

CHINESE BASIN CULTURE AND MUSICAL DIVERSITY: A MULTIDIMENSIONAL STUDY OF THE REGIONAL DEVELOPMENT OF TRADITIONAL CHINESE MUSICAL INSTRUMENTS

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Abstract: This study aims to investigate the influence of multiple factors—including geographical environment, historical culture, ethnic integration, and linguistic systems—on the development of traditional Chinese musical instruments. It seeks to clarify the cultural characteristics and formative logic of traditional instruments across different river basins, and to systematically examine the regional distribution patterns and diverse developmental trajectories of traditional Chinese instrument culture. Employing methods of literature review, regional cultural comparative analysis, and musical morphology induction, the study conducts a systematic analysis of the types, structural features, performance techniques, and cultural adaptability of traditional instruments in the Yellow River basin, the Yangtze River basin, the Pearl River basin, and frontier ethnic minority regions. Drawing on the historical development backgrounds, folk cultural characteristics, and tonal features of spoken language in each region, the research pursues cross-regional, multi-dimensional comparative inquiry. The findings reveal that traditional instruments of the Yellow River basin, shaped by political ritual systems and northern nomadic culture, have formed a weighty and vigorous northern musical style, in which bronze ritual instruments and steppe-type bowed string instruments each exhibit distinct cultural adaptability. The Yangtze River basin, nurtured by its mild and water-rich environment, has cultivated a delicate and graceful musical character centered on silk and bamboo instruments, whose performance style aligns closely with the region’s reserved yet lively cultural temperament. The Pearl River basin, leveraging its strategic position as a hub connecting China and the West, has developed traditional instruments that blend Central Plains culture with Southeast Asian influences, producing a musically diverse and hybrid character, with instrument forms and techniques tailored to the demands of local opera and regional tonal patterns. Traditional instruments of frontier ethnic minority regions, shaped by Islamic culture and religious ritual, exhibit highly distinctive and exotic musical expressions that are deeply intertwined with the lifestyles, customs, and spiritual beliefs of their respective peoples. The study concludes that the regionalized development of traditional Chinese musical instruments is the result of the combined action of natural environmental and socio-cultural factors. Each river basin, drawing upon its own unique cultural soil, has formed a markedly differentiated and richly layered musical and cultural ecology, collectively constructing a pluralistic yet unified cultural landscape for traditional Chinese musical instruments. Based on these conclusions, the following recommendations are proposed: future research should conduct in-depth investigations into the current state of transmission of traditional instrument cultures across various river basins, with particular attention to excavating performance techniques and craftsmanship traditions at risk of being lost; efforts should be made to strengthen cross-basin exchange and research on traditional instrument cultures, promoting the integration and innovative development of regional instrument traditions; and modern cultural dissemination methods should be harnessed to build a transmission and heritage system for traditional instruments that reflects the distinctive character of each river basin’s culture, thereby supporting the living inheritance and long-term sustainable development of traditional Chinese musical instrument culture. According to incomplete statistics, this study surveyed more than twenty mainstream traditional instruments across four major regions, encompassing five broad categories—bronze instruments, bowed string instruments, plucked string instruments, wind instruments, and percussion instruments—and covering the musical cultural systems of more than ten ethnic groups as well as dozens of forms of local folk music.

Keywords: traditional Chinese musical instruments, river basin culture, regional musical styles, ethnic integration, instrument cultural ecology, cultural heritage transmission

1. INTRODUCTION

China’s vast territorial expanse has given rise, across its different river basins, to a wide array of regionally distinctive and culturally rich cultural forms, each shaped by unique natural and geographical environments, historical trajectories, ethnic and cultural structures, and linguistic systems. Traditional musical instruments, as vital carriers of China’s outstanding traditional culture, serve as the concrete embodiment of regional musical culture, folk customs, and humanistic spirit. Their structural forms, timbral qualities, performance techniques, and cultural functions have always been deeply integrated with, and co-evolved alongside, the natural and human environments of their respective regions (Fang, 2024). Over the long course of history, the development of traditional Chinese musical instruments has not been a singular, homogeneous process. Rather, across the three core river basins of the

Yellow River, the Yangtze River, and the Pearl River, as well as in the frontier regions inhabited by ethnic minorities, the interplay of multiple factors—including differences in natural conditions, directions of cultural exchange, shifts in social institutions, and the tonal characteristics of local languages—has produced pronounced regional differentiation, ultimately giving rise to a pluralistic and integrated cultural ecosystem of traditional Chinese musical instruments (Fang, 2026).

At the current stage, research on traditional musical instruments tends to focus on individual instrument forms, performance techniques, or the musical culture of a single region. There remains considerable room for supplementary work in studies that take river basin geographic units as an entry point to systematically analyze the combined influence of natural and humanistic factors on the development of traditional instruments, and to examine the cultural characteristics of instruments across different river basins (Jin, 2025). On this basis, the present study is grounded in four core dimensions—geographic environment, historical culture, ethnic integration, and linguistic systems—to explore the developmental logic, stylistic features, and cultural adaptability of traditional musical instruments across China's different river basins. It aims to clarify the differentiated developmental trajectories of traditional instruments in each region and to elucidate the intrinsic connections between regional factors and the formation of traditional instrument culture. This study seeks to enrich the regional cultural research framework for Chinese traditional musical instruments, provide theoretical references for interpreting the diversity and integrity of Chinese traditional music culture, and offer a clear regional cultural perspective for the inheritance and preservation of traditional instrument cultures across different river basins (Li & Kang, 2025).

2. MATERIALS AND METHODS

This study is a humanities and social sciences cultural research project that employs a combination of literature review, regional cultural induction, comparative analysis, and case study methods. All research processes are conducted on the basis of publicly available and authoritative historical documents, musicological monographs, regional cultural research materials, and findings from archaeological and folklore investigations of traditional musical instruments (Yang, 2026).

(1) Musical morphology analysis method: Academic works, core journal literature, and archaeological research reports related to Chinese historical geography, river basin culture, traditional musicology, and ethnomusicology are collected to examine the geographic environmental characteristics, historical developmental trajectories, ethnic compositions, linguistic systems, and folk cultural backgrounds of the Yellow River Basin, the Yangtze River Basin, the Pearl River Basin, and border ethnic minority areas. Concurrently, foundational data on representative traditional instruments in each region—including instrument form parameters, timbral characteristics, performance techniques, and cultural functions—are compiled. Non-authoritative content with incomplete data or insufficiently rigorous argumentation is excluded to ensure the authenticity and professionalism of the research materials (Wang, 2026).

(2) Regional cultural induction method: Based on the distribution of China's natural geographic river basins and the residential characteristics of ethnic cultural communities, the research subjects are divided into four major research units: the Yellow River Basin centered on Shaanxi and Shanxi; the Yangtze River Basin encompassing the middle and lower reaches of the Yangtze River and the southeastern coastal areas; the Pearl River Basin in the Lingnan region; and the northwestern and southwestern border areas inhabited by ethnic minority groups. The geographic and cultural boundaries of each research unit are clearly defined.

(3) Comparative Analysis Method: Using geographical environment, historical culture, ethnic integration, and linguistic systems as four analytical dimensions, this method conducts a horizontal comparison of traditional musical instruments across the four research units, systematically examining the influence of each dimensional factor on instrument form, timbre, playing techniques, and cultural positioning, and summarizes the core stylistic characteristics and cultural origins of traditional instruments in each unit (Zhang, 2025).

(4) Case Study Method: Representative traditional instruments and musical forms from each river basin are selected as typical cases—such as the bronze chime bells and morin khuur of the Yellow River basin, the Jiangnan Sizhu and Fujian Nanyin of the Yangtze River basin, Cantonese music and Chaozhou Xianshi music of the Pearl River basin, and the dombra and Lusheng of the frontier regions—to conduct in-depth analysis of the adaptive logic between instruments and regional culture, thereby strengthening the persuasiveness of the research conclusions (Zhou, 2025). The research methods employed in this study are well-established and widely used methodologies in the humanities and social sciences. All referenced materials are drawn from publicly accessible and authoritative academic works, and the research process is fully replicable. Fellow researchers may follow the procedures outlined above—source selection, unit delineation, and multidimensional analysis—to conduct equivalent studies and arrive at consistent conclusions.

3. RESULTS

The traditional musical instruments of the Yellow River basin have developed a majestic and powerful northern stylistic character. As the long-standing political center of ancient China, this region was profoundly shaped by court culture, with bronze instruments such as bronze chime bells and ceremonial drums occupying a dominant position in antiquity. These instruments produce a deep and resonant timbre that perfectly aligns with the solemn ritual requirements of court music (Peng, 2025). At the same time, influenced by cultural exchanges with northern nomadic peoples, bowed string instruments such as the erhu and morin khuur commonly feature leather-covered soundboxes and thick strings, adapted to the acoustic transmission conditions of the grasslands, resulting in a timbre that is bold and expansive, highlighting the distinctive musical culture of the steppe.

Traditional musical instruments of the Yangtze River basin embody the delicate and refined cultural qualities of southern China. The mild climate and water-town cultural atmosphere of the middle and lower Yangtze River region fostered the mainstream development of silk and bamboo instruments. Jiangnan Sizhu centers on the Erhu, Pipa, and Qudi as its core instruments, all of which are compact in form. The Qudi, with its relatively wide bore, produces a mellow and rounded timbre, and performance emphasizes improvisational interaction through ornamental variations, aligning closely with the subtle and nimble temperament of local culture. In Fujian Nanyin, the xiao and pipa adopt a lowered tuning to accommodate the tonal characteristics of the local dialect, producing a soft, delicate, and lingering timbre that has merged and co-evolved with regional operatic vocal styles, forming an inseparable musical symbiosis. The influence of linguistic systems on instrument timbre and tuning is particularly pronounced (Li, 2025).

Traditional musical instruments of the Pearl River basin exhibit a character shaped by diverse cultural fusion. As a vital hub of ancient Sino-Western communication, the coastal regions of southern China blend the heritage of Central Plains culture with Southeast Asian influences. The Gaohu and Yangqin in Guangdong music were shaped by local operatic traditions: the Gaohu achieves a high-pitched register through its small resonating chamber, while the Yangqin enhances its metallic quality through the addition of brass strings, together creating a crisp and bright timbral contrast. The Erxian and Yehu of Chaozhou Xianshi music adopt exclusive special tunings to meet the demands of local theatrical vocal styles, employing glissando and vibrato techniques to precisely simulate the tonal inflections of the regional dialect. Regional opera and dialect thus serve as the core factors shaping instrument development.

Traditional musical instruments of frontier ethnic minority regions have developed a distinctly exotic expressive character. Influenced by Islamic culture, the plucked string instruments of the Western Regions—such as the dombra emphasize rapid scalar passages and double-string harmonic techniques. Instruments such as the Qiang mouth harp are deeply intertwined with ethnic religious rituals, possessing a rugged and mysterious timbre that serves ceremonial and folk ritual functions. The Lusheng and bronze drums of southwestern ethnic minority communities, exemplified by the multi-pipe harmonic ensembles of Miao Lusheng orchestras, fully reflect the collective narrative cultural traditions of mountain-dwelling peoples. Ethnic beliefs and ways of life ultimately determine the function and technique of these instruments.

4. DISCUSSION

The findings of this study reveal the core logic underlying the regionally differentiated development of traditional Chinese musical instruments: the natural geographic environment establishes the material and acoustic foundations for instrument development, while historical culture, ethnic integration, and linguistic systems shape the cultural attributes and artistic expression of these instruments. The interaction among these four factors has driven the formation of a pluralistic yet unified cultural ecology of traditional Chinese musical instruments. This conclusion aligns closely with the theory of regional differentiation in Chinese cultural geography and the regional music culture theory in musicology, while providing a testable multidimensional analytical framework for the study of traditional instruments.

Situating the findings of this study within the existing body of knowledge reveals theoretical dialogues and extended significance in the following three areas.

First, the four-dimensional interactive model proposed in this study supplements existing research on watershed music geography. Prior works, such as Cai Jizhou's *Music Culture of the Yangtze River Basin*, primarily describe stylistic differences across regions, whereas this study further elucidates the specific pathways through which factors of different dimensions operate, rendering the formation mechanisms of regional styles more interpretable. For instance, the direct influence of linguistic tones on instrument tuning, and the selection of materials for bowed string instruments shaped by nomadic culture. Instruments of the Yellow River basin exhibit dual characteristics of both court music culture and steppe culture, refining the specific principles of acoustic adaptation of instruments within

steppe environments—such as the use of leather resonating chambers and thick-string designs in instrument construction.

Second, the significant influence of linguistic systems on instrument timbre and tuning methods discovered in this study forms a mutual corroboration with Jiang Jing's *Tonal Language–Instrumental Music Correlation Hypothesis*. The close alignment between the tonal contours of local dialects and the silk-and-bamboo instruments of the Yangtze River region, along with the exclusive special tuning methods adopted in Chaozhou string ensemble music to accommodate local dialects, provides new cross-regional evidence for the hypothesis that instrumental performance imitates tonal patterns. This finding also suggests that phonetic adaptability should be added as an independent analytical dimension in organology, a cultural characteristic that the currently prevailing Hornbostel-Sachs system fails to encompass.

Third, the cases from the Pearl River region and frontier areas validate the innovation-driven model of cultural peripheries. As a confluence of Central Plains and Southeast Asian cultures, the southern coastal regions of China exhibit pronounced Sino-Western hybrid characteristics in instrument morphology, and cultural borderlands tend to generate higher frequencies of instrumental innovation. The deep entanglement of frontier ethnic minority instruments with religious rituals and highland agricultural life corroborates the tripartite explanatory framework in cultural ecology—technology, environment, and ritual—demonstrating that instruments are not merely acoustic tools but also materialized symbols of social organization and belief systems.

In terms of practical significance, the analytical framework established in this study can provide classificatory guidance for the preservation and transmission of traditional instruments across different river basins. For the bronze instruments of the Yellow River region, represented by court ritual music, the preservation focus should lie in restoring their ritual spaces and ceremonial contexts; for the silk-and-bamboo instruments of the Yangtze River region, attention must be given to the coordinated transmission of improvisational ornamentation techniques and dialectal tonal patterns; for instruments from China's southern coastal regions and frontier ethnic minorities, priority should be placed on safeguarding indigenous integrity amid cross-cultural fusion and on the living preservation of religious ritual functions.

5. CONCLUSION

This study, through an analysis of traditional musical instruments from the three major river basins of the Yellow River, the Yangtze River, and the Pearl River, as well as from frontier ethnic minority regions, confirms that geographical environment, historical culture, ethnic integration, and linguistic systems are the core factors shaping the regional developmental characteristics of Chinese traditional musical instruments. Different river basins have thus formed distinct traditional instrument cultures with unique styles and cultural connotations: instruments from the Yellow River basin are majestic and powerful, those from the Yangtze River basin are delicate and graceful, those from the Pearl River basin are diverse and integrative, and instruments from frontier ethnic minority regions possess distinctly exotic ethnic characteristics. Together, these four major regions construct a rich and pluralistic cultural ecosystem of Chinese traditional musical instruments.

The regionalized development of traditional musical instruments is the result of the synergistic interplay between natural and humanistic factors. Their stylistic characteristics, structural designs, and performance techniques are all deeply adapted to regional cultural needs, representing an important manifestation of the diversity of Chinese regional culture. The findings of this study provide a systematic analytical framework for the regional study of Chinese traditional music culture and also point the way forward for the inheritance and preservation of traditional musical instruments—the transmission of traditional instruments must be rooted in their regional cultural origins, with targeted conservation carried out in accordance with the cultural characteristics of each river basin, so as to better preserve their cultural authenticity.

Future research may further investigate the current state of inheritance and the pathways of living heritage of traditional musical instruments across various river basins, thereby promoting innovative development of traditional instruments on the basis of upholding their regional cultural core, and ensuring that the traditional instrument cultures of different regions continue to be passed down and carried forward.

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