

Impact and Role of Artificial Intelligence Technology in the Field of Art

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Abstract: Generative artificial intelligence is rapidly transforming the art world, offering both new creative opportunities and significant challenges. The growing presence of AI-generated works in creation, exhibition, and competitions raises questions about considerations of standard framework, institutional practices, participation guidelines, and transparency. This paper examines these issues through a research-based approach, which identifies current challenges and proposing recommendations. While not a definitive standard for AI application in the arts, the discussion offers an exploratory overview of how generative AI tools are being integrated into everyday artistic practice. The study argues that robust frameworks are essential to address unresolved concerns around copyright, authorship, and data sources, ensuring fairness, integrity, and transparency in competitions and exhibitions. And this could be a help to generative AI development in the future.

Keywords: Generative AI; AI-generated art; Authorship; Exhibition guidelines; Transparency; Standard framework

1. Introduction

Generative AI is rapidly transforming the art world, which brings new possibilities and challenges to artistic creation. Tools such as Midjourney, Stable Diffusion, Runway, and Sora are driving advancements in art and design[1]. AI tools can now produce complex artworks, which prompts a reevaluation of ownership, creativity, and artistic expression. The growing prevalence of AI-generated art raises questions about the framework for its creation, exhibition, and use in competitions. This paper explores key areas: legal and ethical considerations, competition and exhibition practices entry guidelines, and transparency in AI usage. Using a research-based approach to examine current issues, identifies challenges, and provides recommendations. Nevertheless, this paper offers an overview of generative AI use in art world, which is not an absolute standard of AI application, but can be seen as an exploratory discussion on using AI generative tools in daily practice.

2. Standard Framework Considerations in AI-Generated Art

The standard framework surrounding AI-generated art is still evolving. According to ABC News (2023), countries are accelerating the development of frameworks and regulations. For example, Australia's "Policy for the Responsible Use of AI in Government," effective September 2024, aims to enhance transparency and risk assessment, requiring statements on AI use. However, no comprehensive framework exists for copyright, intellectual property, and ownership. Traditionally, creators own rights to their works, but when AI generates art without human intervention, ownership becomes complex.

The primary standard framework issue is copyright. Under conventional law, the creator must be human, placing AI art in a gray area. The "Compendium of U.S. Copyright Office Practices" states copyright protects "intellectual works based on human creativity" and excludes works "solely generated by machines" without human input. China's Copyright standard defines the "author" as a natural person or, in certain cases, an entity. The EU's report on AI and IP states that works autonomously created by AI do not meet originality requirements tied to human authorship. In August 2022, American digital artist Jason Allen uses Midjourney-created "Space Opera Theater" won an award but was denied copyright by the U.S. Copyright Office for lacking human authorship. While AI cannot own copyrights, programmers, owners, or directors of AI may claim them. The case of the Urantia Book highlighted the need to adapt laws to new technologies, revealing the necessity for traditional copyright standard to reassess and adjust in response to emerging technologies. While existing standard framework seem to focus mainly on human authors, they do not entirely exclude non-human authorship possibilities. This debate could influence copyright ownership of future AI creations[2].

Another concern is authorship. AI now produces works rivaling human creativity, blurring attribution. Without clear rules, determining authorship affects moral and commercial rights. [3]Epstein et al. stress defining copyright ownership and protecting artists whose work trains AI, while balancing creators', users', and society's interests.

Currently, no unified global standard framework exists. Countries address these issues differently, with standard framework slowly adapting to rapid AI advances. If there are no clear standards, artists, AI developers, and other stakeholders face

uncertainty over rights and responsibilities.

3. Responsibility Considerations in Art Creation

The use of generative AI in artistic creation raises serious responsibility issues that can impact the creativity and originality of artworks, as well as the status of independent creators in the creative workflow. Artworks generated by AI challenge traditional understandings of creativity. This situation gives rise to various questions, such as definitions of art ownership, whether humans dominate innovation, and the potential for commercial entities seeking economic gain to misuse automation tools. A major consideration involves the possibility of human creators being replaced. As AI systems become increasingly adept at generating artworks that match the quality and novelty of human-made art, there are growing concerns that automated solutions may overshadow traditional creators or weaken their market positioning. Independent artists may face increasing challenges in a competitive environment, as AI-generated works can be produced efficiently and quickly at lower operational costs. This trend could devalue completely human-made artworks, allowing AI-created content to dominate mainstream platforms.

Moreover, the authenticity and originality of AI-generated art are uncertain. If a work is developed from content trained on a vast database of existing human-created works, people may question whether these tools genuinely produce “innovative” content or simply reorganize elements from historical works. Originality issues will arise regarding the extent to which AI-generated works are derivative and whether they can be considered truly original like human-made works. Considering the data used in training, transparency will further complicate these matters[4].

4. Entrance Terms/Conditions of Art Competitions and Exhibitions

As AI-generated art gains attention, competitions and exhibitions face new challenges.

In competitions, simply including or excluding AI art raises legal and ethical issues, requiring clear entry rules. Many traditional contests demand initial sketches and full creative process records to prove originality, reflecting the belief that art stems from human creativity. As art historian Meyer Schapiro remarked, art is an autonomous human activity rooted in human expression. While the role of creator has shifted toward creator–audience interaction, the “human” remains central. However, with AI now producing high-quality works, many contests are revising their rules. In recent years, some scholars and artists have urged excluding AI art, arguing that art must remain human-led. At the 2024 Sony World Photography Awards, Boris Eldagsen refused an award for an AI-generated work, citing the absence of AI review mechanisms, prompting organizers to strengthen procedures. Key challenges include determining whether and how much AI was used, and requiring participants to disclose AI involvement so judges and audiences can assess authenticity. Without transparency, contests risk undermining credibility and fairness. Going forward, rules must balance innovation with integrity, establishing norms and transparent standards for AI-created works.

In exhibitions, AI-generated art’s ability to mimic or surpass human works raises questions about authenticity and origin. Transparency is a central concern. At Art Basel Hong Kong 2025, Chinese artist Miao Ying’s *Lava Cavern of Levitation* integrated ChatGPT-generated poetic texts and an AI voiceover into a fusion of painting and digital art. Ho Tzu Nyen’s *Night Charades* projected on Hong Kong’s M+ Museum reimaged classic Hong Kong cinema scenes via multiple AI systems. In 2022, Romania’s “AI Jarvis” curated an exhibition by analyzing data from universities, galleries, and museums to generate a theme and select works. Unlike competitions, exhibitions focus on subjective expression rather than objective evaluation. AI tools allow artists and curators to improve efficiency and integrate vast information quickly, but they should disclose datasets and technologies used. Just as traditional exhibitions label artworks with names, materials, and descriptions, AI-generated works should include clear disclosures to ensure transparency.

5. Challenges and Recommendations for generative AI

As AI increasingly integrates with the art industry, Standard framework must evolve to address new challenges. AI can transform art but also creates regulatory, fairness, and transparency issues. New standards combined with guidelines are needed, as AI’s rapid growth exceeds framework making, and traditional IP framework for human creators are not fully applicable to machine-generated works. This creates uncertainty over copyright, authorship, and creative work protection. So, a potential solution is establishing a separate IP category for AI-generated works, with distinct rules for competitions and exhibitions. For example, Tongji University’s 2025 Global AI+IP Creative Design Contest encourages AI use as a dedicated category. In fact, balancing support for human artists with AI’s democratizing potential is crucial. Policies should ensure AI enhances rather than replaces creativity. Meanwhile, consideration of transparency is also essential, undisclosed AI use risks misleading audiences. Institutions should require artists to declare AI involvement and provide documentation.

Ultimately, achieving balance will require time and international collaboration, but clear standard framework, guidelines, and transparency policies can foster innovation while protecting all stakeholders.

6. Conclusion

The rise of generative AI brings new creative possibilities, but also challenges that must be addressed. Strong standard frameworks are essential to protect both human and AI-driven creativity. There are some key issues that include copyright, ownership, data sources, and authorship, which current IP frameworks inadequately address, requiring new frameworks. Competitions, exhibitions, and institutions must integrate AI while maintaining fairness, transparency, and integrity, with clear guidelines and disclosure requirements. AI should enhance, not diminish, human creativity. These challenges require collaboration and new policies to embrace AI's potential while preserving creativity's core values. Evolving regulations will ensure both human and AI creativity can thrive.

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