Research on the Design of Game Character with the Chinese Traditional Culture Characteristics

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Abstract

Game character is the soul in a game; there are certain quality requirements for the sense of design, modeling and color as well in a good game. Chinese traditional culture has experienced the evolution of time and space, and has a profound impact on the development of China's modern game character with its rich visual modeling and profound meaning. Nowadays, many people are aware that it is important for Chinese Games to pay attention to the globalization and the mining of Chinese traditional culture elements resources as well. First, the classification, guide positioning, application scope and prospects of game characters are studied in this paper; second, digital dissemination of San Xing Dui Ruins culture is analyzed; then, case study is conducted for the character design of some excellent games in the market; finally, this paper studies the application of San Xing Dui Ruins culture elements in the planning production of game case. Through designing the visual style of the whole game, the conclusion is reached as follows: the design of game character should accurately apply the elements of the Chinese traditional culture into the design of the game characters on the basis of respect for history, traceability and evidence.

Keywords: Game; Character design; Traditional culture; Digital transmission; San Xing Dui Culture.

1. Purposes and Methods of Research

Character design is an important part of the game design; excellent character design will often bring unexpected effect to the game. As the players manipulate the object which stays together from morning to night in the game, they usually put impressive emotional projection on the object, which is also highly concerned. Game characters are often the players' first impression on the game. In this paper, an adventurous game with traditional Chinese culture as the background run on the mobile platform is taken as the actual case to explore how to create the game character which can reflect Chinese cultural characteristics by combining the elements of traditional Chinese culture, according to principle of respecting for history, traceability and evidence. Case analysis, literature analysis and empirical study are adopted to conduct related research.

2. Basic Types and Design Principles of Game Characters

Character is the soul of the game, how to design a popular and vivid character suitable for different users is a problem thought by lots of game characters designers when designing the game character. It is needed to design facial expression, clothing and character modeling suitable for the character in addition to the basic proportion according to the game subject when designing the game character. The painter will draw some concept sketches in the production process of the game, and then the game planner will choose the concept sketch suitable for the character of game subject to the painter for further improvement, until the final full game character shown in front of people.

The design orientation of game character consists of art orientation and plot orientation. Art orientation refers to the design of a character mainly puts emphasis on the appearance design of character, the plot of game is the second. Plot orientation refers to the designers create characters according to the storyline character. In addition, the character orientation also divided into several aspects. Firstly, the character's appearance: the character should have a distinctive appearance, which can enable people to identify it at first glance. Secondly, the character's personality: it can make proper reaction when encountering different situation. Thirdly, the identity of the character, what is the character engaged in?

Is it a hero or a villain? Finally, the audience: For whom the character is designed? What is audience identity, age? Children like the character of the cartoon of Q edition, adults prefer the character with realistic style.

3. Case Analysis of Game Characters Design

3.1. Character design of *"Swordsman III Web Edition"*

"Swordsman III Web Edition" is a 3D role-playing game independently researched and developed by King soft Xishan in China, the background of Tang era is integrated into the various traditional culture elements to show the martial arts world. The design of game character is of the style of Tang and Song Dynasty, especially in the character's clothing. The belt accessories and colors of ancient Tang and Song Dynasty clothing are used to determine the level and identity. Five-color is a popular color. The third figure is a character design of as words man. It can be seen from the male character design that the design color matching of the character clothing is the noble yellow. Clothing is the wide-sleeve crown brocade clothing of the emperor. Shoulder collar and five gorgeous trailing patterns are between birds and flowers, animal mask and moire; Belt hanging drop and the sword hand-holding are similar to brocade pattern. Chest is embedded with silver beast head decoration, and adorned with tassels hanging pendants. Such the clothing matching and character model all reflect the character's hidden and noble status. In official settings, this character is born in the noble family; self-aware of the sword principle, and is of brilliant swordsmanship in spite of his blindness.

Figure 1 :   Character design of parts in "Swordsman III Web Edition"

In the above, the second figure is the character design of a female knight in the game. The character's clothing color matching is given priority to elegant rose and light ochre. Clothing type is the chest jacket skirt suit with a silk ribbon. The character wears a jacket, and a skirt, the skirt is up to the chest, tied in the armpit. Outside of the shirt, a half sleeve is dressed; the sleeve length is to the waist. Tassel pendant is also taken as a decoration between the chest and waist, wearing jade bracelet on the hand. The ancient poem wrote: "the lady in red sleeve goes away," which reflects a lady dressed in gorgeous clothing in Tang and Song Dynasties. In the figure, the character danced with the sword, showing an elegant charm of female knight-errant. In the official setting, as the master, the lady led her followers against the world.

3.2 Character design of the Adventurous game *"Tengami"*

"Tengami" is a decretive adventurous mobile game developed by Nyamyam. It mainly consists of origami pages. It describes a Japanese samurai awakening from the cherry tree; begin his adventure decretive journey through the clues. The music mainly takes Japan's national musical instrument "shamisen" as the main music playing, gives a person the Japanese classical flavor. The game picture and color matching are quite beautiful. The entire game is cored with "artistic conception", which needs players to understand the intention ofthe author. According to the light hint in the images, the flipping and decryption of the page are completed. The characters in the game are displayed with the origami flake three-dimensional silhouette style.

The hero in following figure is a warrior of the game. The main colors of his clothing give priority to blue and red. The red kote on the wrist and forelimb on the leg are matched with blue short-sleeve jacket and straw sandals, which leaves a lonely, tired warrior image on people, not an armor tall burly look in the imagination.

Figure 2: Character figure in *"Tengami"*

4. Instance production of the game of "Guyu Cavity"

"Guyu Cavity" is an adventurous game with a 2D horizontal flat plate style run in the android and IOS platforms. The operation mode is controlled by the touch screen. Users' orientation is set in younger players. This theme is based on the background of Chinese ancient site San Xing Dui Ruins, combining a modern horizontal plate clearance adventurous game with the operation mode run in a mobile platform.

San Xing Dui is the historic treasure of Chinese culture, is located in the duck river, and northwest of Guanghan City, Sichuan Province and it has a history of 5000 to 3000 years. It isa cultural ancient ruin with the largest range, longest duration, the most abundant cultural connotation found in the southwest of China up to now. Cultural relics in all the ruins are the firsthand material for the study of San Xing Dui mystery, provides sufficient evidence for the existence of the ancient Shu kingdom. Many strange beautiful patterns and models inSan Xing Dui relics not only have the aesthetic function, and have the function to differ the identity and status. These elements are a unique identity for Chinese culture in the future.

These elements are presented in the form of the game, which is of important significance for people to understand the ruins of the ancient culture.T he purpose and significance to develop this work is to allow the player to experience the game and to inspire an interest in San Xing Dui culture as well, and to have a certain understanding of it. On the basis of respect for history, traceability and evidence, the work restored the historical and cultural features of San Xing Dui as much as possible. In addition to, the interactive game is used to spread San Xing Dui culture, which plays the role of inheriting Chinese traditional culture. The current interactive rendering method of San Xing Dui is displayed in the museum exhibition; in addition, the other one is presented with 3Dholographic video. The game way is used with less interaction. This paper combines the cultural elements of San Xing Dui Ruins with the modern design style of the game design, it is anew attempt.

4.1 Collection of related materials and determination of the game scenario

After the basic theme of the game is determined, relevant materials of San Xing Dui relics are collected. San Xing Dui cultural relics are of a very wide range, such as the ritual sacrifices, bronze and pottery, jade products, etc. After screening, the most representative and most widely known bronze mask is selected as the main element of the game character modeling. Its most characteristics is the prominent eyes and big nose, which has the characteristics of the ancient Shu exotic.

After determining the main elements of the game and the background of game story was set. Game tells a cave was found on a backpacking trip in the evening. Out of curiosity, he went in; found a bunch of blue flame. He stretched out his hand to touch, was being sucked into the water, be transmitted to the San Xing Dui space-time, and began his adventure. The plot is set at the beginning as an animation.

4.2 Design of the game character

After the game plan is put in place, the concrete implementation process is followed. Players in the game are the core; mainly interact with the game world through the game characters. Therefore, the design of the visual modeling of game character will directly affect the player's gaming experience. Then, from the aspect of character orientation, the specific design process of the conception and the character in the game character design of "*Guyu Cavity"* is preliminarily designed.

4.2.1 Character orientation

In the early game plan, game plot begins with triggering the game from modern to ancient. And the character who triggers the story is the protagonist of the game. Due to the protagonist from modern to the ancient times, the image of protagonist first determines to be a modern style.

4.2.2 Orientation and design of the main characters

The orientation of game character involves character's appearance, personality, identity and its audience in theoretical background. In planning the whole game, the users' orientation is young players, so the audience of character is young-age group; again, according to the audience, Q version cartoon flat style is determined in design. The identity of the characters is determined to be ordinary backpacking trip according to the story. Preliminarily, the character's personality is set to natural dumb, no mouth, ignorance, strong curiosity. According to the sets, preliminary concept sketches are drawn. The basic structure and proportion are considered in the character design, including the head, upper body, lower body and limbs. In addition, the elements that San Xing Duiare also taken into account in the design.

Because the bronze mask statue of San Xing Dui is well known to people, then the elements of bronze mask statue is integrated into the character decoration in the character design. The San Xing Dui mask is put on the head as a headdress.
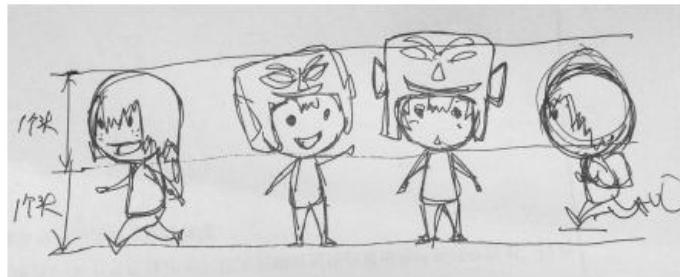

Figure 3: Design sketch

After the character sketch is finalized, the sketch is scanned into a computer and Adobe Photoshop is used to finally design the electronic draft. In the design process, first, draw the reference lines to determine the character proportion, drawing the character of each structure including the head, neck and body equal layer. Then, draw the layer of the various parts of the characters including head, neck and body. The character and the ornament are separately drawn. Three view drawing and 3/4 side drawing are drawn first, then draw the head mask.

Finally, the character and the ornament are pieced together to complete the final design draft.

The color of the character's dress is green from San Xing Dui bronzes.

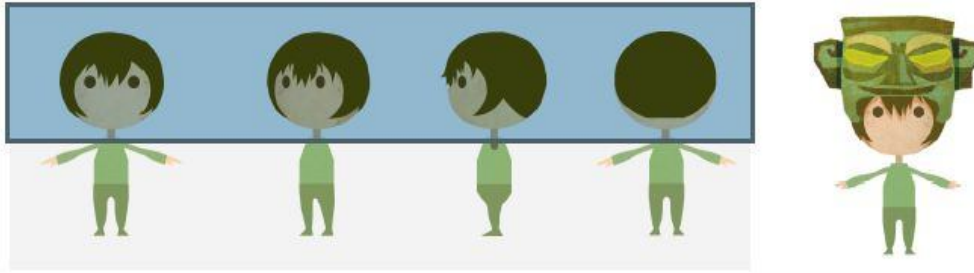Figure 4:   Reference diagram of bronze statues unearthed in Sanxingdui

Figure 5: Headwear setting diagram

4.2.3 Animation production of the character

After setting the game characters, these movements of the protagonist's running, jumping, stationary and death upon dropping are drawn apart into frame-frame animation by the use of Photoshop according to the character setting diagram.

In producing the animation of game character, it is very important for the continuity of the movement. There are many intermediate frames among the protagonist's running, jumping, stationary and death upon dropping. It is needed to take character's movement rule as the basic reference in producing the animation character's movement so that the character animation is more close to nature. It is the most appropriate for 24 frames per second in character animation, which is also relatively smooth in the game running.

5. Conclusions

This paper mainly analyzes the concept, design orientation of the game characters, in-depth study how to combine the San Xing Dui culture elements with the design of game character on the basis of respect for history, traceability and evidence. The game of *Guyu Cavity* is taken as the case to analyze the specific whole process from planning, design to implementation. In designing the characters of *Guyu Cavity*, the character is displayed with modern style as a whole; the headwear of the character is made improved design in the elements of San Xing Dui masks.

Each country has its own traditional culture. In today's diverse society, how to explore the traditional culture elements, and integrate them into the game is what the game designer should consider. Only through observing the traditional culture around and experiencing it and combining design theory with the character design can we create an impressive character.

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