

# Analysis of the Chord Progression of Herbie Hancock's "Dolphin Dance"

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**Abstract:** Herbie Hancock, an outstanding jazz artist of the 1960s, with his exceptional achievements profoundly influenced the development of modern jazz. This paper aims to elucidate his unique artistic thinking and concepts through an analysis of his renowned composition "Dolphin Dance" focusing on its chord progression. By doing so, it aims to reveal his unique artistic thinking and concepts, so as to provide some assistance for the theoretical analysis and development of jazz.

**Keywords:** Motif; Modulation; Chord Progression; Herbie Hancock.

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## 1. Introduction

Jazz originated in the late 19th to early 20th century. It was perceived as "barbaric and primitive music" at first, taking blues as the main content. By the 1960s, alongside the emergence of modernist art and liberated thinking, jazz transformed into a liberated warrior, breaking free from its traditional music subsidiary role, and embarked on independent artistic explorations. Then after, we saw the rise of exceptional musicians and outstanding works.

"Dolphin Dance" is one of the most popular compositions by world-renowned jazz pianist master Herbie Hancock, characterized by distinct impressionistic marks and often deemed as one of the most intricate jazz pieces to date. Its uniquely rich harmonic progression presents a formidable challenge for improvisational performance. The composition's open and diverse harmonic structure is nearly legendary, featuring a concise yet motivically rich melody with a robust and catchy tune. Its chords serve both as carriers of tension and as opportunities for release. The progression of its chords is both captivating and exhilarating, breaking free from traditional jazz boundaries and exerting a profound influence on modern jazz.

It is the theoretical significance and value of studying "Dolphin Dance" to deeply analyze the complex harmonic progression of the composition and realize the cognition of the deep significance of the open jazz spirit of Herbie Hancock and his composition "Dolphin Dance". It is to study the theoretical significance and value of the composition "Dolphin Dance".

## 2. Introduction to Herbie Hancock

Herbie Hancock, born on April 12, 1940 in Chicago, USA, is a prominent jazz pianist, composer and orchestra conductor who has achieved great success in the jazz world with his characteristics in clashing, sharp harmonies and has gained widespread popularity as the leader of an electronic jazz rock band.

Herbie Hancock joined the band of the trumpeter Donald Byrd in 1960. In 1961, he moved into New York City, joined Miles Davis' s Bebop band, and subsequently embarked on a tour. The exploration of rhythmic and harmonic freedom by the Davis Quintet in the mid-1960s sparked some of Herbie Hancock's boldest, rhythmically unfettered, and harmonically

rich concepts, significantly influencing his subsequent works.

In the 1970s, after participating in Davis' s initial Jazz Rock experiment, Herbie Hancock began leading fusion bands and performing electronic keyboards, ranging from electronic pianos to synthesizers. He explored various styles and made great achievements in jazz funk, leaving behind many classic works such as "Cantaloupe Island" and "Chameleon".

Herbie Hancock has garnered 12 Grammy Awards and released over 65 albums worldwide, becoming as one of the most iconic figures in mainstream jazz. Therefore, I have chosen one of Herbie Hancock's classic compositions, "Dolphin Dance" for study and analysis in this instance.

## 3. Background of "Dolphin Dance"

The legendary jazz pianist Herbie Hancock's signature jazz composition "Dolphin Dance" is one of the most harmonious, complex and attracting tunes in jazz plays. It is a favorite jazz standard tune for many jazz musicians and a popular song for many jazz fans.

In 1964, Herbie Hancock composed "Dolphin Dance", which was first recorded in 1965 on his breaking album "Maiden Voyage 1". "Dolphin Dance" features unconventional harmonic progressions and a beautiful melody. Therefore, improvising on this piece is both challenging and rewarding. Although its melody is relatively simple and motif-based, at the time, it represented one of the more complex segments. It subverts traditional II-V-I progressions, extensively modulates, and does not begin or end in the same key, thus constructing a series of tension-filled, richly colored harmonic progressions. It incorporates numerous inharmonic, conflicting chords such as dominant sevenths and altered chords, and uses some quiet and stable chords to set off the elegant melody.

The harmonic progression of "Dolphin Dance" differs significantly from traditional jazz norms, showcasing a high degree of challenge and innovation. Let us now analyze how the harmony of this classic piece is constructed.

## 4. Characteristics of Harmonic Procession in "Dolphin Dance"

### 4.1. Use of Motif

In the four measures of the intro, the primary melodic motif is stated twice, with literal repetition:



Figure 1. Google Scholar

This motif is widely used throughout the composition process, and appears in different tones, as well as variations in rhythm and pitch outline, such as the first four measures after intro and the last four measures of the tune:



Figure 2. Google Scholar

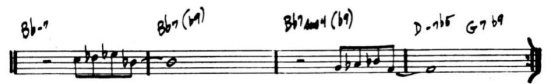


Figure 3. Google Scholar

When comparing the motif introduced in intro with the variations in the eight measures above, we observe that while the pitch contour remains the same, the intervals between the notes differ. However, examining their application over specific chords reveals a commonality: in the intro section, over Ebmaj7, they use the third, fourth, fifth, and ninth degrees, while in the second passage, over C-7, they similarly utilize the third, fourth, fifth, and ninth degrees of C-7. Yet, in Figure 3, the melody over Bb-7 aligns with the earlier motif, whereas the melody over Bbsus4 serves to transition smoothly to the C-7 melody introduced at the beginning of the solo section, as shown in Figure 2.



Figure 4. Google Scholar

The piece contains more than just the aforementioned motif. Introducing and repeating a new ascending motif throughout the Figure can enhance the work's energy. Comparing measures 1-4 with measures 5-8, we once again find identical pitch contours. Furthermore, except for the first note, all intervals are the same. The entire piece is primarily constructed from these two motifs, interspersed briefly with other motifs, which forms a major characteristic of the piece: using motifs to compose the entire work, employing different chords with similar melodies to add palette, thereby presenting a melody that is beautiful and harmony that is unique and a subversion of tradition.

## 4.2. Massive Modulation

“Dolphin Dance” features extensive modulation throughout, which is a challenging aspect of improvisation for jazz musicians. Herbie Hancock employs various techniques during these modulations, with the most common being the use of traditional II-V-I progressions, such as:

At the beginning of the piece, in the concluding part of the intro, to smoothly transition to C-7, the composer employs a II-V of C-7 in the fourth measure, specifically D-7b5 to G7. This is a typical minor II-V-I modulation. The seventh and eighth measures share the same melody as the fourth and fifth measure, while maintaining the unchanged melody, the composer changes the harmony in eighth measure, using a II-V in G major (A-7 to D7) to transition to G major. In eleventh

and twelfth measures, the composer uses F-7 and Bb7 to return the piece to its original key of Eb (C-7). Subsequently, the composer uses a descending half-step root movement to transition the harmony to A-7 in fifteen measures, naturally setting up an II-V in G major (A-7 to D7) which modulates to G major.



Figure 5. Google Scholar

Another way of modulation is to achieve the purpose of modulation through the conversion of major and minor tones. In measures eleven, twelve, and thirteen as depicted, F-7 and Bb7 form the II-V progression in Eb major. Measure thirteen traditionally leads into Eb major, but the composer opts for C minor instead, which is the relative minor of Eb major, achieving modulation. Similarly, since C minor is the relative minor of Eb major, at the end of the intro, the composer chooses to transition to C minor, the relative minor of Eb major, employing a conventional II-V-I progression, thus naturally transitioning to C minor.

## 4.3. Use of Substitution Chords

Herbie Hancock uses a number methods of substitution chords in this piece to enrich the palette and sound of the piece:



Figure 6. Google Scholar

We can see that after intro, the song begins in C minor. In the second measure, Ab7 functions as a tritone substitution of C7. Tritone substitution refers to replacing a dominant seventh chord of C7 a tritone away, where the tritone of C7 is G7, and the tritone of G7 is D7. Therefore, we can replace C7 with D7 and Ab7 as a tritone substitution for D7. But what does “tritone” refer to? We define a tritone as the interval spanning three whole tones or six semitones (i.e., an augmented fourth interval). Hence, Ab is a tritone away from D. We can substitute Ab7 for D7, and this is known as tritone substitution. What appears as a simple one-measure chord is in fact the result of two substitutions, showcasing the intricate harmonic progression of this piece.

There is more than one substitution. In the fifth, sixth, and seventh measures, the roots of the harmony would have formed the semitone descent, i. e., G, Gb, F, but in the tenth

measure, Gbmaj7, the composer replaced it with its II-V, Ab7Db7, so that we have the harmony trend we now see.



Figure 7. Google Scholar

As shown in the figure, the fifth measure also has a substitution, starting from the fourth measure, but not solved to D major, but after E-7A7, substitute A7 with Eb7 to realize the functional continuation of the previous measure. Immediately in the sixth measure, the composer executes a tonic chord transformation, shifting from A7 to A-7, promptly followed by D7 as the II-V progression in G major, smoothly transitioning to G major. B-7, serving as the third-degree chord in G major, substitutes Gmaj7, thus implementing a functional chord substitution within the same functional group, replacing the tonic with the third degree.

#### 4.4. Use of Pedal Chord

The pedal chord is also one of the most intricate chords of the piece, such as:



Figure 8. Google Scholar

From the first measure to the fourth measure, the song features its first instance of a sustained pedal chord lasting four measures. During these four measures, despite all being based on G as the root, various chords are employed above G major to enhance the musical palette, such as sus chords. “sus” indicates the omission of the third of the chord, replaced by another note—in this case, sus4 uses the fourth (C) instead of the third. Because sus chords lack a third, they do not fit strictly into major or minor categories. When played on a

keyboard, sus chords exhibit their distinctive sound. In the third measure, an A major triad is played over G, creating a major second interval between A and the root G, while the C# note in this chord serves as the raised fourth in G major, adding considerable rich palette to the harmony.

Starting with the fifth measure, the composer uses a similar pedal chord on F. In contrast to previous examples, the first measure here does not begin with Fmaj7 but instead starts directly with Fsus4. In the second measure, an F major context is used to play a G major triad, similarly constructing a major triad a major second above the root, continuing the established tonal coloration.

The use of pedal chords makes the piece present a romantic and soothing atmosphere in these eight measures, like dolphins dancing, which is the essence of the song.

## 5. Conclusion

Herbie Hancock's “Dolphin Dance”, features a complex and varied harmonic structure, providing a challenging base for improvising performers. How to interpret the piece, how to alter chord qualities, and how to arrange chord progressions to maintain suspense and reach climaxes, all these are the difficulties and characteristic challenges of improvising on “Dolphin Dance”.

Through the detailed analysis and exploration of the chord progression of “Dolphin Dance”, this paper aiming to shed light on Herbie Hancock's distinctive interpretive style.

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