

An Analytical Study on the Visual Innovation of the Animation <Spider-Man: Across the Spider-Verse>

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Abstract

This study focuses on the art style research of the 3D Animation <Spider-Man: Across the Spider-Verse>, exploring the film's innovation in art design. The article first analyzes how the movie skillfully blends American comics, watercolor painting style, Pollock drip painting, and ink painting, among other artistic techniques, to present a unique visual experience for the audience. By specifically dissecting the character design and scene composition in the movie, it explores the specific application of these art styles and their methods in digital image production. Ultimately, the paper emphasizes the contribution of <Spider-Man: Across the Spider-Verse> to 3D Animated cinema, particularly its innovation in the field of art design, as well as its inspiration and possibilities for the diversity of art styles in animated films. Overall, this study aims to provide in-depth academic insight into the field of animated film art design and to promote its development and innovation.

Keywords: *Spider-Man Across the Spider-Verse, Art Style, 3D Animated, Watercolor, American Comic Styles, Ink Wash, Jackson Pollock's Drip Painting*

1. INTRODUCTION

With the rapid advancement of digital technology, the art style of 3D animated films is undergoing unprecedented innovation. <Spider-Man: Across the Spider-Verse> continues and extends the innovative spirit of <Spider-Man: In to the Spider-Verse> in terms of art style, adopting six different animation styles to depict various universes. The diversity of art styles in animated movies not only showcases the unique visual feelings of different universes but also promotes innovation in artistic expressions within animated films. This thesis

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will analyze the unique animation techniques and art styles of the animated film <Spider-Man: In to the Spider-Verse> and study the use of diverse art styles in character setting, scene design, and the atmosphere design of the specific emotional story in the animated film.

2. THEORY

The animated film <Spider-Man: Across the Spider-Verse> was co-produced by Columbia Pictures and Sony Pictures Animation, in collaboration with Marvel Entertainment, and distributed by Sony Pictures Entertainment. It represents an innovative and boundary-breaking production that takes the *Spider-Man* narrative into an entirely new dimension. Within this multiverse, more than one individual can don the *Spider-Man* mask. The film revolves around a teenager, Miles Morales, and narrates the tale of how, following an accidental acquisition of superpowers, he becomes embroiled in a battle among heroes spanning different universes.

The storyline seamlessly integrates various drawing styles and animation techniques, crafting a visually stunning world where each universe possesses its own distinctive visual identity and version of *Spider-Man*. Beyond being a mere visual spectacle, the movie delves deep into themes of responsibility, courage, and personal growth.

3. RESEARCH CONTENT

3.1 American Comic Book Style

The animation style employed in <Spider-Man: Across the Spider-Verse> serves as an innovative tribute to American comic books. It incorporates classic elements, including halftone patterns, text bubbles, and onomatopoeia directly written on the screen-elements synonymous with American comic books. These carefully chosen stylistic features contribute to an immersive viewing experience, allowing the audience to feel as though they are traversing the pages of a comic book. This intentional integration significantly heightens the overall immersion and engagement of the viewing experience.

Halftone Dots. The utilization of halftone patterns in American Comics finds its origins in the evolution of printing technology during the mid-to-late 20th century. This process involves exposing an image onto a metal photographic plate through a coarse screen, resulting in an image composed of differently sized dots.



Figure 1. Gwen's Face Shadow Dot



Figure 2. Light Dot

In <Spider-Man: Across the Spider-Verse>, the production team employed print exposure technique

es to apply halftone patterns to characters' skin, costumes, and backgrounds. For instance, in Figure 1 during a close-up shot, the viewer can observe that the shadowed portion of *Gwen's* face is comprised of minute dots, with the size and density varying based on light and angle. In more expansive scenes, halftones simulate light, halos of different intensities, and angles, with the dots adjusting with the changing light. For instance, in Figure 2, the film employs a range of larger and smaller dots in panoramic shots, creating a broader, more layered spatial effect. This technique not only visually imparts depth and detail but also enriches the animation's texture, aligning it more closely with the traditional style of American Comics.

Onomatopoeia. In American comics, onomatopoeia serves as a form of expression that replicates sound through words. These words mirror the sensations associated with the sounds they describe, achieved through combinations of shapes, arrangements, and letters. Onomatopoeia is frequently employed in comics to enhance images and plots, enabling readers to visually experience the sound effects within a story. In *<Spider-Man: Across the Spider-Verse>*, onomatopoeia is adeptly utilized to deliver a distinctive audiovisual experience for the audience.



Figure 3. " GRAB " and " TAKE "

In the film, onomatopoeia not only replaces line dialogues in action scenes but also accentuates the character's sense of speed and power. For instance, in Figure 3 when *Spider-Man* moves at high speed and executes instantaneous actions, onomatopoeia such as "GRAB" and "TAKE" appear on the screen, synchronizing with his movements, thereby emphasizing the character's flexibility and rapid action. Onomatopoeia plays a crucial role not only in action scenes but also in emotional expression. For example, in Figure 4, within the tense atmosphere of the movie, the onomatopoeia "BWMM" underscores the tension of the character's behavior through an exaggerated font size and bright colors. Through the effective deployment of onomatopoeia, the film *<Spider-Man: Across the Spider-Verse>* intensifies the emotional experience of the characters, allowing the audience to more intuitively sense the plot's tension.



Figure 4. " BWMM "

3.2 Watercolor Painting Style

The watercolor painting style involves the artistic use of watercolor pigments, known for their transparency, fluidity, and the capacity to modulate pigment intensity and lightness through water manipulation. This technique allows for the creation of rich color layers and gradient effects. In <Spider-Man: Across the Spider-Verse>, *Gwen's* world, Earth-65, serves as a notable embodiment of the watercolor style, characterized by clear and translucent overall colors distinct from other scenes.

The artist strategically employs warmer tones, along with brighter cyan, orange, and purple hues, to visually distinguish *Gwen's* world. As depicted in Figure 5, the film harnesses the fluidity inherent in watercolors to subtly transform scenes, naturally presenting a soft and dreamy image through a gradual color transition reminiscent of water dripping down the screen. The characteristics of watercolor paintings are evident in the natural blending of colors without distinct boundaries. For instance, in Figure 6, during the sunset scene, orange and pink hues in the sky seamlessly intermingle, creating a warm atmosphere with a light and natural feel. Even in the night scene, where opposing hues are present, the film effectively leverages the natural fusion characteristics of water, presenting a blend of colors without rigid boundaries.

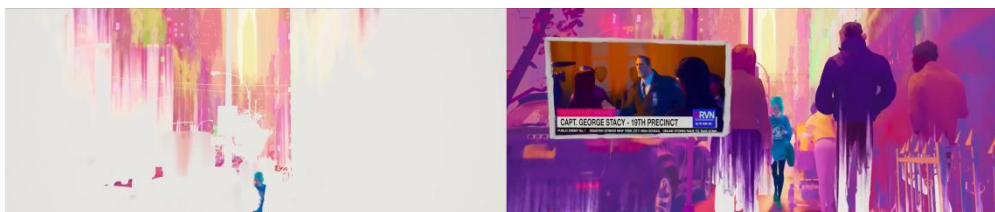


Figure 5. Scene Change

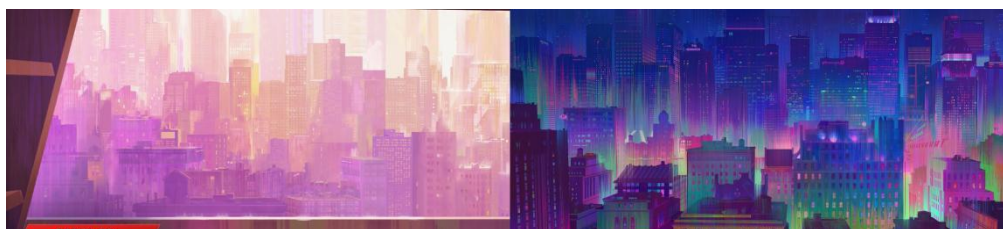


Figure 6. City Scene

The employment of this style is also evident in the nuanced shifts in the character's emotional states. The soft colors effectively convey *Gwen's* emotional warmth and kindness, while the blurred and soft lines express her character's inner vulnerabilities and resilience. The colors penetrate and blend to articulate the emotional dynamics between *Gwen* and her father, and the expressive strokes accentuate the climactic moments of these emotions.

This distinctive artistic style not only individualizes *Gwen's* character's world but also visualizes the subtle fluctuations in her emotional state, crafting a distinctive and profound visual experience for the film.

3.3 Combination of Various blending Styles

In <Spider-Man: Across the Spider-Verse>, the character design of the villain, The Spot, primarily relies on color and line blending. Although it doesn't directly adhere to a specific art style, a combination of blending styles is employed to simulate a distinct blending effect on specific screens. For instance, Figure 7 adopts a dynamic, disorderly, and unexpected visual effect akin to Pollock's drip painting. This design creates a sense

of dynamism and randomness, showcasing intricately interwoven lines and colors. Pollock's drip painting style, developed by the abstract expressionist artist *Jackson Pollock*, influences the visual design, although it is not a direct imitation. While the art design of the character's spots doesn't precisely replicate Pollock's splatter painting style, the imagery exhibits abstract art nuances reminiscent of Pollock's drip painting. This design choice accentuates the chaotic and unpredictable nature of Spot's abilities.



Figure 7. Characteristics of the Drip Painting Style

In the depiction of The Spot's superpowers, specifically in creating black spot, the film mimics the ink wash effect of Chinese style, as illustrated in Figure 8. These effects typically consist of dense black and white dots randomly distributed in space. The moments of doorway creation resemble the smearing or dripping of ink on rice paper, visually enriching the details.

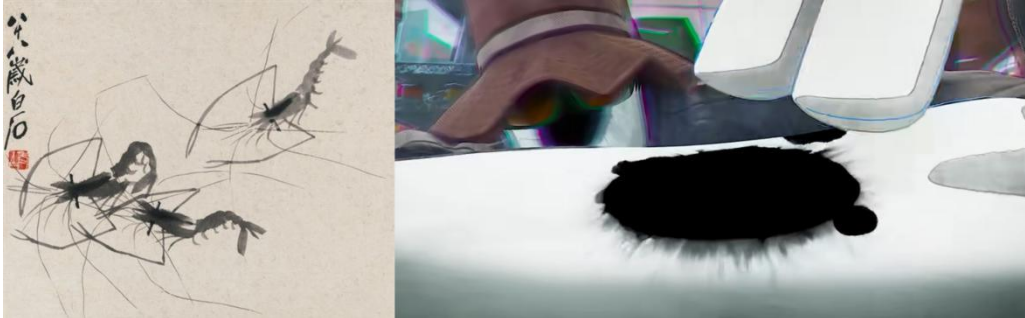


Figure 8. Characteristics of the Chinese Ink Painting

3.4 Other Art Styles

The film <Spider-Man: Across the Spider-Verse> incorporates several additional art styles. For instance, in Figure 11, the art style of Spider-Punk in the movie draws inspiration from Pop Art, incorporating the effects of torn paper and stickers. The conceptual design of the universe's *Spider-Man*, Miguel, is influenced by *Syd Mead*, a conceptual artist renowned for sci-fi works like <Alien> and <Blade Runner>. Miguel's design adheres to the principles of rigorous industrial design, as portrayed in Figure 12, where auxiliary reference lines symbolize rigor and rational self-control throughout his universe. The *Spider-Man* universe 50101 predominantly features rich and highly saturated colors, referencing the Indian comic book <Indrajal>. This art effect presents the texture of print overprints and paper texture, as depicted in Figure 13-a. The painted body of *Spider-Man* in Figure 13-b references traditional Indian dance imagery and Hina motifs.

The diverse array of art styles utilized in the film mirrors the concept of the multiverse. Each *Spider-Man* originates from a distinct parallel universe, and their unique art styles visually express this multiplicity. This

aligns with the movie's theme, emphasizing the existence of different *Spider-Man* versions and highlighting the uniqueness and independence of each character.

4. CONCLUSION

This study has delved into the diverse art styles employed in <Spider-Man: Across the Universe> with a specific focus on simulating American comics, watercolors, and a range of halo effects. Additionally, it briefly outlines various other art styles present in the film. Through the analysis of character design, scene representation, and halo effects, the movie adeptly combines traditional art styles with advanced digital techniques, striking a clever balance.

In essence, <Spider-Man: Across the Spider-Verse> crafts an animated masterpiece rich in creativity and artistic sensibility by seamlessly incorporating multiple art styles. This diversity not only grants the film a distinctive visual allure but also provides the audience with an imaginative and expressive visual feast. The artistic accomplishments of this movie not only deliver a novel cinematic experience but also serve as inspiration for animators and production studios to explore innovative possibilities in art styles. This impact resonates deeply throughout the animation industry, offering audiences a more vibrant array of animated works and propelling the progress and evolution of animation art.

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