

From Customer Relationships to AI Companionships: Transforming Marketing with Feeling AI

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Abstract

Emotions with a product or service strongly influence consumer behaviour. Conventional marketing relied on user-centred designs to achieve loyalty. In the past few decades, firms have deployed AI-enabled technologies to create, communicate and deliver value. Algorithms could initially perform mechanical and thinking-oriented tasks only. However, recent developments have empowered machines with feeling intelligence to understand user emotions. Thus, the current article examines the literature on the emerging scope for feeling AI in marketing. Additionally, this study introduces the 'Five Wheels of Feeling Marketing', a conceptual model and a strategic 'FEELING' framework, designed to transition traditional businesses into enterprises driven by feeling AI.

Key Words

Feeling AI, Emotional AI, Artificial Empathy, Affective Computing, Chatbots

Introduction

In a podcast with McKinsey's David DeLallo, the author of the book *Heartificial Empathy* Minter Dial says, 'Businesses with empathy within their culture turn out to earn net positive benefit along with the rise in their stock prices' (DeLallo & Dial, 2020). Therefore, after employing AI for years to perform cognitive activities, firms are now turning towards deploying machines with emotional intelligence (Bagozzi et al., 2022). Experts predict that the market size for emotional recognition will jump 12.9% by 2027 (Gossett, 2023). Affective computing, also known as emotional AI, is the field encompassing both the creation of and the interaction with machine systems that sense, recognize, respond to and influence emotions (Picard, 2000), and the applications extend to AI and robots capable of recognizing and reacting to human emotions (Caruelle et al., 2022). Huang and Rust (2021b) first used the term 'Feeling AI' to describe the type of intelligence designed by marketers to enhance firm–customer interaction, including the analysis of human feelings and emotions. Feeling AI has emerged as a significant force in marketing and enables companies to be empathic to each consumer (Goldenberg & Gross, 2020). Modern products and services include feeling AI, such as digital assistants, automobiles, games, mobile phones, wearable technology and smart toys (McStay, 2020a). Sensors detect emotional

cues by measuring physiological data, such as skin temperature and galvanic resistance (Caruelle et al., 2022). AI-powered systems with empathy and emotional quotients became crucial in the emerging feeling economy (Huang & Rust, 2021a). While traditional algorithms were trained to retrieve helpful information, AI can now form relations with users (Chaturvedi et al., 2024). Conversational agents have evolved as companions designed with feeling AI, such as Replika, Mitsuku and Xiaoice (Chaturvedi et al., 2023). Firms strive to make customer interface more adept at responding to emotional needs. For example, the MIT Media Lab ELSA understands users' emotions and improves users' mental health (Liu-Thompkins et al., 2022). Marketing executives comprehend consumers' emotions and consider them valuable (McStay, 2020b). For instance, Affectiva's Affdex technology recognizes emotions and can assist staff members in understanding customers' emotions. Real eyes use optical sensors and cameras to study head pose, face direction, palpebral aperture (eyelid openness), gaze direction and facial expressions to reveal significant insights into customer emotions during the service. The Lightbulb, a startup in 2020, offers marketers to detect speech sentiments, voice tonality, text sentiments, facial expressions and eye tracking of customers (Gahlaut, 2023).

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Early studies, such as Gadanho and Hallam (2001), found that artificial emotions are significant in the case of behaviour-based autonomous agents, as they offer unifying ways to tackle the natural system's emotions. Rocks et al. (2009) demonstrate performance improvements, including entertainment, social support and thought-provoking solutions through robots. Larue et al. (2013) explain neuro-modulations in artificial agents, resulting in emotional expressions. Echoing Larue's research, Rosales et al. (2019) proposed the theory of artificial emotion systems (AES) and conceptualized emotion cycles of AES as a function of three constructs including evaluation of emotional stimuli, recognition of emotions and modulation of behaviour.

However, from the marketing perspective, understanding and catering to consumers' emotional states through AI is a new phenomenon. Recently, researchers have examined feeling AI-enabled technologies in robots, autonomous agents, mental health systems, customer service agents, AI companions and immersive advertisements to enhance consumer emotions towards the firms (Chaturvedi et al., 2023, 2024; Liu-Thompkins et al., 2022; Mogaji et al., 2020; Park et al., 2023; Stock-Homburg, 2022). Despite researchers' increasing interest in feeling AI, the findings are fragmented and scattered across disciplines. A comprehensive understanding of the existing literature on feeling AI is essential. Also, a strategic framework guiding firms for artificial empathy is missing from the existing literature. Therefore, a conceptual review of the extant literature on feeling AI is urgently needed. The current article consolidates the body of knowledge, allowing researchers and practitioners to gain insights into the various applications, challenges and future directions of feeling AI. Additionally, a strategic framework termed the 'FEELING' framework is proposed in the study to offer strategic insights.

The rest of the article is organized into seven sections. Initially, we describe the literature search methodology and then answer the question, Why feeling AI in modern businesses?, by explaining the 'Five Wheels of Feeling Marketing'. Further, we discuss the theories used in the feeling AI literature. The next section delves into the themes of literature and discusses four major knowledge clusters. Then, we develop a conceptual framework highlighting the antecedents, mediators, moderators and outcomes in the field of feeling AI for marketing. Next, we propose a novel strategic framework termed 'FEELING' that explains modern marketing's seven feeling strategies (FSs). Finally, we summarize the article in the conclusion section.

Methodology

The current article examines a complete corpus of papers relevant to feeling AI in marketing. Starting with identifying documents about feeling AI in marketing, the source type of publications was restricted to journal articles. Other sources, such as books and book chapters and conference

proceedings, tend to be more explanatory rather than contributory and, thus, are not considered for the review. Scopus is used as a source quality because of its stringent criteria for indexing publications (Lim et al., 2022) and is chosen over alternatives such as Web of Science due to its more comprehensive coverage of scholarly literature (Paul et al., 2021). The advantage of Scopus is that it can be utilized for both searching and acquiring materials. The search was done in September (2024), and search keywords were curated through a brainstorming session by academic experts, which included keywords relating to feeling AI ('Digital Emotions' OR 'Artificial Emotions' OR 'Artificial Empathy' OR 'Emotional AI' OR 'Feeling AI' OR 'AI companion*' OR 'AI friend*'). In total, 525 documents were returned from the search string on Scopus. The filters in Scopus were used as a system of classification and organization in this study. Language, document type, source type and subject area were the four specific organizing codes for the papers. Authors selected documents that were (a) written in 'English' and (b) classified as 'articles' or 'reviews' as document types and limited the search to publications in 'journals' only, as alternative source types such as conference proceedings may not be intended to contribute to knowledge. As discussed above, the exclusion and inclusion criteria followed, and a total of 221 documents were returned. Articles focused on feeling AI and marketing were considered for the review, and thus, two authors manually filtered the documents by reading the abstract, title and keywords that matched the target concept and finalized 143 articles for the review.

Why Feeling AI in Modern Marketing?

The extant literature is focused on how autonomous systems can recognize human emotions and respond accordingly. However, only a few attempts have been made to present reasoning as to why feeling AI is essential for businesses specifically. The current study postulates that firms in Industry 4.0 are emerging with advance technologies and are exposed to opportunities to understand consumer emotions like never before. Emotion recognition, empathetic agents, virtual influencers, AI companions and EmoGen AI are revolutionary applications that enable firms to establish their brands in the feeling marketing landscape. The tools act as five wheels (see Figure 1) for firms to drive customers seamlessly throughout their shopping journeys.

1. *Emotion recognition technologies:* Managers assess customer feelings during various touchpoints to offer a superior shopping experience (Lemon & Verhoef, 2016). Most firms depend on quantitative surveys to measure customer sentiments. Consumers in the modern world shop from e-commerce platforms relative to conventional shopping stores, use online food delivery apps instead of traditional

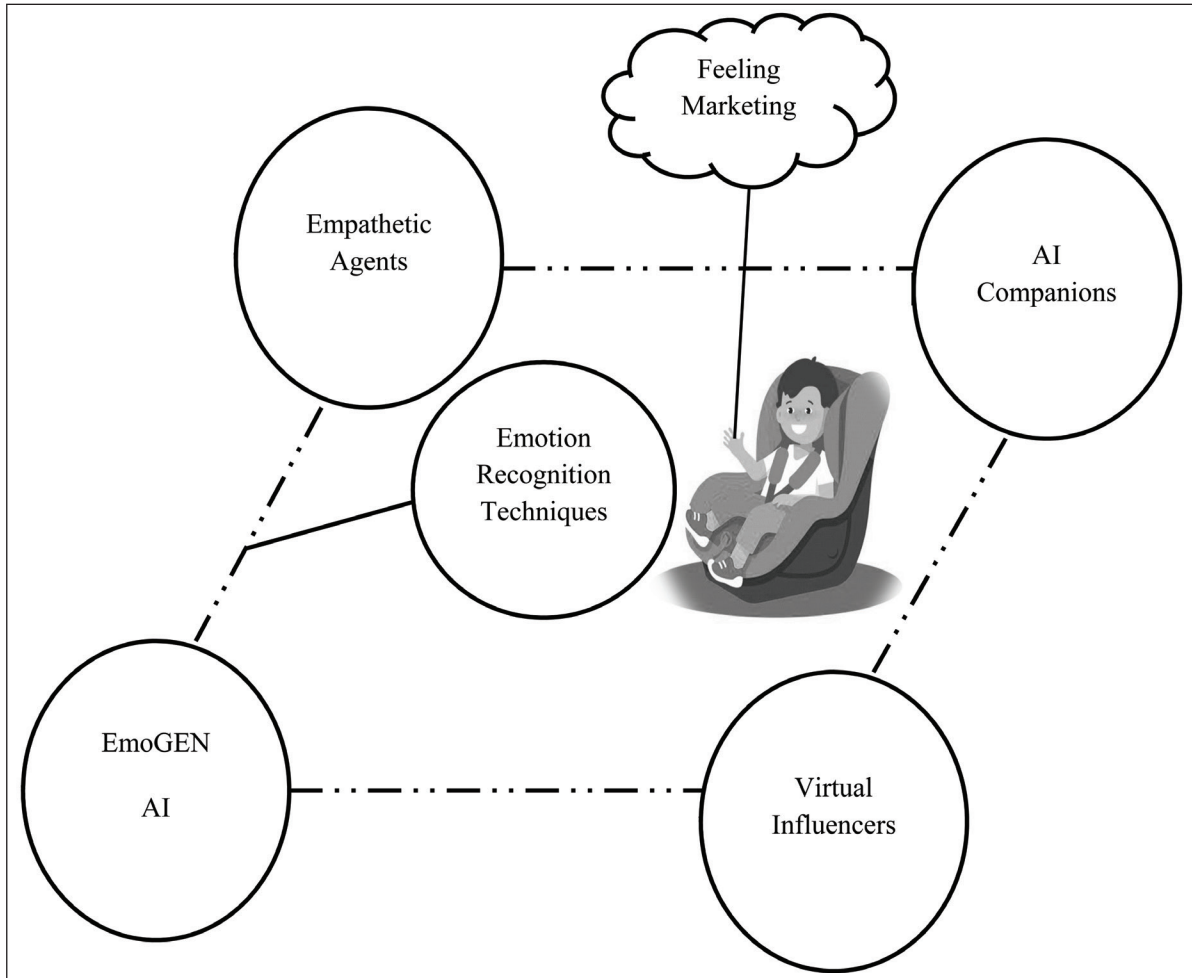


Figure 1. Five Wheels of Feeling Marketing.

ordering from the restaurants, call Uber and Ola cars relative to the earlier way of finding a taxi nearby and switch from conventional television broadcast to web series or movies from over the top (OTT) platforms such as Netflix, Amazon Prime, etc. (Shah & Shay, 2019). Digital platform services offer firms an abundance of consumer data and have expanded the role and scope of marketing in creativity, relevancy, analytics capability, accountability and technology (Shah & Murthi, 2021). Such change enables firms to evaluate consumer data in more qualitative formats, such as consumer reviews, chatbot interaction and employee–customer conversations. Feeling AI with the sentiment analysis of speech and text offers firms valuable insights (Zaki et al., 2021).

2. Empathetic agents: Firms replace human employees with chatbots as service agents to answer customer queries. Chatbots follow a fixed conversation style required to fulfil the possible queries that customers could ask. Despite saving time and effort for customers, they still pose various challenges to be solved (Chaturvedi & Verma, 2023). For example, customers report a lack of human touch in the

service and cannot relate to chatbots. However, recent studies demonstrate that artificial empathy can provide human-like affective responses and social experiences (Liu-Thompkins et al., 2022). Artificial empathy expresses positive emotions and can influence customers by using the affective pathway of emotional contagion (Han et al., 2023).

3. Virtual influencers: Businesses prefer social media to advertise and promote because of its wide acceptance and usage. For their commercials, marketing firms rely on ‘Influencers’ or ‘celebrities’ who are people with large followings and persuasive power on social media networks and can influence individual emotions (Ki et al., 2020). Compared to roughly 45% on TikTok and Facebook, nearly 70% firms use influencers on Instagram for their marketing campaigns. With current predictions of US\$ 16.4 billion and an 18.84% rise from 2021, influencer marketing is a relatively new but quickly expanding industry (Santora, 2023). A new phenomenon known as virtual influencers emerged because of ongoing innovation in influencer marketing. Virtual influencers are software-driven characters who can persuade others, usually through marketing

partnerships or involvement in social media campaigns and are solely produced and consumed through digital platforms (Sands et al., 2022). Despite not physically existing in the actual world, they are computer-generated imagery (CGI) characters or interactive AI avatars who act and resemble human influencers in several functionalities (i.e., online content sharing, brand promotions, product reviews and can be followed by others) but are not humans (Mrad et al., 2022). According to a recent study, virtual influencer posts receive three times as many likes or comments as those from real (human) influencers (Conti et al., 2022). Therefore, brands such as Samsung, Prada, Renault and IKEA have flooded Instagram with digital avatars over the last three to four years, showcasing their dedication to innovation and creativity. Lil Miquela, who openly admits she is not human, is currently the most well-known virtual influencer. She has amassed over 3.1 million followers. This ‘forever 19-year-old Robot living in LA’ was created in 2016 by the transmedia company Brud. It collaborates with high-end fashion labels like Prada, engages with actual people like Bella Hadid in a Calvin Klein advertisement and sings (Dickinson & Drinevskaya, 2023). Modern marketing strategists require virtual avatars and influencers who recognize, understand and express human emotions to create a more significant impact. Imagine a virtual character girl of a brand who can express human-like emotions through text, speech, photos and videos.

4. AI companions: AI companions are advanced conversational agents that can provide free-form conversations of a friendly or romantic variety to establish emotional connection with the users (Freitas et al., 2022). AI companions that can build long-term relationships with users such as Replika, Mitsuku and Xiaoice can transform the consumer–brand relationships as never before (Chaturvedi et al., 2024).

5. EmoGen AI: The recent revolutionary shift in the modern marketing era can be observed as the emergence of generative AI. Open AI’s large language model ChatGPT gained one million users five days after its launch. GenAI’s capabilities, such as creating original content, establishing more extended conversations, understanding long sentences, performing user tasks, etc., enable it to transform conventional marketing. For example, the Google search engine now provides users with Gemini (earlier Google Bard), a GenAI platform offering easy content search options. Similarly, Microsoft’s Copilot assists users with generating images from text, creating new content, etc. The new era is of technology, where AI can create images, videos, text, etc. Even AI can now create music and songs. A famous Indian female singer, the Late Lata Mangeshkar’s, voice is recreated these days with the help of GenAI. However, the future is a fusion of feeling AI and GenAI that can create emotional content based on users’ mood. Imagine your phone can recognize your mood and create videos and pictures on social media. Currently, social media reels are

videos of user likings; the future of social media is of new content created with the help of GenAI and feeling AI. We term this fusion of emotional AI and generative AI as ‘EmoGen AI’, which unfolds new avenues and opportunities for marketing researchers to delve into.

The five wheels of feeling AI can drive consumers seamlessly through the customer journey. Therefore, marketers need to shift their focus from traditional marketing strategies to new *feeling marketing* strategies. The current article attempts to develop seven feeling strategies that can provide a pathway to transform a conventional firm into a modern enterprise running on the feeling framework. However, let us first understand theories and emerging themes from the existing literature. The following sections outline theories and then unfold five themes emerging out of the literature on feeling AI for marketing.

Theories for Feeling AI in Marketing

The theories that are applicable in the field of feeling AI for marketing are presented in Table 1. The table signifies that the domain’s foundations lie in two main fields: first, psychology, for example, appraisal theory of emotions, theory of expressions, uncanny valley theory, self-determination theory, theory of mind and implicit theory of emotion and, second, sociology, for example, social penetration theory, social identity theory and computers are social actors. The mentioned theory in the literature provides a pathway to future researchers in exploring the dynamics of consumer behaviour with the feeling AI–facilitated environment in organizations.

Themes in Feeling AI for Marketing

The current study employs the bibliographic coupling technique, which uses document references for analysis (Lim et al., 2022). Various documents with common referencing patterns combine to form bibliographic couples that reflect a common theme (Chaturvedi et al., 2023). Bibliographic coupling is the most suitable alternative to keyword co-occurrence analysis and to formulate current literature insights (Chaturvedi et al., 2023). Noteworthy, the bibliographic coupling of feeling AI for marketing reveals four major thematic clusters, discussed in the following subsections (Table 2).

Cluster 1: Designing Artificial Emotions

The first cluster entails the design of artificial emotions, encompassing various perspectives. The 10 most cited documents in this cluster include Scherer (2001), Stock-Homburg (2022), Larue et al. (2013), Rosales et al. (2019), Cardon (2006), Korcsok et al. (2018), Tsankova (2009),

Table 1. Top Articles in the Bibliographic Coupling of Feeling AI for Marketing.

Cluster 1: Designing Artificial Emotions	Author	Year	Citations
Emotional experience is subject to social and technological change: extrapolating to the future	Scherer	2001	26
Survey of emotions in human–robot interactions: perspectives from robotic psychology on 20 years of research	Stock-Homburg	2022	17
A general theoretical framework for the design of artificial emotion systems in autonomous agents	Rosales et al.	2019	14
Artificial consciousness, artificial emotions and autonomous robots	Cardon	2006	12
Biologically inspired emotional expressions for artificial agents	Korcsok	2018	8
Emotional intervention on an action selection mechanism based on artificial immune networks for navigation of autonomous agents	Tsankova	2009	8
Empathetic speech synthesis and testing for healthcare robots	James et al.	2021	7
Research on the agent's behaviour decision-making based on artificial emotion	Yang and Zhen	2014	4
A cybernetical perspective on emotion–cognition interactions as self-directed adaptation in situated decision-makers	Schneider	2018	3
Cluster 2: Relational Experience with Feeling AI			
Intelligent humanoid robots expressing artificial human-like empathy in nursing situations	Pepito et al.	2020	18
Artificial emotions and love and sex doll service workers	Belk	2022	11
Artificial empathy in marketing interactions: bridging the human–AI gap in affective and social customer experience	Liu-Thompkins et al.	2022	9
AI companions for lonely individuals and the role of social presence	Merrill et al.	2022	9
My AI friend: how users of a social chatbot understand their human–AI friendship	Brandtzaeg et al.	2022	8
Regulating care robots	Blake	2019	5
Rethinking communication in the era of artificial intelligence	Sundar and Lee	2020	4
Ideal technologies, ideal women: AI and gender imaginaries in Redditors' discussions on the Replika bot girlfriend	Depounti et al.	2023	2
Effect of AI chatbot emotional disclosure on user satisfaction and reuse intention for mental health counselling: a serial mediation model	Park et al.	2023	2
Loving a 'defiant' AI companion: the gender performance and ethics of social exchange robots in simulated intimate interactions	Leo-Liu	2023	1
Cluster 3: Feeling AI in Robots			
Robotic transformative service research: deploying social robots for consumer well-being during Covid-19 and beyond	Henkel et al.	2020	83
The philosophical case for robot friendship	Danaher	2019	36
Social robots to support children's well-being under medical treatment: a systematic state-of-the-art review	Moerman et al.	2019	34
Artificial intelligence in early childhood education: a scoping review	Su and Yang	2022	33
Hedonic quality or reward? A study of basic pleasure in homeostasis and decision-making of a motivated autonomous robot	Lewis and Canamero	2016	21
Advanced programming of intelligent social robots	Malerba et al.	2019	7
Heart robot, a public engagement project	Rocks et al.	2009	7
Humanoid robot-assisted interventions among children with diabetes: a systematic scoping review	Lau et al.	2020	6
A systematic literature review of decision-making and control systems for autonomous and social robots	Maroto-Gómez et al.	2023	1
Artificial intelligence as a double-edged sword: wielding the power principles to maximize its positive effects and minimize its negative effects	Chen and Lin	2023	1
Cluster 4: Strategic Implications of Feeling AI			
Engaged to a robot?: the role of AI in service	Huang and Rust	2021a	240
A strategic framework for artificial intelligence in marketing	Huang and Rust	2021b	197
How smart should a service robot be?	Schepers et al.	2022	15
Exploring expressivity and emotion with artificial voice and speech technologies	Pauletto et al.	2013	10
AI as customer	Huang and Rust	2022	5
Audio and visual analytics in marketing and artificial empathy	Lu et al.	2022	1
Digital emotion contagion	Goldenberg and Gross	2020	78
Digital emotion regulation	Wadley et al.	2020	35
Impact of the global pandemic upon young people's use of technology for emotion regulation	Tag et al.	2022a	6
Emotion trajectories in smartphone use: towards recognizing emotion regulation in the wild	Tag et al.	2022b	3

Table 2. Theories in Feeling AI for Marketing.

Year	Field	Theory	Origin	Example
1950	Psychology	Appraisal theory of emotions	Arnold (1950)	Rosales et al. (2019)
1995	Psychology	Theory of expression	Scherer (1995)	Pauletto et al. (2013)
1970	Psychology	Uncanny valley theory	Mori (1970)	Belk (2022)
2000	Psychology	Self-determination theory	Ryan and Deci (2000)	Lau et al. (2020)
2001	Psychology	Theory of mind	Scholl and Leslie (2001)	Larue et al. (2013)
2007	Psychology	Implicit theory of emotion	Tamir et al. (2007)	Tag et al. (2022a, b)
1973	Sociology	Social penetration theory	Altman and Taylor (1973)	Park et al. (2023)
1986	Sociology	Social identity theory	Tajfel and Turner (1986)	Stock-Homburg (2022)
2000	Sociology	Computers are social actors (CASA)	Nass and Moon (2000)	Brandtzaeg et al. (2022)

James et al. (2021), Yang and Zhen (2014) and Schneider (2018), with 26, 17, 16, 14, 12, 8, 8, 7, 4 and 3 citations, respectively.

Scherer (2001) introduced five interconnected subsystems: appraisal, arousal, expression, action tendencies and feelings. The author defined emotional episodes as sequential changes within subsystems. Furthermore, the paper explored the elicitation of emotions in senders (whether human, fictional characters or AI agents) through appraisal, expression, induction, empathy and contagion.

Stock-Homburg (2022) conducted a literature survey on emotions in human–robot interactions, identifying three emerging research streams: robotic expressions of artificial emotions, human recognition of artificial emotions and human responses to artificial emotions.

Several articles delve into the design of artificial emotions in autonomous agents. For instance, using computer models, Larue et al. (2013) conducted experiments on neuromodulations, including serotonin, dopamine, norepinephrine and acetylcholine. Their findings revealed that emotional words as an input to the system led to longer response times in normal and depressed conditions, akin to the phenomenon observed in humans during emotional Stroop tasks.

Rosales et al. (2019) proposed a conceptual framework for artificial emotion systems (AES) comprising components that impact the feelings and emotional behaviour of the agent. Cardon (2006) discussed the transposition of consciousness into artificial brains through three subsystem architectures: the physical action system, the system of representation and the input systems. Korcsok et al. (2018) developed an abstract emotion model for agents, encompassing surprise, fear, anger, happiness, sadness and neutral emotions. The articles by Tsankova (2009), Yang and Zhen (2014) and Schneider (2018) shed light on the neurological aspects of designing artificial emotions.

In addition to textual expressions, including voice features in robots holds value for providing empathetic responses to individuals. James (2021) investigated robot voices and found that people prefer empathetic voices in healthcare robotics.

Cluster 2: Relational Experience with Feeling AI

The second cluster encapsulates user relational experience with feeling AI. The top 10 most cited documents in this cluster are Pepito et al. (2020), Belk (2022), Liu-Thompkins et al. (2022), Merrill et al. (2022), Brandtzaeg et al. (2022), Blake (2019), Sundar and Lee (2022), Depounti et al. (2023), Park et al. (2023) and Leo-Liu (2023).

The cluster highlights the significance of artificial emotions on user–AI relations. Pepito et al. (2020) demonstrated that affective developmental robotics could express relatable artificial empathy to patients in the context of nursing robots, which received the highest citations in the cluster. Brandtzaeg et al. (2022) conducted a qualitative study on 19 respondents to examine the nature of human–AI friendship. The results revealed that human–AI friendship could be compared with human–human friendship in terms of four identified themes: reciprocity, trust, similarity and availability. Similarly, Liu-Thompkins et al. (2022) make a remarkable attempt to develop a conceptual framework for the impact of artificial empathy on social customer experience. The study unveils three significant components of artificial empathy: perspective-taking, empathetic concern and emotional contagion. The authors found that systems powered by feeling AI reduce the human–AI gap and lead to positive firm outputs such as customer well-being, customer relations, customer experience and customer loyalty. Park et al. (2023) found that emotional disclosure increases user satisfaction in the case of mental health counselling services through AI-based chatbots.

Merrill et al. (2022) found that the social presence feature of AI results in greater perceived usefulness of disembodied AI companions. Feeling AI can play a vital role in empowering marketing. Blake (2019) identified the areas that need strengthening to offer efficient services by robots. The author emphasized vital stakeholders, including service owners that offer care robots, manufacturing units that design such robots and government agencies. Belk (2022) developed a strategic model with artificial emotions to enhance effectiveness in sex robot services.

The author also provides profound managerial implications while marketing such unexplored services.

Cluster 3: Feeling AI in Robots

The third cluster highlights research on feeling AI in robotics. The top most cited documents in this cluster are Henkel et al. (2020), Danaher (2019), Moerman et al. (2019), Su and Yang (2022), Lewis and Canamero (2016), Malerba et al. (2019), Rocks et al. (2009), Lau et al. (2020), Maroto-Gómez et al. (2023) and Chen and Lin (2023) with 83, 36, 34, 33, 21, 7, 7, 6, 1 and 1 citations, respectively. Henkel et al. (2020) investigates the role of social robots in offering consumer well-being for vulnerable customer groups such as older adults and children. The authors introduced typologies for social robotic transformative services, including entertainers, mentors, friends and social enablers.

Lewis and Canamero (2016) examined the role of pleasure in a robot's decision-making process. The authors found that pleasure unrelated to need satisfaction increases viability and flexibility for robot adaptive behaviour. Danaher (2019) challenges the assumption that robots cannot be friends of humans as they lack real feelings and just express fake emotions through algorithms. The author argues that human-robot friendship is philosophically reasonable and plausible in various roles. Human-robot relationship is also leveraged for user well-being. For example, Moerman et al. (2019) found that social robots positively influence a child's well-being in a hospital environment. Lau et al. (2020) identified five different roles played by humanoid robots for children with diabetes: disease manager, educator, advocator, emotional supporter and communicator. Apart from healthcare, robots with feeling AI help children in their early education. Su and Yang (2022) found feeling AI to be a significant tool to help children with learning. They found that emotionally imaginative teaching, emotional inquiry and emotion detection methods enhance artificial intelligence-based learning for children.

Cluster 4: Strategic Implications of Feeling AI

The fourth cluster highlights strategic implications of feeling AI in marketing. The topmost cited documents in this cluster are Huang and Rust (2021a, 2021b), Schepers et al. (2022), Pauletto et al. (2013), Huang and Rust (2022), Lu et al. (2022), Goldenberg and Gross (2020), Wadley et al. (2020) and Tag et al. (2022a, 2022b), with 240, 197, 15, 10, 5, 1, 78, 35, 6 and 3 citations, respectively.

Huang and Rust (2021a) developed a strategic framework using three levels of artificial intelligence (mechanical, thinking and feeling) and catch the highest citations in the cluster. The authors highlighted the potential use of feeling AI in service marketing, including relationship leadership, service

interaction and hedonic service offerings. Similarly, Huang and Rust (2021b) delve into marketing strategies for three levels of intelligence. They conceptualized strategic marketing decisions with artificial intelligence and postulated that feeling AI improves customer understanding, rationalization and positioning. Taking the three bits of intelligence ahead in the context of service robots, Schepers et al. (2022) conducted three studies. They found that feeling AI relates more strongly with positive emotions for the consumers. The study provided valuable insights for service marketing and found that feeling AI benefits full-service providers. Research on feeling AI for conversational systems, service robots and autonomous agents opens vast arrays of applications for marketing in terms of customer relationships, customer experience and customer loyalty. However, another flip to this emerging technology is AI acting as the firms' consumers. Huang and Rust (2022) discuss two types of AI customers: first is termed 'AI-enhanced customers', who are humans influenced by AI environments such as AI-driven social media, and the other is termed 'truly autonomous AI customers' such as Sophia, a humanoid robot.

Chatbots emerge as effective platforms for feeling AI to connect with consumers. Pauletto et al. (2013) found that there is a need to identify right questions to design artificial intelligent systems that can process and express authentic human emotions. However, feeling AI is not limited to chatbots but is also a concept related to AI-driven social media content.

Consumers tend to get influenced by the social media content uploaded by other users. Goldenberg and Gross (2020) highlight the impact of expressor emotion (in social media) on the perceiver's (the user's) emotions. Digital emotion contagion includes both AI expressors and human expressors on social media platforms. Wadley et al. (2020) further emphasized the impact of digital technologies on user emotions through a concept termed 'digital emotion regulation'. Similar studies by Tag et al. (2022a, 2022b) reveal that changing digital habits due to social isolation and pandemic fosters emotion regulations in adolescents. Both digital emotion contagion and digital emotion regulation emerge as beneficial areas from marketing scholars' point of view, as they unfold new consumer psychology angles such as AI-enhanced customers.

Towards a Conceptual Framework

The current article on feeling AI in marketing proposes a conceptual framework that has emerged from the content analysis of the articles used for the review. The framework details the antecedents, mediators, moderators and outcomes pertaining to feeling AI for marketing and thus provides foundational knowledge to future researchers and scholars. (see Figure 2) Noteworthy, although the framework presents a comprehensive view of feeling AI in marketing, this should not be considered as all-inclusive; rather, it

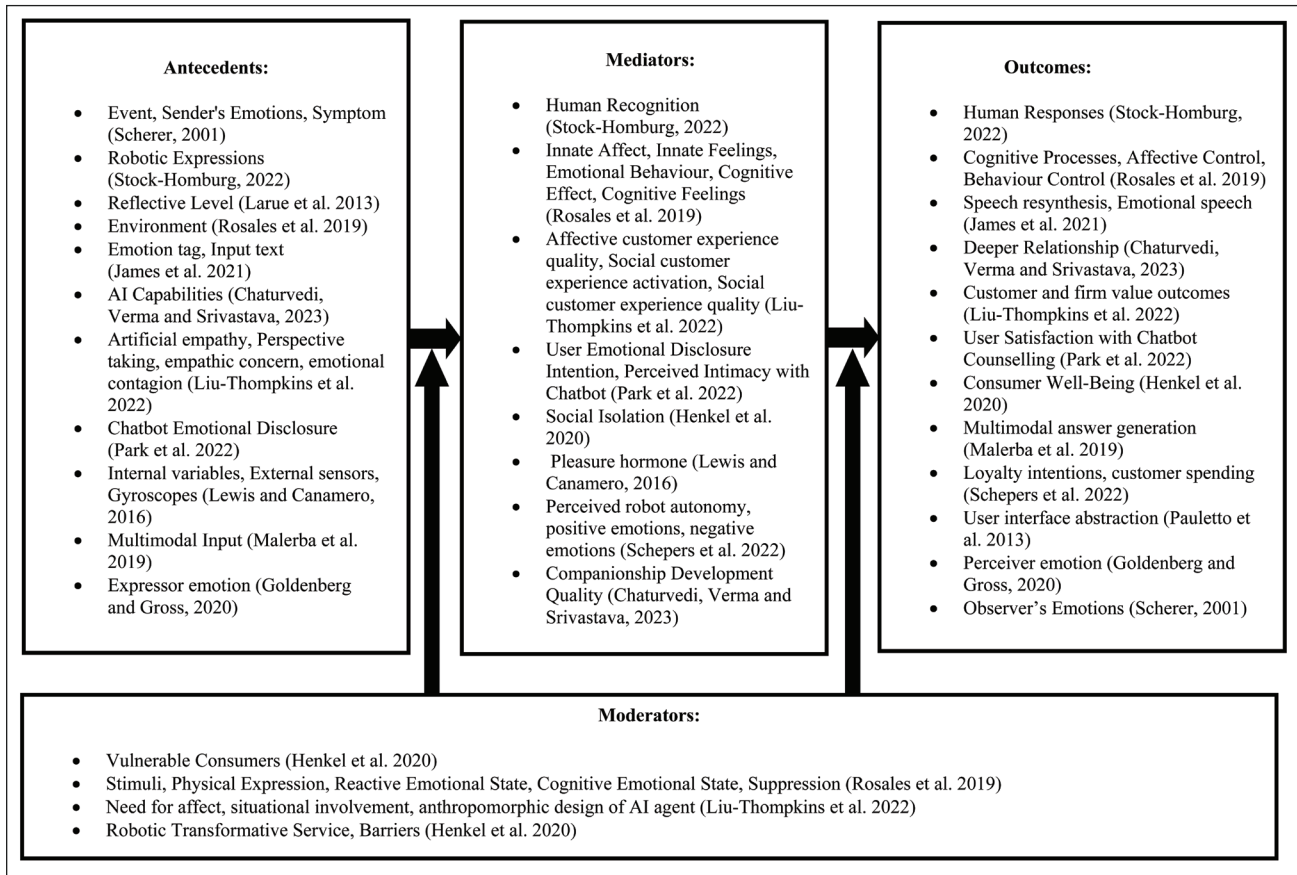


Figure 2. Conceptual[C E14] Framework for Feeling AI in Marketing.

should be viewed as a source of elemental knowledge that future researchers can utilize to expand the existing boundaries of the domain.

Antecedents

Antecedents are determinants of the outcomes, and their effects on the outcome variables can be mediated and moderated by intervening variables. The current research has identified the following antecedents from research articles: event, sender's emotions, symptom (Scherer, 2001), robotic expressions (Stock-Homburg, 2022), reflective level (Larue et al., 2013), environment (Rosales et al., 2019), emotion tag, input text (James et al., 2021), artificial empathy, perspective taking, empathic concern, emotional contagion (Liu-Thompkins et al., 2022), AI capabilities (Chaturvedi et al., 2024), chatbot emotional disclosure (Park et al., 2023), internal variables, external sensors, gyroscopes (Lewis & Canamero, 2016), multimodal input (Malerba et al., 2019) and expressor emotion (Goldenberg & Gross, 2020).

Mediators

Mediators are intervening factors that define the nature of relationship between antecedents and outcome. The study

identifies mediators such as human recognition (Stock-Homburg, 2022), innate affect, innate feelings, emotional behaviour, cognitive effect, cognitive feelings (Rosales et al., 2019), affective customer experience quality, social customer experience activation, social customer experience quality (Liu-Thompkins et al., 2022), user emotional disclosure intention, perceived intimacy with chatbots (Park et al., 2023), social isolation (Henkel et al., 2020), pleasure hormone (Lewis & Canamero, 2016), perceived robot autonomy, positive emotions, negative emotions (Schepers et al., 2022) and companionship development quality of chatbots (Chaturvedi et al., 2024).

Moderators

Moderators influence the degree of relationship between antecedents and outcomes, antecedents and mediators, and mediators and consequences. The moderators identified are vulnerable consumers (Henkel et al., 2020), stimuli, physical expression, reactive emotional state, cognitive emotional state, suppression (Rosales et al., 2019), need for affect, situational involvement, anthropomorphic design of AI agent (Liu-Thompkins et al., 2022), robotic transformative service and barriers (Henkel et al., 2020).

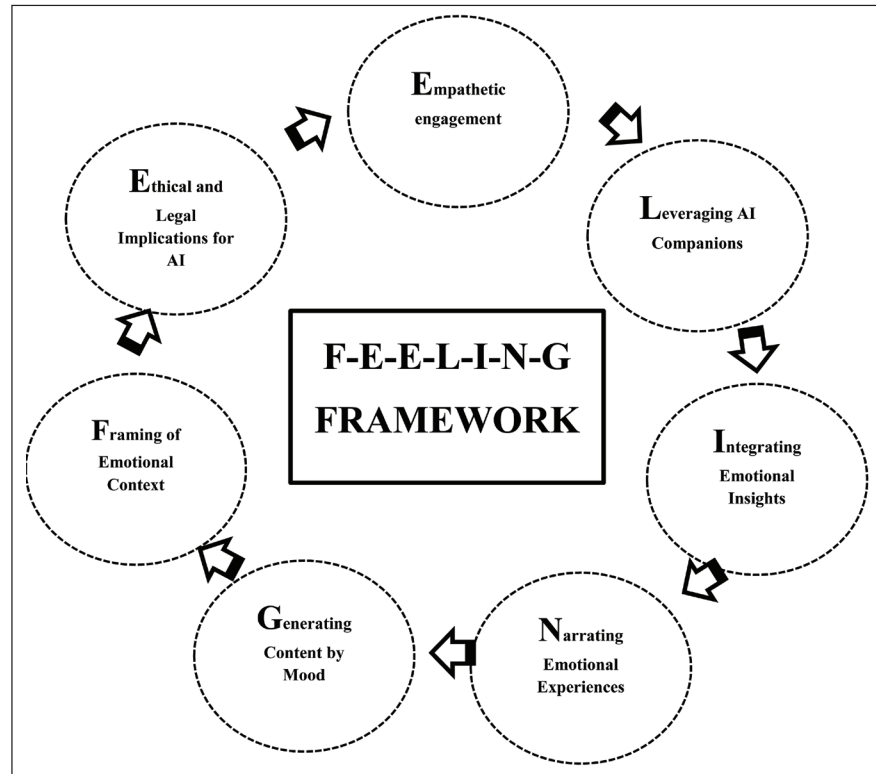


Figure 3. Strategic Feeling Framework for Modern Marketing.

Outcomes

Outcomes are the factors that result from the influence of antecedents and intervening variables such as mediators and moderators. The outcomes identified in the study are observers' emotions (Scherer, 2001), human responses (Stock-Homburg, 2022), deeper relationship (Chaturvedi et al., 2024), cognitive processes, affective control, behaviour control (Rosales et al., 2019), customer and firm value outcomes (Liu-Thompkins et al., 2022), user satisfaction with chatbot counselling (Park et al., 2023), consumer well-being (Henkel et al., 2020), loyalty intentions, customer spending (Schepers et al., 2022), user interface abstraction (Pauletto et al., 2013) and perceiver emotion (Goldenberg & Gross, 2020).

The Strategic Feeling Framework for Modern Marketing

The extant literature suggests to transform business practices with substantive improvements by implementing feeling AI. Despite numerous studies on feeling AI, a strategic comprehensive framework to guide firms was found to be missing in the literature. This review proposes a FEELING framework (Figure 3) for modern marketing firms grounded on the conceptual framework explained in the previous section and implications of emerging AI applications: feeling AI (Huang & Rust, 2021b), AI companions (Chaturvedi et al.,

2024), generative AI (Kshetri et al., 2023) and ethical AI (Hermann, 2022). The framework outlines seven feeling strategies (FSs) of modern marketing that holistically define a course of action to achieve happy and loyal customers. Each FS is represented in a circle. FSs are framing of emotional context, ethical and legal implications for AI, empathetic engagement, leveraging AI companions, integrating emotional insights, narrating emotional experiences and generating content by mood.

'F': Framing of Emotional Context

Mapping emotional touch points in the customer journey is the foundation of any firm (Mele et al., 2021). Understanding senders' emotions is a significant step towards achieving happy customers, and various types of data could be utilized at this stage (Scherer, 2001). First is input text data available as customer reviews, blogs, comments and text conversations through chatbots or employees (James et al., 2021). Second is multimodal input in the form of audio-visual data available as consumer-recorded calls, voice notes, audios and videos on social media (Malerba et al., 2019). Third is expressors' emotions in the form of facial expressions of customers while availing the service (Goldenberg & Gross, 2020). Sentiment analysis on such data acquired from the blogs, reviews and other platforms can reveal valuable insights to the firm on how to improve upon facilitating consumers with happy and positive emotions.

FS1: Feeling marketing has its foundation in framing of emotional context by tapping upon emotional data throughout the customer journey.

‘E’: Ethical and Legal Implications for AI

The first step of mapping emotions and moods in the customer journey is FS1 (Figure 1). Emotion recognition systems allow firms an access to emotional data of consumers, which causes serious ethical and legal challenges. For example, general data protection regulations (GDPR) apply in the case of personal data fed to AI systems (Gremsl & Hödl, 2022). Firms with feeling AI must focus on AI for social good (Hermann, 2022). Despite having several benefits such as enhancing human agencies, increasing societal capabilities and cultivating societal cohesion, AI has risks to humans, such as devaluing human skills, removing human responsibilities, reducing human control and eroding human self-determination (Floridi et al., 2018). Therefore, FS2 closely relates to the ethical use of artificial intelligence, which focuses on lowering the risk of consumer harm due to autonomous technology.

FS2: Feeling marketing necessitates firms to behave in an ethically responsible manner for customers utilizing AI-driven services.

‘E’: Empathetic Engagement

FS3 focuses on the empathetic engagement of firms with their customers. Huang and Rust (2024) conceptualize customer care with feeling AI using four significant steps: emotion recognition, understanding, management and connection. The authors explain how customer care AI deployed with feeling AI can assist users with feeling expressions and maintain empathetic interaction during service. Artificial empathy-based customer services offer social and affective customer experience quality to the users (Liu-Thompkins et al., 2022).

FS3: Feeling marketing requires a firm’s AI to engage in empathetic interactions with customers during the customer journey.

‘L’: Leveraging AI Companions

FS4 calls firms to establish user–AI companionships to enhance customer relationships (Chaturvedi et al., 2023). AI companions are advanced conversational agents such as Replika, Mitsuku, Xiaoice, Gatebox and others which can establish long-term user relationships. Firms can launch their brand characters as AI companions that can provide social and emotional support to users. Imagine Kellogg’s Tony the Tiger, Walt Disney’s Mickey Mouse and Micheline’s Tire Man come to life with the help of companion technology and interact with users to provide

them with social support and fun. User–AI companionship can revolutionize’ brand–customer relationships, brand experience and brand loyalty that we know today (Chaturvedi et al., 2024).

FS4: Feeling marketing requires firms to leverage AI companions by creating brand characters that can deepen user–brand relationships and provide love and companionship to the users.

‘I’: Integrating Emotional Insights

Integrating emotional insights aims to elevate a firm’s performance through creating, communicating and delivering emotional value to its customers. This approach, denoted as FS5, entails the systematic collection, analysis and application of emotional data derived from customer interactions, as explained in FS1, to design new products, brands, logos services, promotional content and advertisements. For example, AI sends notifications to customers on weekends about discounts in more emotional contexts, such as emojis, regional language slang, etc. It also wishes customers their birth anniversary by sharing their memory with the brand, ‘This was the first item you ordered with us’ and a ‘picture of the item or meal’.

FS 5: Feeling marketing needs emotional integration that drives firms to tailor their promotional contents, logos, brand and new product offerings based on a deep understanding of their emotional insights gathered from customers.

‘N’: Narrating Emotional Experiences

Narrating emotional experiences denotes FS6, which highlights the strategic significance of storytelling in the context of feeling marketing (Mills & John, 2020). This feeling strategy focuses on connecting customers on an emotional level by narrating the customers’ emotional experiences with the brand. For example, Nestle’s Maggie used nostalgia stories on the packaging; first, they asked 90’s kids to share their childhood memories related to Maggie and then they used such stories on their packaging. Such narrating experiences enhance user connections with the brand. One of the authors of this article shares his childhood experience with McDonald’s restaurants in India. He explained:

In eighth grade, our school took us to nearby McDonald’s restaurant. My friends and I were thrilled, enjoying our burgers and soft-serve cones, when suddenly, my meal slipped off the table. It was really an embarrassing moment. My friends laughed but reassured me it was alright. However, the situation took a surprising turn, when a female staff approached me with a smile on her face and offered me a new order saying, ‘Please have this, sir; your food fell off, so this one’s on us’. That act of kindness transformed my view of McDonald’s, making it my top restaurant choice ever since

Now brands either use the customer blogs or reviews to collect such experiences from customers or can directly ask customers to share stories like this. Publication of such stories in packaging, TV advertisements, social media pages and other channels connects customers with the brand more emotionally.

FS6: Feeling marketing strategy includes AI, which narrates emotional experiences to the customers to establish stronger connections.

‘G’: Generating Content by Mood

FS 7 focuses on using generative AI to create content based on customer mood on social media as explained in the earlier sections of the article. This strategy revolves around the term ‘EmoGen AI’, a fusion of emotion AI and generative AI. Algorithm-driven social media platforms recommend video reels of user liking that are available online. For example, if someone is fond of watching food recipes, the algorithm will recommend new or alternative recipe videos available on the internet. However, GenAI can now create videos and images instead of sharing existing ones. What if, through emotion recognition techniques, AI can understand user moods and generate images accordingly?

Similarly, personalized advertising templates can be created and shared with users based on their moods. Suppose a schoolboy has just completed his final exams and is super-excited about his holidays. In that case, the emotion recognition data will sense the kid’s excitement and create videos of excited school kids coming out of the examination hall and looking for a refreshing trip in the upcoming holidays.

FS7: Feeling marketing includes generating content by mood using EmoGen AI to surprise customers with their needs and emotions.

Conclusion

The current study consolidates literature on feeling AI in marketing, an emerging field that advances artificial intelligence where machines can understand and respond to consumer emotions in a human-like manner. The study delves into literature and identified 143 articles on feeling AI in marketing published between 2001 and 2024. The article first developed a five-wheel analogy to ensure a seamless customer drive in the shopping journey. The emotion recognition technique is presented as the steering wheel that connects user emotions to businesses. Captured emotions of the customers can help managers and AI systems react in a specific way and address the desired emotional response to the customers. Next are four different technologies acting as power wheels in the analogy and include EmoGen AI (fusion of emotional and generative AI applications), empathetic chatbots (chatbots that can

understand and respond to emotions), AI companions (AI systems that can build long-term relationships with users) and virtual influencers (anthropomorphic digital characters for branding and promotion). The five wheels of feeling AI analogy contribute to theory and practice by offering an understanding of potential feeling AI tools that can help firms achieve happy customers. The current study also consolidates the theories used in the literature on feeling AI in marketing and finds that significant theories come from psychology and sociology. Further, the study conducts a thorough content analysis and bibliographic coupling of feeling AI in the marketing literature to reveal four significant knowledge clusters: designing artificial emotions, relational experience with feeling AI, feeling AI in robots and strategic implications of feeling AI. Next, the study utilizes the ADO framework method and develops a comprehensive conceptual model for feeling AI in marketing to unfold antecedents, mediators, moderators and outcomes of feeling AI technology. The conceptual model contributes to research and theory by offering key variables that play a significant role in achieving outcomes such as customer experience, loyalty and deeper relationship. However, transitioning from traditional business firms to feeling AI-driven firms requires new strategies. Thus, the study finally outlines seven feeling strategies (FSs) of modern marketing that holistically define a course of action to achieve happy and loyal customers. The strategic ‘FEELING’ framework offers policy and design implications to practitioners.

Limitations and Future Research Directions

The current study presents a consolidated overview of feeling AI in marketing literature through a systematic literature review. The review postulates that feeling AI is the future of marketing, wherein understanding and responding to consumer emotions with the help of artificial intelligent systems is the new normal. The anthropomorphic designs and affective computing techniques have accelerated the advancement of artificial intelligent systems and have enabled them with emotional quotients. In this regard, this review acts as an entry gate into the world of feeling machines and their applications in marketing, as well as the new research direction for scholarly community (Huang & Rust, 2021a, 2022, 2024).

The review offers foundational analogies, conceptual models and strategic frameworks based on the content and thematic analysis of the literature. Nevertheless, the review still remains limited in several ways. For example, this review is limited to the insights that could be revealed through a bibliographic coupling analysis, which is typically like a bird’s eye view on the field covering the breadth rather than the depth of the knowledge (Lim et al., 2022). Thus, future researchers can extend the study through

empirical investigations on consumer behaviour with feeling AI technology. Four thematic clusters; a comprehensive conceptual model with antecedents, mediators, moderators and outcomes; five-wheel analogy; and seven FEELING strategies unfold several future research directions for the scholarly community. For example, future research must investigate the role of virtual companionship in enhancing the customer relationship with the firm. How does each of the five wheels of feeling AI impact customer journey satisfaction? How can companies implement FEELING strategies in various business contexts? What products, services and consumer segments are highly sensitive to feeling AI? How can firms manage consumers' emotional data and privacy-related issues?

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