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The analysis and research on the tonality of the music works in the basic music theory teaching in colleges and universities

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ABSTRACT

The key and difficult points in the process of basic music theory teaching in colleges and universities are the mode and tonality analysis, and many primary learners are prepared to analyze the mode and tonality of the music melody under the condition of definite mode system. In order to better grasp the content and structure of music works and accurately express the music emotion, learning to correctly distinguish the mode and the tonality of melody is critical. This article will analyze the tonality of music works in the basic music theory teaching mainly from the four aspects, which are distinguishing melody to constitute the note connection, the sound effects of the melody, background information, and the comprehensive characteristics.

KEYWORDS

Colleges and universities; Basic music theory teaching; Music works; Tonality; Research.



INTRODUCTION

The basic music theory course, as the compulsory professional basic theory course for the undergraduate students majoring in music, combining with harmonic ear training course are called the "cornerstone" of music class specialized curriculum system. The main teaching content of the basic music theory teaching includes distinguishing the enharmonic note, the half-tone and the whole tone, judging the tonality of melody, and the solution of the unstable interval and the chords and so on. Students may feel difficulty in learning the above content, so they need teacher's guidance and help. Below it will briefly analyze the tonality of the music works in the college basic music theory teaching in tonal music works in order to help students' learning.

CONSTITUTE THE SOUNDS CONNECTION TO DISTINGUISH THE TONALITY OF THE MUSIC WORKS THROUGH THE MELODY

Major and minor key and the ancient key

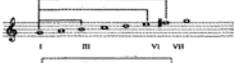
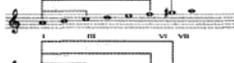
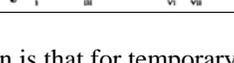
The mode and tonality of the major and minor key was formed on the basis of the mode and tonality of the ancient key, and except for the obvious differences between the special sounds, both of these two mode systems have certain commonality in the process of development and connection of the monophonic melody. For example, the music melody of Brahms's *Waltz* (with the style of the nature major), Chopin's *Banquet* (the bottom pressure mode) all belong to the form of jumping to a connection (shown in TABLE 1).

TABLE 1 : Natural tuning, harmonies tuning and melody tuning

Modal scale		grade I and grade III	grade I and grade VI	grade I and grade VII
Large tuning	Nature		Big 6 degrees	Large 7 degrees
	Harmonies	Big three degrees	Small 6 degrees	Large 7 degrees
	Melody (downstream)		Small 6 degrees	Small 7 degrees
Minor type	Nature		Small 6 degrees	Small 6 degrees
	Harmonies	Small 3 degrees	Big 6 degrees	Small 7 degrees
	Melody (upstream)		Large 7 degrees	Large 7 degrees

While the music melody of Bach's *Vocal Music* (Phrygia mode) and Schubert's *Wild Rose* (melodic minor mode) all belong to the continuous second connection. At the same time, there are a lot of transverse connections of music melody between the major and minor key and the ancient key^[1]. The Scale analysis TABLE is shown as TABLE 2.

TABLE 2 : Scale analysis table

Example	Relationship between the scale structure and the color tone level	Tuning types
Example 1		G natural major
Example 2		a harmonic minor
Example 4		d harmonic minor
Example 9		A harmonies major

Needs special mention is that for temporary tone melody with diacritical marks, how to determine? The concrete can be divided into three cases to consider: "fixed changes in sound level" of tune number. If melodies no key signature, all with accidentals notation, you should first consider which sound is recorded in the number of fixed-tune the sound level changes, which sound is not recorded in the number of temporary changes in tone sound level, which can be determined based on the order of generation by the adjusted number and sharps number.

The national key

It can be known by comparing the mode, tonality and music melody of the national key, the major and minor key and the ancient key that, the most obvious feature is that the melody is the three tone group connection which is mainly composed of five syllables, and the melody connection of the national key is mainly the combination of the minor third + major second or the major second + minor third. The well known *The sun won't set in the prairie* and *Jasmine* are very

similar to the melody of this kind of folk music, and most of its lateral connecting way belong to minor third + major second or major second + minor third^[2].

DISTINGUISHING THE TONALITY OF MUSIC WORKS THROUGH THE MELODY ACOUSTICS

Music is a kind of beautiful enjoyment, and people who initially study music just use the spectrum plane to analyze the mode and tonality of music melody, but are not with the aid of solfege to distinguish the mode and tonality of the music melody. If not unite the auditory sense to perceive the music, it will surely not achieve the ideal effect to learn music. Below, under the situation of analyzing the surface of the spectrum, this paper, combining the way of listening and singing, will analyze the tonality of the music melody.

Major and minor tonality

In the system of major and minor tonality, the main sound levels of the music melody are I, III, IV, and V, and its theme presentation of the music melody takes the development of the mode main triads as the core. Hereinto, the major tonality gives priority to the main triads to decompose, and has very bright colors, while the minor tonality gives priority to the main triads with obvious dark color^[3]. People perceive the sound effects of the music melody and further understand its characteristics mainly through the first tone sight-singing (shown in TABLE 3).

TABLE 3 : Feature tables of size tuning and pentatonic type

Tuning system		Characteristic interval
Size tuning	Natural tuning	Triton (by 4 degrees, minus 5 degrees)
	Harmonic tuning	by 2 degrees, minus 7 degrees by 5 degrees, minus 4 degree
	Melodic tune style	by 5 degrees, minus 4 degree
Pentatonic style		Endowment tone ("Palace - angle" big 3 degrees)

Taking *The brave riders* (Schumann) for example, the theme of the music melody has not a key signature, and is completely in accordance with the characteristic that there is no key signature for the C major key to begin the sight-singing. The beginning and the end part of the music was developed by A, C and E, to get the key note A, and at the same time, the G level of syllables was improve to VII to become into a harmony minor tonal sound. Sight-sing once, you can distinguish its mode and tonality into a harmonic minor.

The ancient tonality

The mode and sound level advocated by the music melody of both two systems of the ancient tonality and the major and minor tonality are similar, because of adding the special syllables in, it led to form the sound effects which are absolutely different from the major and minor key, and to a certain extent it also led to the contradictory phenomenon of the key signature and the phase in the notation^[4]. In the Ukrainian fold song, for example, the key signature is flat B major key; analyzing the main melody tone, its outstanding musical alphabet is flat E and flat G rather than flat B, and it mainly stays in flat E, so it is obvious the tonic of the mode is flat E rather than flat B or flat G. Therefore, in the process of the sight-singing with the flat E as the first tonality, due to adding the A syllable, the overall sound effects formed the long style which is absolutely different from the major and minor key.

The national tonality

In the auditory sense, the combination of the three syllables of the national tonal melody can much more reflect the characteristics. It is because in China, the national tonality has five, six and seven voice tonality, and it may be omitted the syllables in all of these kinds of tonality which causes the contradictory phenomenon of the key signature and the phase in the notation. Therefore, in the process of sight-singing with the first tonality it needs to do utmost to avoid partial tone^[5]. For example, in the *Welcome the New Year and Sing the New Thing* the folk song of She in Fujian province, one of the key signature is sharp and in the process of sight-seeing starting with the first tonality through the G major, on the strong beat and long duration part there may be biased sound and clear angle, and at this time using the related theory of "the clear angle as the palace" to analyze and define C as palace. With the help of C major, the duration in the process of partial tone in the sight-singing become shorter, and the times become less and the position become weaker. So using the sight-singing can timely and accurately identify that the melody tonality is a feather six acoustic mode.

Finally, it should be noted that the general analysis of the melody tone is feasible for clearly tone melody described in this paper. But in the actual analysis will encounter some clear tonality difficult circumstances, such as the size of the adjustment formula, specifically large, minor type III grade color tone does not appear, due to the lack of multi-voice harmonies were caused due to the music even more determined the tendency, therefore there will be wavering in tuning nature.

DISTINGUISHING THE TONALITY OF MUSIC WORKS THROUGH THE BACKGROUND INFORMATION

The tonality can be divided into two aspects, the pitch and the mode, and you need to keep clear thinking when distinguishing so that they can be crushed one by one. The pitch refers to the pitch of the tonic of the mode, which is showed by using the form of musical alphabet letter of the absolute pitch of the tonic of the mode, so it only needs to find out the tonic of the mode, you can write its pitch (musical alphabet). Mode is the musical sound organizational structure formed in the music practice process of human for a long time, and in different ages, nations and regions, the system of mode is different. Various types of mode have certain characteristics and expression because of the differences in the scale structure, the melody, the mode and the scale connection and so on (shown in TABLE 3)^[6].

TABLE 4 : Analysis table of typical examples

Example 1	G natural major
Example 2	a harmonic minor
Example 3	Pentatonic A plume
Example 4	d harmonic minor
Example 5	Plus clear angle of six suppliers
Example 6	g melodic sound
Example 7	Pentatonic ^b B palace
Example 8	Allot seven ^b E levy
Example 9	A harmonies sound tune
Example 10	a harmonic minor

The existence of the diversified mode, a large number of modulation, borrowing tone in a notation and deflected tone in different music works increases the difficulty for people to distinguish the mode and the tonality of the music melody. According to the affiliation mode of the same melody, different music scholars' opinions may vary widely. But after knowing all kinds of basic conditions, there are still some rules to distinguish the tonality of the music melody. (1) Assigning values to the basic characteristics of the mode tonality, including the interval structure, the number of sound level and the characteristics of interval, is premise conditions to ensure the precision of the analysis^[7]. (2) Being familiar with the related background information of the music work which will be analyzed, and in the teaching activities of the basic music theory course, the music melody tonality analysis is mainly related to the three mode system, which are the seven tone mode system with non-five sound, Chinese five sound mode system (five tone, the six and seven tones taking the five sound as the backbone), European music system (major and minor key and the ancient key in the modern time) respectively. In the process of college basic music theory teaching, teachers usually take the Chinese five sound mode systems and the European music system as the key content. After having a certain understanding for the background data of music works, you can roughly reason out the category of affiliation of the mode and the tonality of the music works.

As shown in Figure 1, the music score was from the opera *Christmas Eve* created by the Russian composer Rimsky-Korsakov. Although the music melody only selects six sound levels, it still needs to exclude the probability that belong to the five of six tones. Through further analysis, it can be preliminarily included into the mode system of major and minor key.



Figure 1 : Systems of Major and Minor Tonality

As shown in Figure 2, the music score derived from *Jiao Chengshan* (Shanxi folk songs), which is able to eliminate the major and minor tonality and the ancient tonality, and further reasons out that this melody belongs to the Chinese five mode system. Then it can be known from the further analysis of the melody that it used the seven mode sound levels, so it can be judged as the seven mode system without five tones. On the contrary, if you do not understand the related background information of the music works, it is hard to judge whether a melody, composed of 7 sound levels, belongs to the major and minor mode or to the seven mode system, and it is extremely easily to be caught in the analyzing difficulties.

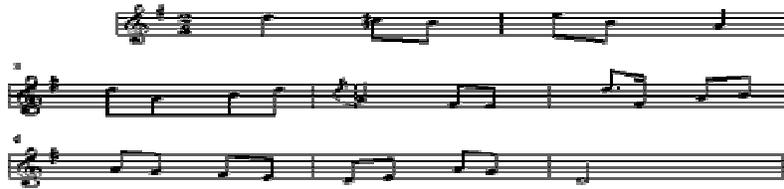


Figure 2 : Seven Sound Mode System with Five Tones

DISTINGUISHING THE TONALITY OF THE MUSIC WORKS THROUGH THE COMPREHENSIVE CHARACTERISTICS

There probably will not be errors for the mode and tonality analysis of the characteristics of the key signature, above third and the special sound which are used by a variety of melodies. But for the mode system, melody sound effect and the composition characteristics that the melody belongs to, it should do a comprehensive analysis. Such as Beethoven's *Piano Sonata*, in the first five sections there is not any definite sharp or flat mark, but in the last three sections there are modulations of sharp F and sharp D; and use C major to sight-sing, and according to the music melody, if the stressed syllable in the beginning is A, C, and E, then it will be defined as A natural minor. The music melody of the whole song mainly takes the continuous second as the principal thing, which obviously does not belong to the national mode. In the last three sections of the tune there are sharp F and sharp D, and according to the key signature and its characteristics, it can be identified as E harmony minor, and at the same time use G major as the first tonality to implement the sight-singing minor^[8].

After understanding the mode system, it needs to take the "critical sound" and "key intervals" as the core to distinguish the tonality. Here are three steps: (1) the primary key and the pitch should be clear. The tonic is the most stable central sound in the music melody. Figure 1 reflects that if the melody knot sound is flat E, then the melody is the biggest possible flat E minor or flat E major. (2) According to the critical interval to distinguish types of mode, and distinguish whether the key intervals in the homophones major and minor mode belong to grade I or grade III, and the minor third is defined as minor mode while the major third is defined as the major mode. In Figure 1 the grade I flat E and the grade III note G formed the major third, and determined that its melody was flat E major. (3) Distinguish the types of mode in accordance with the mode color. The differences among the melody mode, harmony mode and the natural mode lie in whether there are color sounds composed by grade VI or VII sounds with sharp and flat mode. Hereby, the type of the specific mode can be speculated. In Figure 1, the flat C mode is the flat sound with grade VI, which belongs to the harmony major color tone, and the melody belongs to flat E harmony major. The Characteristics tables of melody spin method is shown as TABLE 5.

TABLE 5 : Characteristics tables of melody spin method

Example	Melody Features	Modal types
Example 1	Pure broken chords, scale type, triton type	Size tuning
Example 2	Pure broken chords, scale type	Size tuning
Example 3	three tone groups	Pentatonic style
Example 4	Scale type, triton type	Size tuning
Example 5	three tone groups	Pentatonic style
Example 6	Scale type, Pure broken chords	Size tuning
Example 7	three tone groups	Pentatonic style
Example 8	three tone groups	Pentatonic style
Example 9	Pure broken chords, scale type	Size tuning
Example 10	scale type, Pure broken chords	Size tuning

Through the following three steps the tonality in Figure 2 can be decided. (1) According to the key signature, the tonic, palace and pitch can be determined. One of the sharps in the key signatures will be defined as G key, and G in the pentatonic mode represents the palace sound and the pitch and the tonic of the melody is D. (2) According to the interval relationship between the tonic and the palace sound, it can reason that the mode in Figure 2 belongs to the requisition, and combining with the pitch to analyze, it can be known that it is D requisition mode. (3) First find out the ponticello outside the pentatonic sound and then distinguish with the "color sound" of the type of the pentatonic seventh mode. According to the record of *Selections from Music Books* that the twice ponticello likes the yanmei in the pentatonic sound, which illustrates that except for the pentatonic sound, there are still the palace and requisition in this music melody, and it can be further reasoned that the tonality of the melody belongs to the positive D requisition. Under general circumstances, it is difficult to

analyze the modulation melody, but as long as you know the main approach of analyzing the melody and have a clear thought, the problems can be resolved smoothly.

CONCLUSION

For these difficult to clear tonality more complex cases, this paper think that those should not be included in teaching of basic music theory, because, as the most basic theoretical courses, select its contents should follow the "universal" principle, for those too "specialized" theoretical knowledge (such as some content of the Chinese traditional music theory) can be placed in other courses go to speak. So as to the instance choice, the teacher should fully take this into account. This paper explores a key and difficult issues during the music theory course teaching - teaching method of "tonality analysis of melody", which aims to initiate, causing everyone concern and attention on music theory pedagogy, as Congyin Sun said, "To help the majority of young teachers detours, compiled a "basic Music pedagogy," the book is very needed currently, but also very necessary."

People who began to learn music should earnestly study and research the analysis methods summed up by the previous music experts and scholars, master the different characteristics of lateral connection in the three mode systems, and then quickly and accurately match the music melody characteristics, and comprehensively analyze the sight-singing with the first tonality, which will help accurately understand the connotation of the music works from the aspects of auditory, then express the music emotion well, and lay the foundation for further studying the related music theory knowledge in the future.

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