

The Evolution of Musical Instruments in Yungang Grottoes from the Perspective of National Cultural Integration

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Abstract

Yungang Grottoes have rich types and quantities of musical instrument images. Among them, there are not only traditional musical instruments from the Central Plains, but also musical instruments from ethnic minorities from the Western Regions, the North and the East. The images of musical instruments in the grottoes are a display of the diversity of music culture at that time and a profound reflection of the integration of national cultures. At the same time, the process of ethnic integration also affects the distribution of musical instruments in the grottoes. With the intensification of ethnic cultural integration, musical instruments from the Western Regions gradually entered the Central Plains and became rapidly popular, and the music culture presented diversified music forms. Historically, the integration of national cultures has enriched the types of musical instruments, promoted the prosperity of music culture, and has a positive reference value for the development of today's musical instruments.

Keywords

Yungang Grottoes, Musical Instruments, National Culture

1. Introduction

In Chinese history, with the intensification of the integration of national cultures, musical instruments from the Western regions gradually entered the Central Plains, and the music culture showed diverse musical forms. The fusion of national cultures has enriched the variety of musical instruments and promoted the prosperity of music culture in history, which has great positive significance

for the development of musical instruments today.

Wei, Jin, Southern and Northern Dynasties were a period when ethnic minorities were most active and national regimes changed most frequently. During this period, various ethnic groups conflicted with each other and blended with each other. Among them, the most prominent one is the Northern Wei Dynasty. In order to consolidate the political power, the rulers were inclusive and absorbed the economic, social and cultural resources of all ethnic groups, leaving many precious cultural heritages in the Buddhization of the country and the Sinicization of the nation. The Yungang Grottoes are a shining pearl in the cultural heritage of the Northern Wei Dynasty. While showing the world the carving skills of Buddhist figures, it also preserved a large number of stone carvings of musical instruments. This article focuses on organizing and analyzing the images of musical instruments in the Yungang Grottoes, and discovers the evolution of the images of musical instruments in the Grottoes in different periods and the influence of the integration of national cultures behind them.

2. The Evolution of Musical Instruments in Yungang Grottoes in Different Periods

Archaeologist Mr. Su Bai divided the history of Yungang Grottoes into three periods: early period, 460-465 AD; middle period, 470-494 AD; late period, 494-524 AD. This article's analysis of the evolution of musical instruments in Yungang Grottoes also follows this theory. Among the 45 existing major caves in Yungang, 24 caves are engraved with images of musical instruments. There are 28 identifiable musical instruments, 76 combinations of musical instruments, and more than 530 images of musical instruments (Wu, 2020). They appear in the grottoes of different periods, and appear more frequently in each period. There are more than 15 musical instruments in total, including transverse flute, bili, Yixi flute, panpipe, pipa, and thick-waisted drum, thin waist drum, Qi drum, Faluo, vertical konghou, Qin, etc.

16 - 20, known as the Tanyao Five Caves. Among them, the grottoes with images of musicians are carved in Cave 16 and 17 respectively. The musical instruments that can be clearly distinguished in these two caves are panpipes. Faluo, Yixi flute, bili, pipa, vertical harp, thin-waisted drum, Dutan drum, Qi drum, and bronze cymbals. Among these musical instruments, except for the panpipe, a traditional instrument of the Han nationality, the flute and the drum of Xiliang, the rest are instruments used in Buddhist music, Tianzhu music and Qiuci music (Wu, 2017). During this period, because the rulers of the Northern Wei Dynasty needed to seek a culture more suitable for their own rule at the spiritual level to compete with the Han Confucian culture, they chose Buddhism as a means to maintain their rule and used the appeal of Buddhist music to promote doctrines, promote Buddhism, educate the people, and guide the people to surrender to the rule of the Northern Wei Dynasty. Therefore, the musical instruments in the caves include obvious Buddhist instruments such as conchs and

copper cymbals, as well as musical instruments from Tianzhu, the birthplace of Buddhism, and Qiuci, which is deeply influenced by Buddhism.

The Middle Yungang Grottoes are the heyday of Yungang Grottoes carving, mainly including Cave 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13 and the unfinished Cave 3. This period was the most stable period of the Northern Wei Dynasty and the most prosperous period of economic and social development. In the middle period, except for Cave 3, the other 11 caves were all carved with images of musical instruments. The number and types of musical instruments in the Yungang Grottoes in the middle period have greatly developed compared with the early period. In addition to the traditional Han musical instruments panpipe, qin, sheng, ruanxian, and flute, there are also musical instruments of Tianzhu music, Qiuci music, and Xiliang music. Zhen, transverse flute, conch, pipa, five strings, vertical harp, thin-waisted drum, thick-waisted drum, Dutan drum, Maoyuan drum, chicken drum, two-stick drum, tambourine, bronze cymbal, bell, two-headed flute, Yixi flute, Qi drum, eaves drum, as well as the blowing leaves, Hujia, horns, etc. of the northwest ethnic minorities. There are 27 types of musical instruments carved in the Yungang Middle Period Grottoes, and about 409 musical instrument images can be identified. Among them, there are 22 types and 331 types of ethnic musical instruments from the Western Regions, accounting for about 81% of the total number of musical instruments (Wu, 2017). It can be seen that musical instruments of various ethnic groups appeared in large numbers in the middle Yungang period, and musical instruments from the Western Regions were the mainstream at this stage. This also reflected the rulers' acceptance and tolerance of the cultures of various ethnic groups from the side, and also the musical characteristics of this phase of society where multi-ethnic musical forms coexisted.

The late Yungang Grottoes were mainly built after the Northern Wei Dynasty moved the capital to Luoyang. The caves are distributed in Cave 4 in the east, Cave 14 and 15 in the west, and Cave 21 - 45 in the west of Cave 20. Due to the relocation of the capital, the political and cultural center also shifted. The number and types of musical instruments in the grottoes during this period decreased compared with the middle period. There are about 90 identifiable musical instrument images and 16 types of musical instruments (Wu, 2017). The types of musical instruments from the Western Regions in the caves in the late period have decreased, especially the Dutan drum, Qi drum, Maoyuan drum, and Jilou drum among the percussion instruments. However, the proportion of Han instruments has increased, indicating that Han traditional music has all social strata in the Northern Wei Dynasty were tolerated and accepted, and musical elements of various ethnic groups were integrated into folk secular life.

By analyzing the images of musical instruments from the early, middle and late phases of Yungang Grottoes, the following conclusions can be drawn: First, the ruling ideology of the ruling class affects the evolution of musical instruments. The early music in the grottoes had the characteristics of serving the rul-

ing class. The musical instruments were influenced by the ruling class's belief in Buddhism, and musical instruments related to Buddhism began to appear. In the middle and late period, the ruling class actively implemented the sinicization reform policy, and the more inclusive political ideas and social environment absorbed all kinds of music. The national music art influenced the development of musical instruments in the middle and later periods.

Second, the musical needs and musical aesthetics of the public affect the evolution of musical instruments. The formation of all musical instruments was not brought out of thin air by human beings, but evolved from various production tools in the process of people's production and life. The Northern Wei Dynasty was an ethnic minority regime established by the Xianbei people. The mainstream music needs and aesthetics of the public are naturally different from those in the Central Plains. As a nation that originated from a nomadic civilization, the Xianbei are more receptive to the fast-paced, unrestrained and heroic music of the Western Regions. This is the main reason for the increase in the types of orchestral instruments and musical instruments of ethnic minorities in the Western Regions during the Middle Grotto period.

Third, the level of social productivity and handicraft manufacturing affects the evolution of musical instruments. The cultural integration of various ethnic groups not only brings changes in ideas and exchanges of art, but also leads to the improvement of productivity and production technology. During the Northern Wei Dynasty, the iron smelting industry, textile industry and porcelain making industry all experienced greater development than before. In science and technology, people had a deeper understanding of the resonance phenomenon and discovered new ways to offset the resonance. It was also used as a percussion music instrument. The copper cymbals are widely used, and the problem of pipe mouth correction in music theory has also been well solved.

3. The Impact of National Cultural Integration on the Development of Music in Later Generations

The Wei, Jin, Southern and Northern Dynasties were one of the periods in China's history when most ethnic regimes were established. Objectively speaking, the establishment of various ethnic regimes promoted the integration between the Han nationality and ethnic minorities. During the period when various ethnic regimes were confronting each other, on the one hand, the various ethnic regimes waged wars and experienced passive integration, and on the other hand, private commercial and economic exchanges accelerated active integration, which ultimately accelerated the flow of people of various ethnic groups and promoted the material and cultural exchanges. The blending of cultures of various ethnic groups not only affected the economic development and social life at that time, but also profoundly affected the music culture at that time. The different national characteristics, music styles, and musical instrument shapes of various ethnic groups collided with each other, forming the unique music of the

Northern Wei Dynasty, laid a solid foundation for the peak development of music in the Sui and Tang Dynasties, and influenced the subsequent development of music.

Chinese Dynastic Order

Xia Dynasty: 2070 BC - 1600 BC (disputed)
 Shang Dynasty: 1600 BC - 1046 BC (disputed)
 Zhou Dynasty: 1046 BC - 256 BC (disputed)
 Qin Dynasty: 221 BC - 207 BC (disputed)
 Chu and Han Dynasties: 206 B.C.-202 B.C.
 Western Han Dynasty: 202 B.C. - 8 A.D.
 Xin Chao: 9 - 23 A.D.
 Xuanhan: 23-25 A.D.
 Eastern Han: 25-220 A.D.
 Three Kingdoms: 220-280 A.D. Wei, Shu, and Wu were the three leaders
 Jin Dynasty: 265-420 AD, divided into Western Jin (265-316), Eastern Jin (317-420)
 Northern and Southern Dynasties: 420-589 AD
 Sui Dynasty: 581 AD-618 AD
 Tang Dynasty: 618-907 AD
 The Five Dynasties: 907-960 AD, Later Liang, Later Tang, Later Jin, Later Han, Later Zhou
 Ten Kingdoms: 891-979 A.D.
 Song Dynasty: 960-1279 A.D., divided into Northern Song Dynasty (960-1127 A.D.) and Southern Song Dynasty (1127-1279 A.D.)
 Yuan Dynasty: 1271-1368 AD
 Ming Dynasty: 1368-1644 AD
 Qing Dynasty: 1616-1911
 Republic of China: 1912-1949
 the People's Republic of China: 1949-

The fusion of national cultures led to the introduction of a large number of Hu music instruments represented by Qiuci music and Xiliang music into the Central Plains and their rapid popularity, which had a significant impact on the formulation of the “Nine Music Music” in the Sui Dynasty and the “Ten Music Music” in the Tang Dynasty. In 383 AD, Lu Guang went to the Western Regions to conquer Kucha and other small countries in the Western Regions. Kucha music was then brought to the Central Plains, and the music culture of the Kucha nation gradually spread and spread throughout the Central Plains. Volume 15 of “Book of Sui”, “Music Part Two” records: “Qiuci” originated from Lu Guang’s destruction of Qiuci because of its sound. After the death of the Lu family, its music was scattered, and later Wei pinged the Central Plains and regained it (Wei et al., 2004). In 439 AD, Northern Liang was wiped out by Emperor Taiwu of the Northern Wei Dynasty, and Xiliang music was introduced to Pingcheng. “Xiliang” began at the end of the Fu clan, when Lu Guang, Juqu Mengxun and others took over Liangzhou and changed it to Qiuci Sheng, which was named “Qin and Han Dynasties”. When Taiwu of the Wei Dynasty leveled Hexi, he obtained it and called it “Xiliang Music” (Wei et al., 1973). Emperor Wu of the

Northern Zhou Dynasty obtained music from Kangguo, Goryeo, and Baekje. The music of ethnic minorities from the west, north, and east all entered Pingcheng, and music exchanges became more and more frequent. The in-depth exchange and integration of the music of ethnic minorities in Xianbei, Qiuci, Shule, Xiliang, Gaochang, Tianzhu, and Kang with the music of the Han people in the Central Plains created the prosperity of music in the Sui and Tang Dynasties.

According to “Book of Sui-Music Records”, the musical instruments of Qiuci music among the nine music groups of Sui Dynasty are composed of: bili, sheng, xiao, flute, shell, vertical harp, pipa, five strings, waist drum, Mao Yuan drum, There are 15 kinds of Dutan drums, Jie drums, Tara drums, chicken drums, and bronze cymbals. The instruments used in Jiubu music basically appear in the Yungang Grottoes musical instrument images. The typical impact of the fusion of national cultures on the music of the Sui and Tang Dynasties is reflected in the decline of Yale and the rise of Yanle. Yanle includes and involves a variety of music forms such as vocal music, instrumental music, dance, and various operas. The musical instruments used in its creation are also deeply influenced by the music culture of the Western Regions. The pipa, harp, and bili are all the main musical instruments of Yanle. Yanyue represents the highest level of court music culture in the Sui and Tang Dynasties and has strong cultural characteristics of the Western Regions.

The Song Dynasty inherited the system of the Tang Dynasty, and although Yan music was preserved, due to the development of urban trade and economic order and the increase in the integration of cultural and folk exchanges, the musical instruments of the Song Dynasty inherited most of the musical instruments of the Sui and Tang Dynasties, especially the musical instruments of the Western Regions, and not only were they not eliminated, and it has also been improved according to its own national characteristics to make it more localized. On the other hand, traditional Chinese musical instruments are also widely spread among the people and have been better promoted. With the continuous expansion of territory in the Yuan Dynasty, a large number of external musical instruments were absorbed, such as Huobisi, seventy-two-string pipa, Jianzi, etc., making the combination of musical instruments more diverse. With the rise of “Yuan Zaju”, it adapted to for this form of artistic accompaniment, musical instruments with strong rhythm such as pipa, gongs, and drums became popular. With the further development of dramatic art in the Ming and Qing Dynasties, accompaniment instruments also further developed in terms of accompaniment skills, among which the development of stringed instruments was particularly prominent. In modern times, due to external aggressive wars, China’s social life has been severely damaged, and the development of musical instruments has also been hit hard. Western musical instruments have entered China in large numbers and have begun to compete with Chinese traditional musical instruments for audiences. Due to the long-term influence of Western music culture,

for a long period of time, the status of Western musical instruments among the people is much higher than that of traditional ethnic musical instruments. Under the current background of the gradual penetration of Western cultural ideologies, we urgently need excellent traditional culture to nourish and enhance the people's aesthetics and taste. In fact, China's traditional national musical instruments are not only a tool for expressing music, but also an integral part of China's digital culture. The inheritance of thousands of years of cultural heritage is the representative of the excellent traditional culture of the Chinese nation. We can learn from the evolution and development path of musical instruments in the context of historical integration of national cultures to explore the development of contemporary musical instruments and provide ideas for the development of contemporary musical instruments.

4. The Value of National Cultural Integration to the Development of Contemporary Musical Instruments

After 70 years since the founding of the People's Republic of China, China's traditional musical instruments have developed rapidly. However, due to the long-term influence of modern Western music culture, both the people's musical aesthetic taste and the market share of musical instruments have been greatly impacted by Western instruments. Some traditional musical instruments have even been Westernization reforms, such as structurally transforming traditional Chinese musical instruments in order to reduce noise in playing Western musical instruments, adding a violin-like fingerboard to the erhu, and using other materials to replace the python skin on the erhu barrel. Due to this Westernization reform, the Huqin lost its flexibility and elasticity, causing the sound quality to become sharp and harsh, and its service life was greatly shortened compared with the traditional Huqin (Han, 2021). In addition, according to data from the China Musical Instrument Association in 2019, the main business income of Chinese musical instruments was 41.278 billion yuan, of which the operating income of Chinese traditional musical instruments was 5.748 billion yuan, accounting for 13.93% of the total operating income. The operating income of Western musical instruments was 22.902 billion yuan, accounting for 55.49% of the total operating income; there is a large gap between the market share of traditional musical instruments and Western musical instruments.

In the report of the 19th National Congress of the Communist Party of China, it was clearly stated that we must strengthen cultural self-confidence and promote the prosperity of socialist culture. Without a high degree of cultural self-confidence and cultural prosperity, there will be no great rejuvenation of the Chinese nation. As the carrier of music culture, as a tool for inheriting the national spirit and ideological connotation, and as a representative of excellent traditional culture, traditional national musical instruments should play a more important role in strengthening cultural confidence. Today, when multiple cultures coexist, only cultural confidence can stabilize Chinese national culture in

the impact and collision of different cultures and maintain cultural continuity. Specific to the development of traditional national musical instruments, it is necessary to continuously reform and innovate on the basis of inheritance and promotion, thereby enhancing cultural consciousness and inheriting excellent music culture.

First, the development of traditional national musical instruments must retain the national cultural background and continue the national style. Integration does not mean abandonment, and innovation does not mean complete change. China has been a multi-ethnic country since ancient times. The vast space has given each ethnic group its own unique cultural heritage. National musical instruments have been formed and developed along with the birth and development of the nation. It precipitates the personality and temperament of the nation and condenses the nation. Emotions of phonology and music aesthetics, and expressing the nation's personality, temperament and psychological world in the form of music and art, with distinctive national characteristics and styles. The production of musical instruments is also affected by the region. The natural ecology, geographical environment and economic lifestyle of the region play a role in the shape, material and timbre of the musical instrument. For example, among the Mongolian nomadic people in the north, the matouqur is a unique national musical instrument. The horsehide and sheepskin of its resonance box are easy to obtain for the early steppe nomads. Moreover, the sound range of the matouqur is wide, and it can play high and exciting tunes as well as gentle ones. The melodious melody can also simulate the cry of a majestic war horse. Many characteristics make the morinouqur an instrument with the characteristics of Chinese grasslands and the charm of ethnic minorities. For musical instruments with distinctive national cultural characteristics, they must retain their true character and maintain the nationality and recognition of the culture.

Second, the development of traditional national musical instruments must absorb excellent external culture and carry out exchanges and integration. With the rapid development of China's economy and the formation of economic globalization, the dissemination of culture, art and other information has led to increasingly close exchanges between Chinese and Western music. If you remain stubborn, you will be gradually eliminated and assimilated. Only by accepting the stimulation of foreign music culture and forms can you innovate. Through understanding and understanding of foreign music, discovering commonalities and differences can stimulate innovative ideas and development paths for musical instruments. For example, Liu Tianhua, a master of modern Chinese national music, discovered during his performance that the differences in the string thickness, bow length and production materials of the traditional musical instrument Erhu would lead to a narrow range and poor sound effects of the Erhu. He drew on the violin's playing experience and production materials. The erhu, a traditional musical instrument, has been improved by raising the position of the erhu's handle, thereby expanding the erhu's range and greatly enhancing its performance. At the same time, the material of the erhu body has been opti-

mized with reference to the material of the violin, and high-quality production has been selected. The material makes the sound of the erhu louder and the acoustic effect better. Different regions and ethnic minorities in the country have produced musical instruments with local and ethnic characteristics in the process of development, such as the kouxian used by young Yi men and women in Liangshan Prefecture to talk about love, the Lusheng used by the Miao people to ask for directions and chat, The cucurbit flutes used by Dai traders and buyers to bargain are all gradually formed and developed in a certain region, and contain the historical and cultural connotations of the region. However, these musical instruments are limited by materials and craftsmanship and have not been popularized and mass-produced. On the basis of maintaining national characteristics and original performance characteristics, national musical instruments can use new materials and new craftsmanship to incorporate traditional and modern musical instrument elements to enhance their performance. The original production technology is improved to adapt to the current music aesthetics.

Third, the development of traditional national musical instruments must integrate modern music and innovate music forms. The integration of traditional national musical instruments and modern music forms can expand the scope of music listeners and make more people aware of national musical instruments. The rich and colorful musical connotations and expression techniques of national musical instruments can also supplement the shortcomings of traditional modern music forms and make modern music more popular. The creative form is more comprehensive and the musical connotation is more substantial. With the rapid development of music culture, rich and diverse musical forms such as stage plays, musicals and concertos have provided development space for traditional national musical instruments. There are even attempts to cooperate with ethnic musical instruments and orchestras to give full play to the role of ethnic instruments and orchestras and give new vitality to ethnic instruments. For example, the erhu concerto “Unyielding Su Wu”, the pipa concerto “Mulan”, the suona concerto “Tianle”, etc. are all vivid practices of the integration of traditional national instruments and modern music. Through this integration, traditional music is promoted to continue to innovate and break through, demonstrating the charm of traditional ethnic musical instruments (Jiang, 2020).

5. Conclusion

Music is an expression of art, and musical instruments are the carrier of music. In the context of the integration of national cultures, the evolution of musical instruments in the Yungang Grottoes in different periods is not only a true epitome of the social productivity and social development level at that time, but also a display of the blending of various ethnic groups and the collision of Eastern and Western cultures in social spiritual life. It fully reflected the people’s pursuit and aesthetic appreciation of music art at that time, and also profoundly influenced the development of music in the Sui, Tang and later periods, and brought reference significance to the development of contemporary

musical instruments.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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