Image Expression and Aesthetic Reconstruction in Digital Media Art in the Intelligent Era

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Abstract. In the intelligent era, where technologies such as artificial intelligence, big data, and virtual reality are deeply permeating, the image expression of digital media art is undergoing a paradigm shift from "human-dominated" to "human-machine collaborative," and the aesthetic system is also undergoing a structural reconstruction. Taking the integration of intelligent technology and digital media art as a starting point, this article, drawing on practical examples of image creation, analyzes how intelligent technology reshapes the production logic, presentation form, and dissemination path of images. It explores the changes in aesthetic subjects, objects, and standards in this process, revealing the innovative directions and potential difficulties of digital media art image expression under the empowerment of technology. The study finds that generative AI and intelligent interactive technologies have not only expanded the boundaries of image expression, enabling immersive images that interweave virtual and real life, and dynamically generated personalized images, but also promoted the shift of aesthetic appreciation from "passive acceptance" to "active participation," and from "single aesthetic" to "multi-faceted symbiosis." At the same time, problems such as image homogeneity and the weakening of humanistic values caused by the misuse of technology also need to be urgently addressed. This article argues that the development of digital media art in the intelligent era must be driven by both technological empowerment and humanistic guidance. While breaking through the limitations of visual expression, a new aesthetic system combining technological innovation and spiritual depth should be constructed, providing insights for the sustainable development of digital media art.

Keywords: Intelligent Era; Digital Media Art; Visual Expression; Aesthetic Reconstruction; Technological Aesthetics.

1. Introduction

ChatGPT can generate logically coherent video scripts, Midjourney can transform textual imagination into detailed images, and intelligent algorithms can adjust video content according to user preferences. Digital media art image creation has long since transcended the limitations of the traditional "camera + editing console" model and entered a new intelligent stage of "human-machine collaboration." The technological revolution in the intelligent era is not merely an upgrade of tools; it also profoundly impacts the essence and aesthetic principles of artistic creation. As a quintessential vehicle for the fusion of technology and art, digital media art's visual expression, from production to dissemination and reception, has been transformed by intelligent technologies. Generative AI has shattered the "professional threshold" of image creation, allowing ordinary users to create complex images with simple commands. VR and AR technologies have transcended the two-dimensional limitations of images, creating immersive and interactive three-dimensional visual spaces. Big data analytics allows image dissemination to precisely match audience needs, achieving personalized presentations tailored to each individual. However, behind these technological enablements, pressing questions remain: How is the creator's subjectivity reflected when algorithms become the "invisible hand" of image creation? With virtual digital humans and synthetic images becoming mainstream aesthetic objects, is the traditional aesthetic standard of "realism" applicable? With users participating in the creation of interactive images, how do we define the boundaries of aesthetic activity? At the core of these questions lies the deep-seated contradiction between the "transformation of visual expression" and the "reconstruction of the aesthetic system" induced by intelligent technologies. Current academic research on these two issues focuses primarily on technical applications, such as the principles of AI-generated imagery and the design of immersive VR images. However,

insufficient research has examined how these technologies systematically reconstruct the logic of visual expression and aesthetic paradigms[1]. This article, grounded in the technological context of the intelligent era, focuses on "visual expression" and "aesthetic reconstruction," conducting a five-dimensional analysis. Combining creative practice with industry trends, it explores development paths, providing valuable references for creators and researchers.

2. Intelligent Technology Reshapes the Production Logic of Digital Media Art Images

The impact of intelligent technology on the expression of digital media art images is first evident in the production process. The traditional fixed process of "scriptwriting, shooting footage, editing, and dissemination" has been broken down, giving rise to a new approach of "data-driven, human-machine collaboration, and dynamic adjustment." Creation is no longer exclusive to professionals; ordinary people can participate; and it goes beyond the need for finalization and allows for continuous optimization. In its early stages, intelligent technology enables both "intelligent generation" and "efficient selection" of materials. Previously, creating images required either shooting in-house or purchasing materials, which was time-consuming and labor-intensive, and limited by experience and resources. With generative AI, creating something out of nothing is now commonplace: a designer using Stable Diffusion inputs the phrase "A cyberpunk-inspired future city at dusk, light and shadow flow with time," and dozens of images are generated. The algorithm then adjusts the composition and color, quickly selecting the most suitable ones. Jianying's "intelligent cutout" and "automatic music composition" are also practical. They automatically identify the subject of the image and assign rhythmic music, reducing editing hours to minutes. This "input command, algorithm generation, and manual screening" model allows ordinary people to create images using AI, fostering an ecosystem of "creation for all." In the creative process, intelligent technology has transformed imagery from a one-way output to an interactive generation. Previously, creators had the final say; once an image was released, it was final, and viewers could only observe[2]. Now, with intelligent interaction and data analysis, images can "follow the flow." At digital art exhibitions, sensors record visitor movements and dwell time, and AI adjusts the image's color and rhythm in real time. Visitors gather in a specific exhibition area, and the image cuts to a detailed version; with specific gestures, virtual elements interact accordingly. This model transforms imagery into a dynamic process involving creators, technology, and audiences, transforming expression from "creators speaking alone" to "collective storytelling." In terms of optimization, intelligent technology relies on "data feedback" to achieve more precise expression. Previously, image modifications relied on experience, making it difficult to tailor them to audience preferences. Now, Douyin and Bilibili analyze user viewing time, likes, and reposts to provide creative direction. One creator discovered from data that young people favor the combination of digital humans and traditional culture. They added AI virtual humans dressed in Hanfu (Chinese traditional clothing) and accompanied it with ancient music, increasing their reach by over 30%. This "data-based, adjustment-based, and impact-testing" approach shifts creative processes from relying solely on experience to relying solely on data, improving efficiency and appealing to audiences.

3. Paradigm Breakthroughs and Form Innovation in Digital Media Art Image Expression

Intelligent technology has not only transformed traditional approaches to image production but also disrupted traditional digital media art image expression models, giving rise to three new image forms: interactive, dynamically generated, and cross-modal. These new forms of imagery have transformed images from static displays to dynamic growth, and from a single medium to a blend of multiple media, creating a greater sense of immersion, participation, and individuality. Interactive imagery directly breaks the confines of traditional imagery's single-line storytelling. Previously,

movies and documentaries were limited to a rigid "beginning-development-climax-end" narrative, leaving viewers passively watching without any choice. Intelligent interactive technology now allows viewers to engage with the narrative. Netflix's "Black Mirror: Bandersnatch" uses algorithms to create multiple story branches[3]. Clicking on the screen to select characters can lead to completely different endings, and some viewers can even uncover hidden plot points. This type of work is particularly common in digital art exhibitions. Artists use eye tracking to capture the viewer's attention. Simply by focusing on a specific element in the image, the algorithm automatically displays related content, allowing viewers to gradually understand the image's meaning through a process of "seeing, selecting, and exploring." Dynamically generated images free images from being "fixed." Previously, images were immutable once created; the imagery and color schemes were fixed, and changing scenes required only a simple edit. Now, with big data and AI at its core, images can adapt to the world around them. For example, Beijing's digital installation "City Pulse" collects real-time data on traffic flow and air quality. AI transforms this data into images—showing dense red lines during traffic jams and a translucent blue gradient when the air is good. Citizens can observe the "data-driven" city in real time on large outdoor screens. Even social media platforms' "AI-powered dynamic avatars" can automatically change style based on a user's real-time expressions and outfit, turning images into a dynamic extension of their personality. Cross-modal imaging has also broadened the scope of image expression. Previously, digital images relied primarily on visual perception, and even the addition of sound merely served to enhance the visual experience. Now, AI is blending text, sound, and imagery, creating a more layered expression. Tencent Music's "Music Image Generator" takes a piece of music, analyzes the rhythm and melody, and generates an image whose colors change to match the melody, with the image's rhythm perfectly aligning with the beat. Artist Xu Bing's "Book from the Ground" is another example. It uses AI to transform his "graphic text" into a dynamic image, adding voice recognition. When viewers read the text, the graphics in the image transform and reorganize, allowing them to understand the work's meaning through both listening and seeing[4].

4. Reconstructing the Aesthetic System of Digital Media Art Driven by Intelligent Technology

Technology has transformed the visual expression of digital media art and, ultimately, reconstructed the aesthetic system—the viewers, the objects being viewed, and the standards for judging beauty have all changed, gradually forming a new aesthetic adapted to the intelligent age. In the past, audiences could only passively absorb art, separated from the works and unable to participate in their creation. This is no longer the case. Digital media art, leveraging interactive technologies and platforms, empowers viewers to become creators. For example, the AI-powered special effects on Douyin and Kuaishou allow ordinary people, without technical expertise, to upload a photo and have AI transform it into an ink painting or cyberpunk-inspired animated video. Add music and transitions, and then share it for interactive viewing. Users are now both appreciators and creators of the artwork, transforming aesthetic appreciation from a one-way experience to a two-way collaborative experience. Even at virtual idol concerts, audiences can interact with each other through commentary and vote on song order and stage design. Aesthetic appreciation has shifted from a solitary experience to a collaborative creation. In the past, digital media art's aesthetic focus was largely based on reality—people and scenes in the images had to resemble reality, with "realism" being a key criterion. However, intelligent technology has made virtual creations mainstream. Examples include the digital humans AYAYI and Lingling. These digital humans aren't replicas of real people, but rather AI-adjusted facial proportions and unique expressions, making them popular in fashion and art circles. This is particularly evident in the Metaverse Art Exhibition, where artists create floating castles and living plants using VR. These creations defy the rules of reality, yet they create a powerful visual impact and a sense of immersion. These virtual objects break the constraint of "must resemble reality," extending the aesthetic scope from "visible reality" to "imaginable virtuality." Aesthetic standards have also shifted from a single authority to a multiplicity of aesthetics. In the past, evaluations of

video production focused on technical quality, storytelling integrity, and visual aesthetics, all dependent on the artist's expertise. Now, however, "interactivity" and "immersion" have become new criteria. When evaluating interactive video, audiences are more concerned with whether they can choose the plot and feel immersed. When evaluating virtual exhibitions, the ability to freely browse and interact with virtual elements is crucial[5]. Furthermore, AI has lowered the threshold for creative expression, allowing many ordinary people to create video. Some prefer the traditional Chinese style created by AI, while others prefer cyberpunk virtual scenes. Both niche and mainstream aesthetics can coexist. Without the rigid rule of "authority having the final say," the aesthetic ecosystem has become more vibrant.

5. The Current Dilemma and Solutions for Digital Media Art Empowered by Intelligent Technology

Intelligent technology has not only transformed the imagery of digital media art but also altered the entire aesthetic logic—from the viewers, the objects of appreciation, to the criteria for judging "beautiful," everything has changed, gradually forming a new aesthetic state suited to the intelligent era. The most obvious change is in the audience. Previously, when viewing art, viewers could only passively accept it, separated from the work by a layer, unable to participate in the creation. Today, however, digital media art relies on interactive technologies and platforms, allowing viewers to become "creators." Take, for example, the AI special effects on TikTok and Kuaishou. An ordinary person can upload a photo and, without any professional skills, AI can transform it into a dynamic image with an ink-and-wash or cyberpunk aesthetic. Add a soundtrack, share it, and interact with it. Now, users become both appreciators and creators, and aesthetic appreciation is no longer a one-sided experience, but a collaborative one. Even at virtual idol concerts, audiences can post comments and vote on setlists and stage images. Aesthetic appreciation has shifted from a solitary process to a collaborative one. The very objects of appreciation have also changed. In the past, the aesthetic of digital media art was largely based on reality. The people and scenes in the images had to look "real," and "realism" was a rigid standard. However, intelligent technology has made "artificial virtual objects" mainstream. Examples include the digital humans AYAYI and Ling Ling, whose images, manipulated by AI and designed with facial features, have become popular in fashion and art circles. At the Metaverse Art Exhibition, VR-created floating castles and animated plants defy the rules of reality, yet they deliver a strong visual impact and immersive experience. These virtual objects break the constraint of "must resemble reality," extending the aesthetic from "visible reality" to "imaginable virtuality." The criteria for "beauty" have also been relaxed. Previously, the evaluation of digital media art focused on technical sophistication, coherent storytelling, and aesthetically pleasing visuals, often relying on the opinions of professional artists[6]. Now, with audience participation and the virtualization of the subject, the standards have shifted to a "multi-faceted coexistence." When evaluating interactive images, audiences are more concerned with whether they can choose the plot and feel immersed. When evaluating virtual exhibitions, the ability to freely browse and interact with the elements is crucial. Moreover, AI has lowered the threshold for creative expression, allowing ordinary people to create visuals. Some embrace the AI-inspired national trend, while others prefer cyberpunk virtual scenes. Both niche and mainstream aesthetics find their place. Without the rigid rules of "authority having the final say," the aesthetic community has become more vibrant.

6. Future Outlook: Building a New Digital Media Art Ecosystem that Integrates Technology and Humanities

The convergence of intelligent technology and digital media art is an unstoppable trend. With the continued development of AIGC, VR/AR, and brain-computer interfaces, the visual expression of digital media art will further break through boundaries, and the aesthetic system will become more open and inclusive. Creating a new digital media art ecosystem "enabled by technology and guided

by humanities" will become the core development direction of the industry. Technically, the deep integration of AIGC and VR/AR will create new images that are "immersive, interactive, and ultra-realistic." In the future, the collaboration between the two will enable "real-time generation + immersive experience." For example, in a virtual exhibition, a visitor wearing VR equipment can say, "I want to see spring in the Jiangnan water villages." AIGC will instantly generate dynamic images, with willow leaves swaying with footsteps and ripples forming in the stream. Interactions between multiple people can even become visual elements, bringing the exhibition to life. As brain-computer interfaces mature, creation and appreciation may evolve into "mind interaction"—creators control AI with their thoughts, while viewers interact with the images through their minds. This will elevate the experience from "visual observation" to "full sensory immersion," blurring the lines between creator and audience. In the arts, digital media art will break down barriers and become deeply integrated with traditional art, technology, and social life. Creation will no longer be limited to "pure art" but will also integrate traditional cultural heritage and ecological conservation. AI can be used to transform ancient texts into dynamic images, creating "virtual museums" with VR; and satellite data can be used to visualize glacier melting and forest degradation to raise environmental awareness. Integration with traditional art will also deepen, with ink paintings becoming interactive images and music transformed into dynamic installations. This will transform images from merely aesthetically pleasing to useful, enriching them with cultural and social value. Ecologically, a creative and aesthetic environment characterized by "human-machine collaboration" will gradually take shape, and an industry system that balances technology, humanity, and ethics will be further refined. Creation will follow a model where "creators set the direction, AI performs the technical work, and audiences provide inspiration." Aesthetic standards will become more diverse, encompassing technology, humanity, and social values, allowing for the coexistence of popular and elite aesthetics. At the same time, industry regulations will become stricter, and issues such as data privacy and copyright protection will be jointly managed by government oversight, industry self-regulation, and social oversight to ensure that technological innovation maintains a humanistic foundation[7].

7. Conclusion

The technological transformation of the intelligent era presents both rare opportunities for the visual expression and aesthetic reconstruction of digital media art, and profound practical challenges. From breakthroughs in image production and expression paradigms to the reconstruction of aesthetic systems and the emergence of industry difficulties, digital media art is undergoing a systematic transformation from "technological empowerment" to "ecological reconstruction." Analysis shows that the intelligent era is a key driver of the digital media art industry. Technology has transformed the logic of image production, with "human-machine collaboration," "dynamic generation," and "data-driven" emerging trends. It has also spawned new types of imagery, including interactive and cross-modal imaging. Furthermore, it has driven a shift in aesthetics—from passive acceptance to active participation, from the pursuit of reality to virtual construction, and from a single authority to a diverse and symbiotic landscape. However, technology has also brought about issues such as algorithmic homogeneity, a weakening of humanistic values, and data misuse. The core issue lies in the imbalance between the instrumental rationality of technology and the humanistic spirit of art. Promoting its sustainable development requires fostering a new ecosystem that integrates technology and humanity. Within the creative process, creators should guide technology with humanity, avoiding becoming "vassals of technology." Within the industry, algorithms should be optimized, ethics should be refined, and innovation should be balanced with copyright and aesthetic guidance. At the societal level, aesthetic education should be strengthened to enhance public media literacy. Only in this way can technology become an "enabler," imbuing images with both technological vitality and humanistic depth, leading to a more open and inclusive aesthetic reconstruction. Future technological iterations will lead to further breakthroughs in image expression and a more diverse aesthetic ecosystem, but the core principle of "technology serving art, art conveying humanity" remains unchanged. Digital

media art will eventually move towards "human-machine symbiosis and aesthetic integration", conveying thoughts on human nature and society through images, and becoming an important force in promoting cultural progress and enriching the spiritual world.

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