The Impact of AI-generated Content on Consumer Purchasing Intention

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Abstract. With the breakthrough development of artificial intelligence technology, Artificial Intelligence Generated Content has penetrated multiple sectors. According to survey results, by June 2025, the number of generative Artificial Intelligence (AI) users in my country is expected to reach 249 million, and the total number of 5G base stations will exceed 4.19 million, laying the foundation for scenario-based AI advertising applications. However, existing research has mostly focused on trends in AI advertising efficiency, with little exploration of the differentiated impact of product type on advertising effectiveness in "selective scenarios." This study employs a comparative experiment to investigate the effect of AI-generated content on consumer purchase intention and click-through rate. The study found that for functional goods, human-generated ads were more likely to arouse consumer interest than AI-generated ads; for hedonic goods, AI-generated ads were more likely to arouse consumer interest than human-generated ads. Using consumer perceived authenticity as a mediating variable, the experiment identified AI perception bias and proposed solutions.

Keywords: Purchase invention; AI-generated content; thinking style; authenticity perception.

1. Introduction

In recent years, the rapid development of artificial intelligence (AI) technology has impacted and transformed digital marketing and consumer behavior. AI has become an indispensable tool in business development. Artificial Intelligence Generated Content (AIGC), encompassing text, images, videos, and even virtual anchors, is now being applied across various e-commerce platforms and in advertising creatives. According to the 55th "Statistical Report on China's Internet Development," with Artificial Intelligence Generated Content penetration exceeding 17.7%, the advertising industry is undergoing a transition from "auxiliary tools" to "creative agents." Artificial Intelligence-Generated Content is influencing consumers' purchasing decisions in various forms, and the impact of AI-generated content has become a focus of both academic and industry research.

However, many researchers have overlooked the differentiated effects of AIGC in "choice scenarios." In the digital economy, especially when faced with a variety of product choices, consumers make fundamentally different decisions regarding functional goods (such as home appliances and daily necessities) and hedonic goods (such as luxury goods and travel experiences): functional goods rely on rational cognitive evaluation of value for money, while hedonic goods are more susceptible to emotional impulse buying. These technical characteristics and consumer psychology make the effectiveness of AI advertising complex and uncertain across different product categories.

This study breaks away from traditional AI advertising research perspectives, incorporating the Theory of Planned Behavior (TPB) and the Stimulus-Organism-Response (SOR) model to construct an analytical framework, revealing the dual nature of AI advertising's effectiveness. Testing the mediating role of emotional response and the moderating effect of information disclosure provides a new theoretical perspective for studying the psychological reactions to AI advertising. Furthermore, the research findings can serve as a direct basis for companies to develop differentiated advertising strategies, providing valuable guidance for balancing technological innovation and consumer trust.
This study focuses on "selective advertising scenarios," exploring whether AI-generated advertising influences consumer purchase intentions based on product type and how the emotional responses elicited by AI advertising influence purchase decisions. The research hypothesis is that AI advertising,

through its technological characteristics, triggers emotional responses in consumers, which in turn influences cognitive evaluations and behavioral intentions. However, this process may be moderated by product type and AI information disclosure.

2. Research Design

This experiment employed a mixed-methods design, employing a 2x2 between-group experiment. By manipulating ad source (AIGC/artificially generated) and product type (functional/hedonistic), it tested consumer purchase intention and clickthrough rates. Valid samples were collected using Chrome data. This study used consumer purchase intention as the dependent variable and designed four stimulus materials. The experimental variables were smart home (functional product) and perfume (hedonistic product), as well as whether AI was disclosed. The two ad groups maintained high consistency in visual presentation and copywriting structure (though the content differed). A 7-point scale was used to assess consumer purchase intention, pleasure, and arousal, controlling for demographic variables such as gender and age. Randomized grouping and a controlled questionnaire order were employed to minimize experimental interference. A trap question was included after each stimulus material to test response consistency in figure 1.

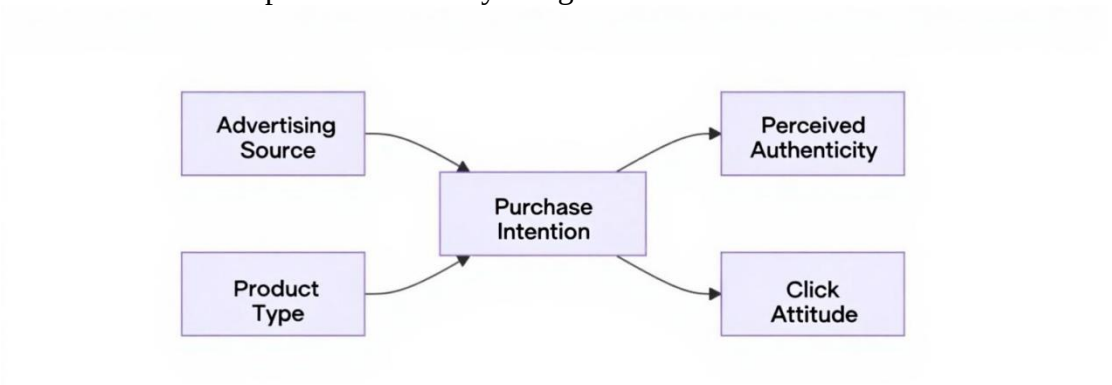

Fig. 1 Questionnaire concept (Picture credit: Original).

3. Results Analysis

This study employed a 2 (product type: functional/hedonistic) by 2 (advertising source: AI/human) between-group experimental design to collect a valid sample of netizens. A variance analysis was conducted using Chrome browser counts and Visual Studio Code tests. The results showed that in the functional goods category (e.g., home appliances and daily necessities), purchase intention for human-generated ads was significantly higher than for AI-generated ads (Mhuman = 5.15 vs. MAI = 5.10, $p < 0.05$). In the hedonistic goods category (e.g., high-end perfumes and travel experiences), purchase intention for AI-generated ads was significantly higher than for human-generated ads (Mhuman = 5.30 vs. MAI = 5.35). This difference persisted even after adjusting for potential confounding factors such as regional distribution and standardization of experimental materials. Further analysis revealed that AI-generated ads for hedonistic goods stimulated consumer interest by significantly increasing consumer pleasure. Mechanistically, AI ads significantly enhanced consumer emotional involvement in hedonistic goods. The creative expression advantages of AI-generated content have also been confirmed in cross-cultural research. In functional product advertisements, overly programmed AI expressions may weaken consumers' embodied perception of the reliability of the technology [1]. The moderating effect of information disclosure also reveals the "explanatory need" in consumer decision-making - when AI-generated attributes are explicitly labeled, consumers will initiate additional cognitive processing to evaluate the authenticity of the advertisement. This psychological process is particularly significant in the field of functional products involving high-involvement purchases [2]. Research data also shows that although AI advertising has shown

purchasing advantages in the field of hedonic products, its ability to regulate consumer emotional arousal is still limited - experimental data show that the average arousal level of hedonic AI advertisements is still lower than the neutral value, suggesting that AI technology still has room for improvement in terms of emotional stimulation. In contrast, artificially generated content in functional product advertisements effectively reduces consumer decision-making uncertainty through the precise presentation of technical parameters [3]. The advantage of this rational appeal is particularly prominent in the purchase scenario of durable consumer goods.

On the other hand, the mean purchase intention scores for the four groups ranged from 5.10 to 5.35 (on a 7-point Likert scale), potentially indicating a high level of consumer acceptance across the four ad types, without significant differentiation by product type or ad source. This phenomenon may be related to the "choice-based advertising" nature of the experimental scenario. Given a clear product type (functional vs. hedonic), consumers prioritized the alignment of ad content with product attributes (e.g., technical specifications for functional products, sensory descriptions for hedonic products) rather than the ad generation method (AI vs. manual), masking between-group differences in purchase intention. Although the data for the question results did not conform to a normal distribution ($p<0.01$), the homogeneity of variance test passed ($p>0.05$), and the sample size ($N=80$) was sufficient to support the robustness. Combined with the Welch's variance test ($p>0.05$), the insignificant differences in the between-group mean scores were further confirmed, indicating that under the current experimental design, neither the independent nor the interactive effects of product type and advertising source on purchase intention reached statistical significance.

Product type has a certain effect on regulating the effect of AI advertising. In the field of functional products, the purchase intention of artificially generated advertisements is relatively higher than that of AI-generated advertisements (5.15> 5.1), while in the field of hedonic products, the impact of AI-generated advertisements on consumer purchase intention is relatively smaller than that of artificially generated advertisements (5.3<5.35). This verifies the chain effect of technical characteristics in the SOR model on decision-making through emotional response (consumer pleasure and AI arousal), and reveals consumers' "explanatory needs" for AI advertising [4]. It can be concluded that for functional products, artificially generated advertisements are more likely to arouse consumers' purchasing interest than AI-generated advertisements [5]. For hedonic products, AI-generated advertisements are more likely to arouse consumers' purchasing interest than artificially generated advertisements. Overall, the research results verify the complex interaction between technical characteristics and consumer psychology: in the field of functional products, artificial advertisements have a higher impact on consumers' cognition of information credibility and the construction of rational decision-making paths; in the field of hedonic products, the creative expression of AI advertisements drives consumers' emotions [6].

On the other hand, the research results show that the Q4 data did not conform to a normal distribution (Shapiro-Wilk test $p<0.01$), but met homogeneity of variance (Levene test $p=0.527$). There was no significant difference in the mean purchase intentions across the four groups (AI hedonic products, AI functional products, artificial hedonic products, and artificial functional products), which does not fully support the initial hypothesis that "artificial advertising is more likely to arouse purchase interest in functional products, and AI advertising is more effective in hedonic products." Considering the experimental design and data characteristics, this may be because a single question in the questionnaire ("Do you think this ad is AI-generated?") heightened respondents' AI arousal, leading them to question whether the ad was AI-generated, thus distorting the experimental results. However, this differential effect provides important insights for companies in developing targeted advertising strategies: during the intelligent transformation process, technology application strategies must be dynamically adjusted based on product attributes, rather than simply pursuing full coverage of AI tools in all scenarios. Future research could further explore the synergistic effects of multimodal AI advertising (images, text, video, and audio) and the differences in consumer acceptance of AI-generated content across cultural contexts [7]. The study also revealed factors that

may affect the results, such as insufficient differentiation of experimental materials and single measurement variables, providing empirical basis for subsequent optimization [8].

The study has three limitations: First, the experimental materials were insufficiently differentiated, failing to fully capture differences between the two groups in key dimensions such as creativity and emotional depth, potentially weakening their impact on purchase intention. Second, the measurement variable was limited, with only one question related to consumer decision-making assessing purchase intention [9]. Intermediate psychological variables involved in the decision-making process (such as emotional reactions and cognitive evaluations) were not included, masking intergroup differences. Third, the sample was highly concentrated in East China (67%), potentially influenced by factors such as regional culture and consumer habits, limiting the experimental results. Future research needs to consider multiple aspects, including material design, expanded measurement indicators, and diversified sample selection, to further refine the research conclusions [10].

4. Conclusion

This study takes the impact of AI-generated content on consumer purchase intention as the research object. Through a 2 (product type: functional goods/hedonistic goods) × 2 (advertising source: AI/artificial) inter-group experimental design, a valid sample of 80 mobile Internet users was collected, focusing on the statistical characteristics and inter-group differences of the core variable "Do you have the intention to buy this product after watching this advertisement?" According to the M value, the purchase intention of artificially generated advertisements in the functional goods field is relatively higher than that of AI-generated advertisements (5.15> 5.1), and the impact of AI-generated advertisements on consumer purchase intention in the hedonistic goods field is relatively smaller than that of artificially generated advertisements (5.3<5.35), but the overall numerical difference is not large. Therefore, it can be concluded that the source of advertisements has a certain influence on consumer purchase decisions, but it is not significant. Therefore, at the practical level, companies need to rationally view the assumption of "universality of AI advertising" and it is recommended to formulate differentiated strategies for different product types: functional products can strengthen the technical endorsement of manual review (such as marking "manual quality inspection") to enhance credibility, and hedonic products can explore AI-generated creative expressions (such as virtual scene simulation) to enhance emotional resonance; at the same time, it is necessary to expand the measurement dimensions of purchase intention (such as adding mediating variables such as emotional arousal and technological trust) and use multi-item scales to more comprehensively capture the dynamic process of advertising effects. Future research can be optimized in three aspects: first, expand the sample coverage (for example, across regions and age groups) to improve the universality of the conclusions; second, optimize the design of experimental materials (such as inviting professional advertising teams to strengthen the differentiated creativity of AI and manual advertising) to enhance the internal validity of the experiment; third, adjust the questions in the questionnaire that test consumers' perception of AI to the end of the questionnaire to avoid increasing the respondents' AI arousal and thus affecting the experimental results.

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