

AIGC-Era Artistic Democratization: The Lowering of Technical Barriers by AI Art Creation Tools and the Reshaping of Mass Participation in Art

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Abstract

Artificial intelligence technology is advancing rapidly, with AIGC (Artificial Intelligence Generated Content) becoming a key driver of transformation in art creation. Based on intersubjectivity theory, this paper explores how AI art creation technologies break traditional artistic barriers and realize artistic democratization, focusing on the shift from elite-dominated to mass-participatory creation. It elaborates on the technical principles, practical applications, and social impacts of AI art creation to reveal pathways for reshaping public participation. Research results show that AI art creation's dual value lies in reducing creative technical thresholds and establishing a new artistic value system based on distributed human-machine symbiotic creativity. Practically, it transcends the limitations of carbon-based lifeforms through silicon-based machine characteristics. This paper emphasizes that AI art creation is progressive, promotes artistic democratization, and makes art a shared cultural activity for all.

Keywords

AIGC, artistic democratization, mass participation, cultural popularization, intersubjectivity

1 Introduction

Artistic creation has long been regarded as a professional skill, requiring systematic learning and practice. Artistic elitism has created invisible barriers, confining art to a minority's domain of taste and background. However, in the big data era, the rapid development of digital technology has popularized AI art creation tools, accelerating the dismantling of these barriers. Art is transforming from an unattainable "miracle" into an integral part of daily life globally. For example, China's Palace Museum launched the Digital Palace Museum with 3D panoramas and AI interaction; Sanxingdui Museum integrated naked-eye 3D and AI special effects for public cultural promotion; the Uffizi Gallery created 3D digital models of sculptures for virtual restoration; and the Berlin Museum of Popular Art introduced an AI guide MIA to answer visitor questions in real-time. These cases demonstrate how AI technology enables more efficient creation, freeing it from technical skill constraints and reshaping life through technology.

Intersubjectivity theory provides a crucial analytical framework for understanding human-AI interaction in art creation. He Jing proposed that intersubjectivity centers on interactive relationships between subjects rather than unilateral control of objects. In AI art creation, this means AI and human artists form a collaborative, not merely tool-user, relationship. AI art creation involves complex algorithms and data analysis, representing a complementary synergy between human and technological civilizations.

Artistic democratization in the AIGC era entails not only lowering technical barriers but also shifting artistic subjectivity from singularity to pluralism and openness. As creation transitions from elitism to popularization, subjectivity evolves from unidirectional to interactive—art creation becomes a human-machine co-creative process, with distributed human-machine symbiotic creativity as its core characteristic. This provides a theoretical foundation and practical path for artistic democratization.

Figure 1:



2 The Development and Principles of AI Art Creation Technology: From "Technical Tool" to "Interactive Subject"

2.1 The Development History of AI Art Creation Technology

The development of AI art creation technology has evolved from simple image processing to complex artistic forms. Early technologies focused on style transfer (e.g., Prisma, Deep Dream), relying on pixel mapping or continuous optimization without simulating human stroke-by-stroke painting. Technological progress led to the emergence of diffusion models, with Stable Diffusion marking a new phase and pilot applications in various cultural fields.

2022 was a milestone for the explosive growth of AI art creation technology, transitioning from niche professional use to widespread cross-field adoption. Li Xue noted that AI's application in the creative industry has realized the vision of "everyone can be an artist." The popularization of AI art tools has enriched creative resources and expanded into grassroots markets.

2.2 Core Technical Principles of AI Art Creation

AI art creation relies on diffusion models and text encoders. The diffusion algorithm involves two key steps: progressively adding noise to an image until it resembles white noise, then training the AI to reverse this process by denoising to form clear images—this trains the AI's image decoder.

The text encoder converts user-input keywords into token embedding vectors. Stable Diffusion uses ClipText (based on the GPT model), which transforms text strings into numerical lists and tokens into vectors, guiding the image generator.

AI art creation is primarily realized through text-to-image and image-to-image methods. Text-to-image generates works based on keyword descriptions, while image-to-image combines reference images with keywords to produce similar-style drafts. Examples include Jason M. Allen's award-winning "Theatre Spatiale" (generated via Midjourney) and Xinhua News Agency's "AI Brush" H5, which integrates AI with culture for public interaction.

2.3 AI Art Creation from the Perspective of Intersubjectivity

From an intersubjective perspective, AI art creation technology is no longer a mere tool but a co-creative partner. He Jing's "generated intersubjectivity" theory emphasizes that AI art creation is a participatory meaning-construction process, not a one-way creation-acceptance model.

In practice, human artists interact with AI through keyword input, parameter adjustment, and result modification. AI generates initial works based on learned data and optimizes them per human feedback. This interaction transforms AI from a technical tool to an interactive subject, supporting artistic democratization.

3 How AI Art Creation Lowers the Barrier to Art Creation: From "Technical Barriers" to "Participatory Co-creation"

3.1 Lowering of Technical Barriers

Traditional art creation requires mastering painting techniques, color theory, and composition, involving long learning cycles and significant effort. AI art tools internalize this professional knowledge into algorithms, enabling creation without professional skills.

Tools like Stable Diffusion allow easy adjustment of style and color, helping overcome creative obstacles and highlight personalization. Users only need simple keywords to generate basic works, significantly lowering technical thresholds.

From an intersubjective perspective, AI art tools shift creation from technical constraint to participatory co-creation. Li Xue's research (based on the UTAUT model) shows that performance expectancy, effort expectancy, social influence, and facilitating conditions positively impact tool adoption. Work creativity relevance and professional experience further moderate usage willingness.

3.2 Reduction of Time Costs

Traditional art creation requires substantial time investment (weeks to months from sketch to completion). AI art tools generate high-quality works quickly, shortening cycles and improving efficiency. Unlike traditional linear creation (conceptualization to completion), AI enables non-linear, iterative creation—adjustments can be made at any stage, breaking fixed chronological sequences.

3.3 Popularization of Creative Resources

AI art tools have enriched and diversified creative resources. Users can experiment with various styles (e.g., traditional Chinese, realism, anime) without professional skills—technology-culture integration becomes the new evaluation standard. Stable Diffusion, for example, generates high-quality character designs and color schemes based on keywords, realizing the "Ma Liang's Magic Brush" vision.

From an intersubjective perspective, AI promotes the transformation of creative resources from scarcity to abundance and from monopoly to sharing, enriching spiritual life and supporting artistic democratization. Sun Song emphasized that intersubjectivity prioritizes interaction and sharing over unilateral control.

4 Case Studies on How AI Art Creation Reshapes Mass Participation in Art

4.1 Technology Empowerment and Creative Democratization – Text-to-Image Tools Reshaping Mass Art Practice

4.1.1 Generalization of the Creative Subject

Mass art practices using Midjourney and Stable Diffusion enable non-professionals to create. For example, a social media user without painting training input "cyberpunk-style Jiangnan watertown, neon lights and traditional awning boats converge" into Midjourney, generating visually striking images that spread widely and spark discussions on prompt engineering.

4.1.2 Mechanism Analysis and Reshaping Path

Diffusion model-based text-to-image tools shift creative core competence from technical execution to conceptual description and aesthetic adjustment. Users need no painting skills or professional software—they transform ideas visually through iterative text prompts. The emerging "prompt engineering" community forms a new communication paradigm centered on textual rhetoric and parameter sharing, shifting mass participation from "drawing" to "describing" and "iterating."

4.1.3 Theoretical Implication

This model dismantles traditional technical barriers, promotes artistic democratization, and establishes a low-threshold, universal participation mode—transforming artistic expression from a professional skill to a accessible cultural practice.

4.2 Style Assetization and Micro-Entrepreneurship – AI-Driven New Paths in the Creator Economy

4.2.1 From Creation to Startup – Commercial Practices of Individual Artists

Independent illustrators use LoRA technology to fine-tune unique line art styles into exclusive digital assets, batch-generating derivative patterns for phone cases, tote bags, and digital collectibles. They establish brands and achieve commercialization via social e-commerce.

4.2.2 Mechanism Analysis and Reshaping Path

AI style fine-tuning lowers the technical threshold for the art derivatives market. The public acts as both consumers and potential producers—enthusiasts can learn to use tools and enter the creation-promotion-transaction cycle. AI's integration into the art value chain enhances cultural understanding and provides new livelihood opportunities.

4.2.3 Theoretical Implication

AI reduces the marginal cost of artistic entrepreneurship, reshapes the economic dimension of artistic participation, and popularizes the creator economy—converting creativity directly into productivity and revitalizing the consumer market.

4.3 The Living Translation of Cultural Heritage – AI as a Bridge Between Academic Research and Public Experience

4.3.1 The Living Interpretation of Historical Heritage

The Dunhuang Academy uses AI for digital restoration of damaged murals, speculatively reconstructing missing parts based on historical documents. AR applications allow tourists to view virtual restoration animations or experience immersive interactions (e.g., "flying apsaras" leaping from cave walls).

4.3.2 Mechanism Analysis and Reshaping Path

AI acts as a digital restoration expert and situational simulation engine. Through deep learning, it enables cognitive participation (providing complete cultural heritage frameworks via high-precision restoration) and experiential participation (transforming static knowledge into immersive AR experiences), lowering public understanding barriers.

4.3.3 Theoretical Implication

This model reshapes public engagement with historical/high art. As a technical medium, AI bridges academic precision and public education accessibility, enabling cultural heritage transmission through experiential, contextualized methods.

5 Challenges and Reflections Brought by AI Art Creation

5.1 Controversies over Creativity and Artistic Merit

Industry controversies focus on creativity and artistic merit: some argue AI art lacks creativity (mere machine imitation), while others recognize its artistic attributes.

Creativity formation requires historical-cultural accumulation, aesthetic experience, and life practice—emerging from new connections between knowledge nodes. Through extensive training and human intervention, AI generates aesthetic works with unique styles, demonstrating creativity.

Artistic merit is subjective—art expresses ideology, emotions, and aesthetics, open to diverse interpretations. These interpretations, combined with creator intent, constitute a work's artistic merit.

From an intersubjective perspective, AI and human artists are interacting subjects; artworks are co-created products, requiring re-evaluation of creativity and artistic merit within this framework.

5.2 Copyright and Intellectual Property Issues

Copyright ownership of AI-generated works is a key challenge. AI training relies on massive existing artworks, raising issues of authorized use, gray areas, and unauthorized secondary use.

Upstream data acquisition complexity makes copyright regulation difficult, requiring new protection mechanisms. From an intersubjective perspective, copyright should reflect the shared contribution of AI and human creators, not unilateral attribution.

5.3 Balancing Professional Value and Technological Substitution

AI art's rapid development raises concerns about professional art value—inefficient practitioners may be eliminated, and the industry may shrink, increasing unemployment.

However, AI improves efficiency but cannot replace traditional artists' irreplaceable qualities. Industries like game development and animation still require human participation. AI acts as an auxiliary tool, allowing artists to focus on conceptualization and emotional expression. From an intersubjective perspective, AI and professional creation are synergistic, not substitutive—AI provides new tools and methods for creative depth.

6 Conclusion and Outlook

In the AIGC era, AI art creation technology transforms art from elitist to mass-participatory, advancing artistic democratization. By lowering technical barriers, time costs, and resource access difficulties, it makes creation accessible to the public and reshapes participation models.

Art practitioners need not deny AI's progress or over-worry about professional devaluation. Distributed human-machine symbiotic creativity establishes a new artistic value system and overcomes carbon-based lifeform creative limitations via silicon-based machines.

Future AI art development will deepen democratization and popularization. Corresponding copyright mechanisms, balanced human-AI relationships, and sustainable industry development are essential. Artistic democratization requires reforms in social attitudes, education systems, and copyright institutions. Intersubjectivity theory provides a key perspective for human-machine relationships and artistic democratization.

In the AIGC era, art creation is no longer a minority privilege but a universal activity. AI art tools realize artistic democratization, opening new possibilities for human creation. AI art involves complex algorithms and data analysis, with uncertainty and intervenability—core to artistic creation and democratization.

References

- [1] He, J. Generated Intersubjectivity—A Participatory Approach to Meaning Construction [J]. *Philosophical Trends*, 2017, (2): 87-92.
- [2] Li, X. Design Research on Shaping the Competitiveness of Clothing Brands in the Artificial Intelligence Era. Ph.D. Thesis, Jiangnan University, 2024.
- [3] Sun, S. Research on the Problem of Intersubjectivity in Artificial Emotions [J]. *Philosophical Research*, 2011, (10): 78-85.
- [4] Chen, J.J., Bai, Y.H. Will Professional Value Be Erased by AI Art Creation?—The Humanistic Pain and Digital Imagination of "Distributed Human-Machine Symbiotic Creativity" [J]. *Audio-Visual*, 2023, (8): 18-20.
- [5] Zhang, W. Analysis of the Application of AI Art Creation Technology in Visual Design under the Background of the Metaverse [J]. *Shanghai Light Industry*, 2024, (11): 65-67.
- [6] Hu, H. Application of AI Art Creation Technology in Public Art Creation [J]. *Screen Printing*, 2025, (3): 111-113.
- [7] Huang, W.X. Thoughts on AI Art Creation Technology and Its Creativity and Artistic Nature [J]. *Toy World*, 2023, (3): 135-137.
- [8] Jiao, L.D. Discussion on the Application of AI Art Creation Technology—Taking Two-Dimensional Art Design in Games as an Example [J]. *Technology Horizon*, 2023, (6): 68-69.
- [9] Tian, G.Y. Application of Stylized Neural Painting Technology in Thematic Publicity—Media Convergence Product "AI Brush | Move Your Hand, 'Add Color' to Spring China Together" [J]. *Chinese Journalist*, 2022, (9): 24-26.

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