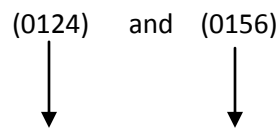


Composition Analysis: Uroboros by John O’Gallagher

With this composition for alto saxophone, bass and drums I wanted to start by using a minimal amount of material and see where it led me. Only two set classes of tetrachords are used to generate all of the harmonic and melodic material in the piece. Each tetrachord is used in an alternating pattern between the two set classes and is transformed by using common tones under inversion and transposition resulting in a feeling of harmonic progression. I also used only one rhythmic structure which would generate all the rhythmic material in the piece. It was important to me that the rhythmic material would have flexibility for multiple layers of rhythms which the drummer could imply. Time signatures of 5/4, 15/8 and 3/4 could all be potential rhythmic layers that the musicians could shift between.

Set Classes Used



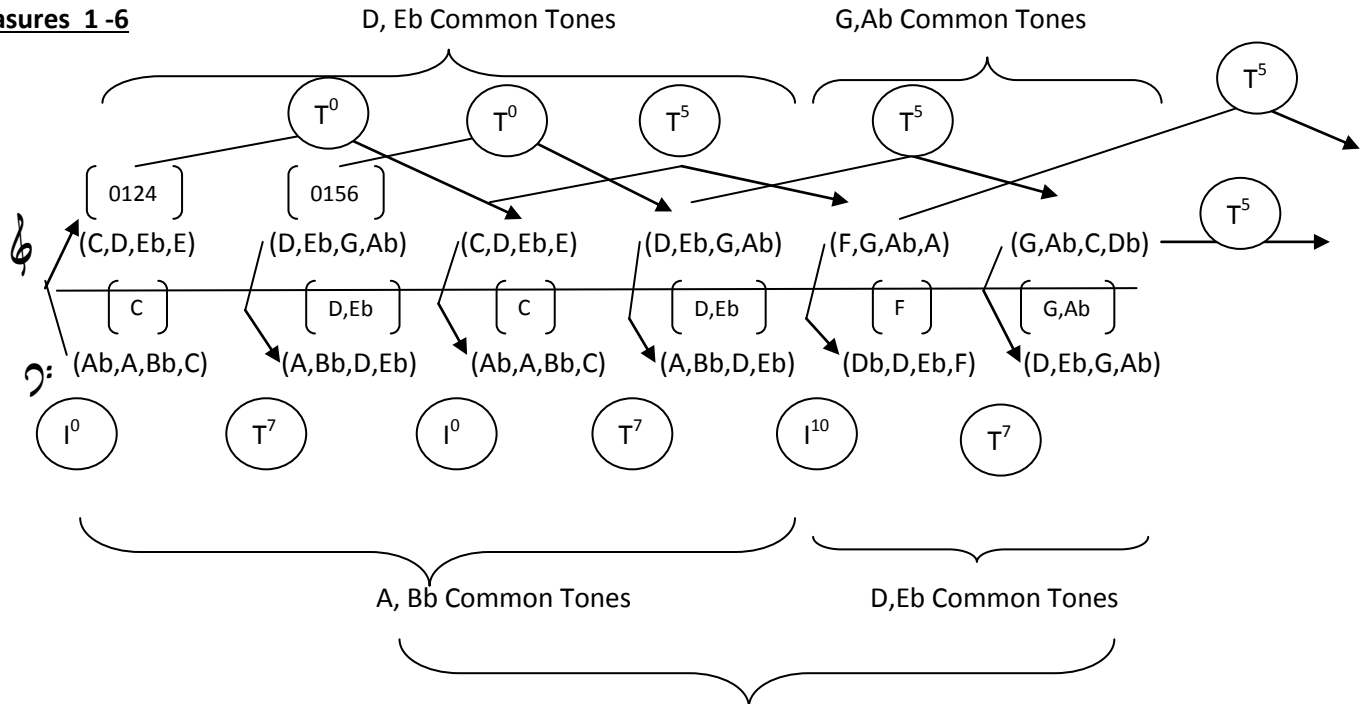
First two tetrachords used as generators: (Ab, A, Bb, C) (D, Eb, G, Ab)

(Ab, A, Bb, C) is used in the first measure of the bass as a generator for its inversion (C, D, Eb, E) which is used in the treble clef. In the treble clef in the second measure (D, Eb, G, Ab) is used as the generator for its transposition (A, Bb, D, Eb) which is used in the bass. What follows after this is a pattern of transformations of these two set classes using common tones under inversion and transposition. The common tone pattern uses set class (0156) as its structural device.

Composition Analysis: Uroboros (by John O'Gallagher)

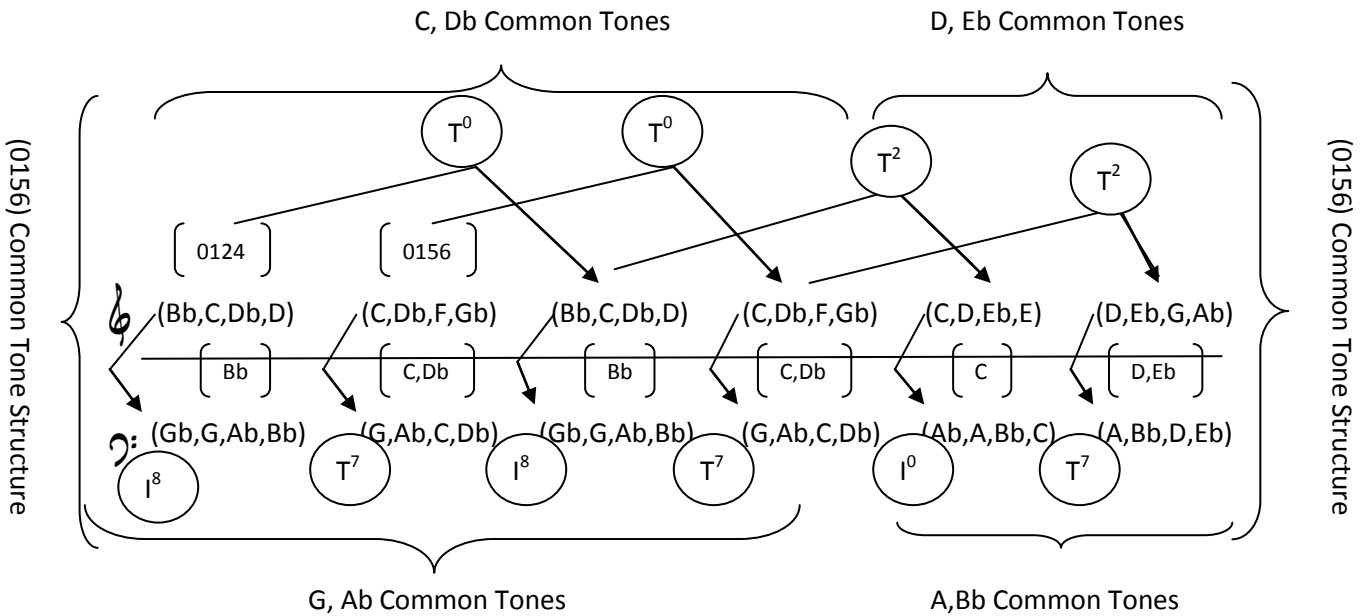
(0156) Common Tone Structure

Measures 1-6



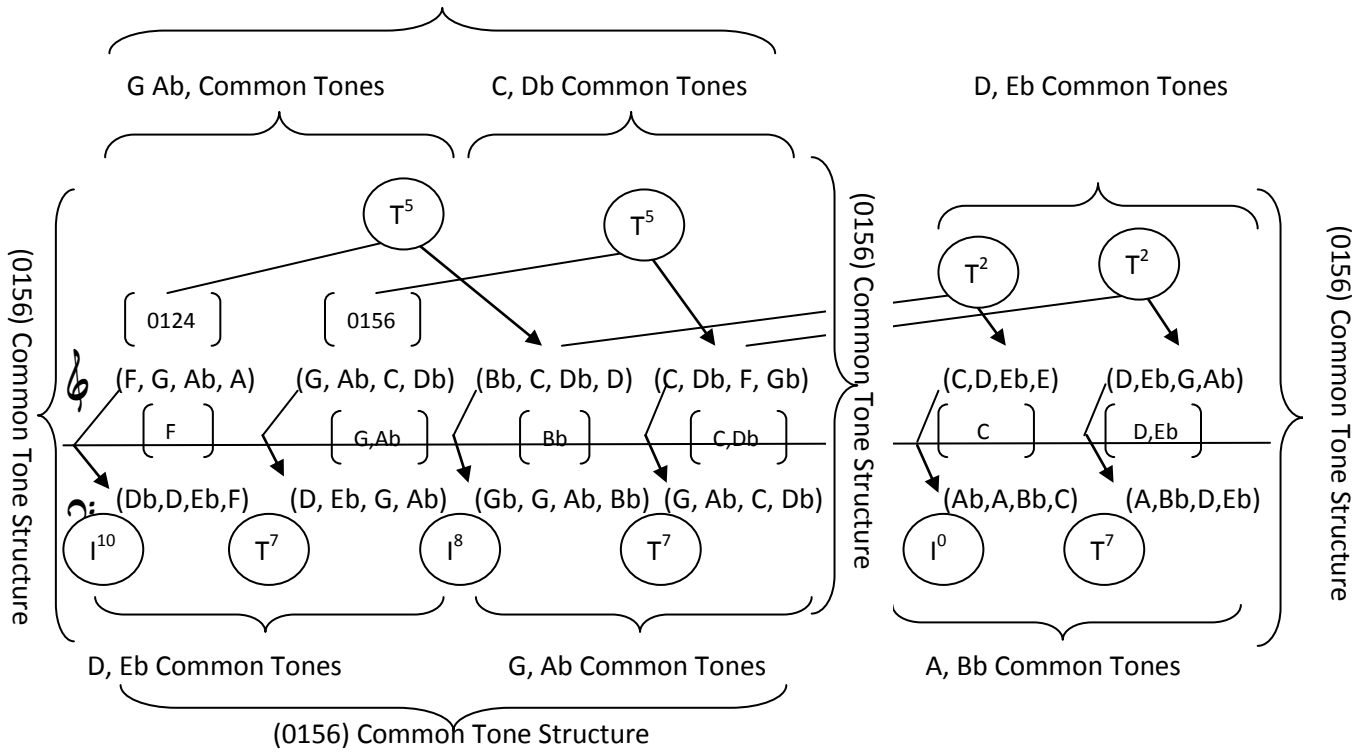
Measures 7-12

(0156) Common Tone Structure



Measures 13 – 18

(0156) Common Tone Structure



Common Tone Patterns

If we look at the horizontal pattern created by the common tones found in the treble and bass clef tetrachords, we can see patterns that mimic the tetrachord (0156).

Treble clef Common Tone Structure: D, Eb, G, Ab, C, Db, D, Eb, G, Ab, C, Db, D, Eb

Bass Clef Common Tone Structure: A, Bb, D, Eb, G, Ab, A, Bb, D, Eb, G, Ab, A, Bb

There is also another vertical pattern of common tones created by looking at the treble and bass clef.

Vertical common Tone Structure:

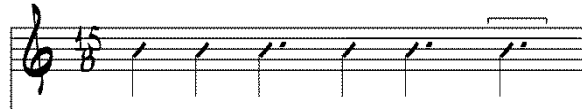
A, Bb, D, Eb, - D, Eb, G, Ab - G, Ab, C, Db - A, Bb, D, Eb - D, Eb, G, Ab, C, Db, A, Bb, D, Eb

Composition Analysis: Uroboros (by John O’Gallagher)

Rhythmic Construction

The rhythmic construction of the piece is based on a one bar rhythm in 15/8 which is then used in all its rotations in both the bass and treble clef. The basic source rhythm is written as an ostinato for the drums to play along with some additional rhythmic accents which tie the alto and bass parts together.

Source Rhythm



All rotations of source rhythm in juxtaposed in both treble and bass clef. Each unique rhythm is identified by a letter name. The rhythms in the treble and bass clef use anchor points of a dotted quarter note and quarter note between the two parts (see brackets).

Six pairs of musical staves, each pair consisting of a treble clef staff and a bass clef staff. Each pair illustrates a different rotation of the source rhythm. The pairs are labeled with letters A through F. Brackets are used to show the alignment of notes between the two staves in each pair. The time signature 15/8 is indicated at the beginning of each pair. The notes are eighth notes, and the rhythm is consistent across all pairs, but the starting point of the sequence is offset in each pair.

Composition Analysis: Uroboros (by John O’Gallagher)

This six bar cycle is used three times with the second and third times being rotations. The result is that all possible six bar pattern rotations being used for the entire piece.

Source pattern →

Rotation beginning on B and E →

Rotation beginning on C and F →

When the pitches were assigned to the rhythmic grid, the 4 pitches in each tetrachord were used for each measure. In other words one measure of 15/8 = one tetrachord. Harmony notes in the treble clef melody were added at a later stage of the composition to enhance the melody. Careful consideration was given to use rests and tied notes in a way that creates an organic rhythmic cadence in the melody and bass accompaniment while retaining the underlying rhythmic structure. In some measures pitches used also undergo a rotation when they are repeated in a later measure.

(Eb, C, E, D) (Ab, G, D, Eb) rotation (C, E, D, Eb) rotation (G, D, Eb, Ab) (A, G, Ab, F) (G, Ab, Db, C)

(A, Bb, Ab, C) (Bb, A, D, Eb) (Bb, Ab, C, A) rotation (A, D, Eb, Bb) rotation (Db, F, D, Eb) (G, Ab, Eb, D)

(C, Db, Bb, D) (Db, Gb, F, C) rotation (Db, Bb, D, C) rotation (Gb, F, C, Db) (C, E, D, Eb) (G, D, Eb, Ab)

(Bb, G, Ab, Gb) (Db, Ab, G, C) (G, Ab, Gb, Bb) (Ab, G, C, Db) rotation rotation (Bb, Ab, C, A) (A, D, Eb, Bb)

Same pitch sequence as measure 3 and 4

Same pitch sequence as measure 3 and 4

Composition Analysis: Uroboros (by John O’Gallagher)

Same pitch sequence as measure 5 and 6 Same pitch sequence as measure 7 and 8 Same as measure 1 and 2

Same pitch sequence as measure 5 and 6 Same pitch sequence as measure 7 and 8 Same as measure 1 and 2

Notice that the sequence of pitches in measures 3 and 4, 5 and 6, and 7 and 8 are the same as in measures 11 and 12, 13 and 14, and 15 and 16. Only the rhythmic content is different. The last two measures of the composition also are exactly the same as the first and second measures.

Meter Change

In order to simplify the piece for reading, I decided to change the meter to 3/4. This changes the length of the piece from being 18 measures of 15/8 to 45 measures of 3/4. This still makes it possible to use the dotted quarter note as the pulse and easy to shift between 3/4, 5/4, and 15/8.

The Improvisation Section

The solo section of the composition was designed using the same rhythmic and harmonic material as the rest of the piece. The bass progression of the chord changes is extracted from the bass part between measure 1 and 45 of the composition and use set class (0124) as it occurs in three transpositions.

Set Class (0124) occurring in the bass clef: (Ab, A, Bb, C), (Db, D, Eb, F), (F#, G, Ab, Bb).

The pitch order of these tetrachords is rearranged to create a cadential root movement of a descending perfect 5th from one tetrachord to the next tetrachord.

Chord Changes Bass Progression

[: (C, Bb, G#, A) $\xrightarrow{\text{descending 5th}}$ (D, Eb, F, C#) $\xrightarrow{\text{descending 5th}}$ (F#, Bb, G#, G) $\xrightarrow{\text{descending 5th}}$:]

I then nested set class (0156) inside this bass progression. Tetrachord (0156) (C, C#, F, F#) can be viewed in diatonic terms as a Major 7 chord missing the third and with a #11. The harmonic quality of using a Major7th chord over its sharp #11 then gives us the sonic pallet of tetrachord (0156). The resulting chord progression uses the root movement of tetrachord (0124) with the harmonic quality of (0156) nested inside it.

Composition Analysis: Uroboros (by John O’Gallagher)

Measure 1 – 10: F#maj7/C (C, C#, F, F#) → E maj7/A# (A#, B, D#, E) Dmaj7/G# (G#,A, C#,D) Ebmaj7/A (A, Bb, D, Eb)

Measure 11 – 20: Abmaj7/D, (D, Eb, G, Ab) → Amaj7/D#, (D#, E, G#, A) Bmaj7/F, (F, F#, A#,B) Gmaj7/C#, (C#, D, F#, G)

Measure 21- 31: Cmaj7/F# (F#, G, B, C) → E maj7/A# (A#, B, D#, E) Dmaj7/G# (G#,A, C#,D) C#maj7/G (G, G#, B#, C#)

The rhythmic content of the solo section uses the original idea of 15/8 with the dotted quarter note as the pulse but written in 3/4. Each chord change lasts one measure of 15/8 or 3 and ½ measures of 3/4.

A one measure extension is added at the end of the solo section to make the final cadence rest before returning to the top of the form.

UROBOROS

JOHN O’GALLAGHER

♩ = 148

STRAIGHT 8TH

BASIC DRUM GROOVE

DRUM SET

D. S.

Composition Analysis: Uroboros (by John O'Gallagher)

11

11

D. S.

This system contains measures 11 through 15. The top staff is in treble clef with a key signature of two flats (B-flat and E-flat). The bottom staff is in bass clef with a key signature of one flat (B-flat). The music features a complex rhythmic pattern with many eighth and sixteenth notes, including rests and ties. The dynamic marking 'D. S.' (Da Capo) is placed to the left of the bottom staff.

16

16

D. S.

This system contains measures 16 through 20. The top staff continues the melodic line with various intervals and rests. The bottom staff continues the rhythmic accompaniment. The dynamic marking 'D. S.' is present on the left.

21

21

D. S.

This system contains measures 21 through 25. The top staff shows a continuation of the melodic development. The bottom staff maintains the rhythmic texture. The dynamic marking 'D. S.' is present on the left.

26

26

D. S.

This system contains measures 26 through 30. The top staff concludes the melodic phrase. The bottom staff concludes the rhythmic accompaniment. The dynamic marking 'D. S.' is present on the left.

Composition Analysis: Uroboros (by John O'Gallagher)

31

0.5.

This system contains measures 31 through 35. It features three staves: a treble clef staff, a bass clef staff, and a percussion staff (marked 0.5.). The treble staff begins with a whole note chord of G4, B4, and D5, followed by a series of eighth and sixteenth notes. The bass staff provides a rhythmic accompaniment with eighth and sixteenth notes. The percussion staff shows a steady eighth-note pattern with 'x' marks above the notes.

36

0.5.

This system contains measures 36 through 40. The treble staff starts with a whole rest, then moves to a series of eighth and sixteenth notes. The bass staff continues with a rhythmic accompaniment. The percussion staff maintains the eighth-note pattern with 'x' marks.

41

0.5.

This system contains measures 41 through 45. The treble staff features a series of eighth and sixteenth notes, including a long note with a fermata. The bass staff continues with a rhythmic accompaniment. The percussion staff maintains the eighth-note pattern with 'x' marks.

Composition Analysis: Uroboros (by John O'Gallagher)

The image displays a handwritten musical score for the piece "Uroboros" by John O'Gallagher. The score is written on six staves, each containing a melodic line and a corresponding chord analysis. The music is in treble clef and consists of a sequence of chords connected by a melodic line. The chords are as follows:

- Staff 1 (Measures 46-51): $F\sharp MA7/C$ (Measures 46-50) and $E MA7/B\flat$ (Measures 51-55).
- Staff 2 (Measures 51-56): $D MA7/G\sharp$ (Measures 51-55) and $E\flat MA7/A$ (Measures 56-60).
- Staff 3 (Measures 56-61): $A\flat MA7/D$ (Measures 56-60) and $A MA7/E\flat$ (Measures 61-65).
- Staff 4 (Measures 61-66): $B MA7/F$ (Measures 61-65) and $G MA7/C\sharp$ (Measures 66-70).
- Staff 5 (Measures 66-71): $C MA7/F\sharp$ (Measures 66-70) and $E MA7/B\flat$ (Measures 71-75).
- Staff 6 (Measures 71-76): $D MA7/A\flat$ (Measures 71-75) and $C\sharp MA7/G$ (Measures 76-80).

The notation includes a treble clef, a key signature of one sharp (F#), and a common time signature (C). The chords are written in a shorthand notation: $[Chord] MA7/[Bass]$. The melodic line is indicated by a series of slanted lines on the staff, with a specific note and a slur in the final measure of each staff.