



The Breakthrough Journey of Sichuan Opera on Bilibili: A Study on Audience Perception and Communication Strategies

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Abstract. This study took Sichuan Opera videos on Bilibili as the research object and uses content analysis to restore the audience perception and dissemination mechanism in the context of new media. After mining a large number of comment texts with ROSTCM6 software, it was found that the audience's perception of Sichuan Opera follows a progressive path of "value cognition - skill recognition - cultural reflection", among which the high-frequency words such as "face-changing", "inheritance" and "innovation" highlight the core concerns of young people. And the special ecosystem of Bilibili was promoting the dissemination of Sichuan Opera from one-way output to participatory practices that include emotional immersion, value resonance, and even intergenerational dialogue.

Keywords: Sichuan Opera, New Media Communication, Audience Perception, Participatory Digitalization, Content Analysis

1 Introduction

The *Regulations on the Protection and Inheritance of Sichuan Opera in Sichuan Province* particularly emphasizes the integrated use of new media platforms, yet Sichuan Opera continues to face an aging audience and limited dissemination impact^[1]. The significant generational gap between the one-way communication of traditional dissemination models and the cultural consumption habits of young audiences is precisely the area that has not been deeply explored in current research.

Against this backdrop, Bilibili, a community for the Z-generation centered around the culture of the second dimension, has become the most worthy of observation. A large number of young users have built a new cultural field for the dissemination of Sichuan Opera through unique bullet-screen culture and the creator ecosystem of UP hosts^[2]. Scholars have noted that the iconic elements of Sichuan Opera, such as "face-changing" and "fire-spitting," are being re-created by young people through innovative

forms like game mods and anime fan works, achieving an organic integration of traditional culture and modern aesthetics^{[2][3]}. Qiu Zimo and Lu Wei (2023) believe that this "cultural collage" phenomenon holds the potential to solve the crisis of audience disconnection in traditional opera^[1]. This leads to the three questions this study aims to explore: What kind of Sichuan Opera do the technologically empowered young audiences perceive? What kind of cultural identity do they construct?

2 Literature Review

2.1 The Current Development of Sichuan Opera

Under the impact of the diversification of entertainment methods, Sichuan Opera is facing problems. Scholars are attempting to find solutions from various perspectives. Social media can precisely present intangible cultural heritage through multiple dimensions^[5]. At the technical level, digital technology is highly anticipated. Augmented Reality (AR) technology redefines the perception boundaries of the audience through immersive experiences^[6].

2.2 Audience Perception and Communication Effectiveness

Audience perception is the core dimension for evaluating the effectiveness of communication. However, Liu L (2024) believes that the effectiveness of cultural symbol dissemination has not yet been fully verified. Cultural communication should deepen from "form innovation" to "meaning internalization"^[7]. Specifically for Bilibili, the interaction through comments has indeed eliminated the cultural gap^[8]. However, this kind of interaction might also lead to another extreme situation - when the focus on Kunqu Opera becomes "performative consumption", can we still call it a true cultural identification^[11]?

2.3 New Media Empowerment: The Dissemination of Sichuan Opera in the Bilibili Field

As a gathering place for the Z-generation, Bilibili has become a "spiritual community" that embodies a unique cultural identity. This kind of ecosystem provides a natural environment for the "breaking through the boundaries" of Sichuan Opera. In fact, Sichuan Opera has already actively collaborated with new media, such as the collaboration with the game "Blue Line"^[4]. By leveraging VR technology to enhance the immersive experience^[12], telling Chinese cultural stories through "Genshin Impact"^[10].

3 Data and Methodology

A total of 2,683 user comments (comprising 60,104 words) containing the keyword "Sichuan Opera" were collected from Bilibili, followed by data cleaning and word segmentation. The study employed content analysis methodology, utilizing ROST CM6 to

conduct frequency analysis, sentiment analysis, and semantic network analysis. Co-occurrence map Figure 1 were generated using Ucinet (e.g. Table 1) and Gephi 0.10.1.

Table 1. Keyword co-occurrence matrix (example).

	Sichuan Opera	Cul- ture	Face- chang- ing	Tra- di- tion	Collabo- ration	Cos- tume	Azur Lane	Inher- itance	Facial Makeup
Sichuan Opera		24	57	20	27	0	18	15	17
Culture	24		20	73	19	0	13	35	0
Face- changing	57	20		25	11	19	15	13	13
Tradi- tion	20	73	25		17	0	13	22	14
Collabo- ration	27	19	11	17		0	28	8	0
Costume	0	0	19	0	0		0	0	7
Azur Lane	18	13	15	13	28	0		0	7
Inher- itance	15	35	13	22	8	0	0		0
Facial Makeup	17	0	13	14	0	7	7	0	

4 Results

Table 2. Top 30 High-Frequency Words.

Rank	Word/Phrase	Freq	Rank	Word/Phrase	Freq	Rank	Word/Phrase	Freq
1	Sichuan Opera	290	11	Amazing	56	21	Skin	38
2	Culture	220	12	China	53	22	Performance	37
3	Face-chang- ing	214	13	Era	52	23	Propaganda	33
4	Tradition	164	14	Innovation	52	24	Action	32
5	Collabora- tion	116	15	Game	44	25	Identity V	30
6	Costume	104	16	Art	44	26	Chengdu	30
7	Azur Lane	93	17	Young People	42	27	Cultural Her- itage	30
8	Inheritance	90	18	appealing	42	28	Beijing Opera	27
9	Facial Makeup	90	19	Xiaoqing	40	29	Childhood	26
10	Sichuan	74	20	The Legend of the White Snake	39	30	First time	25

4.1 Word Frequency Analysis

Word frequency analysis (Table 2) reveals several key dimensions. High-frequency terms such as "Sichuan Opera," "culture," and "face-changing" signal strong value recognition and attention to core techniques. References to "Azur Lane," "Identity V," and "game" confirm that cross-boundary integration has become a mainstream dissemination strategy^[4]. Regional markers like "Sichuan" and "Chengdu" appear alongside emotionally charged terms ("amazing," "art") and memory-evoking words ("childhood," "remember"), indicating a reconstruction of cultural identity through positive evaluation and collective nostalgia^[1]. Meanwhile, the co-occurrence of "performers" with "endangered" reflects persistent concerns over heritage preservation. Finally, the prominence of "Legend of the White Snake" and "Xiaoqing" underscores the enduring vitality of classical IPs^[10].

4.2 Semantic Network Analysis

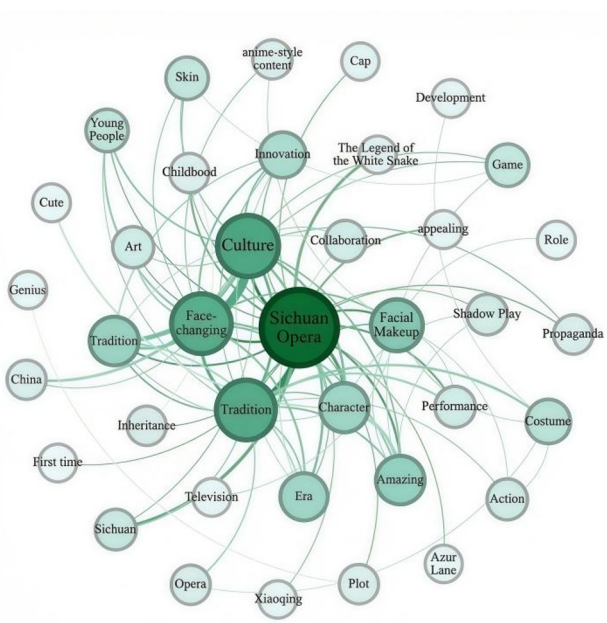


Fig. 1. Co-occurrence map.

The co-word network Table 3 comprises 38 nodes and 178 edges. Core nodes (i.e., those exceeding the average in degree centrality, closeness centrality, and betweenness centrality) are "Sichuan Opera, culture, face-changing, tradition, facial makeup, Azur Lane, collaboration, era, heritage, innovation." Notable node pathways include: "tradition–Sichuan Opera–culture–face-changing," indicating that traditional values remain a central focus; "facial makeup–Sichuan Opera–heritage–innovation," reflecting the au-

dience's expectations for innovation; "Sichuan Opera–collaboration–anime-style content–Azur Lane," revealing successful cross-generational engagement with Gen Z through integrated approaches^[4]; and "Sichuan Opera–Legend of the White Snake–Xiaoqing–character," demonstrating the lasting resonance of classic repertoire ^[10].

Table 3. Network Characteristics of Audience Comment Keywords (Top 5)

Rank	Core Words	Node Degree	Betweenness Centrality	Closeness Centrality
1	Sichuan Opera	25	752.106	75.510 / 74.000
2	Culture	16	130.869	60.656 / 59.677
3	Face-changing	15	224.117	62.712 / 61.667
4	Tradition	15	135.833	60.656 / 60.656
5	Collaboration	8	79.342	53.623 / 52.857

4.3 Sentiment Analysis

Table 4. Sentiment Analysis

Sentiment Category	Number of Comments	Proportion	Intensity	Number of Comments	Proportion
Positive Sentiment	886	48.13%	Low (0-10)	445	24.17%
			Moderate(10-20)	239	12.98%
			High (>20)	202	10.97%
Neutral Sentiment	601	32.65%	\		
Negative Sentiment	354	19.23%	Low(-10-0)	221	12.00%
			Moderate(-20--10)	90	0.89%
			High (<-20)	14	0.76%

As shown in Table 4, Positive emotions accounted for 48.13%, neutral emotions for 32.65%, and negative emotions for 19.23%. Positive comments mainly focused on the high recognition of Sichuan Opera's techniques and value. For instance, the affectionate emotions towards the Sichuan Opera actors ("I fell in love with Xiaoqing."); positive evaluations of Sichuan Opera's innovation ("This is an innovative linkage and also an attempt to change"); positive emotions towards the Sichuan Opera inheritors ("The artists should keep working hard.").

Negative comments stemmed from difficulties in understanding Sichuan Opera works ("I could roughly guess how the clothes changed, but I really couldn't figure out the hats and the facial makeup"); aversion to the innovative methods of Sichuan Opera ("Forcing integration and enlarging the eyes actually lost the uniqueness."); concerns about the loss of traditional culture ("I can only watch these intangible cultural heritages gradually disappear").

These findings indicated that the audience of Bilibili have a dual structure of "traditional recognition" and "innovation expectation" regarding Sichuan Opera, providing a basis for the "creative transformation" of Sichuan Opera, and also warning that excessive entertainmentization may lead to the dilution of recognition.

5 Conclusion and Discussion

5.1 Main Conclusion

Firstly, the activation of the youth-oriented path. By integrating elements such as animation and games, Sichuan Opera has successfully ignited the enthusiasm of young audiences^[4], providing a feasible path for the audience gap. However, the audience holds a complex emotional attitude towards the inheritance and innovation of Sichuan Opera, valuing tradition while being cautious about innovation, and seeking a balance between the two.

Secondly, the progressive logic of audience perception. Viewers delve deeper along the path of "value cognition - skill recognition - cultural reflection"[7], with their focus extending from skill symbols such as "face-changing" and "facial makeup" to cultural values such as "inheritance", "spirit", and "innovation"^[10].

Thirdly, the empowerment of participatory digitalization. Mass creation and community interaction have driven Sichuan Opera to shift from one-way output to a "watching - creating - sharing" viral spread^[12]; real-time interaction between inheritors and audiences has bridged the cultural gap^[8], transforming the "Sichuan Opera enthusiasts" community from loose followers to a "cultural action community"^[11]. This deep integration of offline skills and online consumption scenarios is essentially audience-centered^[10], achieving the "creative transformation" and "innovative development" of intangible cultural heritage through empowerment, interaction, and technological adaptation^[12].

5.2 Management Impact

At the policy level, it is suggested to incorporate digital participation into the protection system of intangible cultural heritage and establish an "Sichuan Opera Digital Resource Database" with open secondary creation^{[9][11]}. At the industrial level, it is possible to promote the deep integration of Sichuan Opera with games and tourism^[4], and achieve cross-cultural communication through the "narrative immersion" approach^{[5][10]}.

5.3 Limitation and Future Study

The data of this study is limited to Bilibili. Future research could be expanded to comparisons across multiple platforms.

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