unique, emotionally engaging brands that stand out in crowded markets and have a profound impact on consumers by coordinating branding initiatives with System 1.

System 2 validates and justifies the initial impressions formed by System 1. It processes more detailed information and logical arguments. The IMPACT Method incorporates this through tools and instruments that add credibility and clarity.

- data-driven claims or features are used to provide rational backing (that are supported logically by quantifiable attributes and advantages, like performance metrics or product certifications) to the emotions triggered by System 1;
- structured communication ensures System 2 isn't overwhelmed, supporting an analytical evaluation of the brand.

Additionally, the IMPACT method brings to attention the latent benefits and characteristics that go beyond the consumer's immediate objectives:

1) The emotional resonance (beyond utility) – the emphasis lies on creating copywriting messages and a brand manifesto that evoke emotions that are not directly tied to the products functionality – thus building a unique brand personality that is aligned with Aaker's (1997) dimensions of brand personality.
2) Social and cultural associations that usually contribute to social signaling through symbolism and affiliation – described by Solomon (2020) as a "psychological phenomenon where consumers use brands to project their identity"
3) Psychological comfort that relies on feelings of security and familiarity and tap on nostalgic connection and association with culture, tradition and childhood experiences – this also aligns with Kahneman's System 1, who mentions that "familiarity breeds trust and preference, often outside conscious awareness".
4) Unexpected value that generates brand loyalty – creating value that customers are not explicitly seeking (by generating emotional satisfaction through customer service or by building a ense of belonging, involvement and participation in greater causes). This element was also addressed by Plassmann et al (2012) when presenting their findings on emotional engagement as a key driver of loyalty.

By using these strategies, the IMPACT Method builds long-lasting credibility and trust, laying the groundwork for regular customer interaction. The author has effectively assisted clients throughout the United Kingdom in accomplishing the following goals by utilizing the IMPACT Method, which is a component of the NeuroMap Branding System:

- Brand differentiation - through a process of assisting companies in creating distinctive, emotionally appealing identities in order to differentiate themselves in crowded markets.
- Trustworthy connections – by establishing long-lasting bonds between companies and their clients by encouraging both emotional and intellectual assurance.
- Multisensory engagement – by creating/developing/using customized, multisensory experiences to encourage regular audience participation.
- Long-term impact: fostering long-lasting behavioral shifts and adding value for the audience and brand.

With its integration of flexible strategies, useful frameworks, and workable plans, the NeuroMap Branding System offers branding experts a full toolkit. The system aims to accomplish 1) brand positioning that works, 2) ethical strategies for differentiation - suited to particular markets and 3) alignment of reason and emotion using the IMPACT Method in order to create NEURObrands.

5. Conclusions

Brand positioning, differentiation, and enduring loyalty can all be greatly enhanced by incorporating dual-system theory and emotional triggers into the customer journey framework. In order to guarantee that branding strategies are absorbed on both the subconscious and conscious levels, this approach addresses both System 1 (intuitive, emotional thinking) and System 2 (rational, analytical thinking).

Using the IMPACT approach, the author helped clients throughout the UK to:

- create distinctive, emotionally compelling brands and differentiate themselves in crowded markets.
- create enduring, trustworthy connections with customers.
- promote consistent participation with tailored, multisensory experiences
- encourage long-term change and impact for the audience and the brand.

The main advantages of this approach include, but are not limited to:

1) Increased interaction with customers - brands can quickly grab consumers' attention by using emotional triggers like visuals, narrative, and sensory components to activate System 1. Deeper connections are cultivated through emotional engagement, which raises customer interest and involvement.

2) More effective brand positioning and differentiation - in competitive markets, differentiation is accomplished by satisfying both the rational and emotional needs of customers. While logical validation enhances credibility, emotional triggers help the brand connect with consumer values and become memorable.

3) Better decision-making – the IMPACT method streamlines the decision-making process for customers by using System 1 to influence preferences and System 2 to support selections. By smoothly navigating them through the customer journey, guaranteeing satisfaction, and lowering post-purchase regret, it lessens decision fatigue and increases customer loyalty.

4) Increased rates of conversion - by addressing both rational hesitancies and emotional motivations, the interaction of System 1 and System 2 improves conversion rates. Transparent information reassures customers and lowers abandonment rates, while emotional triggers like urgency and exclusivity promote quick decisions.

5) A rise in client loyalty - engaging both cognitive systems after a purchase promotes enduring loyalty. System 1 is attracted to individualized and sympathetic communication, while System 2 is satisfied by useful post-purchase assistance. This dual emphasis strengthens brand loyalty and trust.

6) Encourages brand promotion - customers are more likely to become brand advocates when their emotional and practical needs are regularly satisfied. While logical incentives such as referral rewards encourage actionable recommendations, emotional triggers encourage pride in being associated with the brand.

7) Flexibility - many industries can benefit from the dual-system approach's adaptability. Any industry can use both logical and emotional appeals to target particular consumer behaviors, demographics, and values.

8)   Impact on brand value (that can be measured) - both long-term brand equity and short-term performance metrics benefit from this strategy. Rational appeals improve customer trust and retention, increasing overall brand value, while emotional engagement produces a memorable and relatable identity.

Through the IMPACT method, the result of neurobranding process produces emotionally compelling experiences that have a profound impact on customers by comprehending cognitive functions including perception, attention, and decision-making.

Essential elements lie in identifying and emphasizing:

1)   Emotional triggers – because emotions dominate people's purchase decisions, with reason frequently taking a backseat. In order to establish deep connections, neurobranding makes use of emotional connotations;

2)   Subliminal messaging – because unconscious associations can be formed via subliminal cues, such as the use of delicate word choices in taglines or the incorporation of shapes and textures in designs;

3)   Senses' engagement: brand memorability is increased by incorporating sensory cues that activate the brain's reward system.

4)   Narrative and storytelling: according to neuroscience, stories stimulate several parts of the brain, including the empathy-related ones. Creating an engaging brand narrative "binds" customers to the brand on an emotional level.

The way that companies develop their strategies to appeal to quick, emotive, and intuitive thinking (System 1) while offering logical justification (System 2) to maintain and justify customer loyalty is where neurobranding and Kahneman's System 1 and System 2 connect.

Throughout the customer journey, incorporating dual-system theory with emotional triggers improves consumer engagement, fortifies brand differentiation, and fosters loyalty. Brands produce a thorough and significant customer experience by addressing System 1's intuitive procedures in addition to System 2's analytical validation.

This strategy works especially well for creating enduring emotional and intellectual ties with customers while giving brands a distinctive position in cutthroat marketplaces. Future studies should examine how this methodology can be applied to new platforms, like AI-powered personalization, which could increase its efficacy by adjusting both rational and emotional appeals to specific customers.

6. References

- Aaker, J. L., 1997. Dimensions of brand personality. *Journal of Marketing Research,* 34(3), pp. 347–356. https://doi.org/10.2307/3151897
- Bayle-Tourtoulou, A., Badoc, M., & Georges, P. M., 2013. *Neuromarketing in Action: how to talk and sell to the brain*. London, UK: Kogan Page, (p. 130).
- Lemon, K. N., & Verhoef, P. C., 2016. Understanding customer experience throughout the customer journey. *Journal of Marketing,* 80(6), pp. 69–96. https://doi.org/10.1509/jm.15.0420
- O'Brien, D. T., 2012. Thinking fast and slow by Daniel Kahneman. *Journal of Social Evolutionary and Cultural Psychology,* 6(2), pp. 253–256. https://doi.org/10.1037/h0099210
- Plassmann, H., Ramsøy, T. Z., & Milosavljevic, M., 2012. Branding the brain: A critical review and outlook. *Journal of Consumer Psychology,* 22(1), pp. 18–36. https://doi.org/10.1016/j.jcps.2011.11.010
- Rottenstreich, Y., Sood, S., & Brenner, L., 2007. Feeling and thinking in memory-based versus stimulus-based choices. *Journal of Consumer Research*, 33, pp. 461-469. https://doi.org/10.1086/510219
- Solomon, M. R., 2020. *Consumer Behavior: Buying, Having, and Being* (13th ed.). Pearson Education.
- Stanovich, K.E. & West, R.F., 2000. Individual Differences in Reasoning: Implications for the Rationality Debate. *Behavioural and Brain Sciences*, 23, pp. 645-665
- Walsh, C., 2014. Layers of choice, *The Harvard Gazette*. [online] Avaiable at: https://news.harvard.edu/gazette/story/2014/02/layers-of-choice/
- Zhao, M., 2021. Based on Kahneman's two-system theory: presentation and application of the three-system theory. *Academic Journal of Humanities & Social Sciences,* Vol. 4, Issue 9: 112-114. https://doi.org/10.25236/AJHSS.2021.040917