

# Research on Animation Character Design based on Dunhuang Art

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**Abstract.** Taking dunhuang art as the prototype material, the systematic development of animation characters is not only the promotion and innovation of traditional culture, but also the broadening of ideas for the development of Chinese animation nationalization. Dunhuang art and cartoon character design, in many aspects such as personality freshness, exaggerated modeling, vivid image, dynamic typicality, unrestrained imagination, character story and so on, all show common characteristics. In the animation character design based on dunhuang art, we should grasp the principles of character design such as identification, integrity, interest and feasibility. While highlighting the characteristics of dunhuang, it does not lose the artistry and uniqueness of cartoon characters.

**Keywords:** Dunhuang art; animation; character design; feasibility; design principle.

## 1. Introduction

In the multi-cultural context of the world, animation, with its unique artistic appeal and affinity, has become one of the most promising cultural forms in visual culture today, as well as an important carrier to connect the world and spread culture. The animation industry in China started in the 1920s, and the older generation of artists represented by the wan brothers laid a solid foundation for the animation industry in China. After the founding of the People's Republic of China, a series of cartoons with Chinese national characteristics represented by "uproar in heaven" came out one after another, which pushed Chinese animation to the peak and formed the internationally recognized "Chinese school". However, since the 1990s, with the continuous influx of foreign animation into the Chinese market, Chinese national animation was in an awkward situation. Chinese animation had a glorious history and experienced setbacks. It is still in a relatively weak position in the communication of animation culture in the world today. Excavating the material, creating the image and abstracting the spirit from the excellent Chinese traditional culture and art is a powerful way to revive the Chinese domestic animation.

Dunhuang art is an important component of Chinese excellent traditional culture and an important embodiment of Chinese traditional art spirit. Due to its rich religious atmosphere, profound historical and cultural heritage, broad spiritual connotation and endless artistic charm, Dunhuang art has attracted much attention from the academic circles. Over the years, dunhuang art has been made to create material, and has some innovative performance in the art of dancing, indoor and outdoor decoration, product packaging, etc., and the achievements are rather powerful. Dunhuang art has become a rare element of animation creation due to its distinctive character image, rich plot twists and turns, and drawing techniques that integrate Chinese and western painting techniques. Taking dunhuang art as the prototype material and systematically developing relevant animation products, it is a positive and beneficial attempt to explore and promote the excellent national culture and reshape the image of Chinese animation in the new era.

## **2. Feasibility Analysis of Transforming Dunhuang Art Image into Anime Character**

### **2.1 Personality**

Dunhuang art condenses a variety of distinctive characters. The serenity and dignity of the Buddha, the kindness and dignity of the Bodhisattva, the mighty majesty of the Emperor, and the ethereal and ethereal spirit of the heavens, all kinds of image characters are clear and each has its own functions. Under the common characteristics, they also create their own distinct personality characteristics. For example, in dunhuang art, there are many images of king of heaven and hercules. Although they are all generals, their characters are different in character. Taking the painted sculpture in cave 194 as an example, it created two statues of the king of heaven, one angry and one smiling. The king of heaven was red with anger, as if his skin color was red with anger, and his expression was serious. Smiling at the king of heaven with a white face and a slightly open mouth, he added a kind of amiable personality traits to his power. For another example, in the painting form, especially in the painting of the sutra on the buddha of infinite life, the common music of kalin benga kabuki is especially responsible for playing all kinds of wonderful music when the Buddha talks about it. It is the head of the people and the body of the birds, which is often called the wonderful sound bird or bel air bird. The image is unique and has a great personality. These images, with distinct personality and strong identification, meet the personalized requirements of cartoon character design image and can become the original material of cartoon character design.

### **2.2 Exaggeration of the Form**

Dunhuang art is full of exaggerated characters, such as the image of medicine fork in fresco art, which has been treated by artists with exaggerated deformation of interest. If according to the original meaning of buddhist sutras, medicine forks should be thin, they have the characteristics of lightness and agility. However, the medicine fork in the murals of the northern dynasties in dunhuang has round head, thick neck, fat waist, strong legs and shaped like a dwarf. This exaggerated treatment more fully emphasizes the image of the strong body and the strength of superman. For another example, in dunhuang art, there are numerous images of the king of heaven glaring at each other. The painter pays attention to exaggerating the features of the king of heaven glaring and opening, so as to highlight the majesty and deterrent force of the king of heaven and make the image more vivid. In dunhuang art, such exaggerated characters can be found everywhere, which not only reveals the character's personality, but also reflects the superb painting skills of the painter.

Exaggerated style can be described as the soul of anime character design. The exaggerated anime character enhances the humor and fun of the animation and can leave a very deep impression. It can be seen that the exaggerated image creation in Dunhuang art can also provide some reference factors for the design of anime characters.

### **2.3 The Vividness of Images**

“Lifelike” is the highest aesthetic ideal of Chinese traditional art. Dunhuang art is a model of Chinese traditional art in terms of character expression. The full caves are all vivid and graceful artistic images. For example, the Dunhuang Tang Dynasty mural art “not only has a full and healthy character, but also has a variety of spirits. The spirits are also different and colorful. The four Kings of heaven have four different manners and demeanor, the eight divisions of the dragon have eight different dynamics and expressions, the ten disciples have their own unique inner world. In particular, bodhisattvas, in various forms and with different spirits, climbed the peak of the dunhuang fresco art of divination.” [1]

The vivid expression of image is not only the aesthetic ideal of dunhuang art, but also the core point of cartoon character design, which is related to the vitality and attraction of characters. Although dunhuang art and modern animation belong to the art products of different times, they both take "lifelike" as the highest criterion of image design.

## 2.4 Dynamic Typicality

The typical dynamic depiction is one of the highlights of Dunhuang art. By shaping some dynamic artistic images, the ancient craftsmen made the cave two-dimensional flat mural art show a strong sense of movement. The image of music and dance is undoubtedly the key factor in breaking the static space of murals and creating dynamic situations. In the art of Dunhuang murals, the dance of the characters of the music shows the instantaneous climax of the dance movement. According to one of the movements, we can even imagine the connection between her before and after. "Although it is a momentary, it is a state of continuous movement, suggesting that people go back to the aftertaste and chew the vivid scene of the whole dance, borrowing imagination to fill the unfinished space. Combining the verses of music and dance to understand the artistic conception, you I can't help touching the dance texture on the wall that is as fast as electricity, like a wind, as a dragon, light like snow, slow as a cloud, soft as a willow." [2]

The animation design mainly expresses the movement of things through a plurality of continuous static pictures, and the static image of the Dunhuang mural music and dance movement is like a certain frame in the animation creation, which has certain reference significance for the dynamic shaping of the characters in the animation design. In fact, through the dance of the characters in the Dunhuang murals, the development of the Dunhuang dance is an image that explains the importance of developing from a typical movement to a coherent movement.

## 2.5 Imagination

Imagination is the eternal charm of artistic expression. In this respect, Dunhuang art and anime character design can also spark the inspiration of inspiration. Dunhuang art has created countless classic artistic images based on the imaginative styling techniques. "For example, those fascinating and eye-catching flying clouds in Dunhuang murals are insignificant in the Buddhist scriptures. They are just small flowers and music. They are just the waiters who admire the Buddha and the Bodhisattva. In the Great Classics, they are just a little romantic in the solemn and grand scene. This inconspicuous character has a very dazzling image on the murals. Or rao tower all around, wings fly; Or accompany a building to cover, leisurely make dazzle; Or in a caisson, the flowers spread happily. In a big sutra change, if there is no flying sky, it seems that the 'pure land world' lacks vitality. However, in the buddhist sutra texts, they often do not pass on the scriptures and do not enter the sentences. This lovely artistic image is the result of artistic imagination." [3] Flying in the sky, its beautiful shape, clever posture, with a ribbon can fly in the sky, or scattered flowers, or dance, all show the spirit of fairy floatation. In the traditional Chinese animation "uproar in heaven", the image of fairy godmother successfully borrowed from the flying sky. In dunhuang art, there are many imaginative character models, which interpret the unrestrained imagination of ancient people.

Animation design is an art full of imagination. In animation design, our ideas can be bizarre and free, free from the constraints of time, space, region, objective laws and other factors. In the exploration and expression of imagination, ancient people and modern people have the same talent to show.

## 2.6 The Character's Story

Although the Dunhuang mural art is a static two-dimensional painting art, its content has a strong narrative, especially the story painting. Story painting is an important part of Dunhuang murals, and its expressions are rich and vivid, including the story of the birth of the story, the story of the cause, the story of the Buddha, the story of the change, the story of Buddhist history and the story of local historical figures. These story paintings, most of the plot integrity, scene integration, fascinating, exciting, become a good script for the development of animation character story. In 1981, the artist of Shanghai Fine Arts Film Studio made an animated short film "Nine-Color Deer" based on the story of "Deer King Bensheng Story" at the 257 Grottoes of Mogao Grottoes in Dunhuang, which became an excellent model for exploration in this respect.

The scenes of Dunhuang mural paintings are divided into scenes and details to show us a moving story. This storytelling narrative is consistent with the narrative style of animation. The cartoon itself

is to promote the story in the way of story deduction. From this, we found the narrative point of Dunhuang murals and animation.

### **3. Analysis of the Design Principles of Anime Characters based on Dunhuang Art**

#### **3.1 The Principle of Recognition of Character Design**

The design of anime characters based on Dunhuang art must first highlight the distinctive characteristics of Dunhuang art, so that these characters can emerge from the numerous animation characters in the market and have strong recognition. On the one hand, it has become the spokesperson of the excellent Dunhuang traditional culture, on the other hand, it can be used as a pioneer in the animation of Chinese nationality. The embodiment of Dunhuang features is not only reflected in the role modeling, but also in the grasp of color and spiritual temperament.

#### **3.2 The Integrity Principle of Character Design**

The development of Dunhuang's distinctive animation characters is a sustainable research project, in which characters can develop corresponding cartoons and derivative products. This requires that the role of the previous role must grasp the principle of integrity. Designers must accurately deal with the relationship between the whole and the individual, unity and change. The designed anime characters must have the characteristics of uniform style in the senses, and the overall tone of the same, without losing the individualized performance of the individual.

#### **3.3 The Interesting Principle of Character Design**

Dunhuang art is a religious art and is bound to be restricted by religious doctrines, canons and serious themes. Although the primary purpose of Dunhuang art is to promote the Buddhism, the stories in Dunhuang art have different degrees of humanity, good and evil, and ugliness. This secular emotional expression is the most effective way to circumvent the seriousness of religious art. Therefore, the design of anime characters based on the art of Dunhuang murals should be good at shaping the interesting characteristics of the characters, to get rid of the shackles of religious and artistic attributes and make the characters have a vivid and long-lasting artistic vitality.

#### **3.4 Operational Principles for Role Derivation**

As an extendable project, the design of Dunhuang element animation characters should fully consider the possibility and feasibility of mass production in the future. The character design is not only vivid, but also eye-catching and streamlined, and it is easy to implement various actions and special effects in the later stage. From planning, design, production, to operation and listing, every step must be carefully analyzed, planned and budgeted to ensure the operability of each link.

### **4. Conclusion**

The art of Dunhuang Grottoes is a rare cultural treasure and spiritual wealth of mankind. The all-encompassing Dunhuang art provides a constant source of creative inspiration and reference for all types of art. Romance and sacredness, illusion and truth, Dunhuang art and animation art show a high degree of conformity in the pursuit of spirit; the two also have many commonalities in image shaping, individualized performance, imagination, and plot creation. The exploration of anime character design based on Dunhuang art has far-reaching significance. While carrying forward and inheriting the traditional culture of the Chinese nation, it also explored and opened the path of the development of Chinese animation. One ancient and one modern, one old and one new, Dunhuang art and animation design re-conversation in the transformation of time and space, will certainly wipe out a different spark.

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