

How AI's Role Impacts Perceptions of AI Ad Image vs. Artwork

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Introduction & Background Generative AI is unleashing the next era of productivity by allowing more efficient, semi-automated content creation. Content created using AI can be for various purposes, such as commercial (e.g., advertising image) and noncommercial (e.g., artwork). However, despite recent research exploring consumer responses to AI-generated content, the knowledge of how people perceive commercial and noncommercial AI images differently is limited. This is important because understanding people's receptivity, which likely differs depending on the content's purposes, is necessary to establish ways to communicate about AI content creation properly and effectively with consumers. Thus, the purpose of this study is to explore how consumers shape receptivity toward AI content creation for commercial versus noncommercial purposes differently (RQ1).

Preliminary Study A preliminary study was conducted to answer RQ1 before the hypothesis development. A 1-factor 2-level (image type: ad image vs. artwork) experiment was conducted online using Prolific ($n=281$, $M_{age}=39.67$ (13.70), 61.9% female). Participants viewed an AI-generated fashion image that was described as either an AI ad image or artwork. Controlling for the effects of age and AI familiarity, ANCOVA revealed that participants were more receptive to using AI for creating ad images than artwork ($M=4.19$ vs. 3.78; $F=4.73$, $p=.031$, $\eta^2_p=.02$).

Theoretical Background & Hypothesis Development The preliminary study results show that consumers likely show higher receptivity toward AI image creation for ads than artwork. To unveil the mechanisms underlying the AI image type effect, this research uses machine-made effects (Fuchs et al., 2015) as the theoretical underpinnings. Consumers tend to think machine-made artifacts embed low emotional investment, effort, overall meaning, and value (de Bellis et al., 2023; Fuchs et al., 2015). This tendency is expected to be more prominent in artwork than in ad images, since art is believed to be an essential part of being human, and AI is deemed to lack competency for art creation (Agudo et al., 2022; Demmer et al., 2023). Further, people tend to value work, especially art, created with a greater expenditure of resources and effort (Newman & Bloom, 2012). In this vein, it is posited that (a) perceived appropriateness of using AI for image creation, (b) perceived expense behind the AI image, and (c) perceived effort of the creator creating the image using AI will explain the higher receptivity toward AI ad images than artwork, which will consequently affect attitude toward the AI image (H1).

This research proposes that AI's role in AI image creation processes will moderate the effect of AI image type. People form relationships with smart objects (Hoffman & Novak, 2018). The role of AI in the human-AI relationship appears in several ways: partner, servant, or tool (Grewal et al., 2022; Pentina et al., 2023; Zhang & Rau, 2023). While how individuals perceive AI's role may differ (Schweitzer et al., 2019), companies often specify and introduce their

services to highlight a particular AI role and activate the consumers' specific mindset toward the technology. For example, the robot vacuum company iRobot emphasizes the servant role via the marketing message *'It works so hard, so you do not have to,'* whereas Samsung stresses the partner role of smartwatches with the phrase *'health partner for everyone'* (Rai et al., 2023). If consumers are less receptive to AI artwork due to the machine-made effect, highlighting AI as a tool (vs. partner or servant) will enhance consumer perceptions toward AI artwork (vs. ad image) (H2). This is because, compared to other roles, AI as a tool represents the least anthropomorphic and inanimate role, which may spotlight the active role of human creators using AI as a tool.

Main Study A 2 (image type: ad image vs. artwork) \times 3 (AI role: partner vs. servant vs. tool) experiment was conducted online using Prolific. Among 302 U.S. adults recruited, 285 remained after data cleaning ($M_{age}=42.47$ (14.12), 70.5% female). Participants were given an AI-generated fashion image and the descriptions introducing it as an AI image either for ads or artwork. The descriptions of how AI is used were developed to manipulate the AI role based on the literature on consumer relationships with AI (e.g., Rai et al., 2023; Schweitzer et al., 2019). The measurement items drawn from the literature showed good reliability for all constructs ($\alpha > .88$).

The manipulation check showed acceptable results. Ad image was perceived as more for commercial purposes than artwork ($M=3.09$ vs. 3.87; $p=.016$). While participants in the servant condition viewed AI as a servant ($M=4.79$) and a tool ($M=4.89$) relatively similarly, they deemed AI to be a partner in the partner condition the most, and a tool in the tool condition the most.

Controlling for age and AI familiarity, MANCOVA showed the main effect of image type (Wilks' $\Lambda=.90$, $F=5.80$, $p<.001$, $\eta^2_p=.10$) and the image type \times AI role interaction ($\Lambda=.92$, $F=2.26$, $p=.014$, $\eta^2_p=.04$), but not the main effect of AI role ($p=.294$). According to subsequent ANCOVA, participants perceived using AI for an ad image as more appropriate than for artwork ($M=4.69$ vs. 4.20; $p=.010$). The 2-way interaction was significant on perceived appropriateness ($F=4.26$, $p=.015$, $\eta^2_p=.03$), expense ($F=3.42$, $p=.034$, $\eta^2_p=.02$), effort ($F=7.17$, $p<.001$, $\eta^2_p=.05$), and content attitude ($F=4.92$, $p=.008$, $\eta^2_p=.03$). The interaction effect on receptivity was marginally nonsignificant ($p=.090$). In sum, perceived appropriateness, expense, and effort and attitude were highest for artwork when AI was described as a tool. In contrast, AI as a partner or a servant was more effective in increasing perceived appropriateness, expense, effort, and attitudes for an ad image.

PROCESS model 83 confirmed the moderated mediation for each serial mediation path. The mediation of appropriateness-receptivity between image type and attitude was only significant when AI was described as partner or servant (index=0.09, 95% CI=[0.02, 0.20]). Conversely, the mediation of expense-receptivity or effort-receptivity was only significant when AI was described as a tool (index=0.08, CI=[0.02, 0.14]; index=0.13, CI=[0.05, 0.23]). Thus, H1 was partially supported and H2 was supported.

Discussion & Conclusion This study reveals that consumers are more receptive to AI image creation for commercial (ad image) than noncommercial (artwork) purposes. The indirect effect of AI image type on attitudes is explained through different paths depending on AI role; when AI

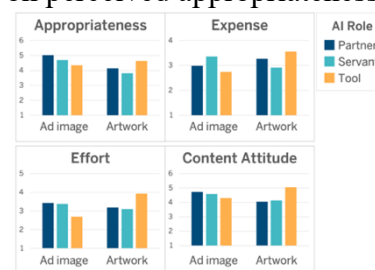


Figure 1. Image type \times AI role interaction

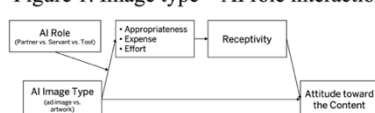


Figure 2. Model 83

is described as a tool, an AI artwork (vs. ad image) leads to higher perceived expense or effort and receptivity, heightening attitude. When AI is introduced as a partner or a servant, consumers form more favorable attitudes toward an ad image (vs. artwork) due to perceived appropriateness and receptivity. The similarity between partner and servant roles might be due to similar level of anthropomorphism. The findings offer a nuanced view of machine-made effect mechanisms and show the importance of content purposes and AI's role. When utilizing AI content creation, for-profit departments (e.g., for fashion ads) can illuminate AI's legitimate role as a peer or assistant. In contrast, artists or non-profit units (e.g., artisan support foundations) are recommended to emphasize the content creator's effort and investment by introducing AI as a tool for executing given tasks. Future research can employ different study designs, such as promotional AI videos or emails by for-profit vs. non-profit organizations, or other operationalizations of for-profit vs. non-profit content.

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