

Write-up on *Ouroboros*

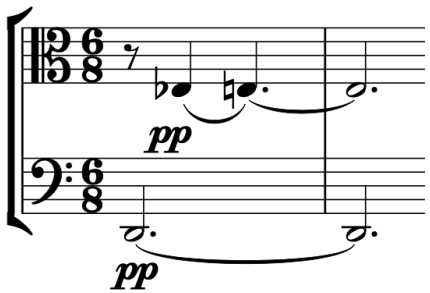
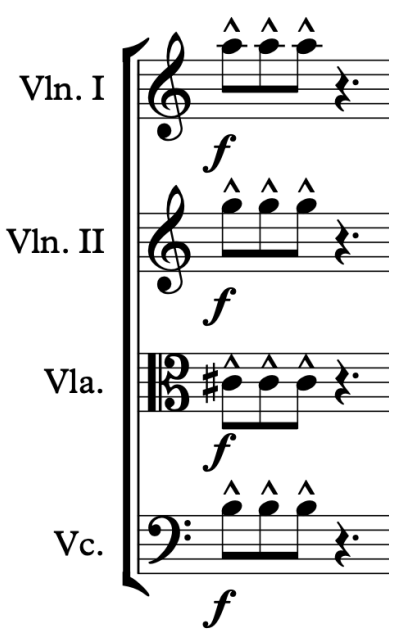
(Free Composition)

Introduction

Ouroboros is named after the ancient symbol Ouroboros, representing cyclic renewal and returning to the beginning. This is presented in this work through the use of symmetry in terms of its pitch centres (discussed further in section 2). Symmetry is incorporated on both the macro and local levels, such as in the use of the pitch centres across the work and the construction of each theme respectively referencing the fact that the circle, the shape of the Ouroboros, is symmetrical about infinitely many axes.

1. Motifs and themes

The motifs of the piece are as follows:

Motif	Example	Musical characteristics
Intervallic 9th (motif A)	<p>Opening bar, layered minor 9th between cello and viola:</p> 	<ul style="list-style-type: none"> - Permeates both the harmonic and melodic parameters - Exhibited both as major 9ths and minor 9ths
3 repeated note motif (motif B)	<p>First occurrence of 3 repeated note motif in bar 9:</p> 	<ul style="list-style-type: none"> - Stark rhythmic punctuation - Sometimes played sul ponticello, giving it a harsh tone colour - Harmonised with secundal harmony, both major and minor 2nds (major 2nd → less dissonant, minor 2nd → more dissonant)

The themes of the piece in the exposition are as follows (in this order). Minor 9ths (motif A) are marked out with 'm9':

Theme A	
Theme B	
Theme C	

The themes of the piece in the recapitulation section are as follows (in this order):

Theme C'	
Theme B'	
Theme A'	

Theme A

- Minor 9th between violin II and cello bassline (derived from bar 11)
- Bar 21: minor 9th leap in viola; major 9th leap in violin II (see Figure 1)

- Bars 21-23: violin I and cello descend in two different whole tone scales (see Figure 2)



Figure 1: Violin II and viola, bar 21



Figure 2: Violin I and viola, bars 21-23

Theme B

Theme B is crafted using a 12-tone row, with non 12-tone accompaniment. This is inspired by Bill Evans' T.T.T. (Twelve Tone Tune), in which he harmonised a 12-tone melody with jazz harmony.

The tone row of theme B is as follows:



Inverting pitches 2 to 12 about pitch 1 (the pitch centre), and then appending pitch 1 to the front of the retrograde of pitches 2 to 12, the same tone row is obtained, making this tone row symmetrical vertically and horizontally. The tone row of theme B is split symmetrically across violin II and viola, pivoting between the two instruments through the use of the common note Bb, a tritone away from the pitch centre of E. The violin II and viola parts are inversions of each other.

This construction of the theme further reinforces the use of symmetrical concepts in the music.

Theme C

- Quaver-crotchet-crotchet-quaver rhythm derived from bar 1 (see Figure 3)
- Bar 67 violin I: figuration derived from tone row of theme B, with octave displacement and chromatic alteration of the fourth note (see Figure 4)



Figure 3: Implicit rhythm outlined by the change in notes



Figure 4: Original theme B and altered theme B

2. Structure

This piece is structured in a modified sonata form. Instead of the usual two themes, there are three themes in the exposition, and they are presented in reverse order in the recapitulation, making the form of the work symmetrical about the development section. Each theme demonstrates inversional symmetry about its pitch centre and in the recapitulation, the themes are inverted. The pitch centres of the sections ascend in major 2nds, akin to the whole tone scale and eventually return back to the original pitch centre. As the whole tone scale is symmetrical, this further reinforces the use of symmetrical concepts in the work.

The structural layout of the piece is as follows:

Section		Bars	Musical characteristics
Introduction		1-18	<ul style="list-style-type: none"> - Introduction of motif A - Harmony in major 2nds and minor 2nds - Fragments of theme A and B in bars 11 to 16 - Motif B at bars 9 and 10
Exposition	A	19-41	Pitch centre: D <ul style="list-style-type: none"> - Prominent use of intervallic 9th in inner voices and bassline - Motif B at bar 41 leads straight into next section
	B	42-63	Pitch centre: E <ul style="list-style-type: none"> - C pedal in cello - Violin I and cello symmetrical about E (bars 42-46)

			<ul style="list-style-type: none"> - Tone row split between violin II and viola - Transition to next section using theme A
	C	64-82	Pitch centre: F# <ul style="list-style-type: none"> - Lighter in character - Lively syncopated rhythms
Development		83-129	<ul style="list-style-type: none"> - Reprise of introduction with textural and pitch inversion - Fugal passage with theme B as subject and theme C as countersubject 1 - Rhythmic and intervallic alteration of themes - Bars 120-125: tone row of theme B used as bassline and violins playing rhythmic punctuation in 2nds
Recapitulation	C'	130-146	Pitch centre: Ab <ul style="list-style-type: none"> - Textural and pitch inversion from section C
	B'	147-170	Pitch centre: Bb <ul style="list-style-type: none"> - Gb pedal in viola - Violin II and viola symmetrical about Bb - Tone row split between violin I and cello - Inversion of theme B
	A'	171-182	Pitch centre: C <ul style="list-style-type: none"> - Use of thematic transformation to give theme A a more majestic character - Inversion of theme A - Truncation of section A
Coda		183-201	Pitch centre: D <ul style="list-style-type: none"> - Fragments of theme A and B symmetrical about pitch 'D' - Slightly faster tempo at bar 183 to end off the piece with a higher energy level - Textural inversion from section A at bar 183 - Ends off with Eb and C# closing in on D in contrary motion (symmetrical about D) - Final Eb to D in violin I highlights minor 9th