

PROCEEDINGS ARTICLE

The Sound of the Drums Permeates the Past and the Present: The Communication of Bronze Drum Culture and the Local Expression of Public Art

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ABSTRACT

This article takes the bronze drum as an introduction, through a brief description of the development of the bronze drum culture, analyzes the artistic gene, modeling characteristics and casting skills of the bronze drum, summarizes the bronze drum culture, discusses the far-reaching influence of the bronze drum culture on the southwest region, and then further discusses the local expression of bronze drum culture in public art in the southwest region. Finally, with the support of real cases, the framework of the local design practice of public art can be constructed to provide working ideas for the local design of public art.

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1. INTRODUCTION

The southwest is located in the frontier. Under the comprehensive influence of a series of factors such as geographical location, natural landforms, and the historical context of the great fusion of multi-ethnic cultures, an accidental beating by the Pu people, in the vicissitudes of time and space, there gradually brewed the unique bronze drum cultural field in the region. As a national intangible cultural heritage, its special influence also requires the development of public art in the region, and the local design thinking of bronze drum culture came into being.

2. DEVELOPMENT OF BRONZE DRUMS

The bronze drum has developed from the 8th century BC to the present. Like the development of the tripod, it has transformed from an ordinary cooking utensil to a solemn ritual vessel and a symbol of power, constructing a social position that spans politics, economy, and culture step by step. It is closely related

to the production, life, customs and habits of the local people, and its sonorous and powerful sound vibrates and reverberates on various occasions such as celebrations, sacrifices, ceremonies, parties, and wars. In ancient times, "Book of Sui · Geographical Records" recorded: "Those who have drums are called Du Lao, and the masses are convinced." "History of Ming Dynasty · Liu Xian Biography" said: "If you get drums, you can arrogantly claim to be king." Today, in Guangxi's ethnic minority gathering place, it is still the crown of wealth and power to seize political status.

Early bronze drums were unearthed in the central part of Yunnan [1]. During the Spring and Autumn Period, the Pu people of Wanjiaba, Chuxiong, used the bottom of the copper cooking utensils as the drum's percussion surface and played music. This is a relatively early Wanjiaba-type bronze drum with simple decorations. Bronze drums have been handed down in the Yao area to this day. However, about the original origin of bronze drums, the Zhuang, Yi, Baiku Yao, Buyi, Han and Vietnamese Muong have their own views, as shown in Table 1 below.

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Region / Nationality	Legend	Source of Power
Guangxi / Zhuang nationality	The bronze drum was cast and gifted by the Thunder God, and the sun is the Thunder God's bronze drum	Borrowing the theocracy
Nandan, Guangxi / Baikuyao nationality	Getting from the Monkey King	
Liangshan Mountain, Sichuan / Yi nationality	There were no bronze drums in the world, but the gods in the sky cast bronze drums before they land on the world.	
Funing, Yunnan / Yi nationality	The Yi girl Rampa loves to dance. She accidentally ate cherries on the mountain one day. She became as light as a swallow, and when she danced, she rode the wind away, and when she fell on the riverside, she met a fairy and danced to the rhythm of the bronze drum. So she asked the fairy to teach her how to dance, and they danced together for three days, and the fairy gave her a bronze drum.	
Guizhou / Buyi nationality	1. Gifted by the Dragon King; 2. There was no bronze drum in ancient times, people could not be reincarnated, and they disappeared after death. The Bouyei man Bu Jie moved the Jade Emperor with wisdom, courage and filial piety, and the Jade Emperor gave the bronze drum to him;	Borrowing the kingship
	3. It comes from the war drum, so the Buyi people call the drum "an nin", which means "Victory Drum".	
Han nationality	"The Book of Music · Hu Bu" Song, Chen Yang, "Bronze drums are made of cast bronze, and they are used as decorations for exotic animals, the big and tall are the most precious, and the broad and literate are removed from the country of the southern barbarian Tianzhu." "Yi Bu Tan Zi" recorded, He Yudu, believed that the bronze drum was cast by Zhuge Liangqin, the prime minister of Shu Han, when Meng Huo quelled the Nanzhong rebellion, hence the name "Zhuge Drum". It is also said that Zhuge cast the drum and buried it in the mountains to suppress the luck of the barbarians.	Borrowing the kingship
Vietnam / Muong nationality	Emperor Yixiang ordered craftsmen to cast bronze drums, and the top bronze drums were kept in the palace, and the second-class ones lived in the folk.	

Table 1. Legends of various ethnic groups about the origin of bronze drums.

Different regions and ethnic groups have different views, but they have the same meaning: to give bronze drums special significance, or to borrow divine or royal power to consolidate the social status of bronze drum owners or the ruling class.

Regardless of whether the bronze drum is used as a sacrificial prayer or a celebration instrument, the essence is that the ruling class enhances the cohesion of the group through the bronze drum, influences and controls the ideology of the masses, strengthens the masses' recognition of their ruling identity, and gives the ruling class the legitimacy of the power to sanction and punish others. Looking back from the

lower reaches of history, with the consolidation of rulers from generation to generation, the influence of this "artificial relic" gradually broke away from the rulers' initial expectations, broke the territorial restrictions, radiated from Yunnan, Guizhou and Guangxi, and spread to the entire Southeast Asian peninsula, across the political, economic and cultural aspects [2]. Due to the participation of the people, new content has been given, creating a unique folk culture field. Today, the dream of ruling the country had been wasted, the rulers were no match for the aging and demise of time, and the living bronze drum culture is still "smiling in the spring breeze".

With the prosperity and prosperity of minority civilization, the bronze drum culture began to flourish in Yunnan and spread to Guangxi from Yunnan and Guangxi to Guizhou, Sichuan, Guangdong, Fujian, Vietnam and Myanmar [3]. Although they are all bronze drums, their materials, sizes, weights, shapes, patterns, and ornaments have different characteristics, and they have been interpreted differently from different cultural perspectives in different regions. During the Wei, Jin, Southern and Northern Dynasties, with the advancement of iron smelting technology, copper smelting technology has been improved accordingly, and various casting techniques for copper drums have reached a very mature level. The Tang and Song Dynasties were the period of rejuvenation of the feudal dynasties, which greatly strengthened the centralized rule of the central autocracy. The ethnic minorities were forced to migrate to wild places with inconvenient transportation, and the small social environment in which the bronze drum culture continued to develop, but also gradually declined due to the interruption of cultural exchanges. In the Ming and Qing dynasties, with the southward migration of people, the bronze drum culture was spread. However, what followed was the Republic of China, where the situation was turbulent and war-torn. The people were living in precarious situations. Coupled with the concepts of "church apprentices starve to death masters" and "pass on men but not women", bronze drum casting skills were gradually lost, and only the creations were still alive. After the founding of New China, after about 10 years of technological exploration, the Weishi brothers in Guangxi finally figured out the casting method of the Majiang bronze drum in 2000, which was affirmed by the Guangxi Zhuang Autonomous Region Museum and Culture Department and enjoyed the support of the "intangible cultural heritage" policy. The bronze drums produced were presented to Beijing, Ningxia and Guizhou as a gift from the Guangxi Zhuang Autonomous Region Committee of the Communist Party of China and the Guangxi Zhuang Autonomous Region People's Government.

The ups and downs of the development of the bronze drum are inseparable from the migration of people and the exchange of cultures. It is the crystallization of the fusion of ethnic identification and representation, which not only strengthens the identification of ethnic identity, but also witnesses the integration of ethnic groups, and is a realistic image of regional culture. The tempered body is engraved with the rain, snow, wind and frost of the region for thousands of years, and the sound of drums resounds like the sound of thunder, describing the rise and fall of the nation.

3. ARTISTIC GENE OF BRONZE DRUMS

First of all, in terms of shape, the bronze drum is made of bronze. When it is first formed, the color and quality are like gold. After oxidation, it is blue-yellow, yellow-brown and brown-black. The drum body is round, the drum surface is flat, the drum waist is narrowed, the drum surface is single, the drum foot is as wide as the drum surface, and the waist has drum ears. The difference in size is large, the size is different, the shape is upright and plain, simple and solemn, reflecting the beauty of nature. Secondly, the patterns are complex, and are mostly engraved on the drum surface and drum waist, with different origins and meanings. They are arranged in concentric circles with the sun pattern as center. The imprinting skills are superb, reflecting the ethnic minority imprinting craftsmanship and aesthetic ideals. Finally, in music, the vibration time of the bronze drum is shorter than that of the leather drum, and the sound is crisp and not dull. The drum sound of high-quality bronze drums can be transmitted 2 kilometers away, and the vibration time is relatively long when drumming. Due to the different sizes of bronze drums, the tones of different bronze drums are slightly different, which can form a certain scale. Both the drum head and the drum waist can be struck. The vibration time of the drum head is long, and the vibration time of the drum waist is short, and the sound quality is different. During the sacrificial celebration, several bronze drums can be struck to play music (Fig. 1).



Figure 1. Bronze drums and details in the Guangxi Museum of Nationalities.

3.1. Types of Bronze Drums

At the end of the 19th century, some countries began to study bronze drums [3]. In 1898, the book "Southeast Asian Bronze Drums" by Mayr & Waff began to classify bronze drums according to their similarities and differences. It was not until 1980, a century later, that an academic seminar on ancient bronze drums was held in Nanning, Guangxi. At the meeting, researchers classified bronze drums according to their standard shapes and named them after the land they came from. Bronze drums are divided into eight categories, which have been recognized by the academic community, freeing researchers from the debate on which is the main "type" and "style" of bronze drums. In addition, the development of bronze drums was traced and eight categories of bronze drums were divided into two systems according to their historical origins, namely the Yunnan-Guangxi system and the Guangdong-Guangxi system. Among the eight types, Wanjiaba type, Zunyi type, Majiang type, Shizhaishan type and Lengshuihong type belong to the Yunnan-Guangxi system; Beiliu type, Lingshan type and Ximeng type belong to the Guangdong-Guangxi system [4].

3.2. Decoration of Bronze Drums

The decoration of bronze drums has three attributes, namely practicality, aesthetics and class, which endow the bronze drum with the beauty of juxtaposition of reality and fantasy. Practicality is indicator marks, eye guidance, reinforced structure, anti-skid, etc. For example, the sun pattern has an obvious pointing effect. Aesthetics comes from the expression of beautiful things and the appeal of ethnic groups to survive spontaneously formed by the ethnic groups who use bronze drums in production and life, such as frog patterns and cloud patterns, which contain the wish for abundant rain and the desire to multiply. Class comes from the bronze drum as an "artificial sacred object", so its pattern has the function of reflecting the supreme will of the ruling class, that is, it shocks others by shaping the mysterious majesty. The common gluttonous pattern on bronze tripods resembles a bull and a tiger, which is a metaphor for the power of the bull and ferocity of the tiger, which is frightening, as is the bronze drum. By classifying the main decorations of bronze drums, it may be possible to better understand their connotation.

3.2.1. Nature Worship Type Decoration

It embodies the pursuit of natural power, worship and the order of class, such as sun pattern, cow pattern, thunder pattern and other natural and primitive patterns [5]. The sun is the center of eternity, the source and light of the growth of all things. The sun

dominates the world and the four directions. Therefore, the sun pattern is located at the center of the drum, which lays the layout of the concentric circles of the bronze drum and derives various patterns. The cow pattern symbolizes courage, strength and perseverance. Most ethnic minorities have the custom of offering sacrifices to cow gods, or use cows as animals to sacrifice to heaven, to sacrifice to the plant, to sacrifice to ancestors, to sacrifice drums, to worship God with the highest ceremonies, to show the most devout beliefs, to pray for the blessing of the clan, praying for auspiciousness. The thunder pattern is made of ground patterns, which overlap continuously. The phenomenon of thunder and lightning arouses people's fear. People can't resist the incomparable insignificance in the face of this kind of power of heaven and earth, and because thunder is the drum of the sky, the thunder pattern is engraved on the bronze drum. The so-called "The voice of thunder, nothing is different and responds at the same time." It reflects the nature of totalitarian rule and the connotation of invincibility.

3.2.2. Harvest and Reproductive Worship Decoration

This is the embodiment of ethnic minorities' pursuit of prosperity and good harvest, such as frog pattern, flying heron pattern, water pattern, cloud pattern and so on. Frogs have strong reproductive power and look like naked people. They and the swirling egrets mostly appear in summer and autumn when there is abundant rain, lush plants, and ripe fruit and fish fat. The prayer for a good harvest and the pursuit of reproduction in the farming civilization naturally endow the two with special meanings.

Some people call the bronze drum frog pattern "toad pattern", which is a wrong name. The frog with frog pattern refers specifically to the frog of the family Rana, not the toad of the family Toad. The three-dimensional copper frog has smooth skin on its back, thin and smooth lines, and is obviously not a toad. Frogs have a special position in the land of farming civilization in the south, especially in Guangxi. The long history of rice planting has made frogs, which coexist and prosper, gradually evolve into animal gods and worshipped by people. The Zhuang people also have Maguai (the frog in the Zhuang dialect) festival every year, praying for a bumper harvest in the coming year and the prosperity of people and animals.

3.2.3. Historical and Legendary Decoration

It embodies the subtle educational function, such as the bamboo knot pattern. The bamboo knot pattern originated from the Bamboo King. A woman washed clothes by the river, and when three bamboos floated

under her feet, a baby boy was cut out from the bamboo, named after bamboo. This is the bamboo king who was both civil and military. The Yelang tribe is the descendant of the Bamboo King, so the bamboo culture has penetrated life, and the bamboo pattern of the bronze drum comes from this. The poet of the Qing Dynasty said, "Bronze drums and barbarous songs compete for the sun, and worship Sanlang in the depths of the bamboo forest." It describes the scene of worshipping the third son of the bamboo king.

3.2.4. Life Record-Type Decorations: Dancing Figures, Horseback Riding Patterns, Boating Patterns, Etc.

The rowing pattern is related to ethnic minorities living by the water and fishing for a living. The horse-riding pattern comes from the Zhuang people. In the Qin Dynasty, Guangxi was called Luliang Land. The so-called "eight mountains, one water and one field" are very suitable for using horses as means of transportation. The Zhuang people have a long history of riding and raising horses. The horse-riding patterns intuitively reflect the Zhuang people's pursuit of bravery and the style of the times for being brave and good at fighting, which shows the function of the bronze drum as a war drum. The dancer pattern preserves the situation of ethnic minorities singing and dancing during the sacrificial ceremony, and it is a true portrayal of people's enthusiasm for life.

3.3. Influence of Bronze Smelting on Bronze Drum Culture

The spread of bronze drum culture relies on real bronze drums. Manufacture of bronze drums requires smelting and manufacturing workshops, which in turn depend on the development and spread of smelting technology. Without these preconditions, prosperity of the bronze drum culture would not be possible.

The material of ancient Chinese bronzes has experienced the change process of natural copper-red copper-bronze. At first, the directly obtained natural copper was used, and "Kaibao Medicine" said that "it is not smelted from ore, so it is called natural copper". It is soft in texture, good in ductility and can be shaped by beating. Red copper is a copper metal obtained from copper ore through primary refining and re-smelting. It is generally easy to process like natural copper. The color is reddish and the quality is purer. Red copper is smelted with lead and tin to obtain bronze. Bronze has a hard texture, which overcomes the weakness of the softness of previous bronzes and is widely used. According to the alloy

composition, bronze can also be divided into lead-tin bronze, tin-lead bronze and tin bronze [6].

The southwest region has absorbed the advanced smelting technology of the Central Plains, and the bronze drums cast are divided into red bronze drums, lead-tin bronze drums, tin-lead bronze drums, and tin-bronze drums. Red bronze drums are also called blunt bronze drums. Most of the red bronze drums are earlier bronze drums with high copper content and almost zero tin and lead content. Lead-tin bronze drums, tin-lead bronze drums, and tin-bronze drums are distinguished based on whether the content of lead and tin exceeds 2% [7]. The content of lead and tin in lead-tin bronze drums is more than 2%, of which lead content is the most, followed by tin. The same is true for tin-lead bronze drums. The content of tin and lead is more than 2%, with tin being the most and lead being the second. Tin bronze drums contain tin and lead, but the tin content exceeds 2% and the lead content is less than 2% [8].

3.4. Casting Technology and Decoration Production Methods

In the early bronze drum casting, the overall casting method was used, and the copper juice was poured into the pottery fan, and it was cast and formed at one time. Because the way to take the drum is to directly break the pottery model and then take the drum, so one model and one drum, the drum cannot be copied. For example, the early Wanjiaba-type bronze drums were cast by the integral casting method, and the craftsmanship was relatively rough. In the middle and late stage, the bronze drum casting technology was mature, and the combination of the combining-model method and the lost wax method was mostly used for casting. The combining-model method is to combine two or several pottery models into one, and the gaps are tight. At the same time, the copper juice needs to be poured into several holes left in advance. It is usually used to cast the drum body. It is not necessary to break the pottery fans when taking the drum. The lost wax method is mostly used to cast delicate three-dimensional components, such as the three-dimensional frog pattern and horseback riding pattern on the drum surface, and most of them are made by this method. Then the multiple parts are cast and joined into a complete bronze drum.

The decoration of the bronze drum is usually made after casting, using the carving method, the printing method and the rolling method. As the name suggests, the decoration is carved, printed and rolled and pressed on the bronze drum. Both the pattern printing method and the rolling-pressing method have molds.

The patterns are engraved on the mold in advance, and then stamped on the copper drum. The model of rolling-pressing method is cylindrical, suitable for continuous patterns, and patterns are continuously printed and pressed on the bronze drum by rolling.

4. DIALOGUE BETWEEN PAST AND PRESENT: LOCALITY OF PUBLIC ART

4.1. Locality of Public Art and National Art

In fact, today, the importance of the locality of public art has been recognized by most scholars, so the author won't go into details here. It is not only experts and scholars who are aware of this problem. The long-established paradigm of urban public space construction that imitates the Western model is receiving critical scrutiny from the biggest critic: the residents living in the city. Urban public space has economic attributes and symbolic functions, and is the key carrier of urban morphological characteristics. Copy-style construction will only dissolve the interaction between people and cities since ancient times, and cut the historical context in time and space. When the familiar hometown has been updated into an unfamiliar and exotic place in the past few decades, the residents gradually realized that the root of the problem lies in denial of their own national culture.

Ethnic art is the fruit of the long-term formation and existence of ethnic groups on a piece of land. It is the crown of the aesthetics of historical and traditional cultural characteristics, with a strong emotional orientation. It both loads the past and points to the future, just enough to bridge the emotional gap and trauma between the field and people. It can be used as a powerful tool to fight against the disappearance of urban spatial and regional identification and the fault of field memory caused by reckless development, so that the truncated history can go out of the museum and historical materials museum, and re-approach people's lives, restore the historical context of the site and awaken people's hometown feelings.

4.2. Local Practice of Public Art

To realize the locality of public art, the entire practice must be transformed from the design of a few elites to the participation and collaboration of the majority, and deconstruct the regional memory from the overall perspective of the entire field, city and even without boundaries [9]. In order to better achieve this goal, the entire work must be standardized and ordered. The practical steps are divided into six stages here.

The first is preliminary preparation. After the project is approved by the government, a work arrangement

meeting will be held to formulate a plan and timetable, and will cooperate with third parties according to existing laws and policies. The third-party participants have different fields and are composed of experts, designers, artists, planners and other occupations, and they work together.

The second is the resource research. Using literature and field surveys to collect materials, audience participation can improve the quality of information collection. That is to extract the characteristics of the place, historical context, cultural genes, natural geographical environment, ecological status, folk customs and other social landscapes. At this stage, third-party participants need to have insight into the future positioning of the city, so that the public art design can meet and even promote the high-quality development of the city, and change the design pursuit from "is there" to "is it good or not". For example, the bronze drum is a public art installation in the North Square of Nanning East Railway Station. Nanning East Railway Station is the largest comprehensive railway transport hub in Southwest China. Therefore, its public art installation extracted the bronze drum, a common cultural element in the southwest region, to design it. Through the genetic symbols of the bronze drum culture, unique historical context and field characteristics of the southwest region are conveyed, so that the ancient bronze drum culture has been newly interpreted in the new era, and the field context has been reshaped (Fig. 2).



Figure 2. Bronze drum installation in the North Square of Nanning East Railway Station.

The third is the choice of artistic expression. The function is combined with the form to construct the structure, and the element extraction, pattern extraction, shape extraction, text extraction and connotation extraction methods are used to externalize the elements, realize the transmission of information, and let the original things be interpreted in the new era. The bronze drum installation of Nanning East Railway Station breaks the old bronze drum form. It uses metal materials and hollow design. The lower part is the deforming horns. The design is

wild and simple, natural and clumsy, full of the sense of wild power, constructing a historical scene beyond the norm, affecting the deep spiritual consciousness, showing the connotation of the new and the old, and the fusion of the ancient and the modern.

The fourth is that, after the plan is formulated, it will be optimized, and the draft will be released in a timely manner after passing the government review. The audience is the main user of public art installations, and the common opinions of this group should be the mainstay, so that people have the right to participate in social public affairs and improve the efficiency of decision-making. Once key information is determined, the design scheme is revised to obtain the final one.

The fifth is construction and maintenance. The construction process is due to the adoption of a multi-party supervision mechanism. The maintenance arrangement should be according to the use time of the device, such as long-term, cyclical, and short-term, to provide corresponding guarantees to avoid waste of resources and maintain healthy development.

The sixth is feedback and updates. Audiences are the main body of feedback and participants. They are composed of multiple levels. They receive different education, have different ages, occupations, genders, and different art appreciation levels. The feedback is also divided into positive and negative, which plays an organic role in regulating the development of public art. The unobstructed channels for collecting opinions can timely submit opinions to third parties and realize two-way interaction between the designer and the audience, so that the public art works can be adjusted, revised and redesigned in time.

5. CONCLUSION

The bronze drum is the drum that maintains empathy among the southern ethnic groups. Through the narrative style of public art, the ancient drum sound can travel through thousands of years, condense the memory of the space and time dimensions of the site, link the new emotional connotation of the site, and continue to provide this land with the precious cultural source water and achieve the purpose of enhancing the competitiveness of the city.

When a city becomes the home that people yearn for, a steady stream of talents will rush for it, participate in the construction, maximize the vitality of the field, play a passionate song of civilization, and shine a splendid light of civilization.

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