Conservation and Inheritance of the Artistic Heritage of Music and Dance in the Western Regions

Jing Gu, Yijuan Pan*, Rui Chu

College of Electronic Engineering, Xi'an University of Posts and Telecommunications, Chang'an, Xi'an, 710100, China

guj@xupt.edu.cn(J.G.) 2202210144@stu.xupt.edu.cn (Y.P.) churui@xupt.edu.cn(R.C.)

Abstract. Against the background of globalization and the rapid development of digital technology, the protection of cultural heritage has become an increasingly global issue. As an important intangible cultural heritage, the music and dance arts along the Silk Road contain profound historical and cultural values. However, as traditional culture is facing the crisis of disappearance, how to effectively protect and pass on these art forms has become an urgent problem to be solved. This paper explores the "Belt and Road" route and constructs the "Silk Road Music and Dance Image Database", which selectively and systematically organizes and preserves the unearthed music and dance images and related archaeological data in Xi'an and its surrounding areas. Through digitization, multimedia technology and big data platform, these cultural heritages are collected, preserved and displayed to provide innovative ideas and methods for the protection of cultural heritage in the future. The research results of this paper support the existing research on music and dance culture, and lay the foundation for teaching the visualization of cultural heritage preservation and dissemination in the future.

Keywords: Silk Road；Music and Dance Arts; Cultural Heritage

1   INTRODUCTION

Against the background of globalization and the rapid development of digital technology, the protection of cultural heritage is gradually becoming a global issue, and culture is not only an important manifestation of a country's soft power, but it is also one of the core elements in international strategic competition. With the deepening of globalization, cross-border cultural exchanges and cooperation have become more and more frequent, and the protection, dissemination and inheritance of cultural heritage have become the basis and link of these exchanges and cooperation. In recent years, with the introduction of the Belt and Road Initiative [1], China has been actively promoting the protection and transmission of cultural heritage through the promotion

of all-round cooperation with countries along the route in the economic, cultural, social and other fields. This not only helps to promote economic development, but also makes positive contributions to global cultural diversity and the continuation of human civilization.

In the past, traditional means of cultural heritage protection mainly relied on physical records and documentation, however, these methods are not adequate for intangible cultural heritage, such as the art of music and dance. With the wide application of emerging technologies such as artificial intelligence, big data, and virtual reality, the digital preservation, dissemination, and presentation of cultural heritage has been greatly improved and expanded. This not only makes the preservation of cultural heritage more efficient and convenient, but also provides technical support for its dissemination and reproduction on a global scale.

In this context, this paper aims to explore how to preserve and transmit these precious cultural heritages through modern technological means.   Taking Xi'an, the starting point of the Silk Road [2], as an example, this study focuses on the rich cultural heritage of music and dance in Xi'an, and systematically collects, preserves, and displays this cultural heritage through digitization, multimedia technology, and a big data platform, with the aim of providing innovative ideas and methods for the future protection of cultural heritage.

2   RELATED WORK

2.1   Digital Cultural Heritage Protection and Multimedia Database

In recent years, with the development of digital technology, the digital preservation of cultural heritage has gradually become a popular direction of global research. Especially in the digital preservation of intangible cultural heritage, such as music and dance, there are many international cases that are worth learning from. For example, the 3D-ICONS project [3] in Europe aims to digitally preserve Europe's tangible cultural heritage through 3D scanning and modeling technology, which achieves accurate recording and preservation of cultural heritage through technical means and provides high-resolution 3D data; in addition, the Europeana platform [4] brings together a large number of historical documents, pictures, audio and video materials. In addition, the Europeana platform brings together a large number of historical documents, pictures, audio and video materials, providing a multimedia cultural heritage resource base, providing a broad international platform for the display and dissemination of cultural heritage, and enriching the resources for cultural research.

In China, the State Administration of Cultural Heritage (SACH) and the Cultural Heritage Digitization Project (CHDP) have carried out a large number of digital preservations of cultural relics and intangible cultural heritage, such as documenting important sites and artifacts through high-definition imagery and 3D modeling technologies. However, most of these projects focus on the digital preservation of tangible cultural heritage, leading to gaps in the research and preservation of intangible

cultural heritage represented by music and dance, especially along the Silk Road, especially the lack of systematic image databases.

Most of these datasets focus on tangible cultural heritage, while digitization of intangible cultural heritage, especially performing arts such as dance and music, is not yet complete.

2.2   Research on Art and Culture Related to Music and Dance

With regard to the academic research on the music and dance culture of the Silk Road, scholars at home and abroad have made a lot of important achievements. For example, Li L [5] and other scholars have conducted systematic research on murals, sculptures and musical instruments along the Silk Road, revealing the phenomenon of the fusion of Chinese and Western cultures along the Silk Road as revealed by these material remains. Zhou C [6] and other scholars have demonstrated the inheritance and evolution of ancient music and dance culture through the study of dance images in the murals of the Mogao Caves in Dunhuang. From an archaeological perspective, Li X [7] reveal the influence of Western culture on the art of music and dance in the Central Plains, providing a cross-cultural perspective on the study of music and dance art. The in-depth study of Dunhuang murals provides rich information and visual clues to ancient music and dance culture.

These studies have provided us with valuable background knowledge and archaeological information on the culture of music and dance, but they mainly rely on isolated studies of documents and images, and lack the integration of multiple data sources. In addition, individual regions such as Dunhuang have been studied in greater depth, while other Silk Road cities, such as Xi'an, have not been fully explored regarding their music and dance culture. These studies are fragmented, with scattered data, and lack the support of a systematic and comprehensive database.

2.3   Cross-cultural Research and Database on Music and Dance

In terms of cross-cult that aims to preserve traditional music and dance forms from around the worldural research on music and dance, there have been a number of international projects that have explored the integration and innovation of music and dance art in different cultural contexts. For example, 'The Global Jukebox' project [8] is a digital platform that aims to preserve traditional music and dance forms from various cultures, covering traditional cultural expressions from all regions. The project not only showcases the diversity of music and dance across countries, but also provides researchers with a database tool for cross-cultural comparisons. However, the limitation of projects such as 'The Global Jukebox' is that, while it covers traditional arts on a global scale, there is relatively little research dedicated to the music and dance cultures along the Silk Road. In addition, while the platform focuses on categorizing and comparing music, it's analysis of dance images and cultural contexts is relatively weak. The project's categorization of music and dance is relatively general, making it difficult to deeply explore the uniqueness and historical evolution of music and dance art in each region.

3   DATASETS

This study constructs a database of archaeological and documentary comparisons of music and dance images of Western features, aiming to systematically organize and preserve music and dance images and related archaeological data excavated in Xi'an, focusing on the Silk Road music and dance cultures of the Northern, Sui, and Tang dynasties. The dataset demonstrates the diversity of music and dance art through artifacts, images, and archaeological discoveries, but also records the exchange and fusion of Chinese and Western cultures in the context of the Silk Road. The following is a detailed description of the dataset.

3.1   Sources of Datasets

The main sources of the dataset include:

Archaeological Discoveries: It includes artifacts featuring images of music and dance unearthed in Xi'an and its surrounding areas, covering tomb murals, terracotta figurines, stone carvings, musical instruments, and so on.

Literature: Includes accounts of music and dance activities in ancient texts and historical records, providing background information and cultural context.

Digital resources: High-definition images and 3D models based on museum collections and archaeological documents provide rich visual materials for constructing the database.

The dataset covers a large number of archaeological images and related documents, which are mainly divided into the following categories:

Music and Dance Images: It contains music and dance images extracted from tomb murals, stone carvings, and terracotta figurines, which are categorized based on the source and historical context of the images. For example, the dance images unearthed during the Northern Wei Dynasty have a rough and vivid expression, while the music and dance images from the Tang Dynasty are more delicate and gorgeous.

Musical Instrument Data: Unearthed musical instruments have been classified and digitized to highlight the exchange and fusion of Chinese and Western musical instruments. For example, pipa, konghou, and transverse flute are representative of the cultural exchange between the Central Plains and the Western Regions.

Dancers' costumes and dance styles: Based on the analysis of archaeological documents and images, the dancers' costumes and dance movements are categorized into different types to reflect the diversity and characteristics of cultural fusion in music and dance art.

Each data entry contains: Artifact type, Place of excavation, Historical period, Types of musical instruments, Dancers' Posture and Costume and Images.

3.2   Data Examples

The Tang Dynasty was the peak period of cultural exchanges on the Silk Road, and the art of music and dance was greatly developed and prospered during this period, which can be explored in depth from the following aspects:

(1) types of music and dance: court music and dance, primarily documented in royal celebrations and banquets, common "feast music" and "court dance", the dancers usually wear elaborate costumes and perform elegant dances. Folk dances, such as the "Anxi Dance" and the "Hu Xuan Dance", which reflect the fusion of multi-ethnic cultures and lively dances, were often used in festivals and folk celebrations.

(2) Classification of musical instruments: The Tang Dynasty saw an extensive variety of musical instruments, such as the sheng, the pipa, the erhu, and the drum, and the styles of musical instruments and the craftsmanship of the instruments reached a peak during this period, reflecting the interaction with Western instruments. Cultural exchanges with Central Asia, India and the Arabian region became increasingly frequent during the Tang Dynasty, and foreign elements were absorbed into the form and content of music and dance, resulting in diverse artistic styles.

(3) Influence of cultural exchange: Studying the evolution of music and dance in the Tang Dynasty can reveal the important role of the Silk Road in promoting cultural exchange, and how this exchange subsequently influenced the culture of the Central Plains.

Through this categorization, the richness and diversity of Tang Dynasty music and dance can be more comprehensively understood, revealing its important position in the cultural heritage of the Silk Road, helping to better understand the uniqueness and importance of Tang Dynasty music and dance, and providing an important research basis for cultural interaction during the Silk Road period. Detailed data is presented in Table 1.

Table 1. The Archaeology of Music and Dance from the Silk Road to Western China in the Tang Dynasty

	Tomb Name	Tomb of Li Jiao	Tang Bishi Shinan Tomb
Cultural Relics Information	Historical Period	Tang Dynasty, 669 AD	Tang Dynasty, 739 AD
	Excavation Site	Central Area of the Zhao Ling Tomb, Liyuan County	East of Zayuan Village, Xi'an
	Date of Discovery	1971	July 1983
	Current Location	Zhao Ling Museum	Shaanxi History Museum
Music and Dance Image Information	Location of Music and Dance	North Wall of the Tomb Chamber	Musicians and Singers Figurines
	Dancer	2	1
	Musician	3	5
	Dance Posture		

	Costume	Two dancers face each other as they perform, with their hair styled in double-looped "Wangxian" buns. They wear wide-sleeved crimson tops, cinched at the waist, paired with striped long skirts, moving gracefully and lightly. The musicians have their hair in high buns, dressed in wide-sleeved red tops and long skirts featuring a black-and-white striped pattern	The accompanying figurines hold various musical instruments and sit cross-legged on the ground, while the singing figurines are seated on their knees. All the terracotta figures wear powder-white narrow-sleeved round-collared long robes and black caps. Among the accompanying figurines, the drummers and singers have prominent noses, deep-set eyes, and beards, representing a typical foreign visage
	Musical Instrument	Pan flute and Transverse flute	Sheng, Dizi, Drum, Yao and Pipa

The Tang Dynasty was the pinnacle of cultural exchanges along the Silk Road, and the art of music and dance experienced remarkable development and prosperity during this period. The diversity of court music and folk dances not only showcased the splendor of royal celebrations but also reflected the fusion of multiple ethnic cultures. The ceramic figurines unearthed from the tomb of Li Jiao in Li Quan County and the tomb of Bilu Shikan in the western suburbs provide us with rich pictorial information on music and dance, revealing the costumes, postures and musical instruments used by musicians and dancers at that time. These archaeological discoveries not only highlight the richness and diversity of the art of music and dance, but also demonstrate the close interaction between Tang music and dance and the cultures of the Western regions, further illustrating the important role of the Silk Road in promoting cultural exchange.

4   CONCLUSION

Through the systematic analysis of Silk Road music and dance culture, this study emphasizes the vital role of music and dance in cultural exchanges, and constructs the "Silk Road Music and Dance Image Database", which offers new support for the preservation and transmission of music and dance culture. Through the combination of archaeological data and music and dance images, we can not only have a deeper understanding of the cultural background of this period, but also lay a solid foundation for the future development of music and dance art.

Looking ahead, based on this dataset, a visualization teaching platform can be further built. By combining multimedia technology to demonstrate the richness of Silk Road music and dance culture in an interactive and intuitive way, we can help users and

scholars better understand and experience this intangible cultural heritage, stimulate more people's interest in the art of music and dance, and promote its inheritance and preservation, as well as contributing to the safeguarding of global cultural diversity.

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