

Negative Effects of Revealing AI Involvement in Products: Mediation by Authenticity and Risk, Moderation by Trust in AI and Familiarity with AI

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Abstract Background: With artificial intelligence (AI) technologies developing at a rapid pace, there is increasing interest in learning how disclosed AI involvement affects customer perceptions and purchasing choices of AI generated products. This study aims to explore the impact of AI involvement in product creation on consumer perceptions across different product categories. Materials and Methods: A series of experimental studies were conducted using three product types: books, e-books and print canvas. Participants were exposed to products with varying levels of AI involvement, and their perceptions of authenticity, quality, financial risk, and willingness to pay were assessed using self-reported measures. Results: The results revealed significant differences in consumer perceptions based on AI involvement. Products with disclosed AI involvement were associated with lower authenticity, quality, and willingness to pay compared to human-authored products. Additionally, the study identified performance risk and perceived authenticity as significant mediators in the relationship between AI involvement and consumer perceptions. Conclusion: The findings suggest that consumers generally prefer products perceived to be human-authored over those involving AI, particularly in terms of authenticity and perceived quality. These perceptions significantly influence consumer willingness to pay and purchase intent. Grasping these dynamics is essential for companies seeking to incorporate AI technologies into their product development and marketing efforts, suggesting that revealing AI involvement could be risky.

Keywords: Artificial intelligence, consumer perceptions, product authorship, authenticity, purchase decisions.

1. Introduction

Artificial Intelligence (AI) is not only revolutionizing service interactions but is also becoming a fundamental part of the product creation process in various industries, from fashion and art to publishing and entertainment. By integrating AI into the production of tangible goods such as books, artwork, t-shirts, and more, businesses are able to leverage cutting-edge technology to enhance creativity, customization, and efficiency, thereby reshaping the consumer product landscape.

AI's capacity to analyze vast datasets allows for unprecedented levels of personalization and trend prediction, enabling brands to design products that more accurately reflect consumer preferences and emerging market trends. For instance, AI algorithms can analyze current fashion trends to help designers create clothing items that are likely to appeal to specific demographics (Luce, 2018). Similarly, in the realm of art and entertainment, AI tools are used to generate unique art pieces and to write books or compose music, expanding the boundaries of traditional creativity.

As consumers increasingly encounter AI-generated products across various platforms, understanding how these interactions influence their perceptions and behaviors

becomes crucial. These products, ranging from AI-created artwork to algorithmically designed apparel, are transforming traditional notions of creativity and production, offering new challenges and opportunities for consumer engagement (Bellaiche et al., 2023; Cetinic & She, 2021).

However, the widespread integration of AI in product creation also brings with it a host of challenges, particularly concerning consumer perception. Issues such as the authenticity of AI-generated art, the originality of AI-written content, and the personalization depth of AI-designed apparel raise significant questions about the value and uniqueness of such products (Hong, 2018). Consumers' trust in and acceptance of AI-generated products are influenced not only by the quality and appeal of the products but also by their attitudes towards AI's role in creativity and production.

Gap in research. Despite the expanding use of AI in product creation, there is a notable gap in research concerning consumer perceptions of AI-generated products, related to purchase intentions. This study aims to explore this under-researched area, particularly examining how the disclosure of AI involvement affects consumer perceptions, focusing on the mediating roles of perceived authenticity and perceived risk. Authenticity here refers to the perceived genuineness and originality of AI-generated products, which is crucial in domains like art and literature,

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where originality is highly valued. Perceived risk involves uncertainties consumers may feel about the quality and personal relevance of products designed by algorithms. This study also investigates how trust in AI and familiarity with AI-generated content can moderate these effects, potentially enhancing consumer acceptance and purchase intentions.

The hypotheses guiding this research propose that while AI involvement might initially increase perceived risks and diminish perceptions of authenticity, thus potentially dampening consumer enthusiasm, higher levels of trust in AI and increased familiarity with AI-generated content could mitigate these effects. These factors may help foster more favorable attitudes towards AI-generated products, leading to greater consumer willingness to purchase and engage with these products.

By addressing this research gap, the study aims to provide deeper insights into the dynamics of consumer acceptance of AI-generated products. These insights will be invaluable for marketers and product developers seeking to effectively integrate AI into product design and marketing strategies, ensuring that AI-driven innovations resonate positively with consumers and lead to successful market outcomes.

This research is particularly relevant in the context of today's rapidly digitizing economy where AI's capabilities are continuously expanding. By focusing on AI-generated products, this study addresses a critical aspect of AI's role in modern consumer markets—its impact on consumer perception and decision-making. *The scientific contribution* of this study lies in its exploration of how AI involvement influences consumer perceptions of authenticity and risk, areas that have not been extensively studied in the context of AI-generated consumer products. Furthermore, by examining the moderating roles of trust in AI and familiarity with AI-generated content, this study contributes to the broader discourse on technology acceptance models, offering insights that could help businesses better integrate AI in ways that align with consumer expectations and enhance market acceptance.

2. Literature Review & Hypothesis Buildup

The rapid evolution of e-commerce has led to an exponential increase in data volume, overtaking traditional statistical methods and fundamentally transforming marketing strategies with the advent of AI-driven predictive analytics like data mining and machine learning (Gupta et al., 2023). Artificial intelligence (AI) has revolutionized the consumer products industry by integrating sophisticated data analysis capabilities, including computer vision, natural language processing, and machine learning, reshaping how companies approach product development, supply chain optimization, and customer experience enhancement (Haleem et al., 2022).

These AI-driven tools streamline demand forecasting, inventory control, and logistics, ensuring more efficient operations and reduced operational costs (Richey et al., 2023). Additionally, AI facilitates more personalized customer interactions through advanced chatbots and virtual assistants, significantly improving customer engagement (Rane, 2023). However, the adoption of AI is fraught with challenges such as data privacy, ethical concerns, and the complexities of system integration, necessitating meticulous management strategies to overcome these barriers (Brendel et al., 2021). Despite these challenges, AI's potential to enhance growth, competitiveness, and sustainability in the consumer products sector is substantial, promising major advantages for companies that can effectively harness its capabilities (Wamba-Taguimdje et al., 2020).

Comprehending consumer perceptions of AI-generated products is pivotal for fostering perceived value, brand loyalty, guiding product development, and securing market acceptance. The way consumers perceive AI-integrated products influences not only individual purchasing behaviors but also shapes broader market trends (Marti et al., 2024). Overcoming the barriers to AI related products adoption and enhancing consumer trust can significantly elevate businesses innovation and competitiveness.

Consumer acceptance and resistance to new technological products are shaped by a variety of factors that influence their perceptions and adoption behaviors. Technological readiness does not directly impact consumer attitudes but instead influences them indirectly through characteristics associated with perceived innovation. Factors such as ease of use, efficiency (Verhoef et al., 2017), and the latest technological features like AI and IoT connectivity attract many consumers, while concerns about privacy, usability, cost, and a lack of trust due to past negative experiences or deceptive marketing deter others (De Bruyn et al., 2020). Consumer opinions are also shaped by endorsements from influencers, peer recommendations, and positive reviews, which can significantly influence the wider acceptance of new technologies. Moreover, AI impacted, clear value propositions and intuitive user interfaces are crucial in enhancing product acceptance, making it essential for companies to address issues related to privacy, affordability, and usability to widen technology adoption (Ismatullaev & Kim, 2024; Sohn & Kwon, 2020).

The psychological impact of technology on consumer perceptions significantly influences how they value and assess product quality. Innovations are perceived as more valuable when they are seen as cutting-edge and superior. Cognitive biases such as the "halo effect" can enhance these perceptions, emphasizing even minor technological advancements. The added functionality and potential for personalization enhance the appeal of these products,

potentially increasing their perceived status and implying a higher social prestige. However, the complexity inherent in new technological products can also invoke concerns about their reliability and compatibility, possibly detracting from their perceived value and quality (Lim & Zhang, 2022; Straub, 2009; Yang et al., 2016).

The integration of AI in consumer products is not only a question of technological advancement but also deeply tied to how authenticity and perceived risks—financial and performance—are managed. Authenticity (Newman & Bloom, 2012) in AI products extends beyond mere physical attributes; it encompasses the reliability, ethical standards, and transparency that come with AI integrations. The acceptance and adoption of AI technologies can be significantly hindered by perceived risks, whether financial, such as the potential for financial loss or unforeseen expenses, or performance-related, such as doubts about product reliability or compatibility (Agarwal & Teas, 2001; Bauer, 1960; Ha, 2006).

Perceived authenticity is the degree to which consumers regard a product as genuine, accurate, and consistent with its intended purpose and design. This notion is closely linked to brand authenticity, which assesses whether consumers view a brand as authentic, reliable, and supportive. The importance of perceived product authenticity lies in its ability to impact consumer attitudes and behaviors towards a product. Products deemed authentic are often linked to greater perceived value and trust in the brand, which can foster positive consumer actions (Nunes et al., 2021). This includes heightened loyalty and a greater willingness to pay a premium for the product (de Kerviler et al., 2021; Newman & Bloom, 2012).

Perceived Financial Risk is particularly poignant in consumer decision-making, encapsulating the potential negative financial outcomes from a purchase. This type of risk becomes more pronounced in scenarios involving high-cost items or new product categories where the financial stakes and the potential for regret are substantial. For instance, consumers might worry about the authenticity of a luxury item or the reliability of a new tech gadget, which could lead to significant financial loss if the product fails to meet expectations (Aldousari et al., 2017; Ha, 2006) (Aldousari et al., 2017; Vlaev et al., 2009). Research has highlighted various dimensions of perceived risks that affect consumer attitudes towards products, including store brands or environmentally sustainable apparel. Studies have shown that financial risk can deter consumers from purchasing due to fears of poor quality or additional costs that may arise after the purchase. Addressing these financial risks through clear communication and assurances can enhance consumer trust and willingness to engage with new product categories

(Kang & Kim, 2013).

Perceived Performance Risk involves the uncertainty about a product's functionality and its ability to perform as expected. In the realm of AI-driven products, this risk is exacerbated by the complex nature of the technologies involved and the consumer's inability to fully test or understand the product prior to purchase. Performance risk is a crucial consideration in industries like automotive or electronics, where a failure to meet performance expectations can lead to dissatisfaction and significant consumer regret (Sääksjärvi & Lampinen, 2005; Stampfl, 1978). Empirical findings suggest that performance risk and financial risk can be mitigated by enhancing perceived quality and reducing perceived sacrifices. Strategies that elevate perceived quality, such as leveraging strong brand names or trustworthy store environments, can significantly lower both types of perceived risks, thereby increasing the perceived value of the products (Agarwal & Teas, 2001).

Furthermore, the role of consumer innovativeness and its impact on the perception of these risks illustrates that familiarity with the technology can reduce the perceived risk, encouraging adoption. Consumers familiar with a product category typically show lower perceived financial and performance risks, which boosts their willingness to purchase new and innovative products (Hirunyawipada & Paswan, 2006).

Familiarity with AI technologies significantly influences consumer acceptance. Regular exposure to and interaction with AI-enhanced products reduce perceived risks and build trust, making these technologies less intimidating and more accessible to consumers. Empirical studies support the idea that familiarity with AI not only enhances its perceived utility and ease of use but also fosters a more positive attitude towards its adoption. Tailored educational initiatives and hands-on experiences with AI can further reduce consumer apprehensions and enhance their comfort and trust in these technologies (Horowitz et al., 2023; Kelly et al., 2023; Wanner et al., 2022).

Providing detailed product information plays a crucial role in empowering consumers, enabling them to make informed decisions and enhancing their overall satisfaction with AI-enhanced products. Transparency about product features, functionality, and the underlying AI mechanisms reassures consumers, mitigating fears related to AI involvement and fostering a sense of control over their purchasing decisions. Clear, comprehensive information about how AI technology's function and their benefits can significantly alleviate consumer concerns, boosting trust and loyalty (Dhagarra et al., 2020; Sangtani & Murshed, 2017; Sun et al., 2023).

The visibility of product outcomes significantly affects consumer perceptions of risk and confidence.

Transparency in demonstrating how products operate, perform, and deliver value reduces perceived risks associated with ambiguity and uncertainty, enhancing consumer trust and satisfaction. The ability for consumers to directly observe and evaluate the outcomes of using a product reassures them of its reliability, efficacy, and quality, fostering greater confidence and decision-making security (Betting et al., 2020; Kim & Jin, 2018; Reck et al., 2022).

Building on the previous research, the introduction of Artificial Intelligence (AI) in product creation poses significant implications for consumer perceptions, particularly concerning authenticity and perceived risks. Consumers might view AI-generated products as less authentic, potentially due to the perceived lack of human involvement, which is traditionally associated with creativity and quality. Moreover, AI involvement might elevate perceived risks—both performance and financial—due to uncertainties about the product's reliability and value. However, these negative perceptions might be moderated by factors such as trust in AI and familiarity with AI, which can alleviate concerns and promote acceptance. Detailed product information and transparency regarding AI's role in product outcomes might mitigate perceived risks and enhance consumer willingness to engage with AI-generated products. The set of hypotheses are proposed:

H1: AI involvement cues increase perceived risks of products.

H2: AI involvement cues negatively influence consumer perceptions of product authenticity.

H3: AI involvement cues negatively influence consumer willingness to buy products.

H4: Higher levels of trust in AI positively moderate the relationship between AI involvement and consumer attitudes towards AI-generated products, as well as purchase intentions.

H5: Increased familiarity with AI-generated content mitigates the negative effects of AI involvement cues on consumer perceptions and purchase intentions.

H6: Providing detailed product information alters perceived risks associated with these products.

H7: Perceived risks negatively mediate the relationship between AI involvement and purchase intentions.

H8: Perceived authenticity negatively mediates the relationship between AI involvement and purchase intentions.

H9: The visibility of the final product outcome significantly reduces perceived risks of AI-generated products and increases purchase intentions.

3. Hypotheses Testing

This study comprised three experiments aimed at understanding the influence of AI involvement and product type on consumer perceptions and behaviors: Study 1 aimed to explore how different products (book vs. canvas print) and the presence of AI involvement (hinted or not) influence consumer perceptions and behaviors. Specifically, the research sought to understand the impact of these variables on a range of consumer responses, including valuation, purchasing intent, and subjective assessments of product features and potential risks. Building upon findings of study 1, Study 2 explored whether including additional information—such as potential access to a detailed summary, table of contents, sample chapters from various parts of the book, and several positive reviews—affects the perceived risks associated with AI-created products, in the e-book context. Given the limited success of information provision, study 3 aimed to investigate how limiting the visibility of the final product outcome, in this case canvas print, may affect consumer perceptions. As all studies had factorial design Analysis of Variance (ANOVA), were employed to assess the main effects and interactions of the variables on consumer perceptions.

Participants and Design. For all studies participants were recruited using MTurk, with Cloudresearch controls. Study 1 had 298 ($M_{age} = 39.99$, $SD_{age} = 11.89$, women = 48.32%) participants and employed a 2x2 factorial design to investigate how customer perceptions were impacted by product (book vs. canvas print) and AI involvement (no AI hint vs. AI hint). The study 2 involved 126 ($M_{age} = 41.02$, $SD_{age} = 11.79$, women=53.17%) and structured as a 2x2 factorial arrangement examining the influence of authorship (human vs. AI) and varying levels of information on outcome (low vs. high) on consumer perceptions. Study 3, a total of 202 ($M_{age} = 42.1$ $SD_{age} = 12.1$, women = 53.5%) participants and 2x2 factorial design to investigate how customer perceptions were impacted by AI engagement (artist vs. AI) and different canvas print output visibility levels (visible vs. blurry).

Measures. In study 1, a variety of consumer behavior measures were utilized in this study, all employing a 7-point Likert scale (Sullivan & Artino, 2013). The measures assessed a broad spectrum of consumer attitudes and perceptions regarding products, including willingness to pay, likelihood to buy, perceived financial and performance risks (Biswas & Biswas, 2004) (the higher the rating – the higher the risk), perceived cost of production, and perceptions of uniqueness, authenticity, originality, and psychological ownership (Atasoy & Morewedge, 2018). Measures of perceived effort in creation permanence, credibility of the author, overall quality, and general product attitudes (good, like, interesting, $\alpha=0.92$)

were also included. Participants were also asked about their familiarity with AI-generated content and their trust in artificial intelligence. AI involvement impact assessed through manipulation checks comparing conditions with and without AI hints (no AI hint vs. AI hint). Study 2 and Study 3 included less but key concepts - willingness to pay, likelihood to buy, perceived financial and performance risks, perceptions of authenticity, quality, enjoyment, effort.

Manipulation checks. In Study 1, manipulation checks assessed the impact of AI involvement with and without AI hints. The results indicated successful manipulation, with significantly higher perceptions of human involvement in the no AI hint condition compared to the AI hint condition ($M_{noAI}=5.059$, $SD=1.497$ vs $M_{AI}=2.116$, $SD=1.791$, $F_{(1,296)}=235.88$, $p<0.001$, $\eta^2=.45$). In Study 2, two manipulation checks were conducted. Firstly, perception of human involvement was higher without AI author hints ($M_{human}=5.734$, $SD=1.13$) than with AI hints ($M_{human}=5.734$, $SD=1.13$ vs $M_{AI}=2.419$, $SD=1.912$, $F_{(1,124)}=139.19$, $p<.00001$, $\eta^2=.59$). Secondly, perceptions of AI involvement were higher without human authorship hints ($M_{human}=2.656$, $SD=1.535$ vs $M_{AI}=6.323$, $SD=0.971$, $F_{(1,124)}=258.34$, $p<.00001$, $\eta^2=.71$). Both results indicated successful manipulation of authorship hints. In Study 3, manipulation checks confirmed the perception of AI involvement being higher with AI hints ($M_{artist}=4.776$, $SD=1.643$ vs $M_{AI}=4.776$, $SD=2.003$), $F_{(1,200)}=54.55$, $p<.00001$, $\eta^2=.22$. Additionally, outcome visibility perception was clearer when considering canvas prints with visible outcomes ($M_{visible}=5.919$, $SD=0.829$ vs $M_{blurred}=2.864$, $SD=1.831$, $F_{(1,200)}=236.27$, $p<.00001$, $\eta^2=.62$) indicating successful manipulation of both AI author hints and outcome visibility perceptions in Study3.

3.1. Study 1: Impact of AI Involvement and Product Type on Consumer Perceptions and Purchase Intentions

Main effects of AI involvement hint. In examining the

effects of perceived artificial intelligence (AI) involvement on consumer behaviour, a significant difference across various measures was noted through an analysis of variance (ANOVA). Notably, the willingness to pay was higher in conditions without an AI hint ($M_{noAI}=21.65$, $SD=16.09$ vs. $M_{AI}=16.21$, $SD=18.67$, $F_{(1,296)}=7.22$, $p<0.01$, $\eta^2=0.02$). This trend was mirrored in the willingness to buy ($M_{noAI}=3.45$, $SD=1.92$ vs. $M_{AI}=2.89$, $SD=1.97$, $F_{(1,296)}=6.24$, $p<0.01$, $\eta^2=0.02$).

Similarly, perceptions of financial and performance risk were significantly lower in the non-AI hinted conditions, indicating a lower risk perception associated with non-AI products (financial risk: $M_{noAI}=2.15$, $SD=1.59$ vs. $M_{AI}=2.58$, $SD=1.83$, $F_{(1,296)}=4.69$, $p<0.05$, $\eta^2=0.02$; performance risk: $M_{noAI}=3.93$, $SD=1.73$ vs. $M_{AI}=4.49$, $SD=2.01$, $F_{(1,296)}=6.58$, $p<0.05$, $\eta^2=0.02$). Authenticity was significantly higher without the AI hint ($M_{noAI}=4.34$, $SD=1.61$ vs. $M_{AI}=3.56$, $SD=1.77$, $F_{(1,296)}=15.55$, $p<0.001$, $\eta^2=0.05$). This observation extended to originality ($M_{noAI}=4.12$, $SD=1.73$ vs. $M_{AI}=3.51$, $SD=1.80$, $F_{(1,294)}=8.74$, $p<0.01$, $\eta^2=0.03$) and the feeling of distinctiveness ($M_{noAI}=3.51$, $SD=1.74$ vs. $M_{AI}=2.90$, $SD=1.81$, $F_{(1,296)}=8.77$, $p<0.01$, $\eta^2=0.03$). A significantly greater perceived effort was associated with products not hinted as AI-created ($M_{noAI}=4.40$, $SD=1.55$ vs. $M_{AI}=3.11$, $SD=1.79$, $F_{(1,296)}=44.34$, $p<0.001$, $\eta^2=0.13$). Similarly, perceptions of permanence ($M_{noAI}=4.59$, $SD=1.60$ vs. $M_{AI}=3.76$, $SD=1.80$, $F_{(1,296)}=17.51$, $p<0.001$, $\eta^2=0.06$) and credibility ($M_{noAI}=4.40$, $SD=1.37$ vs. $M_{AI}=3.63$, $SD=1.74$, $F_{(1,296)}=17.72$, $p<0.001$, $\eta^2=0.06$) were significantly higher without AI involvement. Overall product quality perceptions were also notably higher ($M_{noAI}=3.80$, $SD=1.26$ vs. $M_{AI}=3.25$, $SD=1.28$, $F_{(1,296)}=13.92$, $p<0.001$, $\eta^2=0.05$), as were general product attitudes ($M_{noAI}=4.56$, $SD=1.51$ vs. $M_{AI}=3.86$, $SD=1.65$, $F_{(1,296)}=14.72$, $p<0.001$, $\eta^2=0.05$). These findings underscore a generally more positive consumer response to products when there is no suggestion of AI involvement (Table 1).

Table 1. No AI involvement hint vs disclosed AI involvement main effects

Variable	Mean _{noAI}	SD _{noAI}	Mean _{AI}	SD _{AI}	F _{statistic}	p _{value}	η^2
Willingness to pay	21.65	16.09	16.21	18.67	7.22	0.00762	0.02
Willingness to buy	3.45	1.92	2.89	1.97	6.24	0.01301	0.02
Financial risk	2.15	1.59	2.58	1.83	4.69	0.03114	0.02
Performance risk	3.93	1.73	4.49	2.01	6.58	0.01079	0.02
Perceived costs	13.74	14.68	12.10	17.37	0.77	0.38000	0
Unique	3.68	1.70	3.32	1.78	3.12	0.07850	0.01
Authentic	4.34	1.61	3.56	1.77	15.55	<0.001	0.05
Original	4.12	1.73	3.51	1.80	8.74	0.00336	0.03
Distinctiveness	3.51	1.74	2.90	1.81	8.77	0.00331	0.03
Perceived effort	4.40	1.55	3.11	1.79	44.34	<0.001	0.13
Ownership	3.72	1.97	3.31	1.99	3.25	0.07262	0.01
Enjoyment	4.34	1.64	4.05	1.82	2.05	0.15356	0.01

Variable	Mean_noAI	SD_noAI	Mean_AI	SD_AI	F_statistic	p_value	η^2
Permanence	4.59	1.60	3.76	1.80	17.51	<0.001	0.06
Credibility	4.40	1.37	3.63	1.74	17.72	<0.001	0.06
Quality	3.80	1.26	3.25	1.28	13.92	<0.001	0.05
Product attitudes	4.56	1.51	3.86	1.65	14.72	<0.001	0.05
Easiness to copy	4.50	1.51	4.77	1.50	2.46	0.11749	0.01

Main effects of product form (book vs print canvas). In a comparative analysis of variance (ANOVA) involving participants exposed to books versus print canvas, significant disparities were observed across multiple measures. Participants exhibited a higher willingness to pay for the print canvas ($M_{\text{book}}=11.86$, $SD=9.99$ vs. $M_{\text{canvas}}=26.11$, $SD=20.45$, $F_{(1,296)}=58.38$, $p<0.001$, $\eta^2=0.21$) and a lower perception of performance risk ($M_{\text{book}}=4.85$, $SD=1.75$ vs. $M_{\text{canvas}}=3.55$, $SD=1.81$, $F_{(1,296)}=39.96$, $p<0.001$, $\eta^2=0.12$).

Additionally, the perceived cost was higher for the print canvas ($M_{\text{book}}=8.74$, $SD=10.86$ vs. $M_{\text{canvas}}=17.12$, $SD=19.07$, $F_{(1,296)}=21.76$, $p<0.001$, $\eta^2=0.08$). Quality perceptions were also more favorable for the print canvas ($M_{\text{book}}=3.97$, $SD=1.59$ vs. $M_{\text{canvas}}=3.09$, $SD=0.68$, $F_{(1,296)}=38.50$, $p<0.001$, $\eta^2=0.16$), as was enjoyment ($M_{\text{book}}=3.95$, $SD=1.77$ vs. $M_{\text{canvas}}=4.44$, $SD=1.67$, $F_{(1,296)}=5.88$, $p=0.016$, $\eta^2=0.02$). Participants perceived more effort in the creation of the print canvas product ($M_{\text{book}}=3.99$, $SD=1.70$ vs. $M_{\text{canvas}}=3.54$, $SD=1.85$, $F_{(1,296)}=4.77$, $p=0.03$, $\eta^2=0.02$), and found it more challenging to copy ($M_{\text{book}}=4.45$, $SD=1.45$ vs. $M_{\text{canvas}}=4.82$, $SD=1.56$, $F_{(1,296)}=4.50$, $p=0.035$, $\eta^2=0.02$).

However, variables like willingness to buy, financial risk, authenticity, feeling distinctive, psychological ownership, and credibility showed no significant differences, with small effect sizes. This suggests that while aspects like cost, risk perception, and quality are significantly influenced by the product form, other factors remain relatively unaffected by whether content is an e-book or print canvas.

Interactions. For the perception of financial risk, a significant interaction effect was identified between the product form (book vs. canvas print) and AI involvement (no AI hint vs. AI hint) ($F_{(1,294)} = 3.94$, $p = .048$), Table 2. This interaction indicates that the combined influence of product form and AI hint alters consumer perceptions of financial risk. The Tukey post-hoc comparisons revealed specific differences across the groups: the financial risk was perceived to be higher for books with an AI hint compared to books without an AI hint (diff = 0.82, $p = .019$, $M_{\text{noAI_Book}}=1.96$ vs $M_{\text{AI_Book}}=2.78$). Conversely, there was no significant difference in financial risk perception between canvas prints without an AI hint and those with an AI hint (diff = 0.036, $p = .999$, $M_{\text{noAI_canvas}}=2.31$ vs $M_{\text{AI_canvas}}=2.35$).

Enjoyment levels ($F_{(1,294)} = 4.05$, $p = .0345$) were notably different for canvas prints with an AI hint compared to those without, suggesting that AI hints may adversely affect the emotional response to art-based products (diff = -0.739, $p = .036$, $M_{\text{noAI_canvas}}=4.36$ vs $M_{\text{AI_canvas}}=4.52$). Permanence perception ($F_{(1,294)} = 4.058$, $p = .0449$) was significantly lower for canvas prints with an AI hint compared to those without, suggesting that AI involvement might influence perceived durability or longevity of art-based products (diff = -0.782, $p = .023$, $M_{\text{noAI_canvas}}=4.59$ vs $M_{\text{AI_canvas}}=3.35$). For books, although there was a noticeable difference in perceived permanence between conditions with and without AI hints, it was not as pronounced as in the case of canvas prints (diff = -0.453, $p = .3550$, $M_{\text{noAI_Book}}=4.58$ vs $M_{\text{AI_Book}}=4.13$).

Credibility was significantly affected ($F_{(1,294)} = 10.508$, $p = .0013$) by AI hints in both product forms. For books, credibility was notably lower when there was an AI hint (diff = -0.672, $p = .0328$, $M_{\text{noAI_Book}}=4.75$ vs $M_{\text{AI_Book}}=3.40$). Similarly, for canvas prints, credibility was reduced with AI involvement, although the effect was not significant (diff = -0.431, $p = .4232$, $M_{\text{noAI_canvas}}=4.08$ vs $M_{\text{AI_canvas}}=3.88$).

Quality perceptions differed significantly ($F_{(1,294)} = 18.071$, $p = .00003$) between the no AI hint and AI hint conditions for both product forms, but the effect was more pronounced for canvas prints. Quality was rated lower for canvas prints with an AI hint compared to those without (diff = -1.496, $p < .0001$, $M_{\text{noAI_canvas}}=3.10$ vs $M_{\text{AI_canvas}}=3.07$). In books, the presence of an AI hint also resulted in lower quality ratings, demonstrating the pervasive impact of AI involvement across different mediums (diff = -1.167, $p < .0001$, $M_{\text{noAI_Book}}=4.57$ vs $M_{\text{AI_Book}}=3.40$). Product attitudes were significantly influenced ($F_{(1,294)} = 4.581$, $p = .0332$) by the interaction between product form and AI involvement. For books, the presence of an AI hint notably decreased positive attitudes towards the product (diff = -1.083, $p = .0002$, $M_{\text{noAI_Book}}=4.67$ vs $M_{\text{AI_Book}}=3.59$). Conversely, for canvas prints, while there was still a decline in positive attitudes with an AI hint, the difference was less pronounced and not statistically significant, suggesting that the impact of AI hints might be more critical in content-based formats (diff = -0.303, $p = .6427$, $M_{\text{noAI_canvas}}=4.46$ vs $M_{\text{AI_canvas}}=4.16$). The ease of copying showed a significant interaction effect ($F_{(1,294)} = 8.360$, $p = .0041$).

Table 2. Significant interactions between different product forms and AI hints

Variable	Mean_no AI_Book	SD_noAI_B ook	Mean_A I_Book	SD_AI_Bo ok	Mean_noA I_canvas	SD_noAI_c anvas	Mean_A I_canvas	SD_AI_canva s	F value	p- value
Financialrisk	1.96	1.41	2.78	1.94	2.31	1.73	2.35	1.68	3.939	0.0481
Enjoyment	4.31	1.58	3.62	1.88	4.36	1.69	4.52	1.65	4.508	0.0346
Permanence	4.58	1.55	4.13	1.75	4.59	1.64	3.35	1.77	4.058	0.0449
Credible	4.75	1.16	3.40	1.81	4.08	1.46	3.88	1.63	10.508	0.0013
Quality	4.57	1.39	3.40	1.57	3.10	0.52	3.07	0.83	18.072	0.0000 3
product_attitu des	4.67	1.35	3.59	1.53	4.46	1.64	4.16	1.73	4.581	0.0332
Easytcopy	4.04	1.45	4.83	1.34	4.91	1.46	4.71	1.66	8.360	0.0041

Moderators. Trust in artificial intelligence moderated the willingness to buy, with greater AI trust increasing the likelihood of purchasing when AI involvement was disclosed ($\beta = 0.242$, $p = 0.046$). Higher trust in AI was also associated with a reduction in perceived performance risk when products were hinted to be AI-generated ($\beta = -0.312$, $p = 0.010$), more favorable attitudes toward AI-involved products ($\beta = 0.252$, $p = 0.012$) and increased willingness to pay a premium for AI-involved products (β

$= 2.511$, $p = 0.025$).

Familiarity with AI-generated content moderated the relationship between AI involvement and perceived financial risk. Consumers who more frequently interacted with AI-generated content exhibited less perceived financial risk associated with AI involvement ($\beta = -0.315$, $p = 0.027$). More frequent interaction with AI content was linked to more positive product attitudes in the context of AI involvement ($\beta = 0.268$, $p = 0.038$) (Table 3).

Table 3. significant moderators of AI involvement effects to consumer behavior

Moderator	Response Variable	Coefficient	p-value
Trust in artificial intelligence	perceived performance risk	-0.3120922	0.01035
Trust in artificial intelligence	product attitudes	0.2519777	0.01227
Trust in artificial intelligence	willingness to buy	0.2424285	0.04641
Trust in artificial intelligence	willingness to pay	2.5107898	0.02488
Familiarity with AI-generated content	perceived financial risk	-0.3146126	0.02722
Familiarity with AI-generated content	product attitudes	0.2679907	0.03778

Mediation effects. Performance Risk served as a mediator in several relationships - it mediated the impact of AI involvement on WTP, decreasing willingness to pay with a mediation effect of -2.944, CI [-5.325, -0.691]. Performance risk also influenced willingness to buy (WTB), with a negative mediation effect of -0.347, CI [-0.628, -0.093]. Additionally, performance risk mediated the impact on product attitudes, showing an effect of -

0.306, CI [-0.540, -0.080] (Table 4).

Perceived Authenticity significantly mediated the relationship between AI involvement and several outcomes: it negatively influenced WTP, with a mediation effect of -3.587, CI [-5.732, -1.729], perceived authenticity also decreased WTB, with a mediation effect of -0.523, CI [-0.808, -0.259] and product attitudes, the mediation effect was -0.478, CI [-0.718, -0.240].

Table 4. Mediation effects of perceived performance risk and authenticity

Cond	Mediator	Response Variable	Estimate	CI Lower	CI Upper
Ai involvement	Performance Risk	willingness to pay	-2.944	-5.325	-0.691
Ai involvement	Performance Risk	willingness to buy	-0.347	-0.628	-0.093
Ai involvement	Performance Risk	product attitudes	-0.306	-0.540	-0.080
Ai involvement	Perceived Authenticity	willingness to pay	-3.587	-5.732	-1.729
Ai involvement	Perceived Authenticity	willingness to buy	-0.523	-0.808	-0.259
Ai involvement	Perceived Authenticity	product attitudes	-0.477	-0.718	-0.240

Study 1 results discussion. Key findings reveal that AI involvement hints significantly affect consumer perceptions. Specifically, the AI hints led to lower willingness to pay and buy, authenticity, indicating consumer reservations about AI-produced content, possibly due to concerns about authenticity or the novelty of AI in creative production (Wu et al., 2024). Furthermore, the presence of AI hints was associated with increased perceived financial and performance risks, which might reflect consumer uncertainty about the reliability and value retention of AI-generated products (Deryl et al., 2023). H1, H2, H3 confirmed

The interaction effect on financial risk perceptions indicated a higher perceived financial risk for books when AI involvement was hinted, suggesting the deep content-based format may enhance uncertainty about product quality. In contrast, AI hints did not significantly alter risk perceptions for canvas prints, potentially due to the visible outcome of these art-based products providing a sense of security. Additionally, AI involvement negatively impacted quality perceptions and attitudes towards AI-involved books, underscoring challenges AI faces in being accepted in creative processes (Horton Jr et al., 2023). H1 confirmed again.

The study's findings emphasize the significant role of trust in artificial intelligence in moderating consumer behaviors towards AI-involved products. Trust in AI increased purchasing likelihood when AI involvement was disclosed and mitigated perceived performance risks, improving attitudes towards AI-generated products (Lukyanenko et al., 2022). Experience with AI-generated content also played a moderating role, leading to lower perceived financial risks and more positive attitudes towards AI products (Chen et al., 2022). H4, H5 confirmed.

Performance risk and perceived authenticity were crucial mediators in the relationship between AI involvement and consumer responses, with increased performance risk associated with AI-authored products lowering financial commitment and purchase intent. Perceived authenticity significantly decreased willingness to pay, willingness to buy, and product attitudes, highlighting the importance of enhancing the perceived genuineness of AI-generated products to appeal to potential buyers (Tsai et al., 2024). H7, H8 confirmed.

3.2. Study 2: Evaluating the Effectiveness of Enhanced Product Information on Mitigating Perceived Risks of AI-Created Products

Main effects of AI cues. For participants in the condition where the author was specified as human versus when it was indicated that the author is AI in context of e-books, the analysis of variance (ANOVA) revealed significant differences across multiple variables (Table 4). Perceived authenticity varied significantly between conditions, with participants perceiving higher authenticity when the author was human ($M_{\text{human}}=5.172$, $SD=1.352$ vs. $M_{\text{AI}}=3.806$, $SD=1.872$, $F_{(1,124)}=21.92$, $p<.00001$, $\eta^2=.17$). Similarly, enjoyment levels were notably different, favouring the human-authored condition ($M_{\text{human}}=5.219$, $SD=1.419$ vs. $M_{\text{AI}}=4.145$, $SD=1.587$, $F_{(1,124)}=15.98$, $p=.00011$, $\eta^2=.12$), the quality of the ebook was perceived as higher when authored by a human ($M_{\text{human}}=4.906$, $SD=1.411$ vs. $M_{\text{AI}}=4.226$, $SD=1.509$, $F_{(1,124)}=6.83$, $p=.010$, $\eta^2=.05$).

In addition, financial and performance risks were perceived as significantly lower when the author was human (financial risk: $M_{\text{human}}=1.859$, $SD=1.39$ vs. $M_{\text{AI}}=2.484$, $SD=1.844$, $F_{(1,124)}=4.59$, $p=.034$, $\eta^2=.04$; performance risk: $M_{\text{human}}=3.359$, $SD=1.505$ vs.

$M_{AI}=4.081$, $SD=1.768$, $F_{(1,124)}=6.06$, $p=.015$, $\eta^2=.05$). Lastly, participants showed a higher willingness to buy when the author was human ($M_{human}=4.172$, $SD=1.899$ vs.

$M_{AI}=3.177$, $SD=2.045$, $F_{(1,124)}=7.99$, $p=.0055$, $\eta^2=.06$), but willingness to pay was insignificant.

Table 5. Consumer perceptions of the e-book based on author (author was human vs AI)

Variable	Mean_human	SD_human	Mean_AI	SD_AI	F_statistic	p_value	η^2
Willingness to pay	9.607	6.059	9.447	9.85	0.01	0.9132986	0
Willingness to buy	4.172	1.899	3.177	2.045	7.99	0.005492656	0.06
Financial risk	1.859	1.39	2.484	1.844	4.59	0.03438804	0.04
Performance risk	3.359	1.505	4.081	1.768	6.06	0.01522413	0.05
Authentic	5.172	1.352	3.806	1.872	21.92	8.100045e-06	0.17
Enjoyment	5.219	1.419	4.145	1.587	15.98	0.0001101996	0.12
Quality	4.906	1.411	4.226	1.509	6.83	0.01010112	0.05

Low and high information main effects. The analysis of the main effects between conditions with low and high information availability provided insights into consumer responses across several metrics. While most variable showed statistically significant differences after correcting for multiple comparisons, trends suggest possible influences of information level on consumer perceptions and intentions: marginally significant difference was observed for performance risk, where participants

perceived less risk in the high information condition ($M_{high}=3.431$, $SD=1.639$ vs. $M_{low}=4.016$, $SD=1.668$; $t=1.99$, $F_{(1,124)}=3.94$, $p=0.049$, $\eta^2=0.03$). The participants in the high information condition exhibited slightly higher willingness to pay and buy, along with lower perceptions of financial and performance risks compared to those in the low information condition, but differences were not significant (Table 6).

Table 6: Consumer perceptions based on information cues (low and high information availability)

Variable	Mean_low	SD_cond_0	Mean_high	SD_cond_1	F_statistic	p_value	η^2
Willingness to pay	8.759	7.83	10.25	8.37	1.07	0.3032581	0.01
Willingness to buy	3.426	1.97	3.923	2.064	1.91	0.1693285	0.02
Financial risk	2.295	1.657	2.046	1.653	0.71	0.4004156	0.01
Performance risk	4.016	1.668	3.431	1.639	3.94	0.0492581	0.03
Authentic	4.311	1.794	4.677	1.724	1.36	0.2464671	0.01
Enjoyment	4.508	1.49	4.862	1.676	1.57	0.2128384	0.01
Quality	4.344	1.425	4.785	1.536	2.79	0.09752671	0.02

Interactions. The analysis of the interaction effects between the authorship (human vs. AI) and AI involvement hints across various consumer perception variables did not yield any statistically significant results in context of e-books. This indicates that risk perceptions are primarily based on AI involvement and are hardly affected by presenting more information.

Moderators. Trust in AI significantly influenced perceptions of authenticity, with greater trust leading to higher perceived authenticity in products identified as AI-authored ($\beta = 0.398$, $p = 0.00755$). Similarly, trust in AI positively moderated consumer willingness to buy and pay,

with increased trust enhancing the likelihood of purchasing AI-authored products (WTB: $\beta = 0.461$, $p = 0.01130$; WTP: $\beta = 2.271$, $p = 0.00232$). These findings suggest that trust in AI not only reduces skepticism but also boosts consumer engagement and financial commitment to products associated with AI (Table 7). Additionally, familiarity with AI-generated content played a crucial role in moderating perceptions of financial risk associated with AI-authored products. Consumers with more frequent interactions with AI content exhibited lower perceived financial risks ($\beta = 0.371$, $p = 0.01634$), indicating that familiarity with AI can mitigate concerns and enhance comfort with AI-driven products (Table 7).

Table 7. Moderation effects of AI involvement (vs human) and consumer behavior

Moderator	Response Variable	Coefficient	<i>p-value</i>
Trust in artificial intelligence	Authenticity	0.3981564	0.00755
Familiarity with AI-generated content	Financial Risk	0.3710492	0.01634
Trust in artificial intelligence	Willingness to Buy	0.4610359	0.01130
Trust in artificial intelligence	Willingness to Pay	2.2713829	0.00232

Mediations. Performance risk and perceived authenticity, as shown in the Table 8, served as significant mediators in the relationship between the type of authorship (human vs. AI) and various consumer responses in the experiment. Performance Risk negatively mediated the impact of AI authorship on willingness to pay (-1.451, CI [-2.879, -0.301]), willingness to buy (-0.467 (CI [-0.877, -0.099])), perceived product quality (-0.249, CI [-0.494, -0.045]). This suggests that perceptions of performance risk

significantly dampen consumer willingness to invest, willingness to buy and quality perceptions of AI-authored products. Perceived authenticity significantly mediated the relationship between authorship type and willingness to pay, with a substantial negative effect (-3.520, CI [-5.545, -1.851]), willingness to buy (-1.176, CI [-1.720, -0.651]), quality perception (-0.439, CI [-0.746, -0.192]) reinforcing the importance of authenticity in consumer purchase decisions (Table 8).

Table 8. Mediation effects of perceived performance risk, authenticity for human vs AI involvement and consumer behavior.

Condition	Mediator	Response Variable	Estimate	CI Lower	CI Upper
AI involvement	Performance Risk	Willingness to Pay	-1.451	-2.879	-0.301
AI involvement	Performance Risk	Willingness to Buy	-0.467	-0.878	-0.099
AI involvement	Performance Risk	Quality	-0.249	-0.494	-0.045
AI involvement	Perceived Authenticity	Willingness to Pay	-3.520	-5.545	-1.851
AI involvement	Perceived Authenticity	Willingness to Buy	-1.176	-1.720	-0.651
AI involvement	Perceived Authenticity	Quality	-0.439	-0.746	-0.192

Study 2 results discussion. Building on findings from Study 1, which indicated detrimental effects of AI involvement cues on product attitudes and consumer behavior, Study 2 aimed to evaluate whether providing additional content details, such as detailed summaries, tables of contents, and sample chapters, could mitigate perceived risks associated with AI-created products. However, key findings revealed significant main effects where human-authored products were consistently perceived as more authentic, enjoyable, and of higher quality than those attributed to AI. These products evoked lower financial and performance risks and were more likely to be purchased by participants. H1,H2,H3 confirmed again.

The introduction of detailed information, regardless of the amount (high vs. low), did not significantly alter willingness to pay, buy, product perceptions, or significantly change perceived risks—indicating that adding more product information may not be sufficient to alter established perceptions created by AI involvement

cues (Lefkeli et al., 2024). H6 rejected.

Moderation analyses showed that trust in AI and experience with AI-generated content significantly influenced consumer responses. Higher trust in AI was associated with enhanced perceptions of authenticity and increased willingness to engage financially with AI-created products. Conversely, consumers with more frequent interactions with AI content exhibited reduced financial risk perceptions, suggesting that familiarity might alleviate apprehension. H4, H5 confirmed again.

Mediation analyses further highlighted that performance risk and perceived authenticity are crucial in mediating the impact of AI authorship on various consumer responses. Notably, both performance risk and authenticity perceptions negatively mediated willingness to pay, buy, and perceived quality, underscoring their key roles in the acceptance and valuation of AI-generated content. H7, H8 confirmed again.

3.3. Study 3: "The Role of Outcome Visibility in Modulating Consumer Reactions to AI and Artist Authored Products"

Main effects of AI involvement. For participants in the condition where the author was specified as an artist versus when it was indicated that the author is AI in context of canvas prints, the analysis of variance (ANOVA) revealed significant differences across multiple variables. Notably, perceived authenticity was significantly higher when the author was specified as an artist ($M_{\text{artist}}=4.452$, $SD=1.427$ vs. $M_{\text{AI}}=3.765$, $SD=1.661$, $F_{(1,200)}=9.88$, $p=.0019$, $\eta^2=.05$), indicating that participants perceived artist-authored works

as more authentic. Additionally, the perceived effort put into the canvas creation was viewed as significantly higher in the artist-authored condition ($M_{\text{artist}}=4.000$, $SD=1.246$ vs. $M_{\text{AI}}=3.214$, $SD=1.480$, $F_{(1,200)}=16.55$, $p<.0001$, $\eta^2=.08$), suggesting that participants value human involvement as indicative of greater effort. However, other variables such as willingness to pay, willingness to buy, financial risk, performance risk, enjoyment, and quality showed no significant differences, indicating that these perceptions were not substantially impacted by whether the author was artist or AI, suggesting that perception of art-based products, like canvas prints are less affected by AI involvement (Table 9).

Table 9. Perceptions of Authenticity and Effort in Artist vs. AI-Authored Works

Variable	Mean_artist	Mean_AI	SD_artist	SD_AI	F_statistic	p-value	R2
Willingness to pay	22.845	19.907	13.306	12.132	2.68	0.1031769	0.01
Willingness to buy	3.01	2.949	1.908	1.858	0.05	0.8192418	0
Financial risk	2.846	3.071	1.904	1.885	0.71	0.399246	0
Performance risk	3.962	4.041	1.848	1.942	0.09	0.7669051	0
Authentic	4.452	3.765	1.427	1.661	9.88	0.001939864	0.05
Enjoyment	4.5	4.367	1.461	1.522	0.4	0.5287127	0
Quality	4.202	4.163	1.242	1.306	0.05	0.8297026	0
Effort	4	3.214	1.246	1.48	16.55	6.923171e-05	0.08

For participants in the condition where the outcome of the canvas print was blurred versus when the outcome was fully visible, the analysis of variance (ANOVA) revealed significant differences across several key variables. Willingness to pay ($M_{\text{blurred}}=18.475$, $SD=12.608$ vs. $M_{\text{visible}}=24.47$, $SD=12.347$, $F_{(1,200)}=11.6$, $p=.0008$, $\eta^2=.06$) and willingness to buy ($M_{\text{blurred}}=2.641$, $SD=1.703$ vs. $M_{\text{visible}}=3.333$, $SD=1.995$, $F_{(1,200)}=7.02$, $p=.009$, $\eta^2=.04$) was significantly higher when the outcome was visible, indicating that seeing the final product can substantially enhance higher purchase intent when consumers can fully assess the product. In terms of perceived risks, financial risk perceptions were significantly lower when the outcome was visible ($M_{\text{blurred}}=3.757$, $SD=1.85$ vs. $M_{\text{visible}}=2.121$, $SD=1.554$, $F_{(1,200)}=46.48$, $p<.00001$, $\eta^2=.19$), and performance risk followed a similar trend ($M_{\text{blurred}}=5.000$, $SD=1.793$ vs. $M_{\text{visible}}=2.960$, $SD=1.355$, $F_{(1,200)}=83.67$, $p<.00001$, $\eta^2=.31$), indicating that transparency about the product outcome reduces uncertainty and enhances confidence in the product's quality and worth.

However, there were no significant differences in

perceived authenticity, enjoyment, or overall quality of the canvas print between the blurred and visible conditions, suggesting that these aspects of consumer perception might be less influenced by the visibility of the outcome or possibly overshadowed by more immediate concerns related to financial and performance risks associated with the purchase decision.

Interactions. The analysis of the interaction effects between the authorship (human vs. AI) and the clarity of the outcome (blurred vs. visible) revealed significant interaction influences on several key consumer perceptions. Notably, there was a significant interaction effect on perceived effort, suggesting that the perception of effort exerted in creating the canvas print was influenced by both the type of authorship and the visibility of the outcome ($F_{(1,197)} = 16.99$, $p<.0001$, $\eta^2=.08$). The Tukey post-hoc comparisons revealed that the effort was perceived as significantly lower when the author was AI and the outcome was visible compared to when the author was human and the outcome was blurred, underscoring how AI authorship negatively impacts perceived effort especially when the product outcome is clear (Table 10).

Table 10. Interaction effects of AI involvement (vs artist) and level of outcome visibility

Variable	Mean Sq	F value	Pr(>F)
Willingness to pay	764.194	5.0536	0.0257
Willingness to buy	0.5	0.1445	0.7043
Financial risk	1.048	0.3566	0.5511
Performance risk	0.081	0.0315	0.8593
Authentic	31.594	14.0711	0.0002
Enjoyment	0.96	0.4289	0.5133
Quality	1.058	0.6508	0.4208
Effort	27.593	16.9870	0.0001

Furthermore, the interaction effects were significant for willingness to pay ($F_{(1,197)} = 5.05$, $p = .0257$, $\eta^2 = .03$), where participants were willing to pay more when the outcome was visible, particularly when the author was human. (Table 10). This indicates that visibility of the final product combined with artist authorship favorably influences consumer valuation of the artwork. Authenticity also showed significant interaction effects ($F_{(1,197)} = 14.07$, $p < .0001$, $\eta^2 = .05$), with authenticity perceived higher in artist-authored works, especially when the outcome was visible, suggesting that visibility amplifies the perceived authenticity when the creator is known to be human (artist).

Mediations. Perceived authenticity served as a significant mediator in the relationship between the type of authorship (artist vs. AI) and consumer financial decisions regarding canvas prints. It significantly negatively mediated the impact of AI authorship on willingness to pay (-2.097 , CI $[-3.769, -0.773]$) and willingness to buy (-0.350 , CI $[-0.613, -0.123]$). This indicates that the authenticity attributed to the product by the author type directly affects purchase intent and level of investment in these products.

Discussion of Study 3 results. Study 3 explored the influence of the visibility of final product outcomes on consumer perceptions, specifically when authorship was identified as either an artist or AI, building on insights from Study 2 that suggested additional product information might not significantly alter perceptions of AI-generated products.

Significant differences were observed in perceived authenticity and effort depending on the authorship condition. Participants rated products as more authentic and indicative of more effort when the author was identified as an artist compared to an AI, highlighting a preference for human involvement in creative processes, which are perceived as more genuine and labor-intensive (Horton et al., 2023). H2 confirmed again. However,

there were no significant differences in willingness to pay, buy, and risk perceptions based on authorship type alone for art-based products, suggesting that these factors might be less susceptible to changes based solely on who created the art.

The visibility of the final product had a significant impact on willingness to pay and buy, with higher ratings in the visible condition. This suggests that transparency in the final product boosts consumer confidence and willingness to invest. Financial and performance risk perceptions were significantly lower when the outcome was visible, emphasizing the importance of product transparency in reducing consumer uncertainty (Sansome et al., 2024; Busser & Shulga, 2019).

Significant interaction effects were found on perceived effort, willingness to pay, and authenticity, indicating that these perceptions are jointly influenced by authorship type and product visibility. Notably, perceived effort was lowest when AI was the author and the outcome was visible, possibly due to assumptions that automated processes require less human effort. However, there were no interaction effects related to perceived risks, suggesting that risk perceptions might be primarily influenced by AI cues and are less affected by additional information and outcome visibility. H9 rejected.

Perceived authenticity mediated the relationship between authorship type and consumer financial decisions, significantly affecting willingness to pay and buy. This mediation underscores the critical role of authenticity in consumer valuation, especially in contexts where technology replaces traditional creative roles (Nunes et al., 2021). H8 confirmed again.

In conclusion, Study 3 reveals that while the visibility of the final product can enhance consumer perceptions and mitigate risk concerns, the nature of authorship significantly influences how authenticity and effort are perceived. However, only perceived authenticity is

significantly affected in the mix of these two conditions, later mediating financial decisions.

4. Overall Results

The series of studies presented aimed to explore how AI involvement and various levels of product information affect consumer perceptions and behaviors across different product forms, specifically books, e-books and canvas prints. A consistent theme across all studies was the impact of AI involvement cues on consumer attitudes, underscoring significant concerns regarding authenticity, credibility, and the perceived effort of AI-generated products compared to those attributed to human creators.

Impact of AI Involvement. AI involvement hints consistently led to negative perceptions and willingness to buy and pay, particularly in terms of authenticity and credibility. Consumers showed reservations about AI-produced content, likely stemming from concerns over the novelty of AI in creative production and its potential implications for quality and reliability. This was evident in both content based products (books, e-books) and art-related products (canvas prints), although the art based nature of canvas prints seemed to mitigate some of the negative perceptions associated with AI involvement, suggesting that art-based product forms might offer a sense of security that deep-content formats lack (Neyazi et al., 2023)

Role of Trust and Familiarity. Across the studies, trust in AI and familiarity with AI-generated content emerged as significant moderators of consumer responses. Higher levels of trust in AI technology and more frequent interactions with AI-generated content were linked to more positive attitudes toward AI-involved products. This suggests that enhancing consumer trust and familiarity with AI could play a crucial role in improving market acceptance and success of AI-driven innovations (Choung et al., 2023; Frank et al., 2023).

Effectiveness of Additional Product Information. Study 2 specifically investigated whether providing detailed product information could alter the negative perceptions elicited by AI involvement hints. The findings indicated that while additional information did not significantly change willingness to pay or buy, it did not substantially alter perceived risks. This suggests that while detailed product information is beneficial, it may not be sufficient on its own to counteract the negative biases induced by AI involvement cues (Craig & Choi, 2024).

Mediation by Authenticity and Performance Risk. The mediation analyses across the studies highlighted that perceived authenticity and performance risk significantly influenced consumer behaviors and attitudes. Increased perceptions of risk and decreased authenticity associated with AI-authored products were found to lower financial

commitment and purchase intent. This underlines the importance of addressing these perceptual factors in marketing strategies for AI-generated products (Naz & Kashif, 2024).

Interactions and Visibility of Product Outcomes. Study 3's exploration into the visibility of the final product outcome revealed that clear visibility could significantly reduce perceived risks and enhance consumer confidence, especially when combined with human authorship. This was particularly notable in the canvas print context, where visibility of the final product helped alleviate concerns over financial and performance risks, but did not counteract the negative biases induced by AI involvement (Abràmoff et al., 2023).

Overall, these studies highlight a complex interplay between AI involvement, product transparency, consumer trust, and perceived authenticity. They illustrate that while AI involvement can detrimentally affect consumer perceptions, strategies that enhance trust in AI, improve familiarity with AI products, and ensure transparency in product outcomes can potentially mitigate these effects. The findings suggest that increasing consumer exposure to AI and enhancing the perceived genuineness of AI-generated products are vital for fostering acceptance and integrating AI into creative industries effectively.

5. Discussion

Theoretical Implications. The study explored consumer perceptions of products based on authorship (human, artist, AI) and type (books, e-books, print canvas), enhancing theoretical insights into consumer psychology amid AI advancements (Mariani et al., 2022). Interaction effects underscore the need to consider variables like product type and AI involvement. The study identifies performance risk and perceived authenticity as key mediators affecting consumer decisions (Hirunyawipada & Paswan, 2006; Nunes et al., 2021; Safeer et al., 2023). Additionally, trust in AI and familiarity with AI-generated content emerged as significant moderators, highlighting their influence on consumer responses and attitudes (Lukyanenko et al., 2022). It expands also AI disclosure literature based on brands (Lefkeli et al., 2024).

Practical Implications. The study's practical implications offer valuable insights for product development, marketing, and risk management. Companies can tailor products to emphasize human involvement in AI generated products, enhancing perceived value and authenticity (Nunes et al., 2021). Understanding consumer concerns about AI-related risks enables firms to develop mitigation strategies effectively (Kalogiannidis et al., 2024). Transparency in AI involvement, but highlighting human added value in creation process can foster trust and confidence (Zerilli et al., 2022). Personalized marketing

strategies, based on consumer trust and familiarity with AI, can improve engagement. Educational initiatives about AI capabilities can boost trust and acceptance (Spais et al., 2023). Lastly, the study emphasizes the need for ethical considerations in AI integration, promoting transparency and authenticity in creative processes (Nguyen et al., 2023).

Limitations of this study. Limitations of the study include potential sample bias due to limited diversity in demographics, affecting the findings' generalizability. Focusing on specific product types (books, e-books, print canvas) limits the study's applicability to other product categories. The study didn't differentiate between various AI capabilities or account for potential ethical concerns in AI involvement. The cross-sectional design captures a single snapshot of consumer attitudes, potentially missing temporal changes. Additionally, unexplored external factors like marketing strategies, peer influence, and media portrayal could influence consumer perceptions, and reliance on self-reported measures may introduce bias.

Future research directions. Future studies should use cross-cultural and longitudinal methods to examine how consumers' opinions of AI products are changing. Examining certain AI traits like intellect and creativity might uncover important variables influencing consumer choices. To increase trust and adoption rates, consideration should be given to the ethical implications of AI's creative process as well as the efficacy of consumer education initiatives. It's critical to do research on AI's involvement in real product personalization. Future research must also focus on comprehending AI's effects on various industries, using experimental methods to get causal insights, and evaluating how technology developments affect customer preferences and market dynamics.

6. Conclusions

The research investigated the consequences of disclosing AI involvement in product creation on consumer perceptions, specifically focusing on authenticity, perceived risks, and the moderating roles of trust in AI and familiarity with AI-generated content. The results clearly demonstrated that disclosing AI involvement generally leads to negative consumer perceptions, particularly in terms of reduced authenticity and increased perceived risks for AI generated products. These factors substantially lower consumer willingness to engage financially with AI-generated products.

Perceived authenticity and risks were identified as significant mediators in the relationship between AI involvement and the diminished consumer willingness to purchase. The data suggest that consumers are wary of products when AI's role in their creation is highlighted, doubting both the genuineness of the products and their

performance reliability. However, these negative effects can be moderated by the consumers' trust in AI and their familiarity with AI-generated content. When consumers trust AI technology and are familiar with AI products, their perceptions tend to be less negative, and their willingness to engage with these products increases.

Furthermore, the study found that providing detailed product information can alter perceived risks associated with AI-generated products. This suggests that transparency about the AI's role and the functionalities of the products can help mitigate some of the consumers' concerns.

In terms of practical implications, the study advises businesses to carefully consider how they disclose AI involvement in product creation. To counteract potential negativity, businesses should focus on building consumer trust and increasing familiarity with AI-generated products through educational initiatives and transparent marketing strategies. Additionally, emphasizing the human oversight and ethical standards adhered to in the AI's integration into product development may further alleviate consumer apprehensions.

These findings contribute to the academic literature by providing a detailed analysis of how AI involvement impacts consumer behavior through the lenses of perceived risk and authenticity. They also explore how the negative impacts of AI disclosures can be mitigated by enhancing consumer trust and familiarity with AI technologies.

Overall, the study highlights the complexities of integrating AI into consumer product markets and underscores the need for strategic transparency and consumer education to foster a more accepting consumer environment for AI-generated products.

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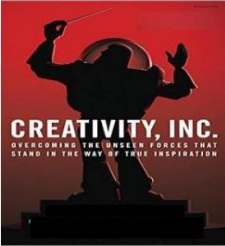



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Appendix

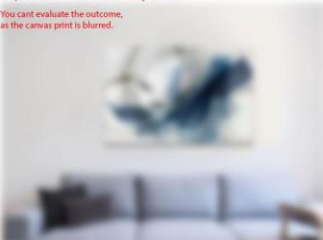

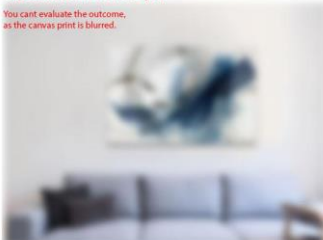
STUDY 1: Stimuli

Book No AI	Book Ai hint	Canvas No AI	Canvas Ai hint
<p>SCENARIO 1</p> <p>Welcome to our online shopping simulation. Imagine, you are looking to buy a book.</p> <p>You come across this book:</p> <p>Hardcover</p>  <p>Typically costs from 10\$ to 50\$.</p>	<p>SCENARIO 1</p> <p>Welcome to our online shopping simulation. Imagine, you are looking to buy a book.</p> <p>You come across this book:</p> <p>Hardcover</p> <p>Important note: This book is generated by AI.</p>  <p>Typically costs from 10\$ to 50\$.</p>	<p>SCENARIO 2</p> <p>Welcome to our online shopping simulation. Imagine, you are looking to buy a canvas print.</p> <p>You come across this print:</p> <p>18" x 24" Landscape Canvas Typically costs from: 25-60USD</p>  <p>Important note: This art print is generated by AI.</p>	<p>SCENARIO 2</p> <p>Welcome to our online shopping simulation. Imagine, you are looking to buy a canvas print.</p> <p>You come across this print:</p> <p>18" x 24" Landscape Canvas Typically costs from: 25-60USD</p>  <p>Important note: This art print is generated by AI.</p>

STUDY 2: Stimuli

Human Low information	Human High information	AI Low information	AI High information
<p>You are considering purchasing a new eBook titled 'Shadows of Tomorrow', a gripping science fiction novel. This novel has been written by Alex R. Johnson, a renowned author known for his contributions to the science fiction and fantasy genres. You have access only to a brief description of the book's plot, without any additional information, sample chapters, or reviews</p>	<p>You are considering purchasing a new eBook titled 'Shadows of Tomorrow', a gripping science fiction novel acclaimed for its deep storytelling and complex characters. This novel has been written by Alex R. Johnson, a renowned author known for award-winning science fiction and fantasy novels. Before making a decision, you have access to a detailed summary, the table of contents, sample chapters from the beginning, middle, and end of the book, and several positive reviews from well-known book critics and readers alike.</p>	<p>You are considering purchasing a new eBook titled 'The Last Algorithm', an innovative thriller focusing on artificial intelligence. This novel has been generated by an advanced AI program. You have access only to a brief description of the book's premise, with no further information, sample chapters, or reviews provided.</p>	<p>You are considering purchasing a new eBook titled 'The Last Algorithm', an innovative thriller that explores artificial intelligence and the future of humanity. This novel has been generated by an advanced AI program, designed to create compelling narrative experiences. Before making a decision, you have access to a detailed summary, the table of contents, sample chapters from various parts of the book, and several positive reviews highlighting the novel's creativity and engagement from technology enthusiasts and literary critics</p>

STUDY 3: Stimuli

Artist Low outcome	Artist High outcome	AI Low outcome	AI High outcome
<p>Welcome to our online shopping simulation. Imagine, you are looking to buy a canvas print.</p> <p>You come across this print:</p> <p>18" x 24" Landscape Canvas Typically costs from: 25-60USD Important: it was created by artist</p> <p>You cant evaluate the outcome, as the canvas print is blurred.</p> 	<p>Welcome to our online shopping simulation. Imagine, you are looking to buy a canvas print.</p> <p>You come across this print:</p> <p>18" x 24" Landscape Canvas Typically costs from: 25-60USD Important: it was created by artist</p> 	<p>Welcome to our online shopping simulation. Imagine, you are looking to buy a canvas print.</p> <p>You come across this print:</p> <p>18" x 24" Landscape Canvas Typically costs from: 25-60USD Important: it was created by AI</p> <p>You cant evaluate the outcome, as the canvas print is blurred.</p> 	<p>Welcome to our online shopping simulation. Imagine, you are looking to buy a canvas print.</p> <p>You come across this print:</p> <p>18" x 24" Landscape Canvas Typically costs from: 25-60USD Important: it was created by AI</p> 