



**Artificial intelligence application and future research  
directions in interactive marketing**

Journal:	<i>Journal of Research in Interactive Marketing</i>
Manuscript ID	JRIM-07-2023-0231.R1
Manuscript Type:	Editorial
Keywords:	Interactivity, electronic commerce, value chain

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**1. Introduction**

Wang (2021) defines interactive marketing as “the bi-directional value creation and mutual-influence marketing process through active customer connection, engagement, participation and interaction”. Technology advancement, platform revolution, and social media have reshaped the field of interactive marketing. Technology advancement such as artificial intelligence (AI) has largely redefined consumer-brand interactive relations and facilitated shopping experience (Flavián, Ibáñez-Sánchez and Orús, 2019; Lim et al., 2023).

Artificial intelligence is defined as “the ability of a system to correctly interpret external data, learn from such data, and use these learnings to achieve specific goals and tasks through flexible adaptation” (Kaplan and Haenlein 2019, p.17). Artificial intelligence not only brings new opportunities, but also faces new challenges. It will have a huge impact on the future of the business world and society at large (Pelau, et al., 2023; Kaplan and Haenlein 2020).

For example, ChatGPT and GenAI have a profound impact on how the marketing industry operates (Peres et al., 2023). With the support of artificial intelligence, chatbots have been recognized as one of the key innovations in interactive marketing that marks a new era in how brands interact with consumers (Tsai et al., 2021). Chatbots are highly interactive and have become an indispensable part of today's interactive marketing practice (Tsai & Chuan, 2023).. They can not only provide 24/7 service to respond to consumers in real time, but also provide personalized content to engage consumers on a deeper level (Pelau, et al., 2023). Artificial intelligence applications and improvements enable companies to remain competitive, therefore, many companies have invested in it to facilitate various marketing-related tasks, such as

chatbots, ChatGPT, customer journey optimization, customer relationship management, image recognition, profiling, and strategic planning (Chiang et al., 2022; Hsieh and Lee, 2021; Jin and Eastin, 2023; Mustak et al., 2021; Payne et al., 2021; Peres et al., 2023; Tsai et al., 2021; Zhu et al., 2023; Zimmermann et al., 2023 ). This is an important topic that is currently being explored more by both academia and practitioners.

## 2. Special Issue Highlights

Despite the increasing research on AI, marketers still lack a cohesive understanding of how artificial intelligence is applied and how it should be applied in the future in interactive marketing. It is critical to identify theoretical advancement in the interactive marketing realm by both conceptual development and empirical findings to generate insights to contribute interactive marketing literature and managerial implications (Wang, 2022). Extant marketing studies use AI as an umbrella term covering machine learning, service robots, automation, big data, neural network, natural language processing, and the Internet of things (IoT) (Keng, et al., 2023; Mustak et al., 2021). To seek current and in-depth understandings of important topics in this area, this special Issue contains 8 articles that extend the growing research on artificial intelligence application within the domain of interactive marketing.

In their article titled “Corporate Digital Responsibility (CDR) in the Age of AI – Implications for Interactive Marketing”, Kunz and Wirtz (2024) define the concept of corporate digital responsibility (CDR) and explore how it is affected by new advances in AI. Their paper is one of the first articles in the service domain to define the concept of CDR and apply it to recent developments in generative AI. The paper also highlights several managerial implications for the challenges that AI poses to CDR.

Peltier, Dahl, and Schibrowsky (2024) provide a comprehensive review of artificial intelligence in the context of interactive marketing and develop an integrative AI framework for understanding value co-creation in interactive buyer-seller marketing relationships. Their framework includes three main components: (1) antecedents to AI usage (individual psycho-social factors, firm level factors, AI design factors, industry and market factors, and moderating factors), (2) interactive AI usage contexts (artificial intelligence cognitive applications, interactive marketing domains, and customer journey), and (3) AI-enabled value co-creation outcomes (individual customer outcomes and firm outcomes).

Huang and Chung (2024) examine the impact of midair, gesture-based somatosensory augmented reality (AR) experience on consumer delight and stickiness intention. In addition, they explore the mediating effects of three psychological states for body schema (i.e., natural symbol sets, vivid memory and human touch) on the relationships between somatosensory AR and consumer delight/stickiness intention.

In their article titled “How to Improve VR Tourism Adoption with Virtual Social Clues”, Zhu et al. (2024) examine the approaches to encourage tourists to adopt virtual reality (VR). Specifically, they investigate the effects of richness (multiple vs. few cues) and dynamic (changeable vs. static cues) on consumers’ willingness to adopt VR tourism. Their findings indicate that virtual social cues can generate mental imagery through interactivity, vividness, and parasocial interactions which in turn increases the consumer’s likelihood of adopting VR tourism.

Qu and Baek (2024) explore the conditions that affect consumers’ trust in the context of Virtual Influencers (VIs). Their findings reveal that attitudes toward a human-like VI are more

negative than attitudes toward a human influencer (HI) and negative attitudes toward VI can be avoided by adjusting the surrounding cues such as the type of companion and the background.

Swan, Peltier, and Dahl (2024) explore how digital transformations alter service models and care delivery methods in healthcare. More specifically, the authors examine patient perceptions of AI and its impact on value co-creation. Their findings indicate that the value co-creation process for AI technologies is a function of value co-creation operant resources, value co-creation engagement, and value co-creation outcomes.

Li et al. (2024) examine the impact of two dimensions of AI stimuli (perceived personalization and perceived interactivity) on customer stickiness. In addition, they extend this research by investigating the mediation effect of social presence on the impact of AI stimuli on customer stickiness as well as the moderation effect of customers' need for interaction and novelty seeking on the mediating effect of social presence.

Yim, Cui, and Walsh (2024) investigate how the different dimensions of the cuteness (baby schema cuteness and whimsical cuteness) of artificial intelligence (AI) agents influence consumers' attachment to AI agents. In addition, the authors investigate the effects of attachment to AI agents on the outcome variables such as commitment, proneness to follow suggestions, satisfaction and usage frequency.

### 3. Future Research Directions

The eight articles included in this special issue capture the latest theoretical and practical trends of artificial intelligence application in interactive marketing and highlight a series of research gaps that remained in this area. Therefore, we summarize some future research directions drawn from this special issue in Table 1 and hope this could accelerate the research progress of artificial

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intelligence in interactive marketing. We categorize these inquiries into three themes: AI and strategic marketing orientation, consumer adoption and engagement of AI, and human-AI interaction.

First, there are several urgent inquiries about the application and implication of artificial intelligence from a strategic perspective (Kunz and Wirtz, 2024; Peltier, Dahl and Schibrowsky, 2024). First, in the fast-changing market environment, understanding the impact of artificial intelligence adoption on the firm’s strategic orientation and how the firm’s strategic orientation shapes the firm’s acceptance of artificial intelligence, are essential in an interactive manner. As aforementioned, the latest development of AI brings new opportunities but also challenges to the marketing practice. Therefore, this dilemma should be captured through multiple perspectives, such as political, economic, social, technological, legal and environmental perspectives. Additionally, the interactive nature of artificial intelligence highlights the value co-creation of marketing practices (Swan, Peltier and Dahl, 2024). Future research should further explore the value co-creation effectiveness of AI-human interaction and examine the value co-creation process. Furthermore, Kunz and Wirtz (2024) highlight Corporate Digital Responsibility (i.e., CDR) in interactive marketing. It is particularly important to understand how CDR is measured and shapes the marketing practices of corporate.

Second, consumer adoption and engagement with artificial intelligence shapes modern marketing practices (Li et al., 2024; Huang and Chung, 2024). More precisely, the key drivers of consumer acceptance and advocacy of artificial intelligence are essential. Given the ever-popularization of artificial intelligence, after the heat, what are the essential reasons that drive consumers’ long-term engagement? As AI massively reshapes consumer behaviors through the customer journey,

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2  
3 it is essential to understand the key factors that shape consumer engagement and attachment  
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5 sustainably. Last but not least, existing research highlights individual differences in accepting  
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7 artificial intelligence in practice. While future research should further explore the differences  
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9 across consumer groups to identify the impact of individual differences on artificial intelligence  
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11 sustainably (Yim, Cui and Walsh, 2024).  
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14  
15 Last but not least, research captured in this special issue particularly emphasizes the human-AI  
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17 interaction across different industries (Zhu et al, 2024; Qu and Baek, 2024). First, the  
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19 effectiveness of anthropomorphic features needs to be further explored. Businesses have been  
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21 working hard on humanizing AI agents and robots in the past years, while ‘the more humanized  
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23 the better’ is still an open question. Additionally, artificial intelligence application has been  
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25 hugely doubted recently. Therefore, identifying the ethical barriers in AI development and  
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27 application is essential. Furthermore, articles in this special issue jointly highlight the industry-  
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29 specific factors in the adoption of artificial intelligence across different industries. Future  
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31 research could identify industry-specific insights to understand the impact of artificial  
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33 intelligence across industries.  
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Table 1. Future research directions for AIP

Future Research Directions	Potential Research Questions
<i>Strategic Marketing Orientation</i>	<ul style="list-style-type: none"><li>• What is the impact of artificial intelligence adoption on the firm’s strategic orientation, and vice versa, how does the firm’s strategic orientation shape the firm’s acceptance of artificial intelligence?</li><li>• How do the PESTLE (i.e., Political, Economic, Social, Technological, Legal and Environmental) factors affect and shape the adoption of artificial intelligence in the market?</li><li>• How does artificial intelligence contribute to value co-creation in interactive marketing?</li><li>• How does Corporate Digital Responsibility (i.e., CDR) is measured, and how CDR shapes the corporates’ adoption of artificial intelligence?</li></ul>
<i>Consumer Adoption and Engagement</i>	<ul style="list-style-type: none"><li>• What are the factors (e.g., cognitive, social, hedonic, utilitarian etc.) that motivate consumers’ adoption of artificial intelligence in interactive marketing?</li><li>• What are the key factors that drive consumers’ engagement (e.g., cognitive, emotional and behavioural) in artificial intelligence use in interactive marketing?</li><li>• What are the factors that affect consumers’ engagement and attachment to artificial intelligence?</li><li>• How do individual differences (e.g., personality traits, values, intelligence etc.) affect consumers’ acceptance and advocacy of artificial intelligence?</li></ul>
<i>Human-AI Interactions</i>	<ul style="list-style-type: none"><li>• How do anthropomorphic factors (e.g., voice, physical presence and actions) affect consumers’ acceptance and trust of artificial intelligence?</li><li>• What are the ethical barriers to AI assistant use across different industries (e.g., ChatGPT in education), and how do AI assistants can be adopted sustainably?</li><li>• How, and to what extent, can artificial intelligence be humanized to enhance consumers’ acceptance?</li><li>• What are the industry-specific factors (e.g., Babylon Health in the healthcare industry, ChatGPT in the education sector, Skyscanner Chatbot in the travel and tourism industry etc.) that shape the adoption of artificial intelligence across different industries?</li></ul>

Note: Table 1 was created by the authors based the contents of this special issue.



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