The Exploration of the Performance and Practice from Bach's Harmonies—an Example from Op. Bwv871

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Abstract: This paper makes a harmonic analysis of Bach BWV871, hoping that players can understand the function of every part of Bach and the purpose of creation from the Angle of harmony. The analysis of harmony also allows the player to identify the development of phrases, making the performance more coherent. Harmonic analysis can also help players to practice Bach logically and interestingly, so as to improve the efficiency of practice and speed up the progress of memorizing music. In the process of practice, you can learn Bach's harmony and kill multiple birds with one stone. A variety of derivations were used to develop the harmonies in the article, including harmonic rearrangement thinking and traditional counterpoint interval relationships. Although the text mentions the concept of harmonic rearrangement in jazz, Bach's harmonies do not use high stacked chords (complex chords) and consist mainly of triads and major/minor seventh chords. In addition, the melody of each voice part is more classical in composition, essentially the major and minor scales, harmonic minors, etc. There are no jazz or avant-garde music symmetries such as whole or diminished scales, as well as some pentatonic scales, altered scales, etc. In summary, the chord progression is very "modern", but the harmonic progression is very "traditional".

1. Theoretical Sources

Bach is one of the greatest musicians in the history of human music, and his works have influenced the development of classical music and modern jazz music. In this thesis, the American harmonic system thinking, harmonic knowledge, and harmonic concepts are all taken from the Berkeley Counterpoint textbook and Dutch Counterpoint tutorials. The American harmonic notation method enables us to visualize Bach's harmonies and get a better sense of his performance by abandoning the stereotypical approach. A variety of derivations were used to develop the harmonies in the article, including harmonic rearrangement thinking and traditional counterpoint interval relationships. Although the text mentions the concept of harmonic rearrangement in jazz, Bach's harmonies do not use high stacked chords (complex chords) and consist mainly of triads and major/minor seventh chords. In addition, the melody of each voice part is more classical in composition, essentially the major and minor scales, harmonic minors, etc. There are no jazz or avant-garde music symmetries such as whole or diminished scales, as well as some pentatonic scales, altered scales, etc. In summary, the chord progression is very "modern", but the harmonic progression is very "traditional".
2. Perception and theory

There are horizontal voices in Bach's works: the ordinary melodic voices, the harmonic filling voices, and the harmonic melodic voices with a suggestive harmonic function. When identifying transverse voices, how do you know what type they are? We have to combine subjective perception with objective theory. Generally speaking, melodies and bass lines are easier to hear if one considers the subjective aesthetic experience, while harmony-filled voices tend to sound more "boring" and may have irregular rhythms. From an objective theoretical point of view, we need to understand the harmonic progressions inherent in Bach's music in order to have an understanding of the function of each part. For example, if a voice part is essentially a chordal intrachord and this melody runs throughout the piece, then it is the theme. If a voice part is dependent on the development of a harmonic progression, then it is an ordinary melody. We have to combine subjective perception and objective theory to identify the function of each vocal part, vertically so that different vocal parts have primary and secondary importance, and horizontally so that we can know the change of the function of the phrase and thus better break the phrase.

Harmony from bwv871, analysis of performance:
(1) Prelude

Harmonies are grouped every four sixteenth notes in the first two bars: in the order of Cm, Fm, Cm, G7, Cm, Fm, Cm, G7 (figure 1). In the traditional Viennese harmonic system, it contains the main function, the subordinate function, and the genus function. The last one, G7, is of course resolved by the Cm that follows in the third bar. Here I discarded the traditional notation methods because they do not allow to see clearly the nature of the harmony. Then after writing these chords, we can clearly see that the eighth notes these notes are the intra-chordal notes originating from the triad [1]. The left-hand part in the first bar of this prelude and the right-hand part in the second bar are my interpretation of the bass line, while the sixteenth notes are my interpretation of the melody line. Here, to distinguish the perception of the bass line in other styles of music, although this vocal part does not appear in the bottom position, it serves to outline the harmony [2].

Once we know the function and meaning of the individual voices here, we should make a little treatment: we have to feel the resolution in the second bar of the Cm. We can slightly strengthen the Eb of the right hand and the C of the left hand. Of course the left hand should rise softly afterwards, thus echoing the soft rise of the first bar. Of course I think that in this prelude the melodic voice should be stronger than the bass voice. The forty-sixth note should be more prominent than the eighth note.

Figure 1: Score example 1: Prelude 1-2 bars

Figure 2: Score example 2: Prelude bars 5-8
In bar 5, we can see harmonic approach, where the harmonic downstroke appears (figure 2). The chords are in the following order: Cm, B♭ maj, A♭ maj and E♭ 7. The first three of these constitute the downbeat, but of course I get the E♭ 7 here from the first harmonic B♭ 7 in the sixth bar, which is the content of the circle of fifths, because they have a strong tendency. There is also a modern melodic writing technique (double melody), which means that the melody is "enhanced" by writing a third interval below the melody. In the first beat of bar 5, we shift the C in the left hand up an octave and we get a third relationship. And these three bars form a downward modal progression.

So it is concluded that in this bar we should express the feeling of this harmonic downward movement, with a tendency to diminish in each bar, and we should also grasp the general direction of the modal progression, so that the direction of development of the three bars is the same, and that the diminution is achieved from bar to bar in the three bars. But the first group of forty-six in the sixth bar must be stronger than the last beat of the fifth bar, because this is how to play the resolution of the genus function to the main function, so that the music has the direction of development. Here the volume of the left and right hands must be the same, which is in line with the original intention of the (double melody) double melody.

(2) Fugue

In the fourth bar, the piece develops into three voices, where the theme, the harmonic fill, and the melody appear (figure 3). The theme is in the bass voice, the harmonic fill is in the middle voice, and the melody is in the high voice. Here the middle voice is obvious, the notes and rhythmicity are simple and random, so that it is easy to find visually [3]. So in the treatment of the music, the harmonic fill is a part that we have to play a bit softer compared to the other voices. Of course, as harmonic fills, we must make sure that these notes are played evenly and smoothly, so that the harmonic inner dynamics of the piece carry the piece forward, rather than driving the mood through the harmonic weave, as in the romantic music that follows.

At the beginning of measure 5, the original theme in the bass voice becomes a melody (in G harmonic minor), while the previous melody in the soprano voice and harmonic fill in the alto voice become harmonic fills. The current vocal composition is: one melody, two harmonic fills. Compared to the previous one theme, one harmonic fill, and one melody, the current vocal part is less important than the previous one, although it remains the same in number. In terms of the emotion of the music, the volume needs to make the two right-hand voices softer overall, but the left-hand voices should maintain their original volume and momentum.

In the subsequent musical development, the melodic G harmonic minor of the music turns into G doria. At the beginning of the G Doria, Bach also uses the technique of the double melody - here the melodic composition takes on a three-degree relationship, in which we must keep the same volume and the same ascending momentum in the left and right hands [4].

In the seventh bar, two voices are presented, the left hand theme and the right hand melody (figure 4). It is worth noting that the themes in bar 7 and 8 appear in the opposite order from bar 1 and 2, and that both have distinctly different harmonic bodies, although the tones are the same. In terms of scale composition, the first two bars use the natural minor of c-flat, while the seventh and eighth bars use the harmonic minor (from Gm to G7).

In terms of performance, we have to grasp the use of the characteristic note (reduced B), and we have to play this reduced B with more prominence compared to the B-flat. It makes the music more
poignant and contemplative.

![Figure 4: Example 4: Fugue bars 7-8](image)

![Figure 5: Fugue bars 12-14](image)

In bars 12 and 13, the theme appears in the bass voice and Bach harmonically rearranges it and expands it so that the phrase ends on Gm in bar 14, unlike before when it ended on Cm, so we should be prepared to design the performance of this theme in such a way that it does not lose its singability in the middle of the performance (figure 5). And the theme of bar 14 starts on Cm, so there is a sense of resolution from genus to subject for the theme of Gm and Cm. This requires us to play this theme with a sense of "hanging" doubt. After observing that there is a heavy genus chord D7 at the end of the theme, we can play on the rising F, which is the nature note of D7. When you play it, you can add a little bit of weight and lengthen it so that this theme can be resolved smoothly to Gm through D7. At the same time, the ending note G of the subsequent theme can be slowed down a bit, and the ending can be deeper, so that the new chord that enters afterwards is not too abrupt [5].

The right-hand writing is also very interesting, as the two voices here are rhythmically complex and of two natures. It consists of a melody in the soprano voice and a harmonic filling in the alto voice. From the same rhythmic pattern, it is easy to see that the first phrase of the soprano melody begins at the end of bar 11 and forms a modal progression with the second phrase that begins at the end of bar 12. The rhythmic pattern of the middle voice is random and basically entirely intrachordal, so it is a harmonic fill. In the performance, we should emphasize the melody of the high part and the theme of the low part, and we should soften the harmonic filling of the middle part, not to let the tones of it "participate" in the melody of the high part, disrupting the same rhythmic pattern and making the melody of the high part disordered, thus losing the charm of the modal progression.

3. Conclusion

Before playing Bach, we should make a harmonic analysis of his works, and then clarify the meaning and function of each part, so that we can deal with each part properly. In our practice, we can use these harmonies instead of boring one-hand exercises. At the same time, after understanding the harmonies, together with muscle memory, we will have some improvement in the efficiency of knowing and memorizing the score.

References