

Research on the Construction Path of Visual Artistic Conception in Martial Arts Imagery Empowered by Digital Technology

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Abstract: Martial arts, as a core vehicle of excellent traditional Chinese culture, carry the martial virtue system of “benevolence, righteousness, propriety, wisdom, and fidelity” and the kernel of the national spirit. Visual artistic conception is the key medium for martial arts imagery to convey the cultural connotation that can be “sensed but not explained in words.” However, its construction is limited by traditional live-action filming methods and faces the challenge of market squeeze by Hollywood special effects films. With the iteration of digital technologies such as virtual reality (VR) and artificial intelligence generated content (AIGC), new opportunities have emerged for constructing the visual artistic conception of martial arts imagery. This paper adopts case analysis and literature research methods to systematically explore how digital technology can innovatively construct the visual artistic conception of martial arts imagery. It also analyzes the key role of digital technology in the inheritance of martial arts culture, aiming to provide experiential reference for the future transmission of martial arts culture.

Keywords: Martial arts imagery; Visual artistic conception; Virtual reality technology; AIGC Technology

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1. The spiritual core of martial arts culture and its contemporary communication

1.1. The spiritual core of martial arts culture: the dual dimensions of martial virtue and national spirit

Martial arts are a “living carrier” of traditional Chinese culture, whose core values encompass two major aspects: martial virtue norms and the national spirit. From the dimension of martial virtue, the seven criteria proposed in *Zuo Zhuan* — “prohibiting violence, halting weapons, preserving the great, achieving merit, pacifying the people, harmonizing the masses, and enriching wealth” — established the cultural tone of “learning etiquette before skills, cultivating virtue before practicing martial arts.” *Origin of Chinese Characters* interprets “Wu”

(martial) as “stopping the spear”, reinforcing its peaceful attribute of “using force to stop violence”, which highly aligns with contemporary moral norms such as “acting bravely for justice” and “punishing evil and eliminating villains”^[1]. From the dimension of the national spirit, the demands for “strengthening the race and the nation, saving the country and ensuring its survival” endowed martial arts with new connotations: The Jingwu Athletic Association founded by Huo Yuanjia established the threefold purpose of “body, intellect, and virtue” and the Jingwu spirit of “patriotism, self-cultivation, justice, and helping others”, elevating martial arts from skill inheritance to a symbol of national self-strengthening^[2].

It is noteworthy that martial arts culture faces “implicit communication barriers”: The Buddhist practice principle of Shaolin Kung Fu, “heart-to-heart transmission, not established by words”, and the Daoist concept of Wudang martial arts, “self-cultivation and self-realization”, result in their inheritance relying on “oral instruction and mental transmission from master to apprentice”, making it difficult to form a standardized path^[3]. This “ineffability” necessitates that the visual communication of martial arts culture rely on visual artistic conception to transform abstract spirit into perceptible aesthetic symbols.

1.2. Contemporary communication paths of martial arts culture: Using imagery as the core medium

The contemporary communication of martial arts culture highly depends on visual media such as film, television, and short videos. Film is a key force driving the globalization of martial arts. Among the “Top 10 Most Popular Foreign Films in History” selected by the American film industry, *Crouching Tiger, Hidden Dragon* (2000, \$128 million box office), *Hero* (2002, \$53 million box office), and *Kung Fu Hustle* (2004, \$17 million box office) are all martial arts themed, confirming its international influence^[4].

The development of martial arts imagery has experienced three key breakthroughs: In the 1970s, Bruce Lee’s *The Way of the Dragon* (1972) created the Hollywood “Kung Fu film” genre, breaking box office records in Southeast Asia and making “kung fu” a globally recognized Chinese word; In the 1980s–1990s, Jackie Chan pioneered the “comedy martial arts film” (e.g., *Project A*, 1983), combining thrilling action with humorous elements. Jet Li promoted “artistic martial arts expression” through *The Tai-Chi Master* (1993), showcasing the soft beauty of “combining hardness and softness” through solid Tai Chi skills. After 2000, *Crouching Tiger, Hidden Dragon* and *Hero* achieved breakthroughs in visual artistic conception construction, integrating martial arts culture with Eastern aesthetics, achieving dual commercial and artistic success.

1.3. Contemporary communication dilemmas of martial arts imagery: Thematic disconnect and aesthetic fatigue

After the 21st century, martial arts imagery fell into structural difficulties: According to the *2010–2019 China Film Industry Development Report*, only 54 martial arts films were released domestically during this period, a decrease of 41.3% compared to 92 films in 1980–1999. Apart from the *Ip Man* series, few phenomenal works emerged.

The dilemma stems from two aspects: First, the theme is disconnected from the needs of the times. The core theme of current global development is “harmony and prosperity”, but martial arts films are still confined to the framework of “conflict and revenge.” For example, *Ip Man 4* (2019), although focusing on national dignity, does not break away from the traditional narrative of “winning through combat”, making it difficult to resonate with contemporary audiences^[5]. Second, visual aesthetics have fallen into fatigue. Hollywood blockbusters like *The Avengers* dominate the market with “surreal special effects.” Martial arts imagery faces a “special effects

dilemma”: excessive virtualization (e.g., *Iceman*, 2014) easily loses cultural authenticity, while adhering to live-action filming (e.g., *God of War*, 2017) weakens appeal due to insufficient expressiveness^[6]. The essence is the misalignment between “traditional means of artistic conception expression” and “contemporary audience aesthetic demands.”

2. The construction logic of visual artistic conception in martial arts imagery

2.1. The connotation of visual artistic conception: The fusion of subjective emotion and objective imagery

Visual artistic conception is a core category of Chinese aesthetics. Its essence is the “dialectical unity of subjective emotion and objective imagery.” The visual artistic conception of martial arts imagery needs to achieve a dual transformation: first, transforming the movement aesthetics of Tai Chi’s “harmonious circularity” and Shaolin’s “vigorous strength” into scene symbols (such as bamboo forests, poplar trees); second, transforming abstract concepts like “chivalrous spirit” and “unity of man and nature” into visual elements such as light, shadow, and color. For example, in Liu Zongyuan’s Tang dynasty poem *Fishing in Snow*, the objective scene of “a hundred mountains and no bird, a thousand paths without a footprint” merges with the subjective feeling of “a straw-cloaked man afloat, fishing snow in a lonely boat”, forming an aesthetic experience where “words are finite, but meaning is infinite.” This highly aligns with the “ineffable” connotation that martial arts imagery needs to convey^[7]. The construction of a visual artistic conception precisely builds a “cultural cognitive bridge” between creators and audiences through concrete visual elements.

2.2. Characteristics of cinematic visual artistic conception: Image dominance and spatio-temporal compositing

As a “dynamic visual art”, film has two major advantages in constructing artistic conception: First, the “expressive function dominated by images.” Roland Barthes’ theory of the “age of image communication” points out that modern media have made images the dominant carrier of meaning, with text relegated to an auxiliary role^[8]. The Republic of Korea film *Spring, Summer, Fall, Winter... and Spring* (2003) conveys the connotation of “greed, anger, delusion, and redemption” through the “stone imagery” — the young monk tying stones to the fish, frog, and snake, the old monk tying a stone back onto him, the middle-aged monk dragging a stone uphill — the expressive depth of these images far exceeds the subtitles explanation of “Spring, Summer, Fall, Winter”, confirming the core role of images.

Second, the “narrative capability of spatio-temporal compositing.” Film achieves the “unity of spatial presentation and temporal narration” through “camera movement + montage.” *Forrest Gump* (1994) uses “running” as the core image, using long takes to show spatial scenes across America and montage to connect the timeline of childhood, youth, and middle age, making “running” both an action symbol and carrying multiple connotations of “training the mind, venting emotions, pursuing ideals”^[9]. This characteristic provides the possibility for martial arts imagery to construct multi-layered artistic conceptions of “movement—spirit—history.”

2.3. Limitations of artistic conception in traditional martial arts imagery: Expressive bottlenecks of physical means

Traditional martial arts imagery relies on “live-action + lighting + editing” to construct artistic conception, with the effect highly dependent on the artistic attainment of the creative team. In Ang Lee’s *Crouching Tiger, Hidden*

Dragon (2000) “bamboo forest fight”, the bending of the bamboo symbolizes Yu Jiaolong’s stubbornness, and the rebound reflects Li Mubai’s restraint; in Zhang Yimou’s *Hero* (2002) “poplar forest showdown”, the red clothing symbolizes hatred, and the yellow leaves imply the withering of love — both are classic cases^[10].

However, traditional methods have obvious limitations: First, spatial constraints make it impossible to present the surreal artistic conception of Wudang’s “unity of man and nature” — real scenes struggle to concretize the philosophical connotation of “*Dao following nature*”; Second, a high interpretation threshold requires the audience to have accumulated knowledge of Daoist and Confucian culture. For example, the “soft beauty” of the “*Tai Chi Cloud Hands*” in *The Tai-Chi Master* is difficult for younger groups to perceive due to insufficient cultural cognition^[11]; Third, lack of detail — live-action filming cannot amplify the force application details of movements (such as wrist rotation angle, center of gravity transfer), weakening the audience’s understanding of martial arts aesthetics.

3. Innovative construction of visual artistic conception in martial arts imagery by digital technology

3.1. VR technology: Embodied experience and spatial reconstruction

VR technology breaks through the spatial limitations of traditional imagery with “three-dimensional panorama + interactive experience.” Its core value lies in achieving “embodied” perception — Peters defines the body as the “most fundamental medium”^[12]. Through headsets and motion capture equipment, VR allows the audience to enter martial arts scenes with a “virtual body”, intuitively perceiving movement details and cultural imagery.

Its innovative application is reflected in two aspects: First, “immersive martial arts performances.” The VR martial arts drama *Tai Chi Wudang*, jointly produced in 2022 by the Wudang Mountain Cultural Tourism Group and the Beijing Film Academy, used 8K resolution 360° panoramic filming and AI motion capture technology to restore the movement details of Zhang Sanfeng’s “Cloud Hands” and “Grasp the Sparrow’s Tail” (such as the 15° angle control of wrist rotation, the center of gravity change in foot movement). After wearing VR equipment, the audience can be “immersed” at the Golden Summit of Wudang Mountain. Within the three-dimensional scene of “precipitous cliffs, red walls, green tiles, and jade-like pavilions”, they can intuitively understand the philosophical connotation of “*Dao following nature*.” The drama has received over 500,000 audience members since its premiere.

Second, “interactive documentaries.” The VR documentary, *Shifu*, directed by Gao Yixin in 2023, records the daily lives of martial arts masters in Beijing, Jiangsu, and Shandong (practicing, sparring, teaching disciples). VR technology allows the audience to “stand beside the master”, use gesture interaction to “pause” and “replay” movements, and even switch to a “first-person perspective” to experience the force application techniques of Chen-style Tai Chi, breaking through the “spectator perspective” of traditional documentaries and strengthening the stickiness of cultural inheritance. This “participatory experience” shifts martial arts culture from “passive viewing” to “active perception.”

3.2. AIGC technology: Concretization of abstract connotation and image restoration

AIGC technology, based on deep learning algorithms (such as diffusion models, Transformer architecture), addresses two core challenges in constructing artistic conception for martial arts imagery: First, the concretization and generation of abstract connotations. Textual descriptions like Jin Yong’s “The great chivalrous hero serves his country and people” and Gu Long’s “A single sword traverses thirty thousand miles” are difficult to present

through traditional filming. AIGC technology, by learning from 100,000+ traditional Chinese ink paintings, can automatically generate visual elements that conform to martial arts imagery. The animated film *Dragon Gate*, which won the Brazil Tietê International Film Award in 2023, uses the density of ink to symbolize the strength of sword energy and blank space to create the artistic conception of “vast heaven and earth”, allowing the “chivalrous spirit” to be intuitively conveyed through visual language.

Second, the restoration and revitalization of classic imagery. Traditional martial arts films, limited by filming technology, commonly suffer from issues like “blurry picture quality, insufficient frame rate” — the original film of Jackie Chan’s *Project A* (1983) has 480P resolution and 24 frames/second, making details like the “bicycle stunt” and “alley fight moves” difficult to discern. The 4K restored version of *Project A*, screened at the 2024 Beijing International Film Festival, used a Transformer architecture-based AIGC model: AI algorithms repaired film scratches, optimized color saturation, increased resolution to 4K, and optimized the frame rate to 60 frames/second, allowing the audience to clearly see body balance control and movement transition details. This restoration not only preserves historical memory but also revitalizes the visual artistic conception of classic imagery.

4. Conclusion and outlook

Digital technology provides an innovative path of “technological empowerment - cultural translation” for constructing the visual artistic conception of martial arts imagery: VR technology breaks spatial limits through “embodied experience”, turning the audience from “spectators” into “participants”, deepening the perception of martial arts culture; AIGC technology, through “concretization of abstract connotations” and “restoration of classic imagery”, overcomes the expressive limitations of traditional methods, enhancing the artistic expressiveness and historical inheritance value of martial arts imagery. The comprehensive application of both promotes the transformation of martial arts imagery from “traditional skill display” to “contemporary cultural symbol”, providing new momentum for the global communication of martial arts culture.

Future research can expand from three aspects: First, technological integration and innovation, exploring the combination of VR and Brain-Computer Interface (BCI) to achieve martial arts experiences with “mind interaction”; Second, in-depth cultural translation, building a “martial arts culture knowledge base” so that visual elements generated by AIGC better fit martial virtue traditions (e.g., “loyalty and righteousness” corresponding to red clothing imagery, “resilience” corresponding to bamboo symbols); Third, audience segmentation design, developing “gamified martial arts imagery” for youth groups, lowering the cultural cognition threshold through interactive experiences. Only by adhering to the core principle of “technology serving culture” can digital technology truly become a “booster” for the inheritance of martial arts culture, allowing Chinese martial arts to radiate new vitality in the digital age.

Disclosure statement

The authors declare no conflict of interest.

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