

Digitalization of Intangible Cultural Heritage Music and Its Impacts on Traditional Artistic Heritage: A Case Study of Nanyin

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Abstract

As one of the oldest surviving musical traditions in China, Nanyin was inscribed on the Representative List of the Intangible Cultural Heritage (ICH) of Humanity by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2009. As Nanyin becomes increasingly disseminated through digital platforms, this process is not merely a simple technical integration. Rather, it triggers profound transformations in the underlying structure of its artistic field. This study employs Bourdieu's field theory as its analytical framework, utilizing publicly available videos, account profiles, platform data reports, and media coverage from platforms such as TikTok, Bilibili, and Xiaohongshu as research materials. Adopting a multi-case study approach, the research conducts analysis across three dimensions: field rules, cultural capital, and the habitus of actors. The findings indicate that digital platforms have altered the ways in which Nanyin is perceived, presented, and evaluated. This shifts the logic of performance from "physical presence" in live settings to "algorithmic visibility" driven by traffic metrics. Regarding the digital translation of cultural capital, inheritors, young artist teams, and individual streamers have adopted diverse pathways: foundational extension, collaborative creation within teams, and individual entrepreneurship. Through ongoing interaction, performers and audiences continuously adjust their respective habitus. Finally, the paper explores strategies for living transmission of Nanyin from three perspectives: restructuring evaluation mechanisms, facilitating bidirectional capital transformation, and nurturing habitus development.

Keywords

Nanyin, Intangible cultural heritage music, Digitalization, Field theory, Living transmission



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Introduction

Nanyin, also known as Xianguan, Nanqu, or Quanzhou Nanyin, originated in Quanzhou, Fujian Province.

Performed in the Minnan dialect, it comprises three major components: "zhi", "pu", and "qu". It has spread

across the Minnan region, Taiwan, Hong Kong, Macau, and other areas in Southeast Asia where Minnan people reside. It has earned the reputation of being a “living fossil of Chinese music”. In 2009, it was inscribed on the Representative List of the Intangible Cultural Heritage of Humanity by the UNESCO.

However, in the context of modernization and evolving media landscapes, its survival faces challenges. In terms of transmission, it relies heavily on oral instruction, involves lengthy cycles, and features complex forms. This leads to a gradual aging of practitioners and slow continuity of knowledge. In terms of dissemination, the Minnan dialect and its distinctive Gongyi notation system pose barriers to understanding for audiences in other regions. Aesthetically, its leisurely rhythm and archaic melodic styles differ from the faster, more visually oriented preferences of younger generations.

Existing research indicates that the preservation of Nanyin is highly dependent on community organizations and educational systems. Core instruments such as the pipa serve to cultivate cultural literacy within schools and community settings. Nevertheless, these studies primarily focus on offline, institutionalized transmission practices. They pay relatively little attention to new approaches on digital platforms [1].

Problem statement and research review

These challenges are now seeing a turning point as digital technologies penetrate these domains. In March 2026, the “15th Five-Year Plan for National Economic and Social Development of the People’s Republic of China” proposed “enhancing the protection and inheritance of intangible cultural heritage, and cultivating new scenarios for its inheritance and experience”. In September of the same year, the Ministry of Culture and Tourism issued the “15th Five-Year Plan for the Protection and Inheritance of Intangible Cultural Heritage”. It identified “deepening technological empowerment and elevating the level of digital and

intelligent protection” alongside “enhancing dissemination efficacy” as key tasks. It also launched the “Intangible Cultural Heritage Digital Dissemination Plan” to support new media platforms in strengthening identity verification, digital capability training, and traffic support for accounts of representative inheritors.

Platforms have also made corresponding strategic moves. Since 2022, TikTok Live has collaborated with the Central National Orchestra to initiate the “DOU Traditional Chinese Music” initiative, creating an online “second stage” for traditional Chinese music. According to data jointly released in 2023 by TikTok and the Central National Orchestra, over the past year, the platform has hosted over 4.14 million traditional Chinese music live streams. These accumulated over 12.80 billion views. Among these, approximately 2,636 traditional Chinese music live streams related to nationally recognized intangible cultural heritage were broadcast daily. Around 13,000 performers received tips through these live streams [2].

However, while new media offers conveniences, it also poses challenges. Nanyin has long relied primarily on traditional venues and stages as its dissemination channels. Digital channels have extended its reach into cyberspace, yet the quality of content varies widely. Platform-based consumption tends to fragment complete musical pieces and reassemble them in new configurations.

International academic discourse on traditional music and digital media can be broadly categorized into three thematic lines. The first focuses on the contemporary context. It posits that digital technologies have enabled intangible cultural heritage music to transition from “rescue-oriented preservation” to “living dissemination”. Based on a questionnaire survey, digital dissemination has significantly enhanced public awareness, dissemination efficacy, and audience engagement regarding music-related ICH.

The second line examines the pathways of technological intervention. Short videos, integrating audio and visual

elements, carry richer cultural information. Social media serves as a primary gateway for young people to access Amami Island songs. Performance videos and music software have bolstered the adaptive capacity of Indonesian talempong music for transmission. Computer vision and natural language processing have also been leveraged to explore the potential of artificial intelligence in preserving ICH within short videos [3].

The third line turns toward a critical reflection on technology. Existing digitalization efforts predominantly revolve around “objects”, making it difficult to adequately document and represent the living, embodied nature of ICH as a bodily practice. Regarding Nanyin, its historical development, performance forms, and heritage education have been systematically reviewed. The educational settings and cultural literacy functions of Nanyin pipa have also been investigated. However, both lines of inquiry remained focused on offline contexts, such as classrooms and community clubs [4].

Field theory: Conceptual context and analytical framework

Theoretical foundation

The concept of “field” was originally derived from the term “field” in physics, and was later adapted by Bourdieu for application in sociology. Its theoretical foundation rests on three interrelated concepts: field, capital, and habitus.

Society is composed of several relatively autonomous fields. Each field constitutes a constellation of objective relationships among actors occupying distinct positions. These actors establish a balance of power based on their hierarchical standing and the availability of resources. The functioning of a field is thus driven by the ongoing interplay of these power dynamics. Within any given field, there exists a tension between professional autonomy as one pole and external political and economic forces as the other.

Capital serves as the leverage that actors employ in their competition. It both determines the starting point of such competition and constitutes the objects of contention. These manifest in economic, social, cultural, and symbolic forms, which, under certain conditions, can be converted into one another. Habitus refers to a set of predispositions - pertaining to perception, judgment, and action - that are internalized by an actor over prolonged exposure to a particular field. This predisposition is characterized by its durability. When external conditions undergo abrupt changes, a misalignment may arise between the existing habitus and the new rules. This is a phenomenon termed “the lag of habitus”. Habitus is not inherently fixed. It can also be reshaped in response to changing circumstances. These three elements mutually generate one another. This relationship was articulated in *The Practice of Class Struggle* through the formula: “(habitus) + (capital) + field = practice”.

Applying this theoretical framework to the digitalization practices of Nanyin reveals two areas of convergence. In terms of practical logic, the deployment of Nanyin on digital platforms itself constitutes a field formation process. Shifts in creative orientations, evaluation criteria, and dissemination modes give rise to new forms of capital. Various actors adjust their habitus to conform to these new rules - a dynamic that resonates with the field theory’s emphasis on competition and generative characteristics. Regarding spatial attributes, a field is not confined to physical spaces. Institutional arrangements, emotional bonds, and virtual spaces can all serve as its forms. Platforms such as TikTok, Bilibili, and Xiaohongshu provide the foundational spaces for Nanyin’s digitalization practices. These spaces are governed both by explicit platform regulations and implicit algorithmic mechanisms. They also continuously engage in struggles over data, traffic, and user attention.

In recent years, field theory has also been applied to the analysis of digital platforms. Recent work elucidates the mechanisms through which platforms accumulate power.

It demonstrates that platforms consolidate power via constitutional, judicial, discursive, classificatory, and mass-mobilization strategies, thereby shaping “digital habitus”. Other research focuses on music sharing on social media. It reveals that such practices foster a specific moral economy centered on “imagined listening”. This enables users to strengthen community bonds and exchange emotions through sharing [5].

Analytical framework

Building upon the aforementioned theories, this study constructs an analytical framework across three dimensions: the field, capital, and habitus. In traditional Nanyin, the field is anchored in physical spaces - such as performance halls and stages. In these spaces, the professional expertise of inheritors serves as the core capital for intergenerational transmission.

Digital technologies, however, have induced transfor-

mations in this field across three domains. At the field level, this examines how existing mechanisms for participation, performance, and evaluation are structurally reconfigured by algorithms and user traffic. At the capital level, it investigates how diverse forms of capital are transformed into quantifiable and tradable data capital. This is accompanied by the strategic adaptations of various actors. Here, “data capital” refers to quantifiable attention resources accumulated by actors on platforms, including follower counts, view counts, likes, and virtual gifts. Such data capital is both a product of cultural capital being translated by the platform and a resource that can be exchanged for economic and symbolic capital.

At the habitus level, it tracks shifts in the aesthetic preferences and interaction patterns of performers and audiences. It also examines the frictions arising between these new patterns and established habitus.

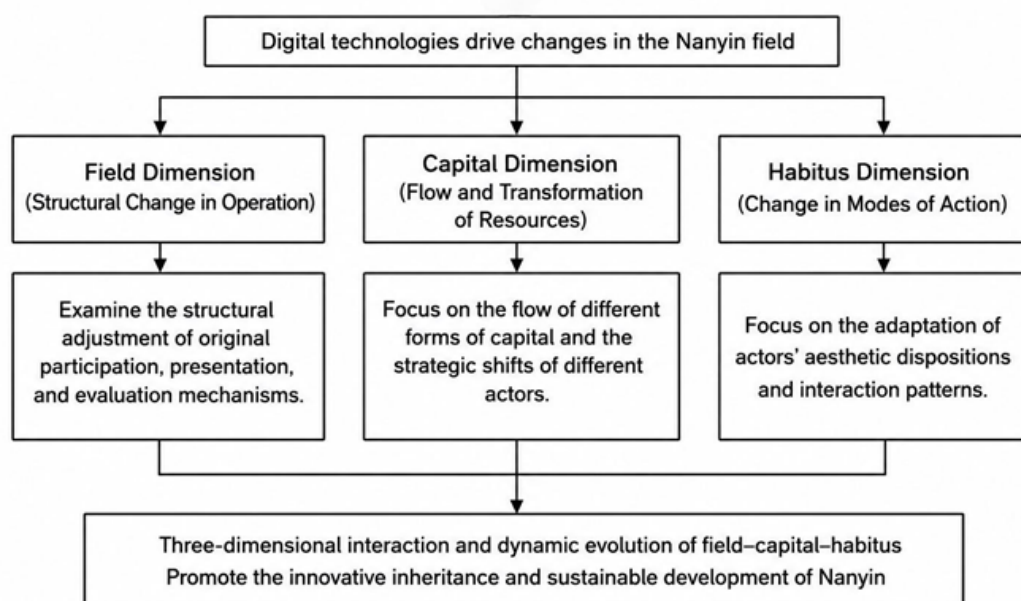


Figure 1. Analytical framework for the digital reconfiguration of the Nanyin artistic field from the perspective of field theory.

Nanyin case study and research design

Case introduction

Nanyin boasts a long and storied history, and its Gongyi score is regarded as preserving information on ancient musical traditions dating from the Han and Tang

dynasties onward. The “upper four pipes” consist of the horizontal pipa, dongxiao, erxian, sanxian, and clappers. The “lower four pipes” incorporate percussion instruments such as the four treasures, double bells, and resonant cups. Throughout its prolonged transmission and evolution, Nanyin has both adhered to ancient conventions and incorporated new musical elements.

This has consolidated a relatively stable mode of artistic production. The essence of this tradition lies in the bodily transmission by practitioners and the spatial boundaries of its performance environment.

Its dissemination relies on scholarly gatherings in government academies, the “Langjun sacrifice” - a ritual music performance dedicated to the deity Meng Chang - and folk customs as well as interactions among community associations. These factors have fostered a tightly-knit community of string instrument practitioners who can perform together on the same stage. This is possible despite the fact that they have never met, using the same Gongyi score. Within this traditional framework, artistic value and professional standards have long been defined by authoritative figures. These include inheritors, professional ensembles, and folk academies, with evaluations based on technical lineage and local reputation [6].

Amid the digital wave, the Nanyin art ecosystem has expanded. In terms of documentation and preservation, Quanzhou has implemented the Nanyin Documentation Project since 2013. This project recorded 65 sets of “finger” and “score” materials along with 1,000 “melodies” onto Digital Video Discs (DVDs). The Quanzhou Nanyin Network, featuring “audio-score synchronization”, aggregates the Comprehensive Collection of Finger Scores for Quanzhou String and Pipe Music along with numerous recordings by renowned artists. Users can view scores and listen to melodies by scanning a Quick Response (QR) code. The Fujian Quanzhou Local Opera Research Association has employed artificial intelligence to digitally capture, record, and restore a batch of Nanyin vinyl records from the early 20th century.

Regarding stage innovation, the Xiamen Nanyin Orchestra collaborated with Xiamen City Vocational College on the “Nanyin Heritage and Protection Virtual Reality” project. This project explored the integration of virtual reality technology with Nanyin performances. In 2023, during the China Central Television (CCTV)

Spring Festival Gala, a program titled Hundred Birds Return to the Nest was staged. Inspired by one of the four renowned Nanyin scores, the Xiamen Nanyin Orchestra participated in the performance.

In terms of platform initiatives, the young team “Dianshui Nanyue” has shared performance clips and excerpts of their works on Bilibili, TikTok, and Xiaohongshu, accumulating millions of views. In 2026, they participated in creating a Nanyin single titled Floral Fireworks Ballad, performed by the virtual idol Luo Tianyi. Meanwhile, Li Shasha, a “post-90s” live streamer from Jinjiang, Quanzhou, has been hosting daily Nanyin live streams on TikTok since 2021, amassing nearly 100,000 followers.

These practices - spanning team-based, individual, and ensemble levels - constitute the primary subjects of this analysis.

Research methods

This study employs a qualitative research approach, primarily utilizing multiple case studies, with TikTok, Bilibili, and Xiaohongshu serving as the main observation platforms. These three platforms were selected because they represent distinct dissemination logics: algorithmic recommendation, interest-based communities, and image-and-text-driven product recommendations, respectively.

The research materials comprise four categories. The first category includes publicly available short videos, live-stream clips, and account profile information of Nanyin artists on these platforms. The second category consists of industry data reports published by the platforms and third-party institutions. The third category covers public reports and interviews with representative practitioners by mainstream and industry media outlets. The fourth category includes publicly accessible policy documents and project materials from government agencies, cultural troupes, and community organizations. Building on this foundation, this study balances representativeness and diversity by selecting three types

of actors as key cases.

These are the young team “Dianshui Nanye”, composed of a cultural inheritor and a music producer, the individual streamer Li Shasha, whose primary operational arena is live-streaming rooms, and both institutional and platform-level practices. It should be noted that all materials in this study are sourced from publicly available channels. No online participatory observations were conducted, nor were platform backend data or non-public community content accessed. Consequently, this study focuses on delineating observable structural changes within these public domains. It refrains from making inferences about the internal mechanisms of algorithmic operations or private communication scenarios. The individuals mentioned in this study are all those featured in public reports or public accounts.

The three dimensions of digital reconfiguration of the Nanyin performance space

Transformation of field rules under algorithmic intervention

(1) Visibility mechanism: Algorithm-driven visibility allocation

Traditional Nanyin performances were traditionally centered around cultural halls and opera stages. In these spaces, inheritors and master practitioners led the performances based on their expertise and reputation, while the audience listened in quiet contemplation.

With the advent of digital platforms, the performance setting has shifted to live streaming rooms. What now determines whether a performance reaches its audience is no longer geographical location or seating distance. Rather, it is the platform’s recommendation algorithms and traffic allocation mechanisms.

The experience of Li Shasha is highly representative. Since 2021, she has been posting Nanyin audio videos on

TikTok. Initially, her videos received modest attention. However, her account began to steadily gain followers after one of her videos, titled “Three Thousand Taels of Gold”, entered the “Hot Recommendations” section. This success led her to establish fixed daily live streaming sessions. Before going live, performers must carefully consider peak traffic periods and select appropriate hashtags. The initiative to ensure their works are “seen” has, to a considerable extent, shifted into the hands of these algorithmic “gatekeepers”.

(2) Content production: Fragmented reassembly and cinematic expression

To align with the dynamics of algorithmic content recommendation, Nanyin has shifted from presenting “complete pieces” to offering “digital snippets”. Traditional Nanyin emphasizes the complete structure of fingers, notation, and melody - a single performance may last from a few minutes to over half an hour. Under the platform’s logic, however, performances are broken down into modular units that facilitate reassembly and editing. The focus of dissemination then shifts toward “highlight moments” - such as classic vocal passages and memorable lines - thereby catering to the norms of short-form video content, where viewers need to be captivated within the first few seconds.

In Li Shasha’s live stream, the piece most frequently requested by viewers is Three Thousand Tael of Gold, renowned for its distinctive and easily recognizable melody. At times, she performs this piece repeatedly during a single live session in response to audience demand. In short videos, instead, the complete vocal passage serves as the auditory anchor, while the visuals are segmented into close-ups of the pipa’s finger techniques and the dongxiao’s mouth position. This employs a collage of sound and image to transform performance material into digestible fragments. The performers’ bodies are likewise “cinematized” - their finger movements and mouth positions are magnified by the camera - so that the performance prioritizes the delivery of clear visual cues [7].

As the platform's operations have deepened, a digital evaluation framework - centered on likes, completion rates, shares, and follower counts - has gradually taken shape. The equation "higher view counts equate to higher value" has enabled the cultural depth, ideological substance, and emotional resonance of Nanyin to be translated into quantifiable data recognizable and rankable by algorithms. Consequently, the criteria for evaluation have shifted from traditional musical aesthetics to immediate appeal, visual impact, and dissemination efficacy.

This shift has given rise to a discrepancy in evaluation standards. Seasoned inheritors, whose prestige stems from profound technical mastery, may not necessarily outperform younger streamers who excel at performing highlight segments in terms of account metrics. Li Shasha's live streaming operations stabilized, and her monthly tip income could reach tens of thousands of yuan. Many fellow practitioners, possessing equally solid skills but lacking familiarity with platform operations, failed to achieve comparable traffic. From Bourdieu's perspective, this discrepancy reflects the erosion of field autonomy by the heteronomous logic embodied by traffic metrics. It also reflects the ongoing adjustment period between entrenched evaluation practices and the new field rules. Thus, the two evaluation systems now coexist and mutually inform one another.

Digital translation and circulation of cultural capital

Within the traditional domain of Nanyin, the accumulation and transformation of cultural capital have long adhered to a stable model centered on apprenticeship transmission, material preservation, or institutional certification. This model manifests in three forms. The bodily form encompasses the vocal style, fingering techniques, breath control, and internalized repertoire absorbed by the performer. The objective form comprises musical scores, instruments, handwritten manuscripts, portraits of the master, and vintage

recordings. The institutional form consists of the title of inheritor, professional designation, apprenticeship name, and formal qualifications in Nanyin.

These three dimensions constitute the identity foundation of the inheritors and are systematically transformed into symbolic, economic, and social capital. Digital platforms now integrate these practices into quantifiable and circulatory systems. This renders data capital a novel intermediary for exchange between cultural, economic, and symbolic capital.

Given disparities in their capital stock and platform perceptions, various actors have developed distinct capitalization strategies. This gives rise to a more complex landscape than a simplistic "intergenerational divide".

(1) Pathway for heritage practitioners: A foundational extension grounded in professional reputation

The older generation of practitioners - represented by seasoned inheritors and renowned performers - has adopted capitalization strategies centered on preserving authenticity.

First, there is the symbolic transfer of institutional capital. Leveraging platform certifications, they prominently feature titles such as "National Intangible Cultural Heritage Representative Inheritor" and "First-Class Performer" in their profile descriptions. They thereby convert traditional honors into authoritative symbols readily recognizable in digital spaces. Second, there is the extraction of tacit knowledge through embodied capital. These practitioners conduct public outreach initiatives on Nanyin. These initiatives cover the deconstruction of performance techniques and the comparative analysis of gunmen musical modes. They also include the interpretation of gongyi notation systems and explanations of associated instruments. They thus transform stage experience into disseminable content.

This "value-preserving" cycle can then circulate back to offline settings, yielding higher-caliber performance invitations. The finger techniques and oral traditions of Nanyin pipa have long relied on face-to-face educational

environments. However, short videos and live streaming have effectively opened up portions of these once-enclosed pedagogical processes to the general public.

(2) Youth pathway: Content entrepreneurship driven by digital logic

The capitalization practices of the new generation are not uniform. At the very least, they can be categorized into two types: team-based co-creation and individual entrepreneurship. The team-based approach, exemplified by “Dian Shui Nan Le”, consists of a music producer, Zheng Mingming - a fifth-generation inheritor of Nanyin - and young performers. This model does not rely on a single line of mentorship or institutional accreditation. Instead, it transforms Nanyin into content symbols suitable for dissemination.

In terms of content, they adhere to the principle of “preserving the ancient charm without altering a single character, while infusing vitality through modern arrangements”. They retain the lyrics, melodies, and structure while incorporating pop arrangements and modern instruments such as box drums. They also enhance visual expression through synchronized recordings in traditional architecture, documentary footage of performances, and period costumes. In terms of interaction, they leverage online releases and offline performances to drive traffic. They ultimately convert accumulated data capital into invitations to higher-profile platforms such as the Hong Kong Arts Festival and professional concert halls [8].

An individual pathway is exemplified by Li Shasha. At nine, she began learning to sing at a traditional school, mastering six singing techniques and five musical instruments. She became proficient in performing nearly eighty traditional pieces, a typical bearer of embodied cultural capital. She once sang Nanyin for four years at Gulangyu Island in Xiamen, but temporarily changed careers due to limited income.

In 2021, she started posting videos on TikTok. After gaining popularity with pieces such as “Three Thousand Taels of Gold”, she transitioned to daily live streaming.

She amassed nearly 100,000 followers on TikTok and earned the nickname “Shasha the Nanyin Singer”. She sustains her live stream by having fans request songs in real time and through fan co-creation. The most frequently requested song, “Three Thousand Taels of Gold”, sometimes requires five performances in a single session. Her attempts to adapt local snacks - such as mianxianhu, vinegar pork, and fried oysters - into her “Little Lyrics” performances were also proposed by her fans and jointly refined. Stable viewer tips enable her to pursue Nanyin singing full-time. This completes, at the individual level, a cycle of transforming cultural capital into data capital, and subsequently into economic capital. Unlike the relatively clear “old-new” distinction observed in other forms of intangible cultural heritage, such as traditional opera, the platform innovations of Nanyin are predominantly achieved through collaborative teams. These teams comprise “heritage bearers, music producers, and young performers”. In the project Dian Shui Nan Le, Zheng Mingming serves both as a representative heritage bearer in institutional terms and as a participant in modern arrangement practices. This indicates that heritage bearers and innovators are not opposing generations. Rather, the pursuit of foundational preservation and the quest for novelty intertwine within the same individual.

This phenomenon provides a localized supplement to Bourdieu’s theory of capital. Within the musical domain of intangible cultural heritage, the original holders of cultural capital can actively embrace digital capital. The decisive variable is not merely age, but whether the actor can access new supporting resources. These resources include music production capabilities and platform operation expertise.

Recasting of the mutual habitus between performers and audiences

(1) Performer: From stage performance to screen-based operations

Traditional Nanyin performers previously established

their authority through ritualistic performances in traditional halls and opera stages, relying on bodily codified routines and complete repertoires. This new platform has rewritten the dynamics of production and reception. It shifts the interaction partner to users on the other side of a screen who can respond in real time.

In terms of performance, outward, continuous bodily expressions are distilled into precise segments through camera framing and algorithmic filtering. Performers are thus gradually developing a data-driven performance consciousness. This consciousness is capable of anticipating which musical phrases are most suitable for dissemination and interpreting interactive data.

Regarding interaction, ritualistic spectatorship has been supplanted by bullet comments and virtual gifts. Performers must now respond to these comments during breath pauses to foster a sense of “presence”. Their role has expanded from that of a performer to that of an account operator. Li Shasha’s routine of “live-streaming at least 362 days per year” exemplifies the gradual consolidation of a new set of habits at the bodily level. Her shift from “feeling embarrassed to perform Nanyin” to “her family taking pride in her” further illustrates this change.

(2) Audience: From passive listeners to co-creators

In terms of aesthetic appreciation, audiences have shifted from passively receiving complete musical pieces to utilizing fragmented time to selectively watch content. Their aesthetic logic has evolved from following a complete narrative to savoring the “rhythm” within vocal techniques and fingerings. They also instantly express their views through live bullet comments and user reviews.

Li Shasha has observed that her fan base has shifted from being predominantly composed of middle-aged and elderly individuals to being primarily composed of young people. In the comment sections, responses such as “Are there young people these days who are learning Nanyin? It’s rare.” have become common. Other responses include “A thumbs-up for preserving the

traditional culture of Southern Fujian.”, “I never get tired of listening to Nanyin”, and “This is exactly the right vibe.” Regarding consumption patterns, spending has expanded from a one-time expenditure centered on ticket purchases to ongoing, symbolic expenditures. These include tips, membership subscriptions, and digital albums. Tips serve as both a testament to aesthetic taste and a marker of community identity.

In terms of participation, audiences have progressed from simple interaction to engaging in productive practices. These practices include music criticism, compilation editing, and cover performances, employing video editing and voiceover techniques.

For instance, Li Shasha has experimented by adapting Quanzhou street foods such as mianxianhu, vinegar pork, and oyster pancakes into traditional musical pieces. Suggestions from her live-streaming fans are jointly refined, and she then performs them. In this process, audiences become integral participants in the reproduction of Nanyin culture. They emerge as “co-creators of cultural meaning” [9].

Practical pathways for the living heritage of Nanyin

Field rule layer: Enabling art to gain deeper integration into platform evaluation

The key to restructuring field-specific rules lies in avoiding the overreliance on dissemination effectiveness as the sole criterion. To address the challenges faced by algorithms in discerning the “rhythm” and technical depth of intangible cultural heritage music, a joint effort is needed. Cultural and tourism administrative authorities, performing troupes, and digital platforms could jointly establish a tiered evaluation and support mechanism. This mechanism would be tailored to intangible cultural heritage music.

On one hand, they could implement the provisions of the “Intangible Cultural Heritage Digital Dissemination Initiative”. These provisions include the identity

verification of inheritors' accounts and traffic support measures. Such measures would ensure that high-quality content produced by professional troupes and representative inheritors gains consistent exposure. On the other hand, they could incorporate content that is difficult to quantify by "initial-second retention rates" into dedicated traffic pools. This content includes full repertoire performances, technical instruction sessions, and thematic explorations of specific schools.

This approach would expand the evaluation framework from a single metric of popularity to a balanced assessment. This assessment would encompass "dissemination reach, artistic depth, and cultural significance". Furthermore, platforms could collaborate with performing troupes to publish creative guidelines for Nanyin. This collaboration would reduce the homogenization of derivative productions based on highlight clips and preserve access points for complete repertoire and in-depth content.

Capital transformation layer: Facilitating bidirectional circulation between professional expertise and data capital

The digital transformation of cultural capital should not be a one-way conversion of traffic metrics. Instead, it should establish channels through which professional expertise and data capital mutually enhance each other's value. For inheritors of intangible cultural heritage, platforms such as the "Intangible Cultural Heritage Inheritors Training Program" can be leveraged to acquire digital content creation and operational capabilities. This enables their embodied technical expertise to be stably converted into disseminable content [10].

For young teams and individual streamers, it is advisable to encourage them to channel their accumulated data capital online back into offline activities. For instance, Dianshui Nanle has utilized its online visibility to access professional concert halls and international art festivals. Li Shasha has transitioned from live-streaming rooms back to teaching and community performance activities.

Simultaneously, established objective capital assets - such as documentation projects and intelligent musical notation systems - should be systematically made accessible to creators. This approach would provide authentic, traceable musical scores and recording resources. It would thereby ground innovation within a unified professional foundation and prevent misinterpretations of musical scores and vocal styles caused by fragmented dissemination practices.

Habit cultivation layer: Defining the boundaries of "rhythm" through the interaction of substance and void

Cultivating new artistic habits requires concerted efforts from both performers and audiences.

For performers, a content strategy of "building a foundation with complete works, supplemented by targeted use of excerpts" should be advocated. This strategy leverages full live performances and online cultural gatherings to foster deep listening. It then employs short video clips to guide audiences toward understanding complete compositions.

For audiences, when encouraging secondary creative engagement, clear boundaries must be established. Approaches such as "adding subtle touches to Southern Music" or "preserving the ancient charm without altering a single note, while introducing enhancements solely in the arrangement phase" provide valuable references. They strike a balance between open co-creation and the preservation of core artistic essence.

Furthermore, stable feedback channels should be established between online and offline domains. Live-streaming bullet comments and excerpt selection data can inform creative processes. Offline cultural gatherings, studio-based training sessions, and international Southern Music conferences can anchor technical mastery and community identity. In this way, the digital realm can expand its reach, while the physical realm can deepen its impact. This ensures that embodied knowledge, including "yin", retains a viable space for

transmission within these new interactive frameworks.

Conclusion

The digitalization of Nanyin is far more than a mere application of technology. It fundamentally reshapes the traditional artistic landscape of this art form. Digital media blur the boundaries between institutional settings and everyday life, between performers and audiences, and between bodily techniques and digital mediums. This transformation turns Nanyin into a cultural ecosystem that bridges humanity and technology, as well as the virtual and the real. However, concerns arise. As algorithmic logic and data visibility gain dominance, the nuanced elements of Nanyin become increasingly difficult to encode and quantify. These elements include the spirit of artistic apprenticeship rooted in the human body, the distinctive “rhyme”, and live interactive engagement. They are also most susceptible to being reduced to mere fragments during the initial few seconds of attention capture, risking complete obfuscation.

As digital platforms become the primary conduit for accessing Nanyin, the question remains: How can Nanyin, centered on the human subject, maintain its authentic presence? Digital technology has expanded the dissemination avenues for Nanyin, so its future direction requires a renewed focus. This focus should redirect emphasis toward safeguarding the profound humanistic values of Nanyin and position digital technology as an enabling intermediary rather than a substitute. It should simultaneously address three key dimensions: evaluation mechanisms, capital transformation, and the cultivation of cultural habits.

This approach aims to foster an open ecosystem that accommodates diversity, encourages multifaceted interpretations, and facilitates intergenerational dialogue. It thereby preserves the existential presence of Nanyin within a new media landscape. This study is based on publicly available data. It did not gain access to algorithmic backend systems or private communities, nor

did it involve systematic interviews with practitioners. These limitations will be addressed in future research through online participatory observations and in-depth interviews.

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Conflicts of Interest

The author declares no conflict of interest.

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