Application of Multimedia Data Feature Extraction Technology in Folk Art Creation

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ABSTRACT

In the intelligent background, in order to carry out the folk art creation more conveniently, this article integrates the new technology of multimedia data features into the folk art creation to achieve the sustainable development of folk art. Specifically, based on the method of wavelet transform, this article decomposes folk art images into images of different scales and different resolutions to obtain clearer works, which is beneficial to the creation and dissemination of folk art. With the peak signal to noise ratio (PSNR) as the evaluation criterion, five classical folk art images are used to test the effect of image enhancement. The experimental results show that the PSNR of the folk art works after data feature extraction is higher than 30, which meets the requirements of data feature extraction. It further shows that multimedia digital feature technology has a good application effect on folk art works, which is conducive to the inheritance and creation of folk art.

KEYWORDS

Applied Research, Folk Art, Multimedia Data Feature Extraction Technology, Wavelet Transform

INTRODUCTION

Folk art is an important part of the art of Chinese national art (Zhao & Yang, 2014). It was created by the Chinese people to beautify the environment and enrich folk customs and activities (Liu et al., 2016). It is a popular art form that people use in their daily lives. It is also an important factor in the artistic tradition of every nation and the source of all artistic forms. Its mainstream is practicality, and then on the basis of practicality, aesthetics was gradually developed, which not only meets material practicality but also provides spiritual enjoyment. In the background of vigorously inheriting intangible cultural heritage, the in-depth investigation of the cultural connotation and artistic inheritance of folk art will help to dig deeper into the cultural charm of folk art and thus gain a more open road of cultural development. Through a long history of development, China has precipitated a lot of high-quality traditional culture, which promotes the birth of folk art through continuous inheritance and development in folklore (Sándor, 2023). By *folk art*, we mean art forms created by workers rather than by professional artists so they can be widely circulated among the people. By studying folk art, it helps to understand the ethnic characteristics and customs of each place, and different forms of art have their own development history and cultural background. Folk art has accumulated the essence of excellent traditional culture and has formed unique artistic characteristics and aesthetic features (Boltaboeva, 2019).

Folk art patterns have a rich cultural connotation, and behind their appearance lies the process of people's understanding of life, as well as the law of the ancestors' understanding of beauty modeling (Chen et al., 2013). The totemic characteristics of primitive art patterns in cultural anthropology show the rich content of primitive modeling concepts and symbols in folk art patterns (Jiang, 2017). The folk art images reflect the production and lifestyle of the ancestors and their sense of creation and inherit the important memory of the history of their own people. Most folk art creators are working people at the bottom of society, and the wise working people gradually distilled many art forms with aesthetic and practical values in the course of life and practice. Folk art is relative to court art, literati art, and other art forms that exist, but it is the primary art form directly from the masses of the people. In fact, as an integral part of Chinese folk culture, folk art has far more artistic value than folk art itself and has extremely rich philosophical, aesthetic, and human cultural connotations. It is the condensation and crystallization of Chinese national culture (Shao, 2017).

The living space of folk art is closely related to its production mode and lifestyle (Zhu, 2017). With the rapid development of industrialization and urbanization, folk art has been greatly impacted (Zhang, 2014). In the 1980s, China's folk art boom was partly accompanied by commercial interests. After the Industrial Revolution, Western developed countries began to turn their eyes to the East, which was impacted by industrial civilization later. If we do not pay attention to strengthening the protection and research of Chinese folk articles, maybe in a few years, scholars studying Chinese production, lifestyle, and folk customs will have to go abroad to obtain material materials, bringing losses that cannot be measured by money. From the perspective of academic research, Chinese folk art, as a part of culture, is of great significance to the study of Chinese traditional production, lifestyle, and folklore. Under the current background, the sustainable development of folk art and modern multimedia technology should be studied (Gao, 2017). There is great cultural and visual value hidden in folk art. Designers should learn from and innovate from folk art from the perspective of modern design, to give new connotations to modern design (S. Wang, 2022).

Although the practical functions of many folk art works have been eliminated or abandoned in historical development, they have the value and function of lasting beauty as art forms. Folk art needs to keep pace with the times and can be propagandized with the help of contemporary multimedia technology to let more people understand folk art (Wang, 2021). We should actively expand the folk art derivatives and strengthen the folk art products through research, development, and innovation. In modern society, industrial production has replaced the traditional small-scale peasant economy, and traditional folk art cannot satisfy people's new spiritual and cultural needs. Therefore, it presents a new trend of change and development, from the previous practical function to spiritual aesthetics, from symbolic implication and good support to economic interests, and from folk belief to meet their own needs (Gong, 2022). At present, folk art has been damaged and lost in the historical inheritance to a certain extent, and some are even on the verge of extinction. In order to inherit the intangible cultural heritage of our country better, people take various measures to protect it (Li & Zhou, 2022). On the one hand, with the help of modern information technology means, to prevent the destruction of physical preservation. On this basis, a database is established to file and preserve all kinds of folk art resources. On the other hand, relevant cultural industries should be developed, and intangible cultural heritage museums and folk art cultural industrial parks should be established (Glăveanu, 2013).

Due to environmental factors or the creator's conditions, folk art works have different degrees of detail ambiguity, low contrast, and color distortion (Ding, 2017, April). Therefore, image enhancement is needed to improve image quality to obtain more useful information (Zhang et al., 2015). Image enhancement is targeted to improve image quality information. The original existing noise or shadow image becomes clear, even strengthening some interesting features while eliminating some useless information. It improves image quality and rich image information in order to meet some specific processing requirements (Akhmetova et al., 2016). At present, there are many methods, such as classical histogram equalization, homomorphic filtering, reverse sharpening mask, and so on. However, in practice, the processing effects of these methods for some images are not very satisfactory. Histogram

equalization will overstretch the gray distribution of the image, resulting in the phenomenon of local over-brightness. Homomorphic filtering is poor in processing color-distorted images. The details of the image processed by the anti-sharpening mask are not all enhanced, and there will still be a blurred phenomenon (Long, 2019). At present, the most commonly used image enhancement method is based on wavelet transform, which can decompose images of different scales and transform them to the frequency domain by wavelet transform. Because the wavelet transform can decompose the image into images of different scales and resolutions, the wavelet coefficients at different scales can be obtained, which is conducive to image enhancement (Wu, 2019).

Folk art is an important component of each nation's fine arts tradition and the source of all fine arts forms. In order to address the aforementioned issues and make folk art creation more convenient, this paper integrates new technology of multimedia data characteristics into folk art creation, resulting in the sustainable development of folk art. How folk art can get creative inspiration from modern multimedia technology and how to better integrate and innovate them is a problem that modern designers must think about. Specifically, based on the method of wavelet transform, this paper decomposes folk art images into images of different scales and resolutions to get clearer works, which is conducive to the creation and dissemination of folk art. With the peak signal-to-noise ratio (PSNR) as the evaluation standard, five classical folk art pictures were used to test the effect of image enhancement. The experimental results show that the PSNR of the folk art works after data feature extraction is higher than 30, which meets the requirements of data feature extraction. It further shows that multimedia digital feature technology has a good application effect on folk art works, which is conducive to the inheritance and creation of folk art.

RELATED WORK

The application of traditional folk art to modern environmental art design is stressed to help relevant individuals comprehend the relationship between traditional folk art and modern environmental art design. L. Zhang (2019) investigated the impact of traditional folk art on modern environmental art design, extended the connection between modern environmental art design and traditional folk art, and investigated the unique use of traditional folk art in modern environmental art. Folk art is widely inherited and transmitted throughout China, establishing a very stable art form and a self-contained modeling and expression system. Wang and Feng demonstrated how folk art can be applied to computers (P. Wang, 2022), giving modern computer design intrinsic traditional cultural features.

Ying and Wang (2021) investigated the evolution of folk beliefs about folk art in the context of intangible cultural assets, examining an alternate mechanism of transmission based on everyday life discourse, collective memory, and aesthetics. Folk beliefs represented by folk art are proven to have a significant vitality in daily life. Folk belief has evolved into a dynamic and active existence that profoundly reflects the harmony between individual and collective, converting into a kind of aesthetic experience in the process of modernization. This alternative conscious inheritance mode of daily life aesthetically outperforms government-level conservation of intangible cultural resources.

Tan (2022) researched the use of Chinese folk art in modern art computer-aided design systems, assessed the need for using Chinese folk art in modern art computer-aided design systems, and recommended techniques to encourage the use of Chinese folk art. According to survey data, shadow puppetry is the folk art content that 43.11% of students want to learn and use in the computer art design aid system, followed by folk painting (35.78%) and ceramics (14.08%). Folk art is a reflection of folk life. It not only carries a rich history and culture but also reflects the cultural characteristics of folk existence, as well as a nation's spiritual characteristics and aesthetic taste. Folk art has a lot of research potential. Gao (2021) analyzed the characteristics and problems of Chinese folk art in modern society, offering a fresh perspective on folk art's future development.

Figure 1. Image Processing Flow Based on the Wavelet Transform
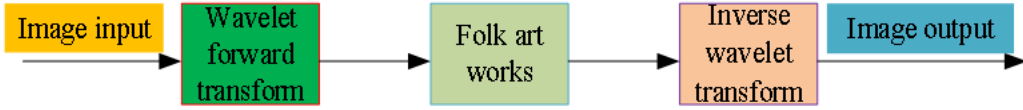
MODELING METHODS

The Principle of Wavelet Transform

Wavelet transform is a recent frequency domain transform technique for signal analysis and signal processing (D. Zhang, 2019). Wavelet is a finite width basis function; the basis function is not only in frequency but also in position is transformed, and it has the ability of time-frequency automatic scaling (Rhif et al., 2019). Wavelet multiresolution decomposition can be regarded as the result of wavelet filtering after the signal passes through the wavelet filter, which has good low-pass performance (Jalayer et al., 2021). Because the image signal is concentrated in the low-frequency part, the low-frequency signal of the wavelet filter can reproduce the information of the original signal very well. At the same time, because the dimension of the signal is greatly reduced, low-pass filtering is a good multi-resolution decision method. If different filtering preprocessing is used, a variety of resolution decisions may be formed to enhance the detail features of different resolutions in the original image (Lee et al., 2019).

The wavelet transform features a multi-resolution property, also known as a multi-scale property, which allows it to monitor the signal step by step and can alternatively be thought of as a set of bandpass filters for filtering the signal (Gao et al., 2020). By selecting the right scale factor and translation factor, a scaling window may be obtained (Liu & Chen, 2019). With the right wavelet bases, the wavelet transform may be designed to characterize the local properties of the signal in both the time and frequency domains, making it useful for detecting transients and singularities in the signal. The discrete wavelet transform is no longer scalable and time-shifted covariant; the binary wavelet is between a continuous wavelet and a discrete wavelet and still has the time-shifted covariant property of the continuous wavelet transform (Zhao et al., 2022). Because of this, it is very useful in singularity detection and image processing. The wavelet transform is a complex algorithm with a good fusion effect, and it is also a promising algorithm. The image processing process based on wavelet analysis and its transformation is shown in Figure 1.

Wavelet refers to a function or signal $\Psi(x)$ in function space $L^2(R)$ that satisfies the following conditions:
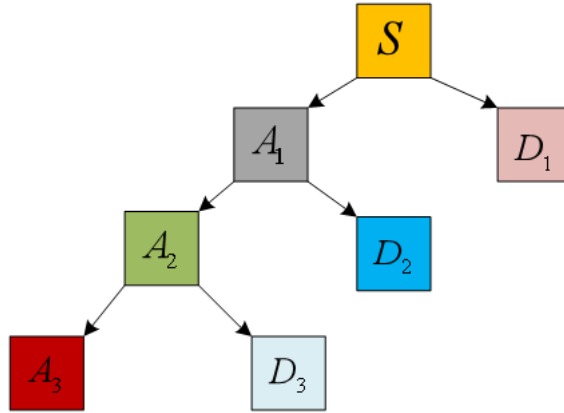
$$C_{\Psi} = \int_{R^*} \frac{\left|\Psi(x)\right|^2}{\left|\omega\right|} d\omega < \infty \tag{1}$$

where $R^* = R - \{0\}$ represents all non-zero real numbers.

For any function or signal $f(x)$, the wavelet transform is defined as:

$$W_f(a,b) = \int_R f(x)\overline{\Psi_{(a,b)}(x)}dx = \frac{1}{\sqrt{\left|a\right|}} \int_R f(x)\overline{\Psi\left|\frac{x-b}{a}\right|}dx, a \neq 0 \tag{2}$$

Figure 2. Wavelet Decomposition Tree

where a is the scale parameter and b is the translation parameter. Therefore, for any function $f(x)$, its wavelet transform is a function of two variables.

If the function $\phi_{j,n}(x) = 2^{\frac{j}{2}} \phi\left(2^j x - n\right), \forall j, n \in Z$ is defined, an important family of functions can be easily obtained from the definition of multiresolution analysis:

$$\left\{ \phi_{j,n}(x) = 2^{\frac{j}{2}} \phi\left(2^j x - n\right); n \in Z \right\} \tag{3}$$

As for multi-resolution analysis, a three-layer decomposition is presented here, and its wavelet decomposition tree is shown in Figure 2 (*A* represents the low-frequency component, and *D* represents the high-frequency component; Shah & Lone, 2022). In multiresolution analysis, the low-frequency part is further decomposed, while the high-frequency part is not considered. Decomposition has the relation: $S = A_3 + D_3 + D_2 + D_1$.

The wavelet number decomposition refers to the multi-resolution on $L^2(R)$ denoted as $\left\{\{V_j; j \in Z\}, \phi(x)\right\}$, and the scale equation is:

$$\phi(x) = \sqrt{2} \sum_{n \in Z} h_n \phi\left(2x - n\right) \tag{4}$$

The wavelet equation is:

$$\psi(x) = \sqrt{2} \sum_{n \in Z} g_n \psi\left(2x - n\right) \tag{5}$$

where the relationship between the two coefficients is $g_n = (-1)^{1-n} \overline{h_{1-n}}, n \in Z$. The following equations hold:

$$\phi_{j,n}(x) = 2^{\frac{j}{2}} \phi\left(2^j x - n\right) \tag{6}$$

$$\psi_{j,n}(x) = 2^{\frac{j}{2}} \psi\left(2^j x - n\right) \tag{7}$$

$$\begin{cases} V_j = \overline{\left\{\phi_{j,n}(x); n \in Z\right\}} \\ W_j = \left\{\psi_{j,n}(x); n \in Z\right\} \\ L^2(R) = \underset{j \in Z}{\oplus} W_j = \overline{\left\{\psi_{j,n}(x); n \in Z\right\}} \end{cases} \tag{8}$$

Then, for any signal $f(x) \in L^2(R)$, we can obtain:

$$C_{j,k} = \int_R f(x)\overline{\phi_{j,k}(x)}dx \tag{9}$$

$$d_{j,k} = \int_R f(x)\overline{\psi_{j,k}(x)}dx \tag{10}$$

Equations 9 and 10 are the scale and wavelet coefficients of $f(x)$, respectively, where $k \in Z$. The orthogonal projections on the closed subspaces V_j and W_j of $f(x)$ are simultaneously denoted as $f_j(x)$ and $g_j(x)$. Thus:

$$f_j(x) = \sum_{k \in Z} C_{j,k}\phi_{j,k}(x) \tag{11}$$

$$g_j(x) = \sum_{k \in Z} d_{j,k}\psi_{j,k}(x) \tag{12}$$

From the spatial orthogonality and the decomposition relation $V_{i+1} = V_i \oplus W_i$, we can obtain:

$$f_{i+1}(x) = f_i(x) + g_i(x) \tag{13}$$

Therefore, the relationship between the scale transform coefficients of the signal and the wavelet transform coefficients can be written as:

$$\sum_{k \in Z} C_{j+1,k}\phi_{j+1,k}(x) = \sum_{k \in Z} C_{j,k}\phi_{j,k}(x) + \sum_{k \in Z} d_{j,k}\psi_{j,k}(x) \tag{14}$$

The Relationship Between Multimedia Feature Extraction and Folk Art Creation

The development of folk arts in contemporary society has become the most important problem facing the artistic and cultural circles in China. We should neither give up folk art forms nor try to replace the products of the great industrial age with folk art in violation of social laws. In order to make the works more national characteristics and the spirit of the times, it is very important to stand in the perspective of modern culture to make a deeper study of the tradition, to find the complementary point between the multimedia era and folk art. The multimedia era has brought the mass production of goods and simple replication, and the simple, dull cultural forms cannot meet the demand of the increasingly rich spiritual culture brought by the multimedia era with pragmatism. Color should not be just a kind of product form; it is supposed to represent a humanistic spirit aesthetically. With its rich form and humanistic spirit, folk art has become an effective supplement to the multimedia era, which guides the development of folk art with its sense of time and sociality. The complementarity of the two makes human culture eventually continue in a more sound and perfect direction.

As an important expression form and symbol of national culture, folk art is a cultural form of continuous inheritance and evolution, which embodies the power of national emotion. In today's digital background, with the development of the economy, how to link folk art and contemporary multimedia technology is a common task faced by modern designers. We are not only faced with the problem of how to protect and inherit folk art, but also the problem of how to develop and evolve. Only by maintaining the unique artistic characteristics of the nation can China's modern art design develop, innovate, and enhance the essence of folk art, so as to occupy its own place in the world of art. In the creation of modern folk art, only by combining the characteristics of traditional creation with modern technical rules can it lead the trend and truly integrate into the world.

China is a developed country with thousands of years of history. Folk art is also very old in history and has been accumulating in the process of development. The creation of folk art is also becoming more and more rich in our national culture, which has a deep influence on the development of our design field. Learning and understanding Chinese folk art can cultivate young students' national pride and their own national cultural identity and love. In order to show folk works more clearly in front of people, integrating data feature extraction technology is very necessary. Specifically, image enhancement is based on the application of people in daily life, to highlight the part of the image works that the experimenter needs or highlight the features of some detailed areas, so that the differences between different features are easier to recognize. At the same time, image enhancement can eliminate or suppress the parts that are not interesting, and the originally obscure folk art works can have good visual observability and expand the application scope of works. The image enhancement processing of folk art works with low illumination can make the folk art works brighter for human eyes to observe, and the details in the folk art works can be highlighted (Hong et al., 2022). The distribution of color information of works can be better guaranteed, so that people can get more valuable information from folk art images and provide more practical application value for later folk art research.

Folk art is the crystallization of the wisdom of our working people for several thousand years. Chinese folk art paper-cuts, New Year pictures, clay sculptures, etc., express people's spiritual sustenance of beautiful things. At the same time, folk art is an important part of folk culture, containing the world view, aesthetic, and unique national spirit of our folk culture. We can conclude from the preceding analysis that multimedia technology is closely related to the creation of folk art works. With the support of multimedia digital feature extraction technology, it can provide more research elements for folk art creation, and it is also a kind of inheritance and development for folk art. Figure 3 shows the application flow chart of multimedia data feature extraction technology in folk art creation.

DISCUSSION AND ANALYSIS OF RESULTS

We run the wavelet transform model adopted in this paper using a single Nvidia RTX 1650 GPU and an AMD EPYC 7402 CPU in the MATLAB 2018B programming environment and the Windows 10

Figure 3. The Application of Multimedia Technology in Folk Art Creation
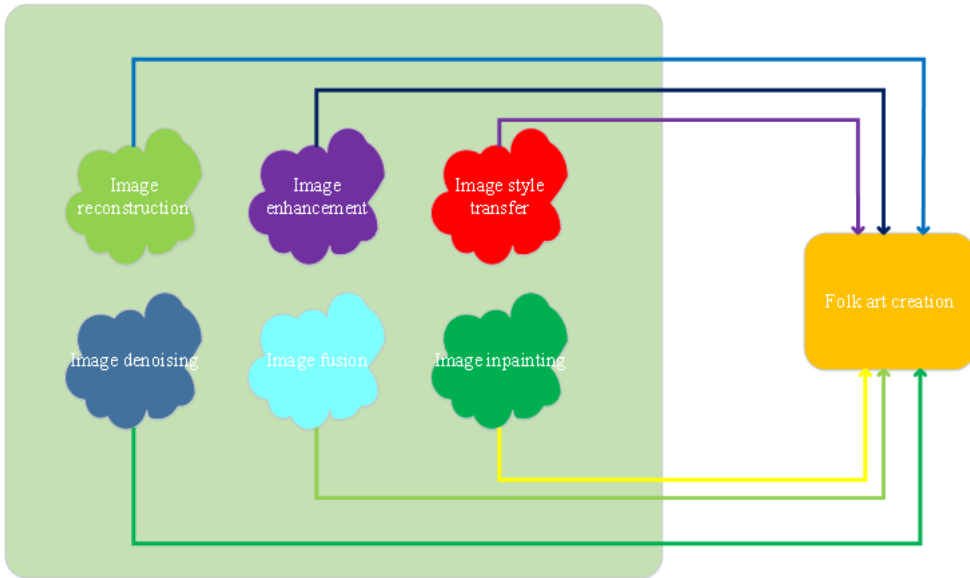
operating system environment. There is a close relationship between folk art and folk activities, both of which are characterized by the unity of practical value and aesthetic value. There are many kinds of folk art, and their purpose and use are different. If there are plastic arts for enjoyment, there are also practical handicrafts. Therefore, this paper selected five types of representative folk art works: lion dance, dragon boat, sculpture, embroidery, and paper cutting as the image enhancement effect display, and took the PSNR as the evaluation index.

The PSNR is a logarithmic measure of the mean square error between the original image and the new image with respect to $\left(2^n - 1\right)^2$ (Tanabe & Ishida, 2017). Before calculating PSNR, the calculation formula for mean square error is given as follows:

$$MSE = \frac{1}{MN} \sum_{i=0}^{M-1} \sum_{j=0}^{N-1} \left[I(i,j) - k(i,j)\right]^2 \tag{15}$$

where *i* and *j* represent two images of size m×*n*, PSNR can be obtained:

$$PSNR = 10 \log_{10} \left(\frac{MAX_i^2}{MSE} \right) \tag{16}$$

where *MAX* indicates the maximum pixel value of the color of the image. The larger the value of *PSNR*, the smaller the noise of the generated image.

A wavelet transform can break down a folk art piece into components of varying sizes, positions, and directions. The outline of the image is primarily reflected in the low-frequency part of the decomposed works, while the details are primarily reflected in the high-frequency part. Image enhancement can thus be achieved by selectively enlarging the components of interest and reducing

Figure 4. Schematic Diagram of the Image Enhancement Effect Comparison of the Lion Dance Category
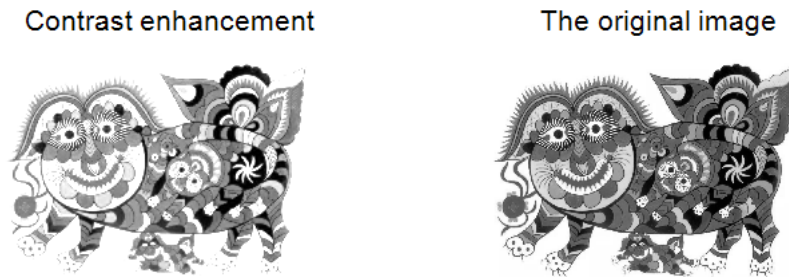
the unwanted components by enhancing the coefficients of the low-frequency part and weakening the coefficients of the high-frequency part. Figure 4 compares image enhancement effects in the lion dance category. The wavelet transform can well retain the original feature effect and make the work more readable.

The creation of folk art has various aesthetic functions. Folk art not only brings people the intuitive enjoyment of aesthetics and the pleasure of body and mind but also gives people spiritual satisfaction. Figure 5 compares image enhancement effects in the dragon boat category. The image after wavelet transform processing is not distorted greatly, and the overall image conforms to the aesthetic characteristics of the original work, which is conducive to the preservation and dissemination of the work.

Folk art creation has the function of emotional communication and strengthens the emotional resonance between people in the process of daily use. Figure 6 shows the comparison of image enhancement effects of sculpture categories. The works processed by wavelet transform retain most of the semantic information, which can well extract the features of the works and present high-quality works, which is conducive to expressing emotions.

The creation of folk art has the function of cognition and spreads the collective consciousness of people about nature, society, and life in the form of perceptual images. It is an important method of folk culture education. Figure 7 shows the comparison of image enhancement effects of embroidery categories. The experimental results show that the brightness of the work is enhanced overall, and the overall effect and features are more prominent, which has educational significance. At the same

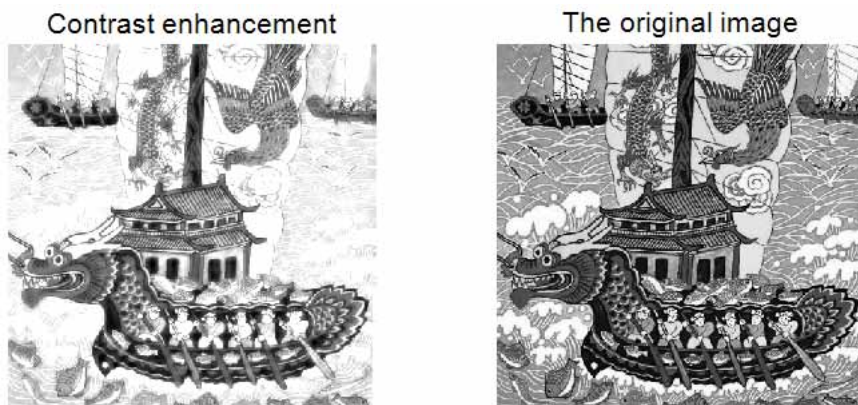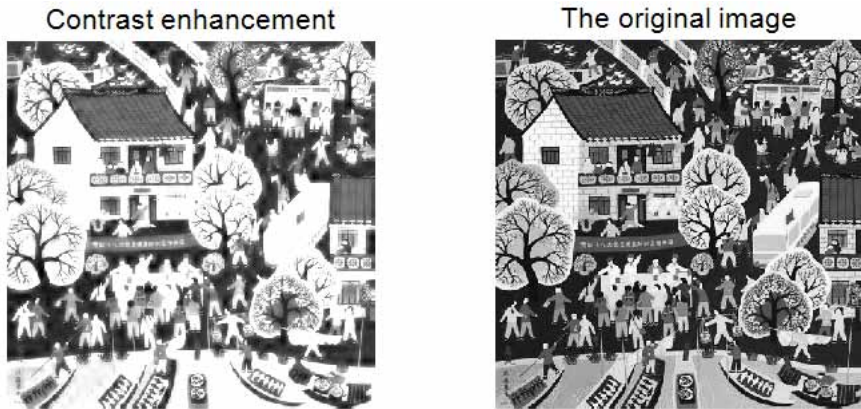**Figure 5. Comparison of Image Enhancement Effect of Dragon Boat Categories**

Figure 6. Schematic Diagram of Image Enhancement Effect Comparison of Sculpture Categories

time, it is presented in a clearer form in the eyes of the public, which is conducive to the dissemination and expression of folk culture education.

As an important representative of national traditional art, folk art creation has immeasurable enlightenment and reference value for the development of modern art. Figure 8 shows the contrast of the image enhancement effect of the paper-cut category, which enhances the dark part of the picture, makes the hierarchical sense of the work clearer, and gives people a better reference value.

Folk art is the product of the consciousness expression and aesthetic intuition of the laboring masses and is their own folk art practice. Folk art has creative freedom with ideas and early hazy emotional ways. Folk art has always maintained the basic quality of original Chinese art, with eternal art charm and aesthetic value, despite the fact that the majority of its creators are people at the bottom of the social ladder. The PSNR image evaluation index is used in this paper to analyze the generated images quantitatively. The evaluation value of the quantitative analysis is shown in Table 1.

Table 1 shows that the peak signal-to-noise ratio of the folk art works after data feature extraction is all higher than 30, which meets the requirements of data feature extraction. It further indicates that multimedia digital feature technology has a good application effect on folk art works, which is conducive to the inheritance and creation of folk art. At the same time, in order to avoid the present works from reflecting the characteristics of folk art, Innovation should be carried out on the basis of

Figure 7. Schematic Diagram of Image Enhancement Effect Comparison of Embroidery Categories
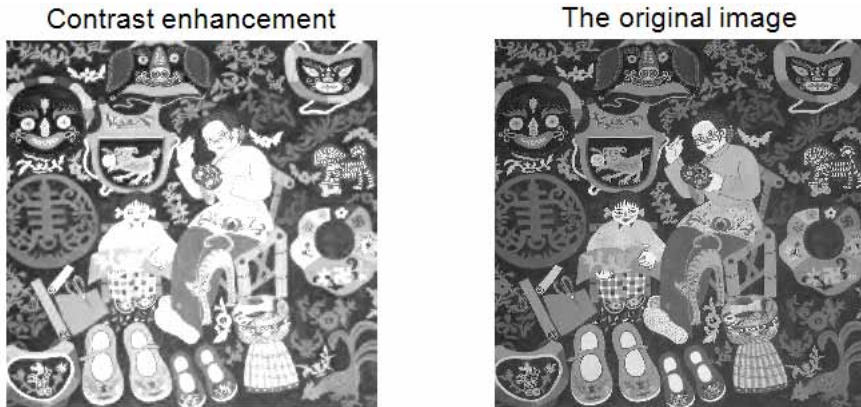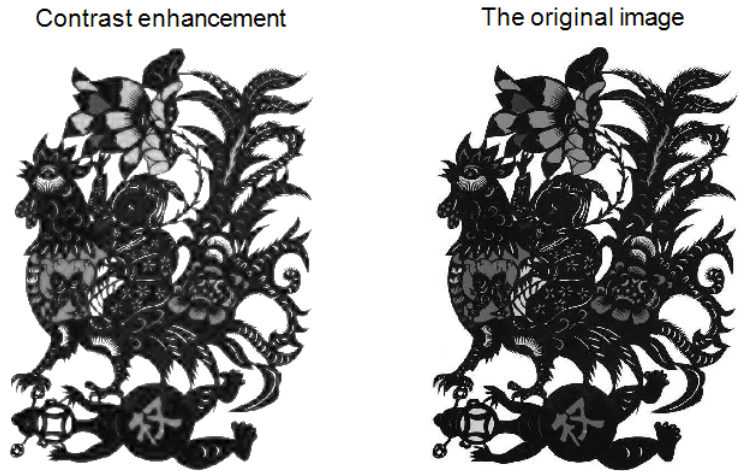
Figure 8. Schematic Diagram of the Image Enhancement Effect Comparison of the Paper-Cut Categories

Contrast enhancement　　　　The original image

its inherent ideas and factors. For example, the composition of colors, patterns, and lines cannot be changed, so it can also be called folk art. While multimedia data feature extraction technology can assist in folk art creation, following the development of The Times, reasonable use of modern technology is also a problem to consider. In short, our folk art is an important part of traditional culture, so, it must be preserved continuously and relevant personnel must study it carefully.

The integration of multimedia data feature extraction technology in the preservation and creation of folk art represents a significant advancement in the field, offering new avenues for enhancing the visual quality and accessibility of traditional art forms. This approach primarily focuses on improving the clarity and aesthetic appeal of folk art images through techniques such as wavelet transform, which decomposes images into various scales and resolutions. The goal is to ensure that these cultural treasures can be appreciated by contemporary audiences and preserved for future generations. To provide a comprehensive understanding, it is useful to compare this technology with another cutting-edge technology, virtual reality (VR), which has also been applied in the context of cultural heritage preservation and art creation.

By focusing on the visual aspects of folk art, multimedia data feature extraction technology significantly improves the resolution and overall aesthetic of traditional artworks, making them more appealing to modern viewers. Improved images can be easily shared and disseminated through digital platforms, increasing the reach of folk art to global audiences. This technology allows for the digital enhancement of folk art while preserving the original style and essence of the artwork, ensuring that cultural authenticity is maintained.

VR enables innovative ways to present and experience folk art, transcending traditional physical and spatial limitations. However, the development and deployment of VR experiences can be costly, and accessing VR technology requires specific hardware, which may limit its accessibility to wider audiences. Additionally, there is a risk that the technological aspect of VR might overshadow the art itself, diverting attention from the cultural and artistic value of folk art to the novelty of the VR experience.

Table 1. Quantitative Analysis of Folk Art After Image Enhancement

Evaluation index	Figure 4	Figure 5	Figure 6	Figure 7	Figure 8
PSNR	31.7	32.4	33.1	31.9	32.5

Therefore, feature extraction technology is more analytical and focused on understanding and processing existing data to create or enhance art, particularly folk art. In contrast, VR focuses on creating new, immersive environments and experiences. In summary, while both technologies offer significant advantages, feature extraction technology is particularly valuable for its ability to analyze, preserve, and innovate within multimedia data and folk art creation. It provides a bridge between traditional art forms and modern technology, ensuring that cultural heritage is not only preserved but also evolved.

CONCLUSION

Folk art is a unique art form in China, and its production and development are closely related to the level of social activities in China's specific historical stage. With the rapid development of society, folk art has been greatly influenced by Western art and modern Western culture, and many folk arts have gradually disappeared. By analyzing the existing problems of folk art creation, this paper combines the feature extraction technology of multimedia data into folk art creation. It provides a new way of thinking about folk art creation. In this paper, based on the wavelet transform method, folk art images are decomposed into different scales and different resolution images, to get clearer works, which is conducive to the creation and dissemination of folk art. With the PSNR as the evaluation standard, five classical folk art pictures were used to test the effect of image enhancement. The experimental results show that the peak signal-to-noise ratio of the folk art works after data feature extraction is higher than 30, which meets the requirements of data feature extraction. It further shows that multimedia digital feature technology has a good application effect on folk art works, which is conducive to the inheritance and creation of folk art.

In the future development of research, folk art research should combine historical and modern data technology and actively expand its research value and significance. Based on paying attention to its technology, function, and artistic aesthetic, it is further combined with production and life, folk customs, and multimedia digital technology for comprehensive thinking. To promote traditional folk art to realize a virtuous circle of production, education, and research; to explore a good method of folk art creation based on multimedia technology; and to continue to find a new way to realize the prosperity and development of the folk art industry, folk art creation, and folk art inheritance.

DATA AVAILABILITY

The figures and tables used to support the findings of this study are included in the article.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

FUNDING STATEMENT

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