

Original Research Article

Research on the transformation and innovation of film aesthetics in the AI era

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Abstract: Artificial intelligence has been fully integrated into the entire chain of film creation, production, and communication, driving a systematic transformation of film aesthetics across production mechanisms, textual forms, and aesthetic experiences. While generative AI, virtual filmmaking, algorithmic recommendation, and other technologies have enhanced industrial maturity and expanded visual expression, they have also given rise to pressing challenges, including weakened artistic subjectivity, superficial emotional articulation, fragmented cultural memory, and blurred ethical boundaries. Grounded in the dialectical relationship between technology and humanity, this paper examines the evolution, core characteristics, and practical dilemmas of film aesthetics in the AI era, and proposes an integrated framework of people-orientation, human-machine collaboration, ethical governance, and indigenous construction to provide theoretical references for the high-quality development of China's film industrial aesthetics.

Keywords: artificial intelligence; film aesthetics; industrial aesthetics; AIGC; aesthetic reconstruction

1. Introduction

As a representative intelligent technology, generative AI is profoundly reshaping the industrial structure and expressive logic of cinema. From script planning, virtual shooting, and intelligent editing to visual effects and distribution, artificial intelligence has gradually evolved from a auxiliary tool into a collaborative creative force, propelling the film industry into a new phase of intelligent, industrialized, and standardized development. Technological empowerment has greatly boosted the efficiency of image production while sparking in-depth reflections on aesthetic paradigms, value orientations, and ethical boundaries. Film aesthetics is no longer confined to cinematographic language and narrative structure; it extends to the holistic reconstruction of production logic, cultural memory, and aesthetic reception. Balancing rapid technological advancement and the persistence of humanistic values has become a central concern in contemporary film aesthetics research. Focusing on the impact of artificial intelligence on film aesthetics, this paper analyzes its transformative features, practical dilemmas, and developmental pathways, so as to provide theoretical support for the sound development of cinematic art in the intelligent age.

2. Three-dimensional transformation of film aesthetics driven by artificial intelligence

2.1. Transformation of production mechanisms

Traditional filmmaking relies heavily on creators' personal experience and artistic inspiration, yielding contingent and individualized creative outputs. Supported by massive image datasets and algorithmic models, artificial intelligence has shifted film production from individual authorship toward systematic governance, rendering the creative process more efficient, standardized, and intensive^[1]. AI can perform script analysis, scene modeling, intelligent editing, color grading, and visual effects rendering, effectively reducing costs, shortening production cycles, and providing technical support for the advancement of film industrial aesthetics. Nevertheless, algorithmic logic carries inherent limitations: emotional expression tends to remain symbolic, failing to convey authentic human experience and psychological depth; artistic styles often result from imitative and parametric reproduction of existing images, lacking original breakthroughs rooted in cultural reflection and contemporary inquiry. Under efficiency-oriented imperatives, some works overemphasize visual spectacle at the cost of artistic originality and critical thinking.

2.2. Innovation of textual forms

AI-generated images rely on collage, recombination, and simulation, giving rise to new textual

configurations and aesthetic qualities. Visually, AI images break traditional rules of perspective and spatial order, presenting hybrid styles, flexible perspectival relations, and fragmented textures, combining experimental spirit with visual impact. Narratively, intelligent editing and generative tools arrange plots in templated and fragmented forms, pushing narration toward automation, yet causing weakened spatiotemporal continuity, thin character motivation, and diminished emotional tension^[2]. Meanwhile, AI images exhibit a trend of "memorial reductionism": creative materials are mostly derived from learning and replicating existing image libraries rather than capturing and translating lived reality, which easily leads to fragmented cultural memory, contextual rupture, and cultural misreading, undermining the capacity to carry historical depth and emotional resonance.

2.3. Reconstruction of aesthetic experience

Artificial intelligence has restructured the aesthetic landscape of cinema from the reception end. Algorithmic recommendation delivers personalized content based on user behavioral data. While improving viewing relevance, it also tends to create information cocoons, intensify aesthetic homogenization, narrow visual horizons, and weaken exploratory and critical attitudes toward aesthetics. New forms such as virtual scenes, digital restoration, and interactive narration brought by generative AI have expanded the boundaries of traditional viewing, transforming audiences from passive recipients into active participants. The audiovisual spectacle and cross-style integration enabled by AI have enriched aesthetic modalities, yet they also incline aesthetic experience toward instant sensory stimulation, weakening the spiritual transcendence, holistic unity, and emotional profundity emphasized in classical aesthetics, resulting in superficial and entertainment-oriented viewing experiences.

3. Practical dilemmas of film aesthetics in the AI era

3.1. Technological rationality and the erosion of artistic subjectivity

Driven by efficiency, standardization, and replicability, artificial intelligence tends to trap filmmaking in patterned cycles. When creativity, style, and emotion can be generated through models and parameters, the subjective status of human creators is significantly diminished; artistic individuality and lived experience yield to data logic and procedural norms. Some works fall into the trap of prioritizing technology over content and spectacle over emotion. Overloaded visual effects, hollow narratives, and flat characterization replace value expression, gradually deviating from the essential pursuit of cinema as a "human art."

3.2. Ethical risks and misaligned value orientation

The deep application of AI has triggered multifaceted ethical disputes. Virtual performers, digital resurrection, and AI face-swapping raise concerns over portrait rights, performance ethics, and physical presence, continuously challenging conventional creative boundaries. Algorithmic recommendation reinforces traffic-oriented logic, easily leading to content homogenization and vulgarization, weakening cultural responsibility and value guidance. Deep synthesis blurs the line between reality and fiction, eroding documentary ethics and historical seriousness, posing potential risks to cultural communication and social cognition. Driven by industrial procedures and market logic, some films present rigid value expression and insufficient humanistic care, failing to fulfill the functions of cultural construction and spiritual guidance.

3.3. Inadequate cultural innovation and the shortage of indigenous discourse

Current AI image creation remains largely imitative of Western paradigms and established styles, lacking an original aesthetic system rooted in Chinese culture and real-world experience^[3]. Collage-based generation leads to fragmented cultural symbols and superficial meaning, making it difficult to form a distinctive national aesthetic discourse. If film industrial aesthetics pursues only technical standards and market benefits while neglecting cultural subjectivity and ethical consciousness, it will be unable to construct a truly internationally competitive aesthetic form or meet the inherent requirements of building a culturally strong nation in the new era.

4. Innovative paths for film aesthetics in the AI era

4.1. Upholding humanistic principles to consolidate creative subjectivity

In response to the artistic challenges posed by AI, the primary principle is to establish a creative ethics of "technology for good and people-orientation," positioning artificial intelligence as a supportive tool rather than a replacement for human creators. Creators must firmly maintain control over creativity, aesthetic judgment, and value choice, employing technology to expand expressive boundaries and refine narrative precision—Not

to substitute lived experience and emotional reflection. In core links such as scripting, characterization, and thematic expression, creators should adhere to humanistic positions, using genuine emotion and realistic concern to offset the coldness of technological rationality, and preserve human warmth and spiritual depth in cinematic imagery^[4].

4.2. Advancing human–machine collaboration to upgrade industrial aesthetics

Deepen synergy between AI and artistic creation, reserving space for personalized expression within standardized industrial processes, and balancing technical norms with artistic freedom. Enhance industrial maturity and production precision through virtual filmmaking, intelligent rendering, and digital asset management, while strengthening narrative depth, aesthetic style, and cultural connotation, forming a virtuous cycle of technological empowerment, artistic improvement, and value guidance. Drawing on the experience of outstanding Chinese films, industrial systems can support indigenous narration, integrating Chinese family-state sentiments, collective values, and Eastern ethics into genre filmmaking, and constructing a film industrial aesthetic paradigm with both international industrial standards and Chinese cultural characteristics.

4.3. Improving ethical regulation and optimizing evaluation systems

Establish film ethical norms adapted to the AI era, clarifying responsibility boundaries in content generation, copyright usage, virtual imaging, data security, and other fields, and strengthen industrial self-discipline and institutional guidance. Build a comprehensive evaluation system that balances artistic innovation, technical level, and value orientation, moving beyond the one-sided pursuit of traffic and spectacle. Strengthen education in film ethics and public aesthetic literacy, enhance creators' ethical awareness and audiences' critical judgment, and foster a healthy cinematic ecosystem featuring coordinated technological innovation, artistic self-discipline, and value guidance^[5].

4.4. Anchoring in indigenous culture to construct an eastern aesthetic system

Rooted in excellent traditional Chinese culture and contemporary reality, integrate AI technology with Eastern artistic conception, ethical concepts, and aesthetic spirit to avoid blind imitation of Western paradigms. Deeply explore indigenous themes, cultural symbols, and philosophical wisdom, activate cultural resources through digital technology, and shape an Eastern aesthetic marked by poetic imagery, ethical implication, and spiritual pursuit. Through innovation in theme, language, and value, enhance the cultural identity and international communication capacity of Chinese cinema, enabling technological progress to serve cultural confidence and civilizational exchange.

5. Conclusion

Artificial intelligence has profoundly transformed film production, textual form, and aesthetic experience, bringing both aesthetic breakthroughs and innovative potentials, as well as risks such as weakened subjectivity, ethical disorder, and cultural hollowing. The future of film aesthetics lies in a dynamic balance between technology and humanity, committed to human–machine collaboration and people-orientation. Only by upholding ethical bottom lines, anchoring in indigenous culture, and strengthening humanistic care can artificial intelligence genuinely serve cinematic innovation, advance the high-quality, meaningful, and warm development of China's film industrial aesthetics, and effectively convey Chinese stories in the global context.

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