Consumer Psychological Responses to AI-Enabled Design Frameworks in Technology Marketing

[1]Jugal Kishor, [2]Swati Sharma*

[1]Department of Society-Technology Interface (DSTI), Central University of Rajasthan, Ajmer, India
[2]Department of Commerce, Manipal University Jaipur, Jaipur, India
*Corresponding author Email: swati.sharma@jaipur.manipal.edu

HOW TO CITE:
Jugal Kishor, Swati Sharma (2026). Consumer psychological responses to AI-enabled design frameworks in technology marketing. International Journal of Special Education, 41(16s), 1493-1509

COPYRIGHT STATEMENT:
Copyright: © 2026 Authors. Open access publication underthe terms and conditions of the Creative CommonsAttribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

ABSTRACT:
Artificial intelligence (AI) plays an important role in the field of consumer psychology. Since AI-enabled tools play a crucial role in marketing, understanding the impact of such tools on consumer psychology is fundamental. In order to shed light on the question at hand, this study will give an explanation of the theory of the matter as well as the current debate regarding AI as it pertains to consumer psychology and marketing intervention. Such a perspective will lead to a good idea for proactive marketing intervention. Hence, the main goal of this paper is to examine the impact of artificial intelligence on consumer psychology in order to formulate a proactive marketing intervention strategy. To this end, the study explores how AI influences consumer psychology through four different perspectives: memory and computational logic, decision-making and cognitive process, neural networks, and social media text mining. This research utilizes a questionnaire survey conducted on the Internet to gather information from 356 subjects and analyze the results using the structural equation modeling method.

Keywords: Technology Marketing, Consumer Psychology, Artificial Intelligence (AI), Social Media, Cognitive

1. Introduction

AI is witnessing a renaissance which is comparable to the era of computer technology that was witnessed during the 1950s. It is due to computational models created by computer scientists which allow learning of trends through big data and enhanced computer power. (Makridakis, 2017). Today, there are many applications of AI in various industries and in different places such as devices and environments. Several studies (Wirtz et al., 20180) conducted previously focused on several topics, for instance, the use of mobile devices (Lu et al., 2020), recommendation systems and customer service. (Belanche et al., 2020). The efforts by robots have helped them attain some important roles in many fields that used to be thought to rely on human intelligence alone.

Although AI is gaining traction with marketing managers and consumers (Parvez et.al., 2026) alike, a comprehensive and in-depth examination of the knowledge produced at the intersection of AI, marketing, and consumer psychology remains to be undertaken. As, the AI-integrated marketing environments contribute to enhanced consumer experience and purchase intention (Yadav & Reddy, 2026), the relationship between the rise of AI in consumer habits and its use in marketing is significantly shaped by studies in the wider field of psychology. Moreover, grasping psychological mechanisms is crucial to the field of AI. Scientists began creating AI with the main

goal of building machines capable of performing tasks that usually require human-like thinking skills (McCarthy et al., 2006). Grasping how algorithms can mimic cognitive processes is crucial. The link between the marketing industry is important because it clearly emerges as one of the industries where AI is utilized (Sterne, 2017).

Research Objective:

This study endeavors to evaluate the performance of AI within the sphere of consumer psychology in order to boost recognition and marketing efforts. Specifically, the evaluation of different facets of AI and their effects on certain constructs associated with consumer psychology is intended in this research. It is hoped that through understanding these variables, insights into how effectively AI can be used as a tool for proactive marketing intervention will be gained.

3. Literature Review:

3.1 Artificial Intelligence (AI)

As per Huang and Rust (2021), the concept of AI refers to the process of using computational components and machines in order to mimic the characteristics of humans, such as the physical actions, cognitive functions, and emotional responses. The level of interest towards the AI phenomenon is increasing significantly due to the improvements made in terms of the computing power and the development of various tools, including machine learning, neural network, and language processing. In addition, the availability of the data is also increasing (Bornet et al., 2021).

The authors Mustak et al. (2021) used the natural language processing approaches in order to perform the topic modelling on their selected articles. They identified ten topics of marketing and AI research. These topics have further been divided into two broad categories that include consumer research and enterprise & strategy-oriented research. Vlacic et al. (2021) presented a detailed literature review concerning AI and intelligent systems within the marketing field. In this study, the researchers used the methods of content analysis along with multiple correspondence analysis. This study led to the identification of four major themes. 1. Various media used in marketing practices. 2. Marketing strategy. 3. Success measure. 4. The process for dividing the market into segments, targeting a specific segment, and positioning the product.

This paper differs from the previous literature reviews, and the contributions made by this paper are as follows. This article is an analysis of the importance of AI in marketing and consumer psychology, thus offering a comprehensive overview of both these areas. Besides the above points mentioned, this research also examines the different theoretical approaches employed in the multi-disciplinary area to better understand AI in marketing and consumer psychology. AI approaches have been found crucial in developing consumer psychology in different fields, such as e-commerce, marketing, and social media. Some of the basic AI approaches employed in consumer psychology include:

3.1.1 Algorithms for personalization

Recommender Systems Based on AI analyze the past behavior, preferences, and interactions of the customer to suggest products according to their likings. Thus, it helps in creating a personalized shopping experience, increasing the chances of closing a deal. Dynamic Content: The analysis of the consumer's profile and behavior enables AI to personalize website content, advertisements, and even emails dynamically.

3.1.2 Sentiment analysis

Feedback Analysis: With the help of natural language processing (NLP), sentiment analysis helps in analyzing the attitudes and opinions of consumers based on social media, reviews, and surveys. This helps in understanding consumer opinions and tailoring their strategies accordingly for establishing a good image. Targeted Messages: AI is capable of analyzing consumer reactions, and therefore, it helps in identifying the pain areas and preferences of consumers. This, in turn, helps in sending messages that resonate with the emotions of consumers.

3.1.3 Predictive analytics

Customer Churn Prediction: The ability of AI models to predict when a client will stop using a

product or service, by analyzing their behavioral pattern. It can help a business organization plan on how to retain its customers. Demand Forecasting: This involves predicting the needs of the consumer by analyzing data.

3.1.4 Behavioral analytics

Path Analysis: With the help of consumer path analysis data, AI identifies patterns in consumer-product or brand interaction. This will allow companies to improve their consumer interactions and guide consumers towards purchasing products.

3.2 Consumer psychology

The discipline of Psychology has been considered vital in the study of consumer behavior and marketing since the early times (Alderson, 1952). In fact, the discipline of Psychology involves an analysis of psychological processes of humans that affect their behavior. Among those, communication, memory abilities, perception, thinking process, and desires have been included (British Psychological Society, 2021). Although many social sciences like cultural anthropology have been integrated into marketing studies, the importance of psychology remains unshaken in this respect. This shift from relying mainly on economic theories to explain consumer behavior towards greater importance attached to psychological theories has played a role in the interdependence of marketing and customer thinking processes. The psychological theories discussed in this study are influenced by various models in the fields of social behavioural science, inspiring psychological research, ecologic psychology, and academic psychology (Hansen, 1976). Recent advancements in consumer psychological research have increasingly focused on exploring the cognitive processes, motivations, as well as experiences of individual consumers. This approach integrates theories from psychology and multiple fields of social science (Malter et al., 2020). This study has included four consumer psychological parameters: memory & computational logic, decision making & cognitive process, neural network, and social media and text mining to measure the effect of AI on consumer psychology.

3.2.1 AI on memory & computational logic

AI encompasses a range of applications processing, procedures & machines that exhibit distinctive aptitude (Shankar, 2018, p. vi). From the beginning, the goal of AI has been to replicate the complexities of human thought processes (Syam & Sharma, 2018). Various cognitive operations identified as essential for human performance and the corresponding techniques that technology can utilize to emulate these functions. Wilson (1988) developed a dictionary designed for use with machines to facilitate experiments in psycholinguistics. Additionally, it gave early AI applications the tools they needed to create machine-readable linguistic and psychological definitions of concepts. Similarly, Perry et al. (2007) compare and contrast several reading and word identification computational models. The work of Thagard (1989) is significant to computational logic since it offered a computational framework for explanatory coherence. This theory facilitates the processing of judgments in everyday situations, elucidates causal reasoning, and enables the acceptance or rejection of scientific hypotheses. Interconnections across hypotheses and other claims are defined by the theory's seven guiding principles. Theoretically, a hypothesis should be consistent with the propositions it explains or that provide an explanation for it. Observation results can be described with a certain level of acceptability. However, if propositions contradict each other, they become incoherent. Thagard's research (1989) has greatly enhanced the field of expert systems. His work explores the connection between psychological understanding and the application of various causal reasoning techniques in technology. The remaining pieces in this group delve into the cognitive processes of humans that machines might be able to imitate.

Pylyshyn (1999) discussed the operationalisation of visual perception in computers and contributed to the ongoing discussion on whether vision is part of cognitive function or distinct from cognition. The process of human

vision requires the brain to handle a vast amount of sensory information and activate mechanisms to interpret visual inputs. One important mechanism is selective attention, which allows the brain to prioritise different visual inputs (Frintrop et al., 2010). When it comes to computer vision, it's crucial for computer systems and robots to be able to handle large amounts of pixel data. Frintrop et al., (2010) highlighted the interdependence of visual perception and cognition, it is crucial to integrate multiple sensors into robots and machinery to enhance visual processing. Robotics perspective defines vision system process image pixels as input data. The vision encompasses outline demonstrations that include surface layouts, edges, and additional details. The representations possess sufficient richness for application to a shape-indexed memory system, facilitating the identification of recognized objects (Pylyshyn, 1999).

H1 There is a significant impact of artificial intelligence on memory & computational logic.

3.2.2 AI on Cognitive process & decision making

According to Davenport et al. (2019), AI is set to revolutionise corporate structures, sales procedures, customer service, and consumer behaviour. Anticipated shifts in economic structures are expected to bring about changes in the way certain industries organise their operations. For instance, within the retail sector, improvements in predictive analytics may result in a modification of the operational sequence. There is also an emerging model whereby the shipping takes place before the purchase process, contrary to the old method where shopping precedes shipping. This is due to the existence of a predictive model that can predict a purchase before its occurrence.

There exist numerous studies in literature that explore the complex processes associated with cognition in relation to the workings of the human brain. For example, the investigation carried out by Everitt and Robbins (1997) was focused on identifying the different roles played by the basal cerebral cortex and pontine cholinergic signaling mechanisms in the brain. Based on the findings of the research, it is evident that the cholinergic system is highly influential in visual attention, but its impact on memory processes is indirect. On the contary, the septo-hippocampal projection has a vital role in the regulation of temporary memory processes. Cholinergic prediction from the diagonally band-cingulate cortex is instrumental in applying reaction procedures. From the findings, it is clear that cognition is very complicated. Frank and Claus (2006) examined the contributions of different brain regions and systems to the decision-making process. Recent studies in this field have revealed links between our understanding of cognitive processes and advancements in AI designed to replicate them. Even with progress in technology, AI still encounters numerous obstacles that need to be addressed.

In a study, Lake et al. (2016) emphasised the limitations of AI in terms of its ability to explicate and comprehend phenomena and build knowledge based on intuitive theories. While AI has shown promise in addressing issues by means of understanding patterns, there is still a long way to go before these systems can fully grasp complex concepts.

H2 There is a significant impact of artificial intelligence on cognitive process & decision making.

3.2.3 AI on Neural networks

Consumer behaviour is influenced by the adoption of AI-enabled technologies, particularly in terms of information search and behavioural changes resulting from technological advancements. For example, the widespread use of self-driving cars will have implications for consumer behaviour. An artificial neural network is a computerized system designed to mimic human intelligence by analyzing and extracting insights from a given data set (Law & Au, 1999). Neural networks play a crucial role in the field of neural computing, specifically in pattern recognition. They utilise feed-forward network architectures like the multilayer perceptron, which efficiently evaluates iterative procedures to minimise errors. A different approach, centered

around the radial basis network, establishes connections among various ideas (Bishop, 1995). Advancements in IT capabilities have made it feasible to gather, store, and analyse extremely intricate datasets (Cortez et al. 2009). Neural networks have become a popular choice among data mining algorithms for analysing this data. Data mining is utilized by managers to extract pertinent information through the identification of trends and patterns, thereby improving their decision-making capabilities (Turban et al. 2008). Linear and multiple regression, along with support vector machines, represent additional methodologies that can be employed to derive insights from neural systems (Cortez et al., 2009).

According to Posner & Rothbart (2007), the neural system comprises a network of brain regions that collaborate to execute psychological and physiological functions. They have the ability to assist humans in recognising faces by establishing connections among different regions of the cognitive system (O'Toole et al., 2002). Neural system plays a crucial role in shaping human personality and are strongly linked to personality traits, which are seen as the foundation for the development of personality (Rothbart, 2007). Neural networks are instrumental in aiding scientists in comprehending the intricate cognitive processes necessary for executing specific tasks. Posner and Rothbart (2007) conducted a study on neural networks that specifically looked at the mechanics of attention. According to their perspective, human behaviour and emotions can be explained by neural structures, genes, and socialisation.

H3 There is a significant impact of artificial intelligence on neural network.

3.2.4 AI in Social media & text mining

Making adjustments to sales processes requires the integration of immediate feedback to refine presentations and communication resources. AI-enabled systems have the potential to greatly enhance customer experiences and assist marketers in utilising various forms of engagement with customers to improve marketing outcomes. The importance of user-generated content on social media in shaping marketing decisions is highlighted by social media and text mining.

Kaplan & Haenlein (2010) examined when online communities began to take shape, social media became a place where users could create and share information as well as participate in many-to-many conversations. Enterprises recognized the chance to connect with their desired audiences by creating a presence in suitable settings. (Fournier & Avery, 2011; Wirtz et al., 2013). Effectively analysing and responding to the substantial volume of unstructured data generated in blogs, reviews on the internet, and social media platforms (Wedel & Kannan, 2016). Several scholars have regarded text mining techniques as a form of AI. Netzer et al. (2012) introduced a text mining apparatus that was used to analyse data from forums. The main goal was to identify patterns by looking at terms that appear together in the text. Goh et al. (2013) conducted an important study that connected social media engagement with business results. The use of text mining methods on user-generated content from social media enabled the creation of an econometric model aimed at evaluating how networking activities influence consumer behavior. Following a comparable method, Archak et al. (2011) employed text mining techniques to perform an in-depth examination of user-generated content, such as online feedback. The analysis extended beyond merely evaluating the positivity and volume of reviews, concentrating instead on how sentiment related to certain product characteristics can serve as a predictor for future sales.

H4 There is a significant impact of artificial intelligence on social media & text mining.

3.3 Bases and ongoing discussion surrounding AI in marketing

This study seeks to explore the conceptual framework connecting marketing and psychology in relation to consumer interactions with AI. Recent studies have shown that digital technologies and AI-driven interactions shape consumers' behavioral intentions and decision-making processes (Joshi, 2026). This section

elucidates the foundational concepts of AI in these domains to provide meaningful perspectives for an in-depth review of the literature. Marketing encompasses various activities, organizations, and processes aimed at creating, communicating, delivering, and exchanging valuable goods and services for clients, consumers, partners, and society as a whole (American Marketing Association, 2017). The landscape of marketing has undergone significant transformations as a result of rapid technological advancements. The research priorities established by the Marketing Science Institute for 1493-1509 highlight the significance of AI in marketing management, emphasizing its impact on capabilities, responsibility, and the improvement of marketing practices and strategies (Marketing Science Institute, 2020). The study of how consumers think and behave is vital in today's world, engaging not only marketers but also policymakers and a range of research fields (MacInnis et al., 2020). People are now involved in various forms of engagement with AI. Experts in marketing recognize the considerable benefits that AI offers to individuals and their everyday experiences (Pitardi et al., 2021). However, the increased use of AI may lead to various issues that affect the community. These issues include concerns regarding privacy, the possibility of dehumanization, and the danger of becoming overly reliant.

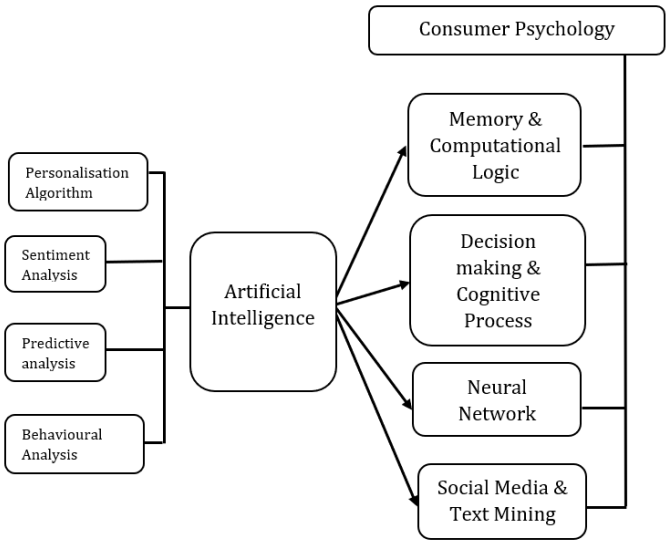

Figure: Hypothesised Model

4. Procedure:

4.1 Sample selection and data collection

Pilot testing was carried out on 50 subjects, who had adequate knowledge of AI applications in consumer psychology, which helped determine the feasibility, budgetary considerations, and timeframe involved, along with improving the research design. The initial stage involved conducting an exploratory study to check the reliability of the scale. A few changes were made concerning the data collected from the pilot test. In the development phase of the survey questionnaire, consultations were taken from two marketing professors, having proficiency in digital marketing technologies. This led to making some modifications, ultimately leading to the completion of the survey questionnaire.

The study was conducted to establish the effect of AI on the psychology of consumers and marketing. It was formulated using the within-subjects design in which the same individual is not subjected through a stimulus more than once. There was no form of control exerted because respondents had to give textual information in a survey questionnaire regarding various demographics.

Data was collected from all respondents systematically. Nonetheless, a good questionnaire was prepared by consulting digital marketing experts. This questionnaire was sent to 487

people via emails. Each email contained a URL where the questionnaire would be filled. Respondents chosen were individuals who have interacted with the AI applications previously. The IP addresses of each respondent were noted to ensure they filled the survey form only once. The data analysis from the email revealed that 415 people participated, representing 85.21% of the sample population. Out of these respondents, 356 people filled the questionnaire, which is 73.10% of the response rate.

Table-1 Demographic Table

Gender	Frequency	Percent
Male	231	64.89
Female	125	35.11
Total	356	100
Age		
1493-1509	80	22.47
1493-1509	98	27.54
1493-1509	106	29.77
36 and above	72	20.22
Total	356	100
Marital Status		
Married	147	41.30
Unmarried	209	58.70
Total	356	100
Qualification		
PG	90	25.28
UG	140	39.32
12th	75	21.17
Other	51	14.33
Total	356	100
Occupation		
Employed	136	38.20
Self-employed	129	36.23
Student	65	18.27
Other	26	7.30
Total	356	100
Residential		
Rural	162	45.50
Urban	194	54.50
Total	356	100

Table-2 KMO and Bartlett's Test

KMO	.772
Bartlett's Test	.000

Source: primary data

4.2 Confirmatory factor analysis

Confirmatory Factor Analysis (CFA) is a technique employed to determine whether the indicators measuring a particular construct are aligned with the factor concept conceived by the researcher. In other words, CFA is applied to test the consistency between the observable variables and the unobservable components they represent. The main aim of this study was to ascertain whether there was a correlation between the indicator variables and the existing theoretical background and research results. The researchers employed a pooled CFA method in this study, where both exogenous and endogenous variables were taken into account. Employing such an approach ensured that the researcher could analyze the relationships between the variables under investigation. By incorporating both exogenous and endogenous variables into the CFA framework, the researcher could obtain an understanding of the underlying constructs and their relationships. There are numerous advantages associated with conducting a pooled CFA as opposed to individual CFAs (Chong et al., 2014).

From Table 4, it is evident that 40 items have been assessed and grouped into 5 latent variables. The variables under investigation in this research work are referred to as indicator variables. All these variables are very much related to the critical element of consumer psychology that gives rise to marketing interventions. A CFA was used to evaluate the reliability and construct validity of these underlying variables. Indicator variables and latent variables are connected by means of factor loadings. As per the research conducted by Kline (2011), Hair et al. (2010), Kenny and Kashy (1992), and Byrne (2010), factor loading value is supposed to be at least 0.70. It is highly imperative to mention here that while endorsing a model with low value chi-square statistic, one has to consider the following additional model fitting indices: "Comparative Fit Index (CFI), Tucker-Lewis Index (TLI) Root Mean Square Error of Approximation (RMSEA), and Goodness of Fit Index (GFI)".

Table-3 Correlation Matrix

	Artificial Intelligence	Memory & Computational logic	Decision making & Cognitive Process	Neural Networks	Social Media & Text mining
Artificial Intelligence (AI)					
Memory & Computational Logic	.57				
Decision making & cognitive process	.62	.54			
Neural Networks	.58	.56	.65		
Social Media & text mining	.56	.55	.54	.55	

Table-4 Measurement Model

First-Order Construct	Statements	CFA loading	CR	AVE	MSV
AI	S3	.612	.902	.537	.384
	S2	.763			
	S8	.814			
	S4	.723			
	S1	.813			

	S6	.811			
	S7	.664			
	S5	.627			
Memory & Computational Logic	S7	.743	.892	.510	.329
	S1	.724			
	S6	.670			
	S3	.681			
	S5	.811			
	S4	.722			
	S4	.708			
	S2	.642			
Decision making & cognitive process	S4	.752	.895	0.518	.422
	S3	.732			
	S1	.683			
	S7	.624			
	S6	.804			
	S5	.741			
	S2	.733			
	S8	.672			
Neural Networks	S8	.823	.910	0.560	.422
	S2	.761			
	S4	.693			
	S1	.754			
	S5	.803			
	S3	.765			
	S6	.752			
	S7	.617			
Social Media & text mining	S2	.791	.918	.584	.313
	S5	.784			
	S3	.671			
	S7	.851			
	S8	.813			
	S1	.792			
	S4	.677			
	S6	.714			

Source: primary data

The results for the first-order confirmatory factor analysis are indicative of an admirable congruence with the conceptual framework for the construct. With a CMIN/DF ratio of 1.32, it is reasonable to assume that there is an acceptable correspondence. The values for GFI, NFI, IFI,

Tucker-Lewis index, CFI, Parsimonious Comparative Fit Index, RMSEA, and RMSR are 0.901, 0.913, 0.911, 0.921, 0.941, 0.830, 0.029, and 0.017, respectively.

The statistical methods have been employed to conduct convergent and discriminant analysis in order to test whether multicollinearity exists within the data. In order to conduct convergent validity testing, the cut-off point set was 0.50 for average variance extracted (AVE). For conducting discriminant validity testing, the value of AVE has to be higher or equal to MSV. The results shown in Table 2 and 3 prove that no issues exist concerning the authenticity of the data. All the conditions required for the CFA's first order measurements have been met as indicated from the results of component coefficients, construct validity and reliability, and model compatibility indicators.

4.3 Structural model

Path analysis was carried out to determine the main determinant of the consumer-product relationship and its effect on the consumers' buying intention by considering three determinants. A thorough review of the summary notes was done before conducting an analysis of the test results of the proposed research model. The review of the structural model gave indices for the model-fit that indicated a good fit of the model. CMIN/DF was determined to be 2.165, which is a good indicator of the fitness of the model. GFI was calculated to be 0.901, which indicated a high degree of fit. NFI was calculated to be 0.903 while IFI was determined to be 0.924, which indicates a good fit.

TLI was calculated to be 0.921 while CFI was measured to be 0.902, indicating a good model fit. PCFI was calculated to be 0.828, which indicates a satisfactory level of fit. RMSEA was calculated to be 0.036, which indicated a good fit of the model to the observed data. The root mean square residual (RMR) measured 0.054, which further corroborates the conclusion of a relatively good model fit. Authors demonstrated the implications of Total Interpretive Structural Modelling in Sustainable Supply chain Management (Dubey et al., 2017).

The findings of the current study demonstrate that AI has a substantial impact on the development of Memory & Computational logic (β=.531) the context of consumer psychology to derive marketing intervention. The acceptance of hypotheses H1 results directly from the previously discussed findings. The present study aimed to evaluate the impact of AI on consumer psychology. The results of this study indicate statistically significant outcomes for the analyzed relationship. The present study has validated the acceptance of hypotheses H1.

The present study similarly evaluated the impact of AI on Decision making & cognitive process. The results of this study indicate statistically significant outcomes for the analyzed relationship: AI and Conginitive process (β=.229). The present study has validated the acceptance of hypotheses H2. This study examined the influence of AI on the Decision making & cognitive process related to marketing intervention. From the regression analysis, it was found that there exists a positive relationship between AI and Decision making & cognitive process.

This study investigated the effect of AI on Neural Network. It can be observed from the result of this study that statistically significant results have been obtained regarding the relationship between AI and Neural Network (β=.438). In this regard, it can be concluded that the hypothesis H2 is accepted. This study explored the effect of AI on Neural network through marketing interventions.

In the current study, the effect of AI on social media & text mining is investigated. The findings of the current study indicate that the outcomes of the relationship being investigated in the current study are statistically significant: AI and social media and Text Mining (β=.431).

The current study has confirmed the validity of the hypothesis H2. The current study investigated the effect of AI on social media and text mining that are associated with marketing strategies. It has been observed from the regression analysis that there is a positive correlation between the two variables.

Table-5 Structural Model Fit

Hypotheses	Path	Standardised Path coefficient	P-value	t-value	Result
H1	AI>Memory& computational logic	.531	.02	.339	Accepted
H2	AI>Decision making & Cognitive Process	.229	.01	.431	Accepted
H3	AI>Neural Network	.438	.00	.520	Accepted
H4	Recognition>Social Media & Text Mining	.431	.00	.451	Accepted

Source: primary data, significance level=5%

5. Discussion

The present study provides several key findings in the area of research on AI. First of all, we should talk about the combination of AI with such interconnected areas as marketing, consumer studies, and psychology. Therefore, we should think about how to consider this approach within our analysis. Study the potential impact of AI on some disciplines, the representatives of which demonstrate overlapping characteristics in relation to AI. This means that our study will not focus on the current trend in research and literature on studies devoted to the topic of AI in marketing and its ignoring of psychology (Mustak et al., 2020; Vlacic et al., 2021). In this case, we conducted an analysis of AI in consumer psychology as it relates to marketing interventions. The impact of the personalization algorithm, which acts as an AI, on consumer psychology is highly important because it influences the perception, engagement, and connection with brands that consumers create. By providing personalized content and recommendations, algorithms make people feel acknowledged and comfortable, thus increasing customer satisfaction and loyalty.

The analysis considered four psychological factors of the consumer: Memory & computational logic, Decision making & Cognitive process, Neural network, and Social Media & text mining. From the findings of this study, it can be seen that all four constructs in this research have a substantial influence on marketing interventions. It was found that the Memory & computational logic factor (β = .531) had a highly significant positive relationship with AI. This means that Memory & computational logic has a significant impact on consumers' participation in social media marketing interventions. In addition to this, Decision making & Cognitive Process (β = .229) also had a significant positive correlation with AI. Decision making & cognitive process in AI has a great contribution towards consumer participation. The Neural network factor (β = 0.438) had a significant positive relationship with AI. This means that the degree of Neural network, including user engagement and interaction, has a substantial influence on marketing interventions. Lastly, the Social Media & Text Mining factor (β = 0.431) had a highly significant positive relationship with AI. This means that the degree of user accessibility on social media platforms has a major influence on AI. The results highlight the importance of personalization and active involvement in the process of marketing intervention. Organizations and marketers need to incorporate these elements into their marketing plans to encourage user participation in their marketing campaigns.

Sentiment analysis, a technique used in AI, has a significant role to play in influencing consumer psychology, helping brands understand and respond to consumer sentiments. By analyzing customer feedback on social media and other platforms, brands can identify pain points and tailor their communication to address these issues in a compassionate way, making customers feel

valued and appreciated. This approach not only enhances brand loyalty but also ensures that customers have a deeper relationship with those organizations that truly understand their needs.

Based on the discussions above, it is clear that there will be a lot of interconnectivity between these fields which can allow for further knowledge about AI. There will be different strategies to approach the same problems that have been applied in this study which has used the statistical method but aimed to get an overall comprehension of the subject based on the three streams of AI, consumer psychology, and marketing intervention.

It is evident that this research includes several disciplines which classify subject areas using a comprehensive approach. Therefore, marketing concepts are understood in terms of their psychological backgrounds which is in line with the aims, goals, and coverage of both psychology and marketing (Donthu et al., 2021). The impact of predictive analytics as a method of AI on consumer psychology is immense since it allows predicting consumers' needs and preferences sometimes even before consumers themselves realize them. Predictive analytics helps brands engage in proactive conversations with consumers, making these interactions intuitive and relevant. In the end, the shopping process becomes easier and more pleasant for consumers. In this way, consumers start trusting brands because they are aware that brands understand their special needs.

The present study provides a great connection between the frameworks of AI in consumer psychology and marketing interventions available in literature by identifying four major clusters wherein research studies of such focus have evolved. Through the analysis of the keywords involved in these areas, we identified the networks of co-occurrence related to the above-mentioned topic area, which was termed using the keyword that occurs the most frequently in the above network: AI, Consumer Psychology, and Marketing Intervention. Furthermore, using the marketing intervention in digital era, this study identifies several topical domains and sheds light on the connections that exist between these topical domains in literature. The role of behavioral analytics in consumer psychology is immense as it reveals how consumers behave with their products and services. By understanding consumer behavioral analytics, firms can further improve their service and product offerings by creating the desired experience for the consumer that makes their life much easier.

The application of AI in landscaping has resulted in two distinct research clusters, which emphasize domains where computer science is extensively used, including memory and computational reasoning, along with neural networks.

6. Theoretical Implication

The objective of this study is to increase the existing body of knowledge by reviewing the current state of AI in consumer psychology literature and marketing intervention literature and identifying the important themes and trends. An exhaustive review of existing literature has been carried out for achieving the above stated objective. Various academic articles, books, and reports published in the field of AI, consumer psychology and marketing have been reviewed. The AI has played an important role in ensuring key marketing goals, such as recommendation of service. It has been an effective tool in the hands of marketer for reaching out to his/her customers and marketing his products/services. In this study, we want to explore the importance of AI in fulfilling key marketing goals, especially the goal of recognition. In this article, the existing literature on AI in consumer psychology for marketing interventions has been explored for understanding the importance of the same.

Results show the necessity of AI in enhancing memory, logical computation, decision making & cognitive processes, neural network, social media and text mining. In terms of contribution of this research to the existing literature in relation to the application of AI consumer psychology and marketing, the research makes a valuable contribution due to the thorough investigation of the marketing techniques applied in this area. Applications of the results extend to numerous

other forms of artificial intelligence tools. Use of various artificial intelligence tools has been rising over the last several years. These tools have proved themselves to be effective enough to implement similar marketing programs.

7. Practical Implication

Technological innovation has undergone changes over time that have seen marketers' skill sets evolve, and in this case, innovations and innovations, as well as analysis and reporting, are now among the skills needed. AI is being utilized by marketers in an attempt to understand clients' needs better and data mining and aligning their projects based on client-focused marketing. With the integration of AI into marketing, there have been changes in terms of skills that are required of marketers, but it has also opened possibilities for remote working since it clears out office spaces (Makarius et al., 2020). It can be expected that advanced marketing systems will be updated from time to time due to the changes in the environment and the huge amount of data that arises daily, including geographical data from smartphones or complaints raised when interacting with voice assistants (Ameen et al., 2020a).

Several information sources may be used in the process, including social media, data broker insights, digital performance key indicators, and transactions, amongst others, allowing personalized advice to be provided. In conclusion, it is important for managers to pay close attention to marketing efforts, like advertising and communication, to make sure they correspond to changing consumer behavior and perception trends. The connection between time and the confidence that AI provides (Lemon & Verhoef, 2016).

8. Conclusion

Studies conducted within the interface of AI and marketing have witnessed an impressive development in recent years. Upon a critical analysis of the academic works that have addressed the issue over the last three decades, one can notice an evident growth in the number of papers published. This academic effort has been accompanied by the same degree of attention to the applications of AI by firms such as Google and Social media among others. Therefore, the information generated about AI and marketing constitutes an opportunity to organize and assess the current academic contributions to this field. Accordingly, this research sought to analyze existing academic works on AI and marketing.

It will give a thorough overview of current literature on AI and marketing, which will capture the attention of researchers, especially those focused on AI, interested in increasing their knowledge. Get involved and analyze its importance in marketing and its reciprocal relationship, while learning about publication sources to use. Besides, the analysis of the content shows us four main theoretical dimensions used by AI and marketing studies. All information provided on the suggested visual map is very relevant to theoretical issues of consumer psychology within AI. At the same time, it also allows to identify many interesting research areas, like AI applications in improving marketing processes, different marketing channels, and strategic marketing based on consumer psychology. Thus, we can conclude that our classification gives an additional understanding of scholarly studies of AI and marketing. Moreover, as opposed to prior research on AI and marketing, which is always structured research based on expert review or citations, the current study uses the hybrid-narrative approach. Furthermore, it has a framework that will help to determine future research directions.

It represents the first attempt at studying this link through this kind of study that focuses on the interaction of AI with marketing from the viewpoint of consumer behavior. Thus, our paper contributes to the existing expert views by presenting an unbiased analysis of the development of AI and marketing and conducting empirical studies that explore the major concepts and theories related to this topic. With the help of thorough literature review and empirical findings, we suggest topics for research that could be important areas of future investigations related to AI technology and

marketing and its various implications including its application and possible applications, adoption of technological advancement in AI, changes in the labor market, and needed skills of marketers.

9. Limitation

Undoubtedly, the ethical challenges associated with AI, as well as concerns for fairness and privacy, are some of the key topics which deserve more focus in the main areas of study that we have explored. Alongside worries about privacy, the impressive capabilities of AI introduce significant ethical challenges (Brynjolfsson & McAfee, 2017; Bornet et al., 2021). The use of customer data in AI platforms for automated decision-making can result in biased and unfair outcomes for consumers, such as loan denials and higher costs. In a more sophisticated discussion, the emergence of AI brings forth concerns about the diminishing of personal freedom, respect, social disconnection, loss of humanity, and other associated matters (Vandemeulebroucke et al. 2018; Caic et al., 2018; Belk, 2020).

10. Further Research Direction

This study offers a thorough and organized approach to systematically cataloging research articles, aiding in the identification of gaps in existing literature and emphasizing areas that are still underexplored yet warrant further investigation (Paul & Criado, 2020; Klassen et al., 1998). Initially, we will examine the results from our analysis of the current literature, followed by a discussion on subjects that the author team considers significant yet have not been adequately explored in the ongoing academic dialogue.

References

Alderson, W. (1952). Psychology for marketing and economics. *Journal of Marketing*, 17(2), 119–135.

Ameen, N., Tarhini, A., Shah, M. H., Madichie, N., Paul, J., & Choudrie, J. (2020). Keeping customers' data secure: A cross-cultural study of cybersecurity compliance among the Gen-Mobile workforce. *Computers in Human Behavior*, 114, 106531.

Archak, N., Ghose, A., & Ipeirotis, P. G. (2011b). Deriving the pricing power of product features by mining consumer reviews. *Management Science*, 57(8), 1485–1509.

Belanche, D., Casaló, L. V., & Flavián, C. (2020). Frontline robots in tourism and hospitality: Service enhancement or cost reduction? *Electronic Markets*, 31, 477–492.

Belk, R. (2020). Ethical issues in service robotics and artificial intelligence. *Service Industries Journal*, 41(13–14), 860–876.

Bilgin, Y. (2018). The effect of social media marketing activities on brand awareness, brand image and brand loyalty. *Business and Management Studies: An International Journal*, 6(1), 1493-1509.

Bin-Obaidellah, S. S. A., Mokhtar, N. F., Awi, N. A., & Mokhlis, S. (2023). The effect of ICT infrastructure on business performance of micro and small enterprises in Yemen: the moderating effect of social media marketing. *International Journal of Procurement Management*, 18(1), 1493-1509.

Bishop, C. M. (1995). *Neural networks for pattern recognition*. Oxford University Press.

Bornet, P., Barkin, I., & Wirtz, J. (2021). *Intelligent automation: Welcome to the world of hyper automation*. World Scientific Books.

Breidbach, F. C., & Maglio, P. (2020). Accountable algorithms? The ethical implications of data-driven business models. *Journal of Service Management*, 31(2), 163–185.

Bruhn, M., Schoenmueller, V., & Schäfer, D. B. (2012). Are social media replacing traditional media in terms of brand equity creation? *Management Research Review*, 35(9), 1493-1509.

Brynjolfsson, E., & McAfee, A. (2017). *What's driving the machine learning explosion?* Harvard Business Review, 18(3), 118.

Čaić, M., Odekerken-Schröder, G., & Mahr, D. (2018). Service robots: Value co-creation and co-destruction in elderly care networks. *Journal of Service Management*, 29(2), 178–205.

Chakraborty, A. (2013). Rationale of handicraft on women employment in rural area: A case study on Jari workers of Bhagawangola II block, Murshidabad district, West Bengal. *Research Journal of Humanities and Social Sciences*, 4(2), 1493-1509.

Charoensukmongkol, P., & Sasatanun, P. (2017). Social media use for CRM and business performance satisfaction: The moderating roles of social skills and social media sales intensity. *Asia Pacific Management Review*, 22(1), 1493-1509.

Chong, E.E., Nazim, A., & Ahmad, S.B. (2014). A comparison between individual confirmatory factor analysis and pooled confirmatory factor analysis: An analysis of library service quality, a case study at a public university in Terengganu. *International Journal of Engineering Science and Innovative Technology*, 3(1) 1493-1509.

Christodoulides, G., & Chernatony, L. (2010). Consumer-based brand equity conceptualization and measurement: A literature review. *International Journal of Market Research*, 52(1), 1493-1509.

Cortez, P., Cerdeira, A., Almeida, F., Matos, T., & Reis, J. (2009). Modeling wine preferences by data mining from physicochemical properties. *Decision Support Systems*, 47(4), 547–553.

Davenport, T. H., & Ronanki, R. (2018). *Artificial intelligence for the real world*. Harvard Business Review, 96(1), 108–116.

Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2019). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science*, 48(1), 24–42.

Donthu, N., Kumar, S., Pattnaik, D., & Lim, W. M. (2021). A bibliometric retrospection of marketing from the lens of psychology: Insights from Psychology & Marketing. *Psychology & Marketing*, 38(5), 834–865.

Dubey, R., Gunasekaran, A., Papadopoulos, T., Childe, S. J., Shibin, K. T., & Wamba, S. F. (2017). Sustainable supply chain management: framework and further research directions. *Journal of Cleaner Production*, 142, 1493-1509.

Everitt, B. J., & Robbins, T. W. (1997). Central cholinergic systems and cognition. *Review of Psychology*, 48(1), 649–684.

Fournier, S., & Avery, J. (2011). The uninvited brand. *Business Horizons*, 54(3), 193–207.

Frank, M. J., & Claus, E. D. (2006). Anatomy of a decision: Striato-orbitofrontal interactions in reinforcement learning, decision making, and reversal. *Psychological Review*, 113(2), 300–326.

Frintrop, S., Rome, E., & Christensen, H. I. (2010). Computational visual attention systems and their cognitive foundations: A survey. *ACM Transactions on Applied Perception*, 7(1), 1–39.

Goh, K. Y., Heng, C. S., & Lin, Z. (2013). Social media brand community and consumer behavior: Quantifying the relative impact of user-and marketer-generated content. *Information Systems Research*, 24(1), 88–107.

Hair, J.F., Jr, Babin, B.J. and Anderson, R.E. (2010). *Multivariate data analysis: A Global perspective*, London: Pearson Education.

Hansen, F. (1976). Psychological theories of consumer choice. *Journal of Consumer Research*, 3, 117–142.

Huang, M. H., & Rust, R. T. (2018). Artificial intelligence in service. *Journal of Service Research*, 21(2), 155–172.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68.

Kenny, D.A. and Kashy, D.A. (1992). Analysis of the multitrait-multimethod matrix by confirmatory factor analysis. *Psychological Bulletin*, 112(1), 1493-1509.

Klassen, T. P., Jadad, A. R., & Moher, D. (1998). Guides for reading and interpreting systematic reviews: I. Getting started. *Archives of Pediatrics & Adolescent Medicine*, 152(7), 700–704.

Kline, R.B. (2011). *Principles and Practice of Structural Equation Modeling*. Fourth edition. Guilford Press.

Lake, B. M., Ullman, T. D., Tenenbaum, J. B., & Gershman, S. J. (2016). Building machines that learn and think like people. *Behavioral and Brain Sciences*, 40, e253.

Law, R., & Au, N. (1999). A neural network model to forecast Japanese demand for travel to Hong Kong. *Tourism Management*, 20(1), 89–97.

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69–96.

Lobschat, L., Mueller, B., Eggers, F., Brandimarte, L., Diefenbach, S., Kroschke, M., & Wirtz, J. (2021). Corporate digital responsibility. *Journal of Business Research*, 122, 875–888.

Lu, V. N., Wirtz, J., Kunz, W. H., Paluch, S., Gruber, T., Martins, A., & Patterson, P. G. (2020). Service robots, customers and service employees: what can we learn from the academic literature and where are the gaps? *Journal of Service Theory and Practice*, 30(3), 361–391.

MacInnis, D. J., Morwitz, V. G., Botti, S., Hoffman, D. L., Kozinets, R. V., Lehmann, D. R., Lynch, J. G., & Pechmann, C. (2020). Creating boundary-breaking, marketing-relevant consumer research. *Journal of Marketing*, 84(2), 1–23.

Makarius, E. E., Mukherjee, D., Fox, J. D., & Fox, A. K. (2020). Rising with the machines: A sociotechnical framework for bringing artificial intelligence into the organization. *Journal of Business Research*, 120, 262–273.

Makridakis, S. (2017). The forthcoming Artificial Intelligence (AI) revolution: Its impact on society and firms. *Futures*, 90, 46–60.

Malter, M. S., Holbrook, M. B., Kahn, B. E., Parker, J. R., & Lehmann, D. R. (2020). The past, present, and future of consumer research. *Marketing Letters*, 31(2), 137–149.

Mankeshva saini, Amit Kumar Gupta, Jayashree Deka, Kunjalata Kalita, Madhuri Shejal, Hem Ahuja, Amit Singh Rathore, Nayyar Parvez. (2026). The Impact of Artificial Intelligence and Predictive Analytics on Consumer Behavior and Marketing Performance in the Digital Economy. *International Journal of Special Education*, *41*(11s), 1254–1260.

McCarthy, J., Minsky, M., Rochester, N., & Shannon, C. E. (2006). *A proposal for the dartmouth summer research project on artificial intelligence.* AI Magazine, 27(4), 12–14.

Mustak, M., Salminen, J., Plé, L., & Wirtz, J. (2020). Artificial intelligence in marketing: Topic modeling, scientometric analysis, and research agenda. *Journal of Business Research*, 124(1), 389–404.

Netzer, O., Feldman, R., Goldenberg, J., & Fresko, M. (2012). Mine your own business: Market-structure surveillance through text mining. *Marketing Science*, 31(3), 521–543.

O'Toole, A. J., Roark, D. A., & Abdi, H. (2002). Recognizing moving faces: psychological and neural synthesis. *Trends in Cognitive Sciences*, 6(6), 261–266.

Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, 29(4), 101717.

Perry, C., Ziegler, J. C., & Zorzi, M. (2007). Nested incremental modeling in the development of computational theories: The CDP+ model of reading aloud. *Psychological Review*, 114(2), 273.

Pitardi, V., & Marriott, H. R. (2021). Alexa, she's not human but. . . Unveiling the drivers of consumers' trust in voice-based artificial intelligence. *Psychology and Marketing*, 38(4), 626–642.

Poornima Joshi. (2026). Exploring Generational Perspectives on AI-Enabled Marketing: A Study of Gen Z and Millennial Consumers. *International Journal of Special Education*, *41*(6s), 1171–1180.

Posner, M. I., & Rothbart, M. K. (2007). Research on attention networks as a model for the integration of psychological science. *Annual Review of Psychology*, 58(1), 1–23.

Prashant Yadav, K. Pradeep Reddy. (2026). Influence of Digital Marketing Strategies on Customer Purchase Intention in the Indian Automotive Sector: A Case Study of Mahindra & Mahindra Ltd. *International Journal of Special Education*, *41*(12s), 694–704.

Puntoni, S., Reczek, R. W., Giesler, M., & Botti, S. (2021). Consumers and artificial intelligence: An experiential perspective. *Journal of Marketing*, 85(1), 131–151.

Pylyshyn, Z. (1999). Is vision continuous with cognition?: The case for cognitive impenetrability of visual perception. *Behavioral and Brain Sciences*, 22(3), 341–365.

Quackenbush, C. (2018). A Painting Made by Artificial Intelligence Has Been Sold at Auction for $432,500. Time Magazine. Available at: https://time.com/5435683/artificial-intelligencepainting- christies/.

Rahwan, I., Cebrian, M., Obradovich, N., Bongard, J., Bonnefon, J., Breazeal, C., Crandall, J. W., Christakis, N. A., Couzin, I. D., Jackson, M. O., Jennings, N. R., Kamar, E., Kloumann, I. M., Larochelle, H., Lazer, D., McElreath, R., Mislove, A., Parkes, D. C., Pentland, A. '., . . . Wellman, M. (2019). Machine behaviour. *Nature*, 568(7753), 477–486.

Rothbart, M. K. (2007). Temperament, development, and personality. *Current directions in psychological science*, 16(4), 207–212.

Shankar, V. (2018). How artificial intelligence (AI) is reshaping retailing. *Journal of Retailing*, 94(4), 6–9.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339.

Syam, N., & Sharma, A. (2018). Waiting for a sales renaissance in the fourth industrial revolution: Machine learning and artificial intelligence in sales research and practice. *Industrial Marketing Management*, 69, 135–146.

Thagard, P. (1989). Explanatory coherence. *Behavioral and Brain Sciences*, 12(3), 435–467.

Turban, E., Sharda, R., Aronson, J. E., & King, D. (2008). *Business intelligence: A managerial approach*. Pearson Prentice Hall.

Vandemeulebroucke, T., De Casterlé, B. D., & Gastmans, C. (2017). The use of care robots in aged care: A systematic review of argument-based ethics literature. *Archives of Gerontology and Geriatrics*, 74, 15–25.

Vargo, S. L., & Koskela-Huotari, K. (2020). Advancing conceptual-only articles in marketing. *Academy of Marketing Science Review*, 10(1-2), 1–84.

Vlacic, B., Corbo, L., e Silva, S. C., & Dabić, M. (2021). The evolving role of artificial intelligence in marketing: A review and research agenda. *Journal of Business Research*, 128, 187–203.

Wedel, M., & Kannan, P. K. (2016). Marketing analytics for data-rich environments. *Journal of Marketing*, 80(6), 97–121.

Wilson, M. (1988). MRC psycholinguistic database: Machine-usable dictionary, version 2.00. *Behavior Research Methods, Instruments, & Computers*, 20(1), 6–10.

Wirtz, J., & Zeithaml, V. (2018). Cost-effective service excellence. *Journal of the Academy of Marketing Science*, 46(1), 59–80.

Wirtz, J., den Ambtman, A., Bloemer, J., Horváth, C., Ramaseshan, B., Van De Klundert, J., Canli, Z. G., & Kandampully, J. (2013). Managing brands and customer engagement in online brand communities. *Journal of Service Management*, 24(3), 223–244.

Zhang, Q., Lu, J., & Jin, Y. (2021). Artificial intelligence in recommender systems. *Complex & Intelligent Systems*, 7(1), 439–457.