The Application of Big Data Analysis in the Analysis of the Characteristics of the Use of Miao People's Folk Songs in Xiangxi

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Abstract. As an important part of the "native culture", Miao Song has long been concerned by the academic circles. The use of the added words and added tunes of the Miao folk songs in Xiangxi has distinct national characteristics. According to the different positions of the added words and the added tunes in the Miao song, it can be divided into three categories: before the music, in the music, and after the music. This article combines computer big data technology to introduce in detail the characteristics and functions of these three added words and tunes, and analyzes the reasons for their consistency with Miao folk songs' overall style. Further research on the added words and tunes will help to understand more closely the Miao folk songs' musical form, characteristics and the close connection of the cultural background of the Miao language and customs.

Keywords: Xiangxi Miao Folk Songs, Added Words, Added Tunes, Big Data Analysis

1. Introduction
About 850,000 Miao people live in the Xiangxi Tujia and Miao Autonomous Prefecture. The Miao nationality is a nation that can sing and dance. Men, women and children all like to use songs to tell things and express their feelings. Miao song has a wide range of subjects, and existing research has shown that Miao folk songs can be divided into two categories: "high cavity" and "flat cavity" according to the different songs. The "high cavity" is mainly sung in the wild, focusing on solo, focusing on lyricism, free rhythm, and large pitch fluctuations. "Ping cavity" is mainly sung in the village, with real sound, simple tunes, and emphasis on narrative. Miao songs mainly adopt the palace and commercial style. The structural characteristics of Miao songs are: often consist of two parallel or corresponding phrases to form a passage, and a song includes at least two passages. The lyrics are mostly in the form of seven sentences and four sentences.

Miao songs not only has the unique style of the main part of the music, but also has the distinctive national characteristics of the use of the added words and tunes. The use of the added words and tunes in the songs of Xiangxi is universal. At present, the research on the added words and tunes of Xiangxi Miao song is still a weak link, which is not conducive to a comprehensive understanding of its musical characteristics. Therefore, it is necessary to take the Xiangxi Miao songs' added words and tunes as the research object and make a special investigation[1].
2. The type and function of the added words and tunes

According to the different positions of the added words and tunes in the Miao song, it can be divided into three categories: the added words and tunes of the front of the music, the added words and tunes of the music, and the added words and tunes of the ending of the music. The following will be specifically introduced and analyzed separately:

2.1. The added words and tunes before the music

(1) Added words

Miao songs' flat cavity in the music are often used e, yi, wa, wu, e han e, the most frequently used is the tone of the word e, e han e. There are also some added words applied to specific flat cavity types. See Table 1 below:

| Flat cavity type                  | Added words                                                                 |
|----------------------------------|-----------------------------------------------------------------------------|
| Shao sa not ga(beep solid adjustable) | I want to tell you to listen                                                |
| Shao sa ga(love song tune)        | Hi hi is oh, hi hi role oh, gong oh, dragon auspicious gives fierce ah       |
| Shao sa bukan(broken head cavity) | Ah really                                                                   |

The added words and tunes before music of the Miao folk songs high-cavity repeating structure is often e han e, but in some songs with more than four lyrics, the adds words of the odd-sentence from the second sentence have changed; The upper part of the corresponding structure of the music is in the form of A+B, often using wu wa a e, yi wa e, + eng e, a e ; The sentence' added words only contains part B, commonly used eng e, a e.

(2) Added tunes

The time value of the added tunes of the music is longer in either the flat cavity or the high cavity. The melody of the lining cavity is often a melody frame with a pure fifth-degree interval. The do-mi-sol or re-soi-la is used to develop the melody of the backbone sound. It is also further used inside the structure of the Miao song, with core tonal features. In the Miao folk songs, the melody form is usually a small wave type with less beats. In the Miao folk songs high cavity, the lining melody has a wide range of sounds, and it is recommended to use the four, five, and eight octaves of the big jump. The spin method is a typical chord decomposition type. The shape of the melody line is often a high drop type and a undulating wave type. The descending melody often has a glide at the end; The wavy melody ends with a cavity with a large interval, and the ending is often the highest pitch of the whole song. The added tunes is free and stretched[2].

(3) Performance function

First, set the situation and render the atmosphere. The added words are mostly imaginary words, and there is no actual meaning. There is no actual connection with the lyrics on the surface, but in fact, the lyrics display content has the effect of setting and laying the foundation. After the words are matched with the appropriate melody. It also creates a specific atmosphere that lays the emotional tone of the extended song. For example, in the song "Twigs Spring Blossoms", the use of the long stretches of the phrase and the long added words and tunes, depicting a beautiful scene of the earth's resurrection, the singer's joy. Second, it attracts attention and has the function of introducing cavities. The form of the added words and tunes of the music is relatively fixed and the melody has a long sound value. On the one hand, it is beneficial for the singer to make full physiological and psychological preparation for the main part of the singing song: opening the throat, gestating the vocabulary, cultivating feelings; People's attention, with call-calling, prepares the responder to respond. It can be seen that the added words and tunes of the music front lining often has a relatively independent structural form and performance. It has a rendering function similar to the introduction and "overture"[3].
2.2. The added words and tunes in the music

(1) Added words
There are few types of added words in the music, and often only one word "e" is used, sometimes "a e". There are two main forms of lyrics in the music, which make the seven-word structure form a rhythm of two or five or four. See the following example: a. Miao Jia (e) has the Communist Party. b. Daughter's foot (a e) broom.

(2) Added tunes
The real value of the added tunes in the music is short, and the melody is usually a short tone composed of one or two notes. The added words and tunes used in the Miao folk songs high cavity and the peaceful cavity are different. However, in the Miao songs of the same genre, there is little change in the use of the added tunes. In the flat cavity, the sound of the added tunes is often composed of the do sound or the do and re sounds. In the high cavity, it is mainly composed of re sound or re and sol.

(3) Performance function
Although the added words and tunes of the music is short, its role in the Miao song cannot be ignored. First, adjust, connect, and transition. Appear in the similarity of two syllables, which can avoid confusing syllables and unclear semantic expression. At the same time, it can make up the tone too single and enhance the rhythm of the tune. It appears in the place where the two syllables have a large contrast, which can strengthen the words and words. The connection between the two makes the bite smooth and the melody transitions naturally. Second, change and develop functions. In the natural tone of the lyrics, the added words and tunes can be added to break the normal rhythm of natural language, forming the freedom and diversity of the rhythm, and increasing the freshness of the song. Third, balance the structure. Because the rhythm of the Miao song lyrics is XX/XXXX or XXXX/XXX, adding the appropriate added words and tunes will change the asymmetry of the lyrics and balance the music structure. Fourth, adjust the singing atmosphere and play singing skills. Adding words and cavity to the music not only helps the singer to ventilate during the process, but also helps the singer's emotions to pave the way and save. Therefore, although the independent expression of the added words and tunes in the music is not strong and the form is relatively simple, it has the role of "catalyst" for regulating the singing scent, adjusting the lyrics, the internal structure of the melody, and enriching the expressive power of the song.

2.3. The added words and tunes after the music

(1) Added words
In the Miao songs' flat cavity, there are only two types of music lyrics, usually "ev and occasionally "a e", but the application rate is extremely high and has a very important structural status. In the high voice of Miao songs, the types of words are more abundant than the plain words, not only the main added word "e", but also Wu, Wa, yi and other words.

(2) Added tunes
The details of the use of the lining cavity after the music are shown in Table 2 below.

| Genre       | Structural type       | Specific form                                    |
|-------------|-----------------------|--------------------------------------------------|
| Flat cavity | Repeat type           | The upper and lower sentences have a post-lining cavity, and the melody pattern is 2——1 ↘2−1 \     |
|             | Corresponding type    | Only the next sentence has a sentence after the lining cavity, the melody pattern is 2——1 ↘2−1 \     |
| High cavity | Repeat type | Both the upper and lower sentences have a post-lining cavity, which consists of 2 and 5 sounds, but the specific form is different. The last sentence is 5——2↘, emphasizes the main tone 2, and the lining melody has a long value. |
| Corresponding type | There are sentences in the back and forth. The last sentence is 6——2↘, terminated. The next sentence is 5——2↘ completed. |

It can be seen from the above table that the application of the lining cavity of Miao folk songs' flat cavity music is relatively simple, and the melody tone is single. Although the lining cavity of the high-cavity music is more complicated, there are only two forms in the same Miao song, and there is a simple basic law: the upper sentence emphasizes the genre and subordinate sound above the main sound, which causes the melody. The sense of stability promotes the development of the melody; the next sentence emphasizes the lead and highlights the stability of the melody [5].

(3) Performance function

First, strengthen the tone and push the waves. At the end of the lyrics, the tone of the pause is matched with the added words and tunes, which can cause the extension and reinforcement of the tone. At the same time, the added words and tunes of the music can also serve as a supplementary means for the main part of the song, making the singer more broad. The time and space fully express their emotions. Second, expand the structure and enrich the melody. Miao songs' music structure is relatively simple, often using repeated or repeated repetitive techniques to form a melody, the music is mostly seven words and four sentences. The use of the line cavity not only expands the cavity of the music, expands the structure of the song, makes the melody more melodious, and the added words and tunes of the music plays an important role in the harmony function: make the ending sound of the melody the main sound, strengthen the stability of the song, and highlight the melody characteristics of the melody. The added tunes of the music can also bring freshness to the melody with less variation, enrich the aria and add the artistic charm of Miao song [6].

3. Conclusion

This article analyzes the characteristics of the use of Miao folk songs in western Hunan by applying big data analysis, and draws the following conclusions: In general, the Miao songs added words and tunes is simple and simple, and is good at using refined music materials to create unique style music. Its characteristics are consistent with the original and natural style of Miao song. The added words and tunes of the Miao folk songs are colorful, and it is a treasure in the art of my national song. It not only contains the wisdom of the working people to create art, but also exudes the fragrance of the country's soil, and has a strong artistic expression and appeal, highlighting the personality characteristics of the Miao folk songs. Learning, researching, inheriting and excavating it will be of great significance for further protection, inheritance, and promotion of the folk songs of the Miao nationality in Xiangxi and the development of our new music today.

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YSX062: Study on the Lack of Groups of the Inheritors of Xiangxi Folk Songs from the perspective of the "intangible cultural heritage" protection.

References

[1] Garbers J, Volk A, Kranenburg P V, et al. On Pitch and Chord Stability in Folk Song Variation Retrieval[J]. Communications in Computer & Information Science, 2007, 37:97-106.
[2] Bäcker J. Chinese Folk Songs and Folk Singers: Shan'ge Traditions in Southern Jiangsu[J]. Asian Folklore Studies, 2000, 59(2):337.

[3] Yi L, Xu J P, Lei W, et al. The Study of the Classification of Chinese Folk Songs by Regional Style[C]// International Conference on Semantic Computing. 2007.

[4] Conklin D, Anagnostopoulou C. Comparative Pattern Analysis of Cretan Folk Songs[J]. Journal of New Music Research, 2011, 40(2):119-125.

[5] Zhou Y J. Research on the Lining Words of Huanggang Folk Songs[J]. Journal of Hubei University for Nationalities, 2010.

[6] Ouyang Xiaolu. A Study on the Folk Songs of Hunan Han Nationality [D]. Central China Normal University, 2019.