

Analysis of the Creative Mode of Digital Dance Imaging Technology

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Abstract: *Dance imaging technology has made rapid progress since the 1980s, combined with the development of computer technology. Nowadays, dance imaging works are not only just a direct combination of dance and image, but also completed through a technological medium, making dance into different types of imaging works. As the pioneer of computer art, Vera Molnar believed that cold and inhumane robots can help humans complete the most profound works, now through the combination of various arts, it provides audiences with updated aesthetic experiences and creators with more artistic works. By analyzing the digital dance image mode, we can clearly understand the subdivision categories of dance image works, and achieve successful cases through meticulous photography techniques, as well as reflect on the prospects of the entire professional industry.*

Keywords: Dance, Image analysis, Creative Mode.

1. Dance Video Exhibition at the Art Festival

Dance imagery, as an emerging art form, combines dance with visual technology to expand the expressive space and dissemination channels of dance. With a unique perspective and innovative means, it captures the movements and emotions of dancers with a unique perspective and innovative methods, freezing the moment into eternity. Dance imagery not only preserves the dynamic beauty of dance, but also enriches the visual effects of dance through techniques such as video editing and special effects, making it more visually appealing and artistically infectious. At the same time, dance imagery also provides new ideas and possibilities for dance creation, becoming an important component of contemporary dance art. In recent years, with the development of digital technology and network technology, dance imagery in China has shown a diversified development trend.

In recent years, dance visual works have frequently appeared at major art festivals and film festivals both domestically and internationally receiving widespread attention; On the other hand, more and more dancers and directors are trying to use dance imagery as an art form to expand the expressive space of dance. Analyzing the application scenarios and cases of dance imagery in China, it can be found that the main application scenarios of dance imagery in China include stage performances, TV programs, movies, advertisements, education, etc. In these fields, dance imagery can not only record and showcase dance performances, but also provide new sources of inspiration for dance creation.

The 2024 Pittsburgh International Dance Film Festival (PIDFF), developed from the Constructed Sight Dance Film Festival, is the premier dance film festival in Pittsburgh, Pennsylvania. The festival features a variety of dance films from different countries and has a "build" line of sight unit, focusing on public art works or films focusing on specific locations. This year, the festival has contributed hundreds of films from various regions of the world, of which five Chinese works were successfully selected.

The Beijing International Film Festival is the second A-class international film festival in China to be recognized by the

International Federation of Film Producers (FIAPF). The "International Youth Dance Image" unit is mainly aimed at young creators around the world, collecting diverse and cross genre dance image works. The film festival encourages university teachers, students, and new generation young artists around the world to create works that are of contemporary significance and innovation, allowing dance art and image art to break through boundaries and cross-border integration to generate new vitality. This year's International Youth Dance Video Unit received over a hundred works, including 10 dance VLOGs, 20 experimental dance videos, 4 dance films and documentary videos, and 17 dance photography works that were shortlisted for final evaluation.

The Spanish Spring Dance Video Festival is a highly professional and global competition and exhibition platform that has been held continuously for 9 years. This competition has received submissions from artists from around the world, including Spain, the United Kingdom, and the United States. The shortlist consists of over 250 works submitted in different categories worldwide, with more than 20 selected for the exhibition. Three works from China were shortlisted. The work is still in the award stage.

2. Analysis of Digital Dance Image Creation Mode

The image analysis framework is the core of deep learning technology in the field of image processing, which integrates algorithms, data processing flows, and model training mechanisms to cope with various image analysis tasks. This framework improves the accuracy and efficiency of image analysis by optimizing data processing, feature extraction, and model construction. It not only supports various types of data processing such as remote sensing images and medical images, but also can be customized and adjusted according to different application needs, providing strong technical support for ground object recognition, disease diagnosis, etc. In the digital image dance, the image creation mode also has the following modules for current creation.

2.1 Documentary Photography

Authenticity is the primary task of documentary photography, which involves providing authentic responses to objective things. Recording works in dance video works is also the most widely used creative mode, recording dance practice patterns on a linear timeline, documenting the state of mind or difficulties encountered in the process of dance creation, or recording the creative process behind the scenes of the work. For example, the CCTV documentary "Ballet Dreams in Urban Villages" tells the story of two girls who pursue their ballet dreams by working with their parents in Shenzhen. There is a ballet school in the urban village where they are located. The school provides free dance education to migrant children. The children sweat in the practice room, hoping that dance can change their destiny. However, in the end, they were not selected by a professional art school. In addition to feeling lost, they actually experienced the happiness that dance brings to them.

2.2 Artistic Photography

In the works of dance art photography, they are all thematic creations and creative experiences of thematic ideas. He fully embodies the theme of the work, which runs through the entire process from conception to completion of the title, including observation of life and selection of themes, grasping of plot and depiction of details, establishment of themes and deepening of artistic conception, pursuit of the spirit of the times and national style, as well as deliberate innovation. For example, in the dance video work "Same", the creativity of the work was initiated by the Beijing Dance Academy, which brought together six art institutions from five countries including the Youth Dance Troupe of the Beijing Dance Academy, the Maranhão Theater Dance Troupe in Brazil, the Confucius Institute Dance Troupe of Durban Institute of Technology in South Africa, the SboNdaba Dance Troupe in South Africa, the National Choreography Academy of Kazakhstan, and the National Theatre Arts Academy in Krakow, Poland to participate in cloud based joint creation. In form of expression, 'Tong' breaks through the inherent stage performance, placing dance art in outdoor environmental spaces and organically integrating iconic buildings or landscapes from various countries into dance creation. Urban landmarks such as the Summer Palace in China and Table Mountain in South Africa have become stages for dancers to showcase their talents.

2.3 Holographic Photography

The application of holographic technology in the field of photography is far superior to ordinary photography. Ordinary photography is based on the principle of lens imaging, which projects a three-dimensional scene onto a flat photosensitive substrate to form a light intensity distribution. The recorded photos do not have a sense of three dimensionality because the images obtained from various perspectives are completely the same. Holography reproduces an accurately replicated object light wave. When we "see" this object light wave, we can observe different sides of the reconstructed stereoscopic image from various perspectives, as if we were seeing a realistic object, with depth of field and parallax. Holographic dance is a combination of dance art, holographic projection, virtual image and other technologies. For example, the holographic dance "ithra" was tailor-made as a dance

performance for the opening of the Saudi Film Festival, metaphorically revealing the legendary story of a boy acquiring superpowers. In the work, dancers interact with objects in holographic images and interact with virtual firebird images. Image technology allows the characters to shuttle through multiple spaces and ultimately find a pearl on the seabed, telling the historical story of Saudi cinema through this pearl.

3. Case Analysis of Digital Dance Image Creation

To sum up, with the development of digital technology and network technology of the three photography technologies, dance video presents a diversified development trend. On the one hand, dance video works are frequently appeared in various art festivals and film festivals at home and abroad and received wide attention; On the other hand, more and more dancers and directors begin to use the art form of dance image to expand the expression space of dance. For example, a number of commonly used app TikTok platforms in China have also appeared a group of dancers who focus on the shooting of dance video works, but with foreign works that pay more attention to the film festival or dance video exhibition, the audience change of dance video in China focuses on the online app TikTok platform.

TikTok is a music creative short video social software launched by Beijing ByteDance Technology Co., Ltd. on September 20, 2016. It is a short video community platform for all ages. Users can shoot short videos through this software to form their own works. It is the product of PGC+UGC high integration. According to the 2019 TikTok Data Report released on January 6, 2020 by ByteDance, the number of daily active users of TikTok in China in 2019 before the epidemic was about 400 million, while in the 2021 TikTok Data Report released in the same period of 2022, the number of daily active users of TikTok had reached 600 million, and the number of uploaded products per day reached 10 million, with a significant increase in the number of users and activity.

On the TikTok app platform, as of June 2022, TikTok platform has 36000 dance anchors. In the first half of 2022, these dance anchors have broadcast 90.42 million hours of live broadcast, brought 5.05 million online dance performances, and attracted nearly 2 billion users to watch. This data not only shows the popularity of dance content on the TikTok platform, but also reflects the potential of online live broadcast in the dissemination and realization of culture and art. And this dance video and video works are used for online interaction and dissemination, expressing emotions and artistic conception through precise body language through dance movements.

Search for dance education anchors on the TikTok platform, and Wang Shiyi is typical. Her audience target is suitable for adult dance lovers' repertoire. It can be seen that the number of fans who follow her on the TikTok platform has reached 499000, and the number of people who like the dance "Lantern Walk", the highest video rating, has reached 277000, forming a full platform interaction between online and offline courses. At the same time, Wang Shiyi has also created her

own clothing brand to provide all-round services for dancers. In her works, there is a strong concept of dance imagery design, which has a different perspective from traditional dance videos. In Wang Shici's dance video works, a large number of video works are shot in professional studios, and a lot of design is done for the shooting angle and shot design of the dance. The dialogue between the lens and the dance is used, and the "sound" of the lens is used to output the dance works at a higher level of intention, making the dance vocabulary more lexical and dance like. Through the intrinsic expression of photography techniques, using the language of photography techniques such as pushing, pulling, shaking, moving, following, tilting, and bending to create dance visual works. Create the meaning, texture, movement route, and speed of the work.

Through the works of dance host Wang Shici, we can see that in the analysis of dance movements, we focus on the fluency, rhythm, and intensity of the movements. Dancers need to master muscle contraction and stretching, body tilting and twisting, as well as eye contact and facial expression coordination. Each movement carries a profound meaning, both independent and coherent, together constructing the complete story of the dance. Gain a deep understanding of the dancer's intentions and feel the power and beauty conveyed by the dance. The editing techniques for dance videos include transitions, slow motion, elevation, and color grading. Through these techniques, dance scenes can be made more visually impactful, highlighting the rhythmic beauty and artistic sense of dance movements. Secondly, the application of digital technology in dance image creation mainly includes virtual reality (VR), 3D modeling, and special effects production. These technologies can achieve the reproduction of dance scenes, innovation of dance characters, and expansion of dance movements, providing more possibilities for dance image creation. So, dance style visual videos quickly gained popularity among the general public and even formed efficient dissemination.

4. Thoughts on the Development Trend of Dance Video Works

4.1 Mature Path

Through the above examples, it can be seen that dance video works have formed a more mature direction in China with the development. Whether it is short video works published on the TikTok platform or dance video works of art types published on various art film festivals, they have been deeply processed by art, fully demonstrating the advantages of combining art and modern technology. When watching a dance work, the audience can not only understand the artistic conception that the dance work itself wants to express, but also achieve a higher level of artistic expression through the secondary creation of visual images.

4.2 Internal Core Migration

such works also have a certain development disadvantage. For example, whether the initial editing ideas of dancers in the editing stage will be impacted by the video link, and whether the audience's senses of appreciating the work will be affected by the visual effect creation of high editing. Whether the

overlap of the design and image techniques of such works will make the audience fatigue in the aesthetic process is worth thinking about the dance creators of our works. How to make a good connection between the two and how to balance the connection between the dancer and the camera. Secondly, with the development of artificial function AI, more attention should be paid to dance works and dancers themselves as the main appreciation view. Rather than focusing more on the intense lighting stimulation and the virtual performance brought to the audience.

5. Epilogue

Dance visual works, as an emerging interdisciplinary art form, have broad development prospects. The video creation mode provides useful reference for future dance image creation. The development of digital imaging technology provides technical support for dance image creation. The application of high-definition cameras, 3D animation, virtual reality and other technologies enables dance video works to have higher artistic expression and visual impact. Through analyzing the current development status of the industry, photography models, and short video cases, we aim to gain a better understanding of the characteristics and value of dance imaging technology creation models in this field of art.

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