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# Opera Minora

*brief notes on selected musical topics*

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*In the notes of this series the focus will be on bridging the gap between musical theory and practice. The target audience is the jazz performer who reads music and has a good understanding of chord progressions and traditional harmony.*

## Using Whole Tone Scales in Improvisation, No. 1

### **Motivation**

It is well known that whole tone scales can be successfully used over dominant seventh chords, especially those which have been altered by raising the fifth. Augmented chords, too, can support whole tone lines by simply adding whole step passing tones. In contrast, this note investigates the use of whole tones in less obvious situations with non-dominant chords and provides a theoretical framework for developing whole tone motifs and incorporating them into improvised lines.

### **Development Strategy**

We begin by taking a musical passage from a recorded performance and then develop some general principles to explain the passage and support the creation of new ones.

The following improvised phrase appeared in Hank Mobley's solo on "It's You or No One," Columbia Records CK65265, *ART BLAKEY, The Jazz Messengers*, 1956.



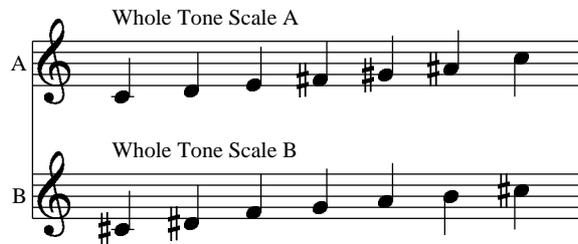
Example 1: Hank Mobley Improvisation<sup>1</sup>

Ignoring the chromatic passing tones for the moment, it can be seen that the basic structure consists of a simple motif repeated four times and descending a whole step at each iteration. Analysis of the passage and its relation to the underlying harmony in the following paragraphs will suggest further ideas for extensions to improvised jazz lines.

### Background

Recall that whole tone scales have a unique symmetry not shared by diatonic scales. This symmetry renders the notion of a tonal center practically meaningless, but may be exploited when ambiguity is desired.<sup>2</sup>

For reference, the two possible whole tone scales are shown in the following figure. Note that the starting tone of each scale should not be regarded as a tonal center, since any other tone could be used as well.



Whole Tone Scales

<sup>1</sup>The track is recorded in the key of F, but this passage occurs in a section whose key is A $\flat$ .

<sup>2</sup>Seamless modulation involves regions with ambiguous tone centers, for example.

## Analysis

The first step in the analysis is to simply examine traditional diatonic major and minor scales for extended whole tone sequences. This will reveal the most logical place to overlay a whole tone scale.

The image shows two musical staves. The top staff is labeled "Key of C" and shows a diatonic major scale in C major. A bracket underneath the notes from C4 to G4 is labeled "Whole Tone Groups". The bottom staff is labeled "Key of Cm (melodic ascending)" and shows a diatonic minor scale in C minor. A bracket underneath the notes from C4 to G4 is also labeled "Whole Tone Groups".

It should be clear that short whole tone passages might be constructed and transposed to fit the groups shown for each scale. Longer whole tone sequences will, of course, contain tones outside the original key. The minor scale has a slightly longer whole tone span, but the difference is trivial since thirds are frequently flatted in jazz lines anyway.

## Examples

To illustrate the general idea, consider the following passage which places a whole tone sequence over a conventional *ii-V-I* progression.

The image shows a musical staff in 4/4 time. The key signature has one flat (Bb). The staff is divided into three measures. The first measure is labeled "Gm7" and contains a whole tone sequence of notes: G, A, Bb, C, D, Eb, F. The second measure is labeled "C7" and contains a whole tone sequence of notes: C, D, Eb, F, G, Ab, Bb. The third measure is labeled "F" and contains a whole tone sequence of notes: F, G, Ab, Bb, C, D, Eb. The notes are written in a melodic line with eighth and quarter notes.

Example 2: Whole Tone Passage

This simple example demonstrates the harmonic ‘stretching’ sometimes required to fit an extended whole tone phrase over a simple major scale. The stretching consists of altering diatonic scale tones to fit the phrase. This adds considerable color, and lends a distinct horizontal character to the passage. Of course, the benefit of going through the stretching process is that

it expands the range of available choices during improvisation by pushing boundaries outward.

To soften the dissonance, a short whole tone motif should be played within the whole tone span of the current diatonic scale and then repeated moving downward (or upward) by whole steps until it moves outside the current key.

The next example shows a similar passage harmonized for piano.

Example 3: Whole Tone Passage

Although our examples have avoided chromatic passing tones, it should be obvious how the Hank Mobley passage in Example 1 can be understood through a similar analytic treatment.

Note that whole tone motifs may migrate upward as well as downward. Here is an example of another passage applied to a *ii-V-I* progression where the overall motion is upward. This time we have also used chromatic lower neighbor tones.

Example 4: Upward Whole Tone Passage

## Conclusion

Starting with an example taken from a recording by Hank Mobley, we have described a framework for incorporating extended whole tone sequences into an improvised performance. All the examples demonstrate horizontal lines which sometimes depart from the vertical harmonic structure underneath.

The key points are:

- Begin the whole tone passage within the whole tone span associated with the current key,
- The passage can extend outside the strict key range by following the associated whole tone scale, particularly over dominant chords,
- Linear motion can trump vertical structure if it exhibits a logical horizontal structure and is reasonably short,
- Some personal musical growth may be required to fully appreciate the extensions.

## Comments

It is possible to dissect and analyze all these examples as simple alterations of dominant chords or substitutions combined with alterations. Nevertheless, the basic notion of applying whole tone sequences (with the attendant harmonic stretching) over the native whole tone groups in conventional scales provides an extended palette for using them in other contexts and for exploring new sounds for improvisation.