ESJ Social Sciences Peer-reviewed

The Influence of Conversational AI on Consumer Behavior and Counterfactual Thinking: A Systematic Review

Bouhlal Hind, 3rd year PhD
Belahcen Noureddine, Professor
University of Abdelmalek Essaâdi,
National School of Commerce and Management, Morocco

Doi:10.19044/esj.2025.v21n4p69

Submitted: 01 September 2024
Accepted: 15 December 2024
Published: 28 February 2025

Cite As:
Bouhlal H. & Belahcen N. (2025). *The Influence of Conversational AI on Consumer Behavior and Counterfactual Thinking: A Systematic Review*. European Scientific Journal, ESJ, 21 (4), 69. https://doi.org/10.19044/esj.2025.v21n4p69

Abstract

This document evaluates the development and importance of conversational AI, chatbots, and virtual assistants in shaping human behavior and decision-making,particularly in the context of e-commerce. It is designed to investigate the impact of AI on the personalization of user experiences, and maps how the automation of decision-making affects cognitive processes like counterfactual thinking and regret. The findings sugest that while conversational AI enhances the shopping experience through personalized product recommendations, it can also trigger cognitive biases such as regret by exposing consumers to alternative options, leading them to reconsider their initial choices. This raises concerns about AI risk mitigation, particularly regarding transparency, psychographic profiling,and the emotional influence of AI-driven decision-making. Importantly,the study highlights that consumers do not inherently dislike AI; rather,they seek a more ethical and culturally aware approach to its implementation. A responsible AI design could not only improve user experience but also strengthen consumer trust in AI-driven products and services.To fully understand tese dynamics, longitudinal studies are needed to assess the long-term effects of conversational AI on consumer satisfaction, loyalty,and decision-making. Additionally,cross-cultural comparisons will provide deeper insights into how consumer perceptions and interactions with AI vary across different markets.

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

Keywords: Conversational AI, consumer behavior, personalization, counterfactual thinking,e-commerce

Introduction

AI chat systems or conversational AI, such as bots, AI assistants, or AI agents, are currently a critical innovation of all industries. The technology operates by natural language processing to interact with consumers, reply to their questions, and induce sales activities through high value-added recommendation and sales mechanisms.

The integration of conversational AI into digital platforms has revolutionized brand-consumer interactions, and thereby streamlining decision-making and enhancing brand interactions (Iskef, 2022). This convenience raises the question of its impact on the psychoanalysis of consumers and decision-making which is an important issue, specifically on its capability to refashion the cognitive processes as counterfactual thinking (Arora et al., 2013; Celuch et al., 2015).

The objective of this systematic review is to establish a connection between these different domains by summarizing the literature currently available relating to the application of conversational AI in consumer behavior and counterfactual thinking. The research is to bring out primary dimensions by which the study will analyze the balance between efficient, authentic, and ethical e-commerce.

Theoretical Framework

This cognitive process is especially relevant in e-commerce, where the consumer's are often required to compare several choices before making a purchase. In this decision-making process,Goal-Modeling Heuristics (GMH)-a cognitive framework that involves presenting goal-oriented recommendations-play an essential role in improving the shopping experience by guiding consumers toward what they perceive as the most optimal choice (Hu et al., 2023; Sharma & Shafiq, 2022). GMH allows e-commerce platforms and conversational AI systems to offer tailored suggestions based on individual preferences and goals,thus streamlining the decision-making process.

Consumers may experience frustration or regret when they reconsider their choices and feel they have made the wrong decision.This phenomenon is linked to counterfactual thinking,where individuals mentally simulate alternative outcomes and imagine what could have happened had they choses differently. Conversational AI can play a dual role in this process: while it can reduce regret by offering personalized recommendations,it may also amplify decision uncertainty. For instance,when a chatbot suggests multiple alternatives just before a final purchase,the consumer might begin to doubt

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

their initial choice,leading to increased hesitation orpost-purchase remorse (Fung, 2019; Mustafa Ayobami Raji et al., 2024).

Therefore, by providing a greater number of alternatives, AI systems could reinforce counterfactual thinking, and thus also the decision paradox, which triggers in the consumer an uncertainty on whether the subjacent alternatives could have been a better option, adding cognitive effort and reducing satisfaction with what was chosen.

By the same token, the acceptance of AI to analyze and summarize large amounts of consumer data has emerged as a new aspect of personalization. Awareness of consumer interests and behavior through this medium opens doors to specific suggestions that the AI makes. This, while personalizing the content for the user also helps in simplifying the task by lowering the individual's working load, may also lead to decision fatigue due to excessive choices because of over-personalization. Furthermore, the structural dilemma is never taken into account even though AI-generated conversations are yet not authentic to the human way of interaction, hence, trust and friendliness can hardly be replicated by such systems (Ma & Sun, 2020; Mustafa Ayobami Raji et al., 2024).

AI systems becoming emotional beings are a completely new experience that could change e-commerce as we know it because of their capability to understand and respond to the emotions of the consumers in real-time. These systems can enhance consumer decision-making, reduce post-purchase regret and building satisfaction on a positive emotional plane. However, such a transformation also poses a significant risk of utilizing the prevailing vulnerabilities in consumer lives, notably through uber-personalization and emotional triggers (Rajkumar & Agarwal, 2014).

To wrap up, conversational AI has emerged as a powerful tool for shaping customer perception through real-time, interactive engagement. However, for it to be effectively integrated into e-commerce, a deeper understanding of psychological, cultural, and ethical factors influencing consumer choices is essential (Hu et al., 2023).

While Conversational AI leverages data-driven insights to personalize interactions,it often overlooks the cultural contexts and cognitive biases that shape decision-making.One critical aspect of this is counterfactual thinking, where individuals mentally simulate alternative outcomes. In e-commerce, AI-driven recommendations expose consumers to alternative options,prompting them to reassess their initial choices. This process creates a decision paradox –while AI enhances personalization,it can also induce doubt and cognitive effort, impacting both satisfaction and trust in the decision-making experience. (Jain et al., 2024; Xu et al., 2024).

The interaction between AI-driven recommendations and counterfactual thinking can create a complex feedback loop, where

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

consumers, influenced by AI suggestions, begin to compare their decisions with alternative outcomes. This process opens up new avenues for research into the long-term effects of these technologies on consumer behaviors such as customer satisfaction, brand loyalty, and market trust. Given the rapid evolution of AI technologies in e-commerce, it is essential to explore how these systems not only influence short-term purchasing behavior but also their impact on the consumer journey and trust-building over time. This theoretical framework calls for future research that can examine the ethical implications of AI in decision-making and the need to design responsible AI systems that consider consumer welfare and decision integrity.

Research Objectives and Methodology

The literature was then thoroughly analyzed to find 23 credible articles that were published between 2014 and 2024. These documents were obtained from the Web of Science database, using searches such as "conversational AI," "counterfactual thinking," "consumer behavior," and "online decision-making" (table1). Inclusion criteria were strictly defined to focus on studies examining the role of conversational AI in e-commerce contexts, with particular attention to its psychological and behavioral implications. Exclusion criteria eliminated articles unrelated to AI or those addressing offline consumer behavior without an explicit connection to counterfactual thinking.

Search Method

A structured method was used to carry out this systematic literature review in order to find relevant studies that examine conversational AI and its impact on consumer behavior, counterfactual thinking, and purchase decisions. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines were used to make sure the review proceeded in a rigorous manner (figure1).

We searched for the studies in the Web of Science database by the help of a specified keyword list and a set of search strings. An open source tool, "Rayyan", was employed in conducting a data exploration, where the management and filtering of the dataset took place through this platform efficiently.

Table 1: Search criteria table

Keyword	Conversational AI	Consumer Behavior and Counterfactual Thinking	Counterfactual Thinking
Synonyms	"Chatbots", "Virtual Assistants", "AI Agents", "Digital Assistants", "Smart Assistants"	"Purchase Decisions", "Buying Behavior", "Online Purchase Behavior", "Consumer Purchase Patterns"	"Counterfactuals", "Consumer Regret", "Alternative Scenarios", "What-If Thinking"

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

The sequence used for the search was pre-created and then adapted to each database; in specific, the tools were utilized to carry out separate searches. Below you will find the displayed piece of the search query:

- "Conversational AI" OR "Chatbots" OR "Virtual Assistants" OR "AI Agents") AND ("Consumer Counterfactual Thinking" OR "Counterfactuals" OR "Consumer Regret" OR "Consumer Decision-Making") AND ("Purchase Decisions" OR "Consumer Behavior" OR "Buying Behavior" OR "Online Purchase Behavior")

Inclusion and Exclusion Criteria

To ensure relevance and rigor, the following inclusion and exclusion criteria were applied:

Inclusion Criteria	• **Studies published between 2014 and 2024.** • **Studies focusing on conversational AI's role in consumer decision-making.**
Exclusion Criteria	• Non-English language publications. • Studies unrelated to e-commerce or consumer behavior. • Articles lacking empirical evidence or theoretical relevance.

Selection Process

For PRISMA compliance, figure 1 shows the flow diagram outlining the identification process.

1. **Initial Screening**: The metadata of all studies retrieved (n=182) was reviewed, and duplicates were removed. Studies irrelevant to the topic were excluded based on titles and abstracts.
2. **Abstract and Title Screening**: Using “Rayyan.ai”, studies were filtered further, reducing the total to 143 articles.
3. **Full-Text Review**: The remaining studies were downloaded and reviewed in detail. Articles without sufficient focus on conversational AI in the context of counterfactual thinking or purchase decisions were excluded.
4. **Final Selection**: After applying all criteria, 23 studies were selected for the systematic review.

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

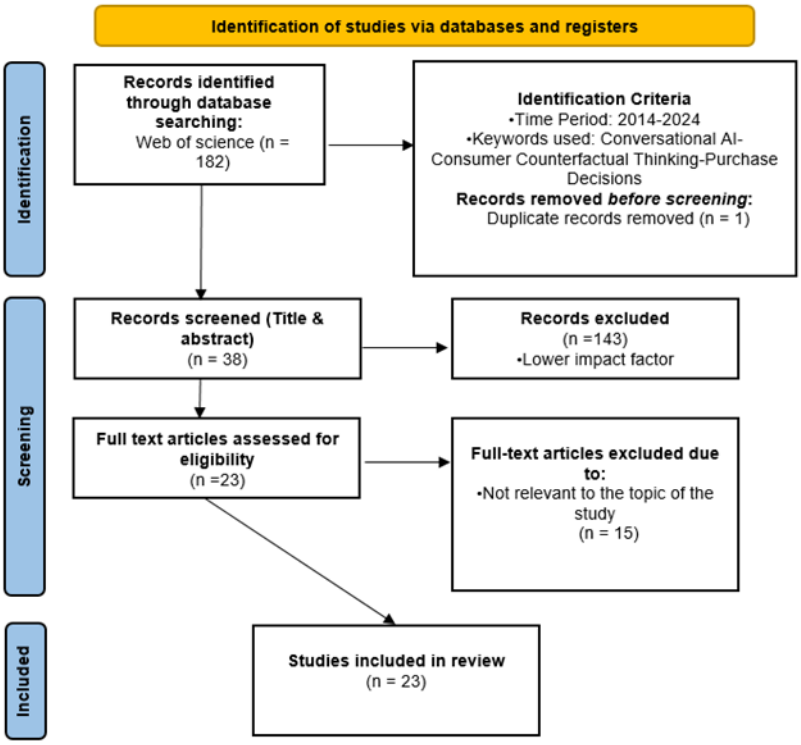

Figure 1: Flow diagram of PRISMA process

Findings and Discussion

Methodological Distribution in Conversational AI Studies

The Table 2 delineates the methodologies used in the 23 studies that were reviewed. The research was experimental (8), and it was the most commonly occurring type of research, hence, a study of causal relationships. It followed by the surveys (7) and qualitative interviews (5), which demonstrates a combination of quantitative and qualitative methodologies. Finally, case studies (3) gave detailed, situation-specific insights.

Table 2: Overview of search and study type

Study Type	Number of Studies
Experimental Studies	8
Qualitative Interviews	5
Surveys	7
Case Studies	3

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

Applications of Conversational AI across Key Categories

This sub-section covers the uses of Conversational AI among different consumer categories and its impact on consumer decision making and behavior in particular contexts.

Table 3 presents the distribution of Conversational AI applications, categorized across major consumer segments, are shown (percentages feel across zones).

Table 3: Overview of search by categories

Categories	Percentage
AI in Consumer Behavior	23,3%
AI in Marketing	26,7%
AI in E-Commerce	16,7%
AI in Emotion Detection	20%
AI in Decision Making	12,3%

The adoption of Conversational AIs has been one of the most significant applications of AI technologies, with the aim of involving clients and even making decisions. In marketing (26.7%), AI tools have been instrumental in making advertising campaigns more relevant to target audiences by personalizing user experiences and fostering customer loyalty through tailored recommendations. Researches in consumer behavior (23.3%) highlights how conversational AI builds trust and satisfaction by offering personalized solutions, indirectly influencing purchase decisions (M. Huang & Rust, 2021; Luo, 2002; Seva et al., 2007).

Emotion detection (20%) emphasizes AI's ability to interpret and respond to user moods, creating engaging and human-like interactions (Gerlich et al., 2023). Instead, in e-commerce (16.7%), conversational AI streamlines shopping processes, minimizes decision-making fatigue, and enhances the overall user experience, showcasing its transformative potential in online retail. Meanwhile, decision-making research (12.3%) delves into the subject of how conversational AI in different scenarios is able to offer suggestions that are well-structured, thereby making it easier for people to go through the whole process, and consequently, the decisions are often right. These applications of the greatest diversity are a sign of an emergent technological shift (Celuch et al., 2015; Galiano-Coronil et al., 2023).

Temporal Trends in AI Research

The following subsection examines the temporal trends observed in the adoption of Conversational AI, showing how its influence on consumer behavior has evolved over time.

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

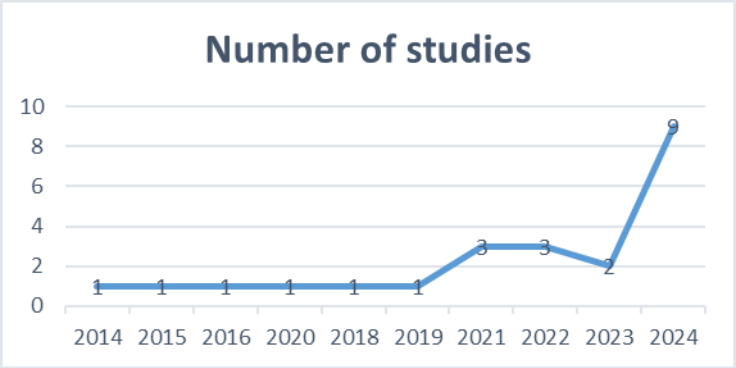

Figure 2: Identified publications per year

The conversational AI field shows a constant increase in research with massive bulks in the latest years. Between 2014 and 2020, research primarily focused on foundational aspects, with only one study published annually. The direction changed in 2021 and 2022, with three studies per year, which explored the aspect of the emotional and personal comment, the so-called advanced themes. This trend surged in 2024, with nine studies exploring how conversational AI influences consumer behavior and decision-making. (Bai, 2022).

Table 4: Studies included in the systematic review

ID	Title	Authors	Year
1	Machine learning and AI in marketing – Connecting computing po	Liye Maa, Baohong Sun	2020
2	The Impact of Personalization Algorithms on Consumer Engagement and Purchase Behaviour in AI-Enhanced Virtual Shopping Assistants	Ruhi Rachna,Misra	2024
3	Analysis of the change of artificial intelligence to online consumption patterns and consumption concepts	Bai, LY	2022
4	Application of Mobile Big Data and Artificial Intelligence in the Efficiency of E-Commerce Industry	Cui, HK And Xiao, LN And Zhang, XH	2021
5	Augmentation through Generative AI: Exploring the Effects of Human-AI Interaction and Explainable AI on Service Performance	Philipp Reinhard	2024
6	Artificial intelligence as toolset for analysis of public opinion and social interaction in marketing: identification of micro and nano influencers	Gerlich, M And Elsayed, W And Sokolovskiy, K	2023
7	Chatbot interactions: How consumption values and disruptive situations influence customers' willingness to interact	Marco Meier,Tim Weitze,Christian Maier, Jason B. Thatcher	2024
8	The Role of Counterfactual Thinking in Narrative Persuasion: Its Impact on Patients' Adherence to Treatment Regimen	Timothy K F Fung	2019

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

9	E-commerce and consumer behavior: A review of AI-powered personalization and market trends	Mustafa Ayobami Raji, Hameedat Bukola Olodo…	2024
10	Counterfactual Thinking: What Theories in Design	Oulasvirta, A And Hornbæk, K	2022
11	A Framework for Collaborative Artificial Intelligence in Marketing.	Ming-Hui Huanga, Roland T. Rust	2022
12	Design principles for artificial intelligence-augmented decision making: An action design research study	Pathirannehelage, SH And Shrestha, YR And Von Krogh, G	2024
13	Developing trustworthy artificial intelligence: insights from research on interpersonal, human-automation, and human-AI trust	Li, YG And Wu, BZ And Huang, YQ And Luan, SH	2024
14	A Survey of Contrastive and Counterfactual Explanation Generation Methods for Explainable Artificial Intelligence	Ilia Stepin, Jose M. Alonso ,Alejandro Catala, And Martín Pereira-Fariña	2021
15	Expectation-based consumer purchase decisions: behavioral modeling and observations	Jia, J And Li, J And Liu, WX	2023
16	Should We Collaborate with AI to Conduct Literature Reviews? Changing Epistemic Values in a Flattening World	Ojelanki Ngwenyama, Frantz Rowe	2024
17	Improving the Performance of an Artificial Intelligence Recommendation Engine with Deep Learning Neural Nets	Guha, R And IEEE	2021
18	Marketing Decision Model and Consumer Behavior Prediction With Deep Learning	Xu, AF And Li, Y And Donta, PK	2024
19	Online Decision-Making in General Combinatorial Spaces	Rajkumar, A And Agarwal, S	2014
20	Should Have I Bought the Other One?" Experiencing Regret in Global Versus Local Brand Purchase Decisions	Davvetas, V And Diamantopoulos, A	2018
21	The Influence of Counterfactual Thinking and Regret on Ethical Decision Making	Celuch, K And Saxby, C And Oeding, J	2015
22	A survey on the impact of AI-based recommenders on human behaviours: methodologies, outcomes and future directions	Pappalardo,Luca,Ferragina, Emanuele Citraro…	2024
23	The Role of Anticipated Emotions in Purchase Intentions	Bagozzi, RP And Belanche, D And Casaló…	2016

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

Table 5: *Key* Themes Identified in the Literature

Theme	Insights	Implications
Conversational AI in Engagement	Enhances consumer engagement by offering personalized, real-time interactions through chatbots.	Optimizes the sales process, improves consumer satisfaction, and fosters trust in AI-driven systems.
Trust in AI Recommendations	Consumers trust AI-generated suggestions, especially when framed as tailored options.	Leads to higher purchase rates and loyalty when transparency and relevance are maintained.
Counterfactual Thinking	Prompts consumers to imagine alternative choices and evaluate their decisions.	May increase satisfaction if the choice feels validated or induce regret if alternatives seem better.
Decision Fatigue Mitigation	Reduces cognitive overload by narrowing choices to relevant options.	Enhances user experience and supports confident decision-making.
Cultural and Ethical Concerns	Trust and adoption vary across cultural contexts; ethical transparency is critical.	Requires localized approaches and clear communication about AI-driven recommendations.
Broader E-Commerce Impact	AI's global scalability improves efficiency across operations, marketing, and support.	Drives business growth while adapting to diverse consumer needs and behaviors.

This synthesis illustrates the conversion of e-commerce with conversational AI driving its potential to attract, engage, bond and make the consumer's decision-making process leaner. Although it implies worldwide scalability and operational efficiency, the positive influence of conversational AI is subtle due to psychological and cultural variables. Companies need to balance personalization with simplicity to avoid decision fatigue and ensure that they are maintaining ethical transparency which in turn would help them to build consumer trust. For the last two strategies, they need to consider the cultural complexities and to get the most out of AI, show responsible behavior by creating mutual advantage that is stable with both consumers and businesses.

Practical Implications

The outcomes of this study can be very beneficial not only for e-commerce platforms but also for the AI developers. To optimize the impact of conversational AI on consumer decision-making, businesses must determine the systems that best represent a compromise between people's likes and ease. While over-personalization may initially seem beneficial, it risks overwhelming consumers and leading to regret. Contrarily, AI systems must concentrate on suggesting clear, brief, and context-specific advice that will aid consumers without overwhelming them with the excessive number of options available.

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

Conversely, the synergy of emotional intelligence for conversational AI empowers consumer satisfaction. AI systems can deal with the consumer's emotions directly and immediately by virtually duplicating the natural abilities of human tenderness and intelligence, thus reducing regret and strengthening positive decision-making experiences. From the cultural perspective, the formulation of the AI models for diverse local markets is the cornerstone of the whole thing. For example, AI systems can incorporate familiar language, humor, and cultural references, making them more relevant and trustworthy for local consumers.

Conclusion and Future Directions

This review underscores the opportunity presented by conversational AI to reshape the consumer decision journey, particularly in relation to counterfactual thinking and online purchasing behaviors. The findings highlight how AI-driven recommendations influence consumer choices while also triggering regret and uncertainty when alternative options are suggested. However,the psychological and cultural nuances of consumer behavior-Including trust, satisfaction, and regret — call for a more balanced and ethical approach to AI implementation.

While AI enhances the shopping experience through personalized recommendations, it can also unintentionally amplify cognitive biases such as counterfactual thinking,leading to frustration and decision paralysis. Businesses must carefully design AI interactions to minimize excessive consumer regret and promote positive decision-making experiences. Future studies should adopt a longitudinal approach to assess the long-term impact of conversational AI on consumer satisfaction,brand loyalty,and counterfactual thinking across various e-commerce industries.

Furthermore, cross-cultural studies are essential for understanding how and in what ways consumers react to and engage with AI systems in different countries. These gaps could help future studies deliver actionable insights to businesses seeking to incorporate AI in a manner that increases consumer satisfaction and minimizes adverse psychological outcomes.

Conflict of Interest: The authors reported no conflict of interest.

Data Availability: All data are included in the content of the paper.

Funding Statement: The authors did not obtain any funding for this research.

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

References:

1. Arora, P., Haynie, J. M., & Laurence, G. A. (2013). Counterfactual thinking and entrepreneurial self-efficacy: The moderating role of self-esteem and dispositional affect. *Entrepreneurship: Theory and Practice*, *37*(2), 359–385.
2. Bagozzi, R. P., Belanche, D., Casaló, L. V., & Flavián, C. (2016). The Role of Anticipated Emotions in Decision Making. *Paper Presented at a Conference on the Role of Anticipation and Regret in Decision Making, La Jolla, CA*.
3. Bai, L. (2022). Analysis of the change of artificial intelligence to online consumption patterns and consumption concepts. *Soft Computing*, *26*(16), 7559–7569.
4. Baron, A. S., Zaltman, G., & Olson, J. (2017). Barriers to advancing the science and practice of marketing. *Journal of Marketing Management*, *33*(11–12), 893–908.
5. Celuch, K., Saxby, C., & Oeding, J. (2015). The Influence of Counterfactual Thinking and Regret on Ethical Decision Making. *Journal of Education for Business*, *90*(4), 175–181.
6. Cui, H., Xiao, L., & Zhang, X. (2021). Application of Mobile Big Data and Artificial Intelligence in the Efficiency of E-Commerce Industry. *Mobile Information Systems*, *2021*.
7. Dawetas, V., & Diamantopoulos, A. (2018). "Should have i bought the other one?" Experiencing regret in global versus local brand purchase decisions. *Journal of International Marketing*, *26*(2), 1–21.
8. Fung, T. K. F. (2019). The Role of Counterfactual Thinking in Narrative Persuasion: Its Impact on Patients' Adherence to Treatment Regimen. *Health Communication*,1482–1493.
9. Galiano-Coronil, A., Blanco-Moreno, S., Tobar-Pesantez, L. B., & Gutiérrez-Montoya, G. A. (2023). Social media impact of tourism managers: a decision tree approach in happiness, social marketing and sustainability. *Journal of Management Development*, *42*(6), 436–457.
10. Gerlich, M., Elsayed, W., & Sokolovskiy, K. (2023). Artificial intelligence as toolset for analysis of public opinion and social interaction in marketing: identification of micro and nano influencers. *Frontiers in Communication*, *8*.
11. Guha, R. (2021). Improving the Performance of an Artificial Intelligence Recommendation Engine with Deep Learning Neural Nets. *2021 6th International Conference for Convergence in Technology, I2CT 2021*, 1–7.
12. Herath Pathirannehelage, S., Shrestha, Y. R., & von Krogh, G. (2024). Design principles for artificial intelligence-augmented decision making: An action design research study. *European Journal of*

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

Information Systems, *00*(00), 1–23.
13. Hu, B., Mao, Y., & Kim, K. J. (2023). How social anxiety leads to problematic use of conversational AI: The roles of loneliness, rumination, and mind perception. *Computers in Human Behavior*, *145*(September 2022).
14. Huang, M. H., & Rust, R. T. (2022). A Framework for Collaborative Artificial Intelligence in Marketing. *Journal of Retailing*, *98*(2), 209–223.
15. Huang, M., & Rust, R. T. (2021). *A strategic framework for artificial intelligence in marketing*.
16. Iskef, G. (2022). *The adaption of AI for marketing management*.
17. Jain, V., Wadhwani, K., & Eastman, J. K. (2024). Artificial intelligence consumer behavior: A hybrid review and research agenda. *Journal of Consumer Behaviour*, *23*(2), 676–697.
18. Jia, J., Li, J., & Liu, W. (2023). Expectation-based consumer purchase decisions: behavioral modeling and observations. *Marketing Letters*, *34*(3), 397–413.
19. Kim, J. E., & Johnson, K. K. P. (2013). The Impact of Moral Emotions on Cause-Related Marketing Campaigns: A Cross-Cultural Examination. *Journal of Business Ethics*, 79–90.
20. Li, Y., Wu, B., Huang, Y., & Luan, S. (2024). Developing trustworthy artificial intelligence: insights from research on interpersonal, human-automation, and human-AI trust. *Frontiers in Psychology*, *15*(April), 1–13.
21. Luo, X. (2002). Uses and Gratifications Theory and E-Consumer Behaviors. *Journal of Interactive Advertising*, *2*(2), 34–41.
22. Ma, L., & Sun, B. (2020). Machine learning and AI in marketing – Connecting computing power to human insights. *International Journal of Research in Marketing*, *37*(3), 481–504.
23. Meier, M., Maier, C., Thatcher, J. B., & Weitzel, T. (2024). Chatbot interactions: How consumption values and disruptive situations influence customers' willingness to interact. *Information Systems Journal*, *34*(5), 1579–1625.
24. Misra, R. R. (2024). *The Impact of Personalisation Algorithms on Consumer Engagement and Purchase Behaviour in AI-Enhanced Virtual Shopping Assistants*.
25. Mustafa Ayobami Raji, Hameedat Bukola Olodo, Timothy Tolulope Oke, Wilhelmina Afua Addy, Onyeka Chrisanctus Ofodile, & Adedoyin Tolulope Oyewole. (2024). E-commerce and consumer behavior: A review of AI-powered personalization and market trends. *GSC Advanced Research and Reviews*, *18*(3), 066–077.
26. Ngwenyama, O., & Rowe, F. (2024). Should We Collaborate with AI

 ISSN: 1857-7881 (Print) e - ISSN 1857-7431

to Conduct Literature Reviews? Changing Epistemic Values in a Flattening World. *Journal of the Association for Information Systems*, *25*(1 Special Issue), 122–136.

27. Oulasvirta, A., & Hornbæk, K. (2022). Counterfactual Thinking: What Theories Do in Design. *International Journal of Human-Computer Interaction*, *38*(1), 78–92.
28. Pappalardo, L., Ferragina, E., Citraro, S., Cornacchia, G., Nanni, M., Rossetti, G., Gezici, G., Giannotti, F., Lalli, M., Gambetta, D., Mauro, G., Morini, V., Pansanella, V., & Pedreschi, D. (2024). *A survey on the impact of AI-based recommenders on human behaviours: methodologies, outcomes and future directions*. *1*(1), 1–41.
29. Rajkumar, A., & Agarwal, S. (2014). Online decision-making in general combinatorial spaces. *Advances in Neural Information Processing Systems*, *4*(January), 3482–3490.
30. Reinhard, P. (2024). *Augmentation through Generative AI : Exploring the Effects of Human-AI Interaction and Explainable AI on Service Performance*. 2018–2023.
31. Seva, R. R., Duh, H. B. L., & Helander, M. G. (2007). The marketing implications of affective product design. *Applied Ergonomics*, *38*(6), 723–731.
32. Sharma, A., & Shafiq, M. O. (2022). A Comprehensive Artificial Intelligence Based User Intention Assessment Model from Online Reviews and Social Media. *Applied Artificial Intelligence*, *36*(1).
33. Stepin, I., Alonso, J. M., Catala, A., & Pereira-Farina, M. (2021). A Survey of Contrastive and Counterfactual Explanation Generation Methods for Explainable Artificial Intelligence. *IEEE Access*, *9*, 11974–12001.
34. Tien, D. H., Amaya Rivas, A. A., & Liao, Y. K. (2019). Examining the influence of customer-to-customer electronic word-of-mouth on purchase intention in social networking sites. *Asia Pacific Management Review*, *24*(3), 238–249.
35. Xu, A., Li, Y., & Donta, P. K. (2024). Marketing Decision Model and Consumer Behavior Prediction With Deep Learning. *Journal of Organizational and End User Computing*, *36*(1), 1–25.
36. Zhang, K. Z. K., & Benyoucef, M. (2016). Consumer behavior in social commerce: A literature review. *Decision Support Systems*, *86*, 95–108.