

## A Research of Ink and Wash Elements on the 3D Animation Film <Deep Sea>

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### **Abstract**

*<Deep Sea> is an 3D animated film that stands out for its exceptional special effects and distinctive artistic style. The film employs a multitude of dazzling and vibrant ink particles, creating a strong sense of three-dimensionality and weightlessness, while simultaneously portraying a dreamlike and elegant representation of a deep sea ink painting. Furthermore, through the utilization of fragmented stream of consciousness narrative technique, the film establishes a unique artistic effect infused with a Chinese atmosphere. This paper by analyzing the unique particle ink art style and color and stream of consciousness narrative methods in film, this paper discusses the innovative art style generated by traditional ink art style combined with three-dimensional technology, and the integration of traditional ink art ideas and artistic conception in animated films. The objective is to cultivate a new ink art style and prove the importance of traditional cultural expression in animated films, while providing new perspectives for the future application of traditional art in animation.*

**Keywords:** *Chinese Animated Film, Traditional Cultural Elements, Particle Ink, Animated Film Deep Sea.*

### **1. Introduction**

Traditional Chinese art, known for its local flavor and simplicity, has garnered increasing global appreciation and admiration, becoming a shared cultural heritage. The dissemination of traditional culture necessitates the utilization of various media, with animation being a purposeful platform for conveying ideas through visual elements and narratives. Chinese animation has successfully incorporated these traditional art elements into its scenes, as seen in films like *Monkey King: Hero Is Back* (2015), *White Snake: The Origin* (2019), and *Jiang Ziya* (2020). Furthermore, the recently released Chinese animated film, *Deep Sea*, employs numerous traditional elements, such as the innovative particle ink art style, which captivates viewers' visual senses. However, the film's evaluation remains mixed due to its fragmented and abundant blank narrative

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approach. Chinese ink painting, an artistic form that has evolved over centuries, encompasses profound cultural connotations and has become an integral part of Chinese traditional culture. This paper analyzes the utilization of traditional ink elements in the animated film *Deep Sea*, exploring the impact of innovative cultural expressions on animated films and highlighting the significance of cultural representation in the medium.

## 2. Theory

*Deep Sea* is an animated film that delves into the depths of the sea, uncovering hidden secrets and embarking on a unique journey of life through the perspective of a modern girl. This captivating story, intertwined with elements of soul salvation, serves as the backdrop for exploring the realities of depression experienced by the protagonist, *Shenxiu*. As the narrative unfolds, the dark underbelly of the beautiful dreams depicted in the film is gradually revealed. *Deep Sea* employs the pioneering "particle ink" effect, seamlessly integrating traditional Chinese cultural elements with advanced 3D technology. The visually stunning and fluid textures of the artwork harmonize with the fantastical stream-of-consciousness ink-style narrative, immersing viewers in the storyline. Through the application of this innovative ink art style, the film exemplifies the diverse presentation possibilities of traditional Chinese culture within the realm of Chinese animation.

## 3. Analysis of Ink Painting in *Deep Sea*

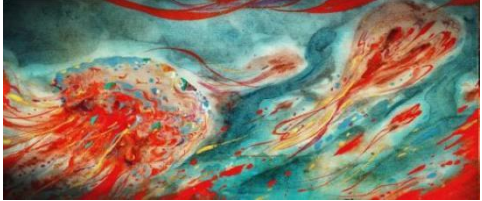


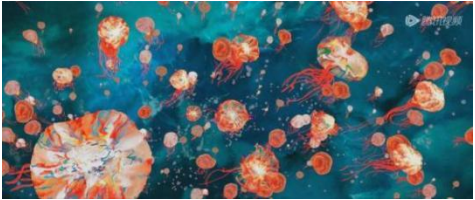





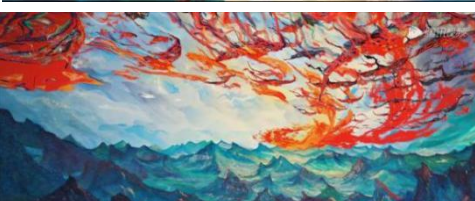
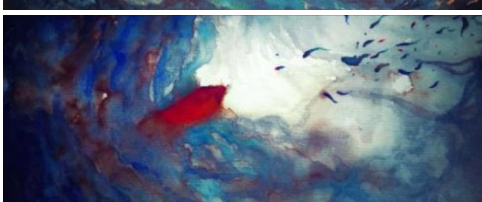



### 3.1 Visualization of Artistic Style

The traditional Chinese ink effect shown through the "particle ink" that combines two-dimensional ink and three-dimensional technology is the most distinctive visual feature of *Deep Sea*. In the early stage of creation, the director determined to explore something different from conventional 3D animation and create a unique art style to illustrate the charm of Chinese animation. When the director saw the works of the ink painter *Zhang Yu*, he began to try to combine the "ink" of Chinese culture with today's core 3D technology, refer to Figure 1 for Left Picture. The ink painter *Zhang Yu* also made the preliminary conceptual design for the animation *Deep Sea*, refer to Figure 1 for Right Picture and Table 1.



Figure 1. *Zhang Yu's Ink Painting Works and Early Concept Design of Deep Sea*

**Table 1. The Concept Design and Presentation Effect of Deep Sea**

Art concept art created for <i>Deep Sea</i> by Zhang Yu	The final effect of animated film <i>Deep Sea</i>
	
	
	
	
	
	
	

Particles are widely utilized in 3D animation to achieve various special effects, including fluid simulations, gaseous phenomena, explosions, and flames. The utilization of particles serves as the foundation for generating flowing ink elements, thereby enabling the overall dynamic design process. Additionally, the interstitial spaces

and gaps between particles allow light to penetrate, resulting in a visually vibrant and "breathing" appearance. This effect effectively portrays the essence and movement found in traditional ink painting. Simultaneously, the animation incorporates features derived from water-based materials and pastel paintings, showcasing the graceful motion of flowing water and the sparkling effect resembling gold leaf. Throughout the animation, the interplay of ink shades, the precision of lines, color density, and the deliberate smudging technique collectively create an exceptional visual experience for the audience. By incorporating modern three-dimensional technology, the animation effectively presents a fusion of particle-based ink and wash techniques with elements of oil painting. The resulting visual representation exhibits low graininess, intricate layers, dynamic lighting and shadows, and imparts a textured aesthetic that evokes a sense of spatial flow. This composition constructs a visual effect that encapsulates the distinct characteristics of Chinese ink painting, as illustrated in Table 1.

### 3.2 The Application of Traditional Colors in *Deep Sea*

"Particle Ink" diverges from the conventional black and white ink paintings, incorporating the color matching and conceptual elements of rock color painting and heavy color painting. This approach enriches the ink medium with a wide array of distinctly recognizable traditional Chinese colors, resulting in a pronounced design characterized by strong color contrasts. Within the depths of the ocean depicted in the film, a vibrant and saturated color palette permeates the visuals, prominently featuring numerous traditional Chinese colors. Traditional Chinese colors are a representation of how the Chinese people perceive and define color, offering a unique lens through which to view the world. With over 560 different traditional Chinese colors, each possessing a distinct name and associated historical documentation, these colors encapsulate the essence of Oriental aesthetics and ancient wisdom passed down through millennia. The structure of color in China was established over 2,000 years ago during the pre-Qin period. Unlike the Western approach that categorizes colors based on lightness, purity, hue, and complementary relationships, Chinese traditional colors are rooted in five fundamental colors: black, red, blue, white, and yellow. These primary colors serve as the foundation, while other colors are considered secondary, drawing connections to the five elements of water, fire, wood, gold, and earth. Consequently, they are referred to as the five-element colors, as illustrated in Figure 2.

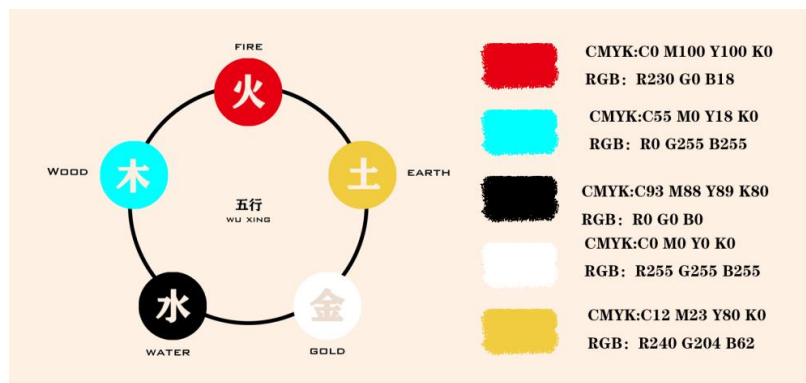


Figure 2. Chinese Traditional Five Elements Colors

The color scheme employed in *Deep Sea* draws upon the distinctive attributes of highly saturated natural colors observed in rock paintings and heavy-color paintings. Emphasizing the grainy texture inherent in these paintings, this approach enhances the expressive qualities and allure of traditional Chinese colors. In the



context of *Deep Sea*, the "Particle Ink" predominantly comprises shades of blue reminiscent of the sea and intense flame red, imbuing the visuals with a pronounced Chinese aesthetic. The juxtaposition of these hues with iris pink and Turquoise blue adds a captivating element, endowing the composition with a unique charm. Through this interplay of colors, the animation effectively transforms the dark and somber ambiance of the deep sea within the objective world into a vibrant and resplendent display, as depicted in Table 1.

### 3.3 The Artistic Conception of Stream of Consciousness Ink Painting

The so-called stream of consciousness refers to the constantly changing and flowing characteristics of the content of consciousness. With the development of modern art style, a unique style of "stream of consciousness ink painting" that combines the characteristics of stream of consciousness with traditional Chinese painting methods has also appeared in ink painting, refer to Figure 4. This painting method not only has the profound artistic conception and spiritual charm of ancient China, but also has modern bold innovation and wonderful conception.



Figure 4. Stream of Consciousness Ink Painting by Zeng Jian

The stream of consciousness ink painting in *Deep Sea* not only exists in the visual display, but also in the story expression of animation. At the same time, the creation of Chinese ink painting is often not only to record the scenery, but also to integrate into the artistic conception. The beauty of the artistic conception is the harmony and unity of virtuality and reality, form and spirit, movement and stillness, existence and non-existence. The narrative method of *Deep Sea* is mainly to express the inner consciousness activities of the characters. The structure and story line of the *Deep Sea* world all follow the protagonist's inner consciousness. The broken and chaotic storyline is not clear until the protagonist's heart is redeemed. Therefore, the *Deep Sea* is not a fabricated world out of thin air, but the projection of the protagonist *Shenxiu*'s emotions in the real world, which is the combination of *Shenxiu*'s real cognition and inner fantasy. In the deep-sea world, "Form are fake, spirit are real." The images of chefs, passengers, and *Nan He* in the *Deep Sea* world are fake, but the attitudes and expressions of these characters are real. "Stillness is fake, movement is real." The fixed scenes of the *Deep Sea* cruise ship and the unconstrained ocean world are all fake, while the sea elves and despondent ghosts are the real emotional expressions of *Shenxiu*. The statement, "Existence is fake, non-existence is real," encapsulates the notion that the narratives unfolding within the *Deep Sea* are inherently fictional. However, amidst these fictional tales, certain irrational dialogues and plot elements possess a genuine quality. The pronounced sense of discontinuity observed throughout the entire film serves as a manifestation of the fluidity characterizing the temporal and spatial dimensions within the stream of consciousness.

## 4. Conclusion

The visually captivating artwork featuring the particle ink art style within the animation *Deep Sea* has garnered acclaim from numerous audiences, effectively showcasing the essence of traditional ink art. By employing the stream-of-consciousness narrative technique in conjunction with the ink-style aesthetic, the animation pushes the boundaries of expressive techniques typically confined to the realm of literature. Notably, the integration of *Shenxiu's* emotional fluctuations and hallucinatory dreams into the surreal particle ink imagery represents a significant breakthrough within the animation. Through the comprehensive analysis of the innovative use of traditional ink painting in *Deep Sea*, it can be seen that animation based on traditional culture and art can have a more bold and innovative display, traditional cultural elements can not only be applied in traditional art methods, combined with the current new technology can create a new art style that perfectly integrates tradition and modernity. In the future, Chinese animated films should strive to be more innovative and diversified in expressing Chinese traditional culture.

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