# THE INFLUENCE OF AUTHORSHIP INFORMATION ON THE PERCEPTION OF GRAPHIC MEDIA MESSAGES

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**Abstract**: At a time of increasing use of artificial intelligence (AI) in the design and shaping of media messages, it is important to understand how people perceive messages shaped by artificial intelligence compared to those created without the help of artificial intelligence. This article investigates whether authorship information (AI vs. designer) affects the perception and evaluation of graphic messages. The goal of the research is to determine whether information about authorship can become part of a communication strategy that achieves a better connection with the content and can have a marketing value that contributes to shaping the desired image. An experimental study was conducted with randomly selected participants, divided into two groups. The first group rated graphic messages that were told they were designed by an AI, while the second group rated the same messages with the information that they were designed by designers without the help of AI. Questionnaires with a Likert scale were used to assess aesthetic value, creativity and overall impression. The results of the research are presented through descriptive and inferential statistics to understand the perception of the participants. The research results provide a basis for further research and practical applications in design practice and marketing communication, with the aim of optimizing the use of AI technology in design.

Key words: authorship, design, artificial intelligence

# 1. INTRODUCTION

Artificial intelligence (AI) is an interdisciplinary field of study based on mathematics, computer science, linguistics, psychology, and other fields. Benefits of AI are being seen across a wide range of industries and sectors, from automation in design to innovation in media (Russell and Norvig, 2021). In graphic design its use goes from self-made websites to various design software's (Rezk, 2023). Individuals and organizations often decide to cooperate with AI, especially when it comes to developing ideas and making decisions (Jain et al., 2023). Zhou et al. showed that the Al significantly improves the designer's performance, the efficiency of the iteration process and the quality of the generated solutions (Zhou, Zhang & Yu, 2023). Al significantly helps designers in making decisions, increasing their cognitive activity and design solutions. Due to high implementation of AI in graphic design designers have more time to focus on other aspects of work like brainstorming, new design possibilities, conceptualizing new projects, etc. However, Al designs can become too similar and generic, leading to a decrease in uniqueness and individuality, and homogenization of design. Also, the reliance on AI s may lead to a loss of human touch and creativity in designs, reducing the overall quality and relevance of graphic design work (Mustafa, 2023). Floridi and Chiriatti (2020) discuss whether AI can truly be considered a "creator" or if it merely replicates patterns based on existing data (Floridi & Chiriatti, 2020). AI works in a specific order and cannot "think" independently because they are unable to evaluate the context in which a task should be performed (Rezk, 2023). Therefore, there are some concerns related to implantation of AI in design and the role of humans in design. Scientific reflection on the role of the author in the creation and interpretation of a message is not a new topic. Barthes in his essay argues for a departure from the traditional view of authorship, where the author holds a central role in creating and interpreting meaning (Barthes, 1977). Instead, he proposes that the focus should shift to the reader, or in this case, the viewer, who actively participates in constructing the meaning of the work. When applied to AI-generated design, Barthes' concept of freeing the work from the authority of the author becomes particularly relevant. AI does not function as an individual creator with personal intent and emotional context, it is a tool programmed with rules and algorithms. This "disappearance" of the traditional author in AI design further blurs the boundaries between human and machine creativity. Barthes' thesis on the "death of the author" encourages a re-examination of the role of authorship in modern communication strategies, especially in the context of design and artificial intelligence.

Authorship information could be important in graphic design for several reasons as it can enhance professional reputation, protect the designer's work from unauthorized use and distinguish it from AI made

work (Sun, 2021). The latter is especially important as recent studies indicate general public puts more value on work made by human rather than AI (Dio et al., 2023).

Historically, the concept of the author has evolved significantly. Early definitions of authorship were related to any idea or creation. Over time, literary and critical theories, particularly post-structuralism, challenged the traditional view of the author as the central figure in the creation of meaning. In graphic design, the application of authorship is problematic, particularly when considering the collaborative nature of the profession and the commercial context in which most design is produced. The rise of post-modernism and the deconstruction of texts has led some designers to explore authorship by embracing fragmented, reader-based designs. However, this approach has often been criticized for being more about selfexpression than about the critical engagement with content (Rock, 1996). Early graphic design emphasized anonymity over authorship. Many rejected the elitism of traditional art, favouring functional, minimal, and rational forms inspired by machines. As the profession evolved, objectivity became central, and some designers still prioritize clarity in conveying a client's message, aware of the challenges of true neutrality. However, many modern designers now create their own content, asserting artistic presence and sparking debates on graphic authorship. This shift has revived a sense of agency in design, challenging traditional views and practices (Armstrong, 2009). Manovich (2002) among types of authorships defines collaboration between the author and the software as Authoring using Al. The author sets up general rules but has no control over the concrete details of the work. Authorship that uses electronic and computer tools is a collaboration between the author and these tools that make possible certain creative operations and certain ways of thinking while discouraging others. Of course humans have designed these tools, so it would be more precise to say that the author who uses tools engages in a dialog with the software designers.

#### 1.1 Literature review

Public opinion on AI has an important role in product adoption, commercial development, research funding, and regulation of AI (Kelley et al., 2021). Therefore, a body of research has focused on people's perception on the AI made works in various fields, like music (Hong et al., 2022), and visual arts (Caporusso et al., 2019; Kobis & Mossink, 2021). Some research points to a positive role of AI. For example, in one study Kelley et al. (2021) showed that the public has a widespread perception that AI will have significant impact on society. Some of the key themes they attribute to AI with are; exciting, useful, worrying, and futuristic. McCosker and Wilken (2020) investigated how people react to AI-generated art and how AI affects their evaluation of creativity (McCosker & Wilken, 2020). They concluded that while Al-generated content can be aesthetically pleasing, there is a persistent bias in favour of human-created work due to emotional depth and uniqueness. Mostly the research focused on copyright or value of AI created works. For example, Park et al. examined whether people can distinguish between paintings drawn by a real artists and art created using AI (Park, Kang & Kim, 2023). They found that people have difficulty distinguishing authentic from AI artwork and that additional information about artists and artworks can affect people's criteria for judging paintings. Similarly, Ragot et al. (2020) asked participants to evaluate paintings in four dimensions: liking, perceived beauty, novelty, and meaning, and found that the paintings perceived as painted by humans were rated higher than those made by Al. In another study Jain et al. (2023) determined that with the increase in human age, the aversion to AI decreases. Furthermore, the results show that people have less trust in AI when they use it occasionally, that is, for sporadic parts of tasks and when AI and human do not have different roles in performing tasks. However, in situations where humans and AI work parallel and have different roles, human trust in AI is greater.

Dio et al. (2023) explored the impact of authorship beliefs on aesthetic judgments of abstract art, examining how perceptions of human versus robot creators influence evaluations of beauty and liking. The research found that participants rated artworks differently based on whether they thought a human or a robot created them, even when the artworks themselves were identical. When participants believed a human created the artwork, they gave higher liking ratings in the primed condition compared to the blind condition (where authorship was unknown). This suggests a bias favouring human artists when it comes to emotional connection with the art. Conversely, robot-created artworks received lower beauty ratings in the primed condition than in the blind condition. This indicates a reluctance to attribute artistic competence to robots. The study highlights that people tend to resist attributing artistic value and emotional depth to robot-generated art. The human element in art-making is strongly linked to emotional resonance and perceived creativity, which are seen as distinctively human traits.

Gangadharbatla conducted a study to explore how people perceive and evaluate AI-generated art compared to human-created art (Gangadharbatla, 2022). The study aimed to understand whether

individuals could distinguish between artworks produced by humans and those generated by AI, and how knowledge of the artwork's authorship (human vs. AI) influenced their attitudes and evaluations. The study revealed that participants generally struggled to accurately distinguish between artworks created by humans and those generated by AI. This finding suggests that AI technologies can produce art that is visually similar to human-made art, blurring the lines between human and machine creativity. Despite the difficulty in distinguishing between human and AI art, participants tended to associate figurative (representational) art with human authorship and abstract art with AI authorship. This bias suggests that people may have preconceived notions about the types of art that humans and AI are capable of creating. When participants were informed about the authorship of the artworks before evaluating them, this information significantly influenced their attitudes, purchase intentions, and evaluations of the art. Specifically: Artworks identified as human-made received higher evaluations in terms of originality, creativity, expressiveness, aesthetic value, composition, uniqueness, and emotional connection. When abstract artworks were attributed to AI, they were evaluated more positively compared to when the same artworks were attributed to humans.

#### 1.2 Theoretical Background

Aesthetic value theory has broad applications, particularly in the evaluation and critique of art, design, and media. It provides a framework for understanding why certain works of art are revered while others are dismissed and how these judgments can vary across cultures and historical periods. In the context of Algenerated art, aesthetic value theory can help explore how traditional notions of beauty and artistic value are challenged or upheld by new technologies (Liang, 2022). Aesthetic value theory is concerned with the nature and evaluation of art, beauty, and taste. It explores how and why certain objects, artworks, or experiences are deemed beautiful, moving, or artistically valuable. This area of study encompasses various perspectives, ranging from classical theories rooted in ancient philosophy to contemporary approaches that incorporate cultural and psychological insights. One of the central debates in aesthetic theory is whether aesthetic value is objective or subjective (Goldman, 2005).

Aesthetic value is often linked to the experience of beauty or art. The philosopher Monroe Beardsley argued that aesthetic experience is characterized by an intense focus on the sensory qualities of an artwork, leading to a kind of aesthetic pleasure (Beardsley, 1982). This concept becomes relevant when examining how individuals perceive graphic designs, whether created by humans or Al.

# 2. METHODS

In designing the research methodology for this study, the primary goal is to investigate how authorship information (AI vs. human designer) influences the perception of graphic media messages. The research builds on previous studies that have examined subjective responses to design and art (Chamberlain, 2022; Thüring & Mahlke, 2007; De Angeli, Sutcliffe & Hartmann, 2006). Our study's approach, carefully designed for measuring user perception will contribute to understanding how people interact with new forms of creative outputs, especially in relation to aesthetic value, creativity, and overall impression. This study utilizes a controlled experimental design, where participants are divided into two groups and exposed to the same graphic designs, with only the information about authorship varying (AI vs. human). This approach is inspired by Magni, Park and Chao who found that Al's involvement in creative processes can alter perceptions of creativity and originality, particularly when participants are made aware of the design's authorship (Magni, Park & Chao, 2023). The findings suggest that while people sometimes ascribe lower creativity to AI-generated artifacts compared to human-made ones, this effect is not consistent across all cases. A key factor in this bias is the perception that AI exerts less effort in the creative process than humans, which drives lower creativity ratings for AI-produced works. Additionally, studies by McCosker and Wilken (2020) suggest that the use of AI in creative work often blurs the lines between human creativity and machine efficiency (McCosker & Wilken, 2020). Their work provides insights into how participants may struggle to differentiate between human- and Al-created designs, which is highly relevant to the aims of this study. Floridi and Chiriatti (2020) further contribute to this by discussing the philosophical implications of AI as an "author" and the challenges this poses to traditional notions of creativity and originality. These theoretical considerations are central to this study, as they provide context for how authorship bias might influence participant evaluations of the same graphic media messages. The combination of these insights will help frame the experimental design and guide data analysis, ensuring that the methodology not only addresses the key research questions but also aligns with current research in the field of AI and creative perception (Floridi & Chiriatti, 2020).

#### 2.1 Research Design

This study employed a controlled experimental design to assess how authorship information (AI vs. human designer) affects the perception of graphic media messages. Participants were randomly assigned to one of two groups and exposed to the same set of graphic designs, with the key difference being the authorship information provided. Group 1 evaluated designs labeled as "created by AI," while Group 2 evaluated the same designs but with the label "created by a human designer."

### 2.2 Participants

A total of 166 participants were involved in the study. The sample included 92 females (55.42%) and 74 males (44.58%), with participants evenly distributed across the two experimental groups. The gender distribution of the participants was analyzed for the overall dataset as well as separately for Group 1 and Group 2. In the overall sample, 92 participants were female, accounting for 55.42% of the total, while 74 participants were male, representing 44.58%. In Group 1, there were 48 female participants, comprising 57.83% of the group, and 35 male participants, accounting for 42.17%. In Group 2, 44 participants were female, what is 52.38% of the group, and 39 participants were male, representing 47.62%. No significant difference in gender distribution was observed between the groups, as confirmed by a Chi-Square test (p = 0.639). The age distribution between Group 1 and Group 2 (p = 0.911). The age groups assessed were 18-25, 26-35, 36-45, and 56+. The overall distribution showed that 31.79% of participants were aged 18-25, 25.17% were aged 56+, 21.85% were in the 26-35 age group, and 21.19% were in the 36-45 age group. In Group 1, 29.73% of participants were aged 18-25, 24.32% were aged 56+, 22.97% were aged 18-25, 25.97% were aged 36-45. In Group 2, the distribution was as follows: 33.77% were aged 18-25, 25.97% were aged 56+, 20.78% were in the 26-35 age group, and 19.48% were in the 36-45 age group.

#### 2.3 Materials

The stimulus material consisted of six different graphic media messages sourced from Behance. These visuals were selected to vary in theme and expression, ranging from generic designs to highly authorial works, and from emotionally neutral to emotionally charged messages. Each image was presented twice across the two experimental conditions, but with differing authorship information.

First used image depicts three different stages or versions of a product rendering process for a drink labeled "FruttaVit Sour Cherry." Left panel shows finished, rendered product with full color and details. The bottle is placed in a natural setting, surrounded by cherries, highlighting the drink's sour cherry flavor. In the middle panel is a grayscale, untextured 3D model of the same bottle. This is likely an intermediate stage in the product design, showing the structure of the bottle without textures or lighting effects. On the right panel is a wireframe view of the 3D model, showing the underlying mesh and geometry used to create the bottle. This stage reveals the technical details of the 3D modeling process. This setup is often used in design presentations to show the progression from a 3D model to a fully rendered product.

The second image is an advertisement for a well-known beer brand, set against the backdrop of a sunset. The image prominently features a bottle with a slice of lime at the top, a typical serving style for certain type of beer. The bottle is well-lit, with a glowing effect that emphasizes the golden hue of the beer. A vibrant, warm sunset fills the background, creating a relaxing and inviting mood. The sun's position is cleverly aligned with the bottle, adding to the visual impact, as the light appears to shine directly through the beer. The text "Sunset o'clock" is written across the image, suggesting that the ideal time to enjoy a beer is during sunset, possibly evoking emotions like relaxation, leisure, and enjoyment of the moment. The use of a minimalist font keeps the focus on the bottle and the scenic background, enhancing the simplicity and effectiveness of the message. The imagery likely targets consumers who associate the brand with outdoor experiences, leisure, and a carefree lifestyle.

The third image is a campaign for Alzheimer's awareness, specifically focusing on cherishing moments before memories fade. The design is powerful and symbolic, using artistic renditions of elderly faces that seem to be constructed from carved words. The central figures in the image are three elderly individuals whose faces are composed of three-dimensional wooden letters and words. This visually represents the connection between memories, language, and identity, all of which are deeply affected by Alzheimer's disease. The expressions on the faces convey emotion, particularly a sense of reflection, loss, or contemplation, which aligns with the theme of memory and fading moments. The words may represent the memories and knowledge slowly slipping away, a core feature of Alzheimer's. The artistic portrayal of

faces made from words effectively evokes a sense of empathy and urgency. It connects viewers with the emotional impact of Alzheimer's disease. The combination of familiar human expressions and the abstract use of typography creates a powerful metaphor for the cognitive decay associated with Alzheimer's.

In the next example we used an an advertisement for well-known energetic drink, showcasing the brand's connection to extreme sports and energy-driven activities. The design is consistent with branding—silver, blue, and red colors—with the logo clearly visible. The central focus is on a high-octane action moment. A motocross rider is launching off what appears to be an aircraft or platform into the sky. The rider is wearing a helmet and is mid-action, leaning forward as if performing a stunt, symbolizing speed, power, and adventure. A second figure, possibly a crew member or technician, appears to be refueling or "powering up" the rider's motorcycle with a hose connected to the drink can. This is a creative metaphor for how the drink is marketed as an energy-boosting drink, literally fueling action and excitement. The image reinforces drinks's association with extreme sports, adrenaline, and energy. The combination of the can and the action-packed scene of the motocross rider launching into the sky suggests that the drink provides the fuel and energy needed for high-performance activities.

The fifth image is a branding design for a nail care product or service. It emphasizes aesthetics and luxury through strong visual elements. The focus is on hands with striking, metallic, copper-colored nails. The high level of detail and reflective surface of the nails suggest a premium, polished product or service. The skin and nails are highly stylized with a smooth, metallic sheen, giving the image a futuristic and luxurious feel. The warm, orange hue adds to the rich, bold visual impact, making the nails the focal point. The large, clear font ensures that the brand name stands out against the vibrant background. The logo, placed above the brand name, consists of abstract shapes, possibly symbolizing movement, creativity, or fluidity, aligning with the aesthetics and craftsmanship of nail design. The color scheme predominantly features warm, metallic tones of copper, gold, and orange, evoking feelings of luxury and sophistication. The imagery and design choices convey a message of high-end, fashionable, and bold beauty services. The close-up, metallic textures, and sharp contrast of the nails against the skin make the advertisement visually striking and designed to catch attention.

The last used image showcases a vibrant and nature-inspired branding or advertisement for a soft drink. The central focus is a glass filled with a brightly colored orange soft drink, garnished with an orange slice and ice. The drink has a refreshing, fizzy appearance, highlighted by the bubbles rising in the glass, evoking a sense of refreshment and lightness. Surrounding the drink is a lush, green landscape filled with various flowers in shades of orange, pink, and yellow. The backdrop of a clear blue sky with soft, fluffy clouds enhances the idyllic and peaceful atmosphere, suggesting the drink is to be enjoyed in a natural environment. The use of vibrant oranges and greens connects the product to natural elements like citrus fruits and plants. The bright blue sky adds contrast, making the image pop and reinforcing a sense of clarity and freshness. This visual composition is crafted to promote the soft drink as a fresh, natural, and vibrant product. By placing the drink in a nature-filled setting, the image connects the product to ideas of purity and health, appealing to consumers seeking a refreshing and natural beverage. The use of vibrant, nature-inspired colors and a relaxing atmosphere supports the brand's identity as a refreshing and healthy choice.

## 2.4 Procedure

Participants were informed that they would be evaluating various graphic media messages. Each participant was presented with six images, and for each image, they were asked to rate it on the following dimensions:

- aesthetic value,
- creativity,
- overall impression.

These ratings were collected using Likert scales, ranging from 1 (very low) to 5 (strongly high). The only manipulation in the study was the information about the creator of the designs—whether they were labeled as created by AI or by a human designer. Group 1 participants were told that the designs were AI-generated, while Group 2 participants were told the designs were created by human designers.

#### 2.5 Data Analysis

The collected data was analyzed using both descriptive statistics and inferential statistics. Mean scores for aesthetic value, creativity, and overall impression were calculated and compared across the two groups.

An independent samples t-test was performed to determine whether there were statistically significant differences in perception between the two conditions (AI vs. human authorship).

### 2.6 Ethical Considerations

All participants provided informed consent before the start of the experiment. The study was conducted following ethical guidelines to ensure participant privacy and anonymity. No personal or sensitive data was collected during the study, and all responses were anonymized for analysis.

## 3. RESULTS

An independent samples t-test was conducted to compare the ratings of aesthetic value, creativity, and overall impression between Group 1 (informed that the images were AI-generated) and Group 2 (informed that the images were created by a human designer).

#### 3.1 Aesthetic Value

For Image 1, there was no statistically significant difference between Group 1 (M = 2.59, SD = 0.98) and Group 2 (M = 2.71, SD = 0.74), t(164) = 1.96, p = 0.372. For Image 2, the result was similar, with no significant difference between Group 1 (M = 3.62, SD = 0.99) and Group 2 (M = 3.73, SD = 0.81), t(164) = -0.80, p = 0.424. However, for Image 3, there was a statistically significant difference in aesthetic value ratings between Group 1 (M = 3.94, SD = 0.86) and Group 2 (M = 4.24, SD = 0.73), t(164) = -2.44, p = 0.016, with Group 2 rating the image more favorably. Similarly, for Image 4, Group 2 (M = 3.18, SD = 0.68) rated the image higher than Group 1 (M = 2.90, SD = 0.64), t(164) = -2.70, p = 0.008.

For Image 5 and Image 6, no statistically significant differences were found between the groups (p > 0.05) (Table 1).

Aesthetic Value						
		М	Sd	Md	t-statistics	p-value
Image 1	Group 1	2.59	0.98	2	1.96	0.372
	Group 2	2.71	0.74	3		
Image 2	Group 1	3.62	0.99	3	-0.80	0.424
	Group 2	3.73	0.81	4		
Image 3	Group 1	3.94	0.86	4	-2.44	0.016
	Group 2	4.24	0.73	4		
Image 4	Group 1	2.90	0.64	3	-2.70	0.008
	Group 2	3.18	0.68	3		
Image 5	Group 1	3.88	0.82	4	-0.35	0.728
	Group 2	3.93	0.96	4		
Image 6	Group 1	2.28	0.61	2	0.57	0.566
	Group 2	2.22	0.73	2		

Table 1: Aesthetic Value

#### 3.2 Creativity

Creativity assessments followed a similar pattern. For Image 1 and Image 2, there were no significant differences between Group 1 and Group 2 (p > 0.05). However, Image 3 (Group 1: M = 3.94, SD = 0.86; Group 2: M = 4.24, SD = 0.73, t(164) = -2.44, p = 0.016) and Image 4 (Group 1: M = 2.90, SD = 0.64; Group 2: M = 3.18, SD = 0.68, t(164) = -2.70, p = 0.008) showed significant differences, with Group 2 providing higher creativity ratings. For Image 5 and Image 6, no significant differences were observed (p > 0.05) (Table 2).

#### Table 2: Creativity

Creativity						
		м	Sd	Md	t-statistics	p-value
Image 1	Group 1	2.59	0.98	2	-0.90	0.37
	Group 2	2.71	0.74	2		
Image 2	Group 1	3.61	0.99	3	-0.86	0.39
	Group 2	3.73	0.81	3		
Image 3	Group 1	3.94	0.86	4	-2.44	0.016
inage 5	Group 2	4.24	0.73	4		
Image 4	Group 1	2.90	0.64	3	-2.70	0.008
	Group 2	3.18	0.68	3		
Image 5	Group 1	3.88	0.82	3	-0.35	0.728
	Group 2	3.93	0.96	3		
Image 6	Group 1	1.92	0.72	2	-0.65	0.52
	Group 2	1.99	0.72	2		

#### **3.3 Overall Impression**

The analysis of overall impression revealed a significant difference for Image 1 (Group 1: M = 1.92, SD = 0.83; Group 2: M = 2.19, SD = 0.82, t(164) = -2.17, p = 0.03), with Group 2 providing a more favorable overall impression. Image 3 also showed a significant difference (Group 1: M = 4.19, SD = 0.67; Group 2: M = 4.60, SD = 0.66, t(164) = -3.96, p = 0.0001). For Image 4, there was a significant difference as well, but in favor of Group 1, who thought the image was created by AI (M = 3.43, SD = 0.67 vs. Group 2: M = 3.18, SD = 0.80, t(164) = 2.22, p = 0.028). There were no significant differences for Image 5 or Image 6 in terms of overall impression (p > 0.05) (Table 3).

Table 3: Overall impression

Overall impression							
		м	Sd	Md	t-statistics	p-value	
Image 1	Group 1	1.92	0.83	1	-2.17	0.03	
	Group 2	2.19	0.82	2			
Image 2	Group 1	3.72	0.79	3	-1.26	0.21	
	Group 2	3.87	0.69	4			
Image 3	Group 1	4.19	0.67	4	-3.96	0.0001	
	Group 2	4.60	0.66	5			
Image 4	Group 1	3.43	0.67	4	2.22	0.028	
	Group 2	3.18	0.80	4			
Image 5	Group 1	2.42	0.70	3	094	0.35	
	Group 2	2.52	0.61	3			
Image 6	Group 1	1.81	0.65	2	0.00	1.0	
	Group 2	1.81	0.71	2			

## 4. DISCUSSION

The results of this study provide important insights into how authorship information influences the perception of graphic media messages. Partly consistent with previous research (Di Dio et al., 2023; Gangadharbatla, 2022), participants rated some images attributed to human designers more favourably in terms of aesthetic value, creativity, and overall impression compared to images they believed were Al-generated. This aligns with the notion that people tend to ascribe greater emotional depth and creativity to human-made works. This was particularly evident in the example related to Alzheimer's disease, where the emotional component of the message was strongly emphasized. The significant differences observed in the ratings of Image 3 and Image 4 suggest that participants had a bias towards human authorship, particularly when it came to creativity and aesthetic appreciation. These results support the idea that people may view Al-created designs as less authentic or emotionally resonant, despite the images

themselves being identical. Interestingly, for Image 4, participants who thought the image was created by AI gave it a higher overall impression score than those who believed it was human-created. This may indicate that in some contexts, participants view AI-generated works as innovative or novel, which could enhance their overall impression. The lack of significant differences for several images suggests that the bias toward human creators may not be universal and could depend on the specific characteristics of the design. This is consistent with findings from Ragot et al. (2020), which showed that the perceived beauty of an artwork could be influenced by whether participants believed it was created by a human or AI.

#### 4.1 Limitations

A potential limitation of the research is that participants were only informed about the authorship of the images (Ai or human created). However, this information was quite general, with no specific information about the exact extent of Al's involvement in the production process. The primary objective of our research was to assess the overall effect of Al as a producer on creativity evaluations, rather than focusing on a specific aspect of the process. Secondly, we did not use specific definition of Al and rather left this open for participants, which might be a limitation as participants might have different ideas about what an Al is and what it can do.

# 5. CONCLUSIONS

The implications of these findings are relevant for both designers and marketers. For designers, understanding the bias toward human authorship can help in crafting strategies that either capitalize on this bias or address it by highlighting the unique contributions of AI in the design process. Marketers can also use these insights to tailor communication strategies, emphasizing human involvement in creative processes when targeting audiences that value emotional resonance, while promoting the innovation and efficiency of AI-generated work in other contexts. Further research is necessary to explore how varying levels of AI involvement in the creative process influence perceptions of design. Additionally, future studies could investigate whether providing more specific information about the role of AI (e.g., partial vs. full creation) could mitigate the bias toward human creators. Expanding the sample size and diversity would also allow for greater generalization of these findings across different demographics and cultural contexts. In conclusion, this study contributes to the growing body of knowledge on AI in creative industries, offering a deeper understanding of how authorship information shapes public perception. As AI becomes increasingly integrated into creative processes, balancing human creativity with machine efficiency will be crucial for optimizing both design outcomes and audience engagement.

## 6. REFERENCES

Armstrong, H. (2009) Graphic Design Theory: Readings from the Field. San Francisco, Chronicle Books.

Barthes, R. (1977) The Death of the Author. London, Fontana Press.

Beardsley, M. C. (1982) The Aesthetic Point of View: Selected Essays. Ithaca, Cornell University Press.

Caporusso, N., Zhang, K., Carlson, G., Jachetta, D., Patchin, D., Romeiser, S., Vaughn, N., & Walters, A. (2019) User discrimination of content produced by generative adversarial networks. In: Ahram, T., Taiar, A., Colson R. S. & Choplin A. (eds.) *Human Interaction and Emerging Technologies*. Springer International Publishing, pp. 725–730.

Chamberlain, R. (2022) The interplay of objective and subjective factors in empirical aesthetics. In: Ionescu, B., Bainbridge, W.A. & Murray, N. (eds.) *Human Perception of Visual Information*. Springer, Cham. pp. 1-15.

De Angeli, A., Sutcliffe, A. & Hartmann, J. (2006) Interaction, Usability and Aesthetics: What influences user's preference? In: Carroll, J. M. (ed.) *Proceedings of the 6th Conference on Designing Interactive Systems, 26-28 June 2006, University Park, PA, USA*. New York, NY, Association for Computing Machinery. pp. 271-280.

Di Dio, C., Ardizzi, M., Schieppati, S. V., Massaro, D., Gilli, G., Gallese, V. & Marchetti, A. (2023) Art made by artificial intelligence: The effect of authorship on aesthetic judgments. *Psychology of Aesthetics, Creativity, and the Arts.* 17 (1), 45-57. Available from: doi: 10.1037/aca0000602 Floridi, L. & Chiriatti, M. (2020) GPT-3: Its nature, scope, limits, and consequences. *Minds and Machines.* 30 (4), 681-694.

Gangadharbatla, H. (2022) The role of AI attribution knowledge in the evaluation of artwork. *Empirical Studies of the Arts.* 40(2), 125–142. Available from: doi: 10.1177/0276237421994697

Goldman, A. (2005) Beardsley's legacy: The theory of aesthetic value. *The Journal of Aesthetics and Art Criticism*. 63 (2), 185-189.

Hong, J.W., Fischer, K., Ha, Y. & Zeng, Y. (2022) Human, I wrote a song for you: An experiment testing the influence of machines' attributes on the AI-composed music evaluation. *Computers in Human Behavior*. 131 (107239), 107239. Available from: doi: 10.1016/j.chb.2022.107239

Jain, R., Garg, N. & Khera, S. N. (2023) Effective human–AI work design for collaborative decision-making. *Kybernetes*. 52 (11), 5017-5040.

Kelley, P. G., Yang, Y., Heldreth, C., Moessner, C., Sedley, A., Kramm, A., Newman, D. T. & Woodruff, A. (2021) Exciting, useful, worrying, futuristic: Public perception of artificial intelligence in 8 countries. In: Fourcade, M., Kuipers, B., Lazar, S. & Mulligan, D. (eds.) *Proceedings of the 2021 AAAI/ACM Conference on AI, Ethics, and Society, 19-21 May 2021, Virtual Event, USA*. New York, NY, Association for Computing Machinery. pp. 627-637.

Kieslich, K., Keller, B., & Starke, C. (2021) Al-ethics by design. Evaluating Public Perception on the Importance of Ethical Design Principles of Al. *arXiv*. [Preprint] Available from: https://arxiv.org/abs/2106.00326 [Accessed: 13th October 2024].

Kobis, N. & Mossink, L. D. (2021) Artificial intelligence versus Maya Angelou: Experimental evidence that people cannot differentiate AI-generated from human-written poetry. *Computers in Human Behavior*. 114 (106553), 106553. Available from: doi: 10.1016/j.chb.2020.106553

Liang, D. (2022) Aesthetic value evaluation for digital cultural and creative products with artificial intelligence. *Wireless Communications and Mobile Computing*. 2022 (1), 8318620

Manovich, L. (2002) Models of authorship in new media. SWITCH. 17 (3), 3.

McCosker, A. & Wilken, R. (2020) Creativity and AI: Examining the boundaries of human and machine creativity. *Journal of Digital Media and Society*. 8 (3), 56-71. Available from: doi: 10.1177/2056365120937762

Magni, F., Park, J. & Chao, M. M. (2023) Humans as creativity gatekeepers: Are we biased against Al creativity? *Journal of Business and Psychology.* 39, 643–656. Available from: doi: 10.1007/s10869-023-09910-x

Mustafa, B. (2023) The impact of Artificial Intelligence on the graphic design industry. *Res Militaris*. 13 (3), 243-255.

Park, J., Kang, H. & Kim, H. Y. (2023) Human, do you think this painting is the work of a real artist? *International Journal of Human–Computer Interaction*. 1-18.

Ragot, M., Martin, N. & Cojean, S. (2020) AI-generated vs. Human artworks: A perception bias towards artificial intelligence? In: Bernhaupt, R. & Mueller, F. F. (eds.) *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems, 25-30 April 2020, Honolulu, HI, USA*. New York, NY, Association for Computing Machinery.

Russell, S. J. & Norvig, P. (2021) Artificial Intelligence: *A Modern Approach*. Upper Saddle River, Pearson Education, Inc.

Rezk, S. M. M. (2023) The role of artificial intelligence in graphic design. *Journal of Art, Design and Music.* 2 (1), 1.

Rock, M. (1996) The designer as author. Eye. 20 (5).

Sun, H. (2021) Redesigning copyright protection in the era of artificial intelligence. *Iowa Law Review*. 107, 1213.

Thüring, M. & Mahlke, S. (2007) Usability, aesthetics and emotions in human-technology interaction. *International Journal of Psychology*. 42 (4), 253-264. Available from: doi: 10.1080/00207590701396674

Zhou, C., Zhang, X. & Yu, C. (2023) How does AI promote design iteration? The optimal time to integrate AI into the design process. *Journal of Engineering Design*. 1-28.



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