A Harmonic Study of Rhythm and Blues in Chinese Popular Music

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Abstract. The purpose of this thesis is to study the use of Rhythm and Blues (hereafter referred to as R&B) harmony and its characteristics in Chinese popular music. The study reviews the historical development, representative works, and representative figures of Chinese R&B. Through an in-depth analysis of the stylistic characteristics of R&B in Chinese popular music, as well as the classic works of Chinese R&B music, the study analyzes some common chord structures in R&B music, and analyzes the principles of chord arrangement and color changes. After fully understanding the nature of chords in R&B, we will study the application of harmony in Chinese R&B music, understand the rules and logic of chord progression, and analyze the relationship between harmony and melody in songs. This study will help creators to have a better understanding of analyzed R&B harmony and provide more ideas for future music creation in this genre.

Keywords: Rhythm and Blues (R&B), pop music, harmony, chords.

1 Introduction

1.1 An Overview of the Historical Development of R&B in China

The historical development of Rhythm and Blues (or R&B for short) can be traced back to the mid-1940s, before it was officially named. However, this style of music soon spread widely and became one of the representatives of black popular music.

The original R&B was developed based on musical elements of blues and jazz. It uses the harmonies commonly found in the blues, but also incorporates the swinging rhythms and horn-based arrangements found in jazz. Over time, R&B evolved into an independent style of music and reached its peak during the 1950s and 1960s. In the 1970s and 1980s, R&B began to merge with other styles of music, such as rock music and soul music, to create a more diverse style of music.

After the 1990s, R&B music officially entered China. Some Chinese singers began to experiment with this style of songwriting. Songs in this style use a lot of syncopated notes to form rhythmic rhythms; the melody often has ornamental sounds such as glissandos and vibrato, etc. In the 00s, the style of Chinese pop songs became

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more diversified, and most Chinese pop singers could find obvious R&B music styles in their musical works.

Nowadays, R&B has become one of the mainstream styles in popular music. It is not only popular all over the world, but also has a large number of fans in China. The development of Chinese R&B has also been influenced by Chinese culture, and many R&B songs with a "Chinese style" flavor have been born. These music works not only inherit the elements of traditional R&B, but also add Chinese folk instruments as accompaniment, and use the traditional Chinese tuning, showing the unique innovative elements of Chinese R&B [1].

Overall, Chinese R&B as a musical style has developed and evolved under the influence of international pop music and Chinese culture. Its historical development is full of changes and innovations, and also reflects the degree of tolerance of Chinese music culture towards foreign music styles as well as the cultural exchange interoperability of music.

1.2 Stylistic Characteristics and Musical Features of Chinese R&B

R&B as a dominant musical genre in modern popular music, combines many of its stylistic features and musical characteristics. Early R&B was developed from elements of blues and jazz. Over the decades, it fused elements of electronic music, hip-hop, and rock music, developing into an independent musical style and becoming a unique branch of popular music genre style. R&B also has many branches, such as Classic pop R&B, which combines with classical elements and the songs tend to be more melodic with emotional narratives; and the style called Contemporary R&B, which combines traditional R&B with the influences of funk, pop, hip-hop and other music.

Secondly R&B is known for its unique rhythm and rhyme. Most R&B has four beats to a bar and emphasizes the second and fourth of those beats, which are the backbeats. R&B often uses complex percussion instruments as well as bass or guitar to enrich the rhythm of the song and reinforce its groove.

Although there are not many types of chords used in R&B, and most of the chords in a piece are repeated, most of the songs use high stacked chords and other complex chords, which enhance the emotional expression and the listening experience through the diversity of their constituent tones, as well as the distinctive colors of the extended tones such as ninths and elevenths. The songs use a lot of repetitive phrases, and the melodic lines are beautiful and simple; they emphasize emotional expression and vocal technique, creating a sense of silky smoothness and subtle spontaneity.

Early R&B used mostly the same playing instruments as jazz, including piano, percussion, brass, and strings. Afterwards, they no longer stick to the classic instruments of jazz, and are influenced by elements of electronic music, funk, hip-hop, and rock music, experimenting with electric guitars, electric basses, synthesizers, and other instruments. The instruments used in Chinese R&B have been further developed. Some Chinese ethnic instruments are added to the songs, such as guzheng, erhu, pan drums, gongs, and other instruments with Chinese elements are used in the songs, especially in the introductions or interludes[5].

1.3 The Music Analysed in The Thesis

This thesis will select six representative works of Chinese R&B for specific analysis. By combining the composer, arranger, and year of creation, the following six pieces are identified as the objects of study.

Table 1. Music sheets and their information.

Music Title	Composer	Arranger	Singer	Year of release
“Quicksand”	David Tao	David Tao	David Tao	1997
“Normal Friend”	David Tao	David Tao	David Tao	1999
“Celadon”	Jay Chou	Xingming Zhong	Jay Chou	2007
“Our Song”	Leehom Wang	Leehom Wang	Leehom Wang	2007
“The Special One”	Khalil Fong	Khalil Fong	Khalil Fong	2014
“Don't Ask It's Scary”	j.sheon	XinXiong Pan	j.sheon	2017

These are the six representative Chinese R&B songs analyzed in the thesis, which the author divided into three time periods. Two works were selected between 1990 and 2000, namely "Quicksand" and "Normal Friend", both by the originator of Chinese R&B music – David Tao. Two songs were selected from 2000 to 2010, "Celadon" and "Our Song", both from the peak of R&B development in China. The development of the new era of Chinese R&B since 2010 to the present should not be underestimated. There are two selected works for this thesis, namely "The Special One" and "Don't Ask It's Scary".

2 The Chord Structure of Chinese R&B

2.1 Natural 7thChords and Higher Stacked Chords

In Chinese R&B, most of the songs are harmonized in natural major and minor keys. R&B developed from jazz, which often uses seventh and higher chords. R&B developed from jazz, and often uses 7th chords and above, while natural 7th chords and above high stacked chords use the intonation as the chord building blocks, which is more colorful compared to the major or minor triads at each level.

The underlying logic of these high stacked chords is the same as that of the major and minor triads. Such as the IVmajor 7th chord, has the same subordinate nature, but because of its many constituent tones, the colors it displays are more complex and intense. For example, the IImin 7th chord, also known as the secondary minor seventh

chord, adds its seventh note to the secondary sub-triad chord, which has a softer nature and is more conducive to the expression of emotions. Because of its subordinate and minor nature, this chord can be used to replace a fourth chord in a song to portray a melancholic color.

In the last bar of the intro to "Our Song", the IImin 7th chord is used before the Vsus4 chord, forming a fifth downward, forming a semi-final , defining a stable sense of passage and structure for the main song. See figure 1 for details, the figure is for guitar transposition, the song is in the key of bD major, the chart demonstrates the key of C major.

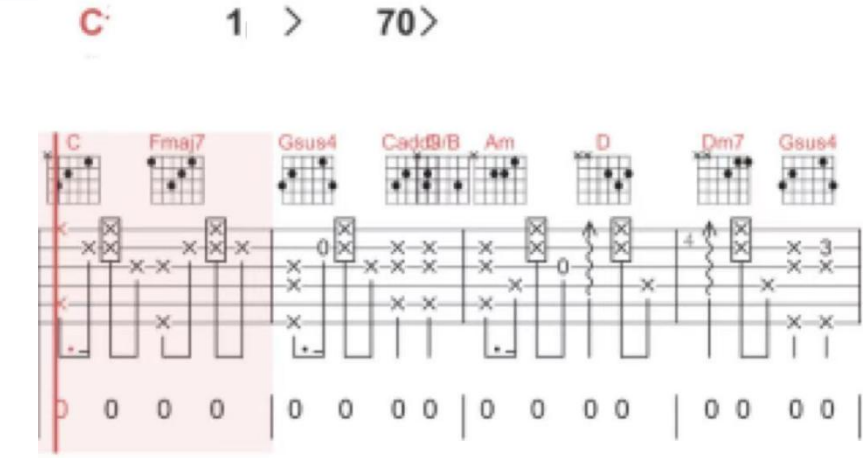

Fig. 1. transposed for guitar, and is shown demonstrating the key of C major

2.2 Added Tone Chords

The added tone chord is a chord in which the outer tones of the chord are added to the original triad in a non-triadic overlay, such as the ninth and eleventh tones. In the case of the suspended chord, it is a chord in which the tritone is replaced by a diatonic or a quatonic. Theoretically, these two chords contradict each other, but in R&B songs, most of the songs that use these two chords have very similar colors, so most of the songs don't force to distinguish the chord types.

The surtone chords are used mostly for the upward and downward movement of the chord tones, or to conform to the melodic line of the song, or to gain some special color through the tendency of their surtone to the chord tones. For example, IVmin6 chord, because it is a minor sixth chord, has a melancholic color. Due to its minor nature, it is very suitable to be followed by a IVmaj chord or IVmaj 7th chord in order to create a contrast between light and dark. Its third b6, is the tonic of the harmonic major and is chromatically related to the root of the dominant chord. So this chord is a characteristic chord interchangeable with the natural minor modes, not only has a similar functionality to the dominant chord, but also has a unique melancholic and soft color, so in some songs the fifth chord is replaced by a IVmin6 in a similar progression of IV-V-I.

In the second measure of the main song "Quicksand", the above mentioned harmonic progression of IVmaj 7th chord - IVmin6 chord - Imaj chord is used, which expresses a richer and deeper emotion and atmosphere than the traditional dominant chord progression to the Imaj chord. See figure 2 for more details, which is in the key of G major for the guitar.

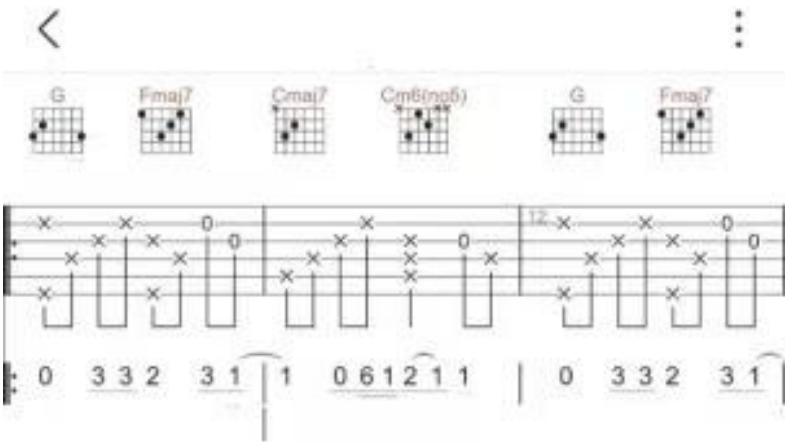

Fig.2. the key of G major for the guitar

2.3 Inversion Chords

The inversion chord is a chord with a different bass note, which may not be the inner note of the chord, but may be any note. They are usually added between chords in a song to form a smooth bass downbeat or upbeat, while retaining the nature of the original chord, e.g. V/VII chord. It can also be the result of removing some of the chord voicings from some of the higher stacked chords, giving them a more concise and cleaner color than the original higher stacked chords.

For example, IV/V chord is also the V9sus4 chord with the fifth omitted, so it has the nature and sound of a dominant chord. In R&B songs it is often used instead of the dominant chord at the end of the phrase, or it can be resolved to the VMm7 chord and then proceeded to the next phrase.

This chord is used as a dominant chord at the end of the intro to "Quicksand" to form a tense, urgently resolving II-V semi-termination, which then resolves to the first chord of the main song. See figure 3 for details, which is transposed for guitar, and is shown demonstrating the key of G major.

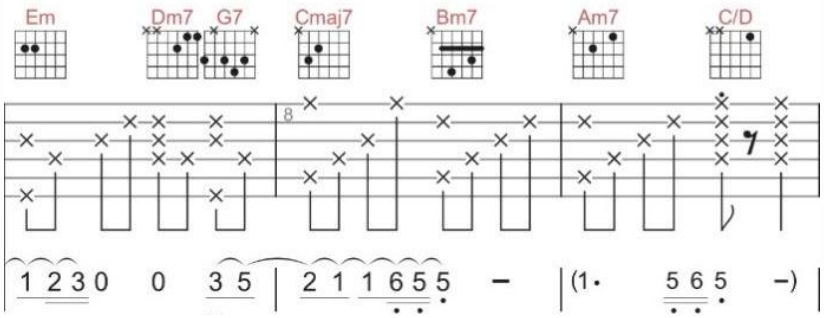

Fig. 3. transposed for guitar, and is shown demonstrating the key of G major

2.4 Off-Key Chords

Off-key chords are often used in R&B songs, and are generally used for short durations and need to be resolved. Most off-key chords are arranged as subgenus chords to make the song more colorful, such as ⅢMm7 chord, ⅤMm7 chord and so on. Off-key chords are also used as transition chords in harmony, because of their unstable off-key nature, they usually only have one or two beats of timing to express some mood. Off-key chords are also used in song transitions [3].

Generally out-of-tune chords are used as transition chords, often using some of the jazz chord arrangement techniques. For example, bⅦmaj 7th chord, as a subordinate chord of Ⅳ, is also called a heavy subordinate chord. It is often used in songs with fourth or first chords. Although it is an Off-key chord, its nature is actually a characteristic chord obtained by interchanging major and minor keys. In the beginning of the main song "Quicksand", a progression of Ⅰ maj chord-bⅦmaj 7th chord-Ⅳ maj 7th chord is used, with three consecutive major chords that give the listener a bright, melancholic and cyclical sound. See figure 2 for more details.

Further, the bIIIdim7 chord, for example, with its tense colors and eagerness to resolve, appears less frequently in popular music as a diminished seventh chord. The use of this chord in R&B music draws on jazz techniques to fill in the gaps between differing whole tone chords [9]. In the penultimate bars of the verse of "Don't Ask It's Scary" this chord appears as a transitional chord between a triad and a secondary chord, replacing the sixth chord for a touch of color and forming a chromatic downbeat. As a jazz passing diminished chord technique has a more undulating mood and unique colors compared to the downward fifths commonly used in pop music like Ⅲ-Ⅵ-Ⅱ.

3 Common Chinese R&B Harmonic Progression

3.1 Canon Harmonic Progressions

Canon harmonic progressions are often used in popular music for long riff narrations, and are often used in Chinese R&B. Many R&B creators have adapted when using the Canon, which in turn has spawned all sorts of variations [6]. The classic canon harmonic progression is the Ⅰ-Ⅴ-Ⅵ-Ⅲ-Ⅳ-Ⅰ-Ⅱ-Ⅴ progression, and the resulting alternative and extended chord progressions can all be considered canon harmonic progressions.

Due to guitar playing habits, some unspecified chords have been additionally labeled. The intro to "Normal Friend" reflects an adaptation of the R&B style of music to the Canon. Eadd9 chord is used in measure 1, while three chords are used in measure 2. The first two beats use an Eadd9 chord-#Dmin7-5 chord progression, which constitutes a chromatic downbeat when the mood changes quickly to #Gmaj chord in the next two beats, which constitutes a fifth downbeat and stays in the color of the secondary dominant chord of #Cmin7 chord in the next bar to constitute a genitive dominant progression. Four chords are used in measure 3, with the three chords #Cmin7 chord, Cmin7 chord, and Bmin7 chord in the first three beats using the parallel chord technique used in jazz, and the EMm7#9 chord in the last beat forming a temporary out-of-tune second-fifth-order progression with it, as well as a dominant progression with Aadd9 chord in the next measure[4]. The last two bars then proceed in unison with the canon harmonic progressions.

The jazzy harmonic techniques, the ascending ninths of the EMm7#9 chord, and the short chord arrangement timings in bars 2 and 3 of the intro give the listener a change in harmonic color and a dip in the mood of the song's intro within two bars.

In modern pop music, the canon harmonic progressions usually represent stabilized harmonic progressions of the bass downbeat. The canon harmonic progressions can also be adapted to the emotional needs of the song through off-key or chord substitution techniques. In Chinese R&B it is also performed through different instruments playing the canon harmonic progressions. Regardless of how it is played, the steady downward movement of the bass must be one of its most representative characteristics.

3.2 Circle-of-fifths Harmonic Progressions

Circle-of-fifths harmonic progressions are progressions that are in relationship to each other's fifths, such as the chordal relationship between Ⅳ-Ⅶ-Ⅲ-Ⅵ. The Ⅴ is often used in place of Ⅶ in the work, resulting in the more commonly used Circle-of-fifths harmonic progressions as Ⅳ-Ⅴ-Ⅲ-Ⅵ. This harmonic progression is actually a variation of the canon harmonic progression, which is often used in popular music arrangements around the world. Over time it has evolved into a more complete harmonic progression of Ⅳ-Ⅶ-Ⅲ-Ⅵ-Ⅱ-Ⅴ-Ⅰ. The progression is also used by Chinese R&B arrangers [2]. There are many variations of it.

Unspecified chords have been additionally labeled. The chorus in "Celadon" uses this harmonic progression. The chorus opens with the 4th chord Cmaj chord in bar 1, the next is DMm7/C chord. Since the chord is pitched at 4, the tendency to resolve there is diminished, and the emotional ups and downs are consequently lessened. The Bmin7 chord in bar 2 acts as a color chord of the genus, continuing to Emin and converting to minor color [7]. The Bmin7 chord also forms a continuous bass downward fifth with Amin7 chord in the next measure, and finally the dominant progression of the genus, forming a termination.

Although the circle-of-fifths harmonic progression has become one of the most common harmonic progressions in modern pop music, its harmonic potential and varied variations still have many music makers employing it. Chinese R&B can also be more diverse and innovative by adapting rhythms or chords according to the characteristics of the R&B style.

4 The Relationship Between Harmony and Melody in Chinese R&B

Most of the accompanying instruments in a song play the harmony of the song, and the vocals sing the melody of the song. And in R&B, the melody is very important. Depending on the structure of the song, the melody may be played by the accompanying instruments or the melody may be sung by the vocals. Often the melody will follow the harmony, and chord tones or chord extras may be played or sung, and there will never be a situation where the melody is all chord tones or extras [8]. It will be orchestrated mainly according to the emotion needed for the song, and the color of the harmony.

In some of the music, there is a combination of melodic and harmonic movement. For example, the melody is relatively calm, but the harmony and orchestration change frequently and are more abundant. For example, in the main song of "Our Song", the harmonic progression in measures 1 and 2 is Ⅰ maj chord-ⅠⅤ maj7 chord-Ⅴ sus4 chord-Ⅰ add9 chord in the first degree. The melody is basically in four chord intones, which makes this section of the song have a more pleasant and smooth mood.

Melodies are often arranged to avoid out-of-tune notes. Some off-key chords in emotionally propulsive harmonies may be orchestrated to the out-of-tune note of the off-key chord. Although the melody is out-of-tune and has tension, it is often an important melody in the song, even punctuating it. For example, in bar 6 of the second verse of the title track of "The Special One". #1 is used as the tritone of Ⅴ/Ⅰ Mm7 chord. Although it is out of key, its presence in the melody is not out of place, but rather serves to advance the mood of the song.

Other situations where out-of-tune sounds occur include transposition as well as modal interchange. Transposition is easier to understand, and its principles are the same as in the previous paragraph of this chapter after the chords required for transposition have been programmed. In some chords where modal interchanges occur, if the song melody appears out of key, it is a melodic arrangement where the song has been temporarily transposed to the key of the modal interchanges. For

example, in the 5th measure of the pre-chorus of "Normal Friend", the ♭Ⅴmin7 chord is a fourth natural chord that has been modal interchanged with the natural minor. At this point the song is temporarily converted to natural minor, and the #5 and #6 that appear are both in-tune to natural minor. These melodies fit the ♭Ⅴmin7 chord while rendering the melancholy color of the minor key in contrast to the bright propulsive sense of the major key that follows.

To summarize, even though the melody in an R&B song is the brightest presence in the song, the basic logic of its arrangement needs to be based on the harmonic progress of the song. Within the framework of following music theory, the melody that makes the song stand out is made according to the mood and harmonic color of the song.

5 Conclusion

This paper firstly introduces the development history of R&B and the origin of Chinese R&B, the stylistic characteristics of R&B songs and the unique features of Chinese R&B. These can let readers better understand the history and musical characteristics of R&B music and Chinese R&B. Secondly, this paper focuses on chords and harmonic progressions commonly used in R&B. This paper details a portion and the underlying logic it uses in the common chords used in R&B,, as well as the different colors it offers. R&B harmonic progressions are how songs use chords to create harmonic connections. R&B songwriters usually refer to some traditional pop harmonic progression, while adding adaptations and innovations to it, depending on the desired emotional delivery of the song. They embellish it wherever it makes sense and add flair to the song. The paper concludes with a brief study of the relationship between melody and harmony through the analysis of harmony as well as chords. Through some examples of Chinese R&B classics, it illustrates the logic of arranging melodies on the basis of harmony, and how songs can emphasize their individuality melodically.

Through the research in this paper, general listeners can have a better understanding of Chinese R&B and improve the musical aesthetic consciousness of listeners of the R&B style genre of music in Chinese popular music. After reading it, music creators can understand some of the theoretical underpinnings of R&B harmonic progression, explore its harmonic potential, and provide references for music creation. The purpose of this paper is to provide theoretical support as well as creative guidance for the creation of rhythm and blues in Chinese popular music, and to provide more ideas for future music creation in this genre.

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