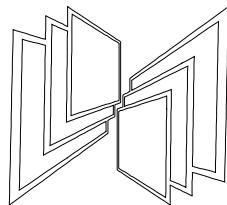


**Elodie
LAUTEN**

**Strange Attractors
for Orchestra**

August 2005



Studio 21
ASCAP
New York, NY

Elodie Lauten**STRANGE ATTRACTORS** (2005) for chamber orchestra

C score and transposed score

Instrumentation:

Flute (1)
Oboe (1)
Clarinet in Bb (1)
Bass Clarinet (1)
Bassoon (1)
Horn in F (1)
Trumpet in C (2)
Trombone (1)
Percussion: (2, Metals & Woods)
Piano
Violin I
Violin II
Viola
Cello
Contrabass

Program Notes

Strange Attractors for orchestra addresses the interplay between chaos and order. I became interested in chaos theory as the ultimate philosophy for our time, fraught with disasters, wars, and many social and cultural inequities. To accept chaos as a 'strange' form order unto itself is one way to survive it.

Scientists look at a chaotic dynamic system - much in keeping with what we are experiencing in real life - as a 'holistic harmony', in which all the factors affect one another in an unpredictable manner. In meteorology this phenomenon is known as the 'butterfly effect': something as minute as the wind produced by the wings of a butterfly can trigger incredibly disproportionate changes in weather patterns. This hypothetical butterfly is an example of a 'strange attractor', or factor of turbulence.

The structure of the piece is that of an orderly chaos where multiple, contrasting themes are constantly interrupted and reconnected without being allowed to expand. There are frequent changes of key signature, time signatures, dynamics and harmonic structure. The themes themselves are tonal and evocative of familiar classical and jazz harmonies, while the general structure of the piece is not formulaic.

Strange Attractors was premiered at SUNY-Fredonia with conductor David Rudge on 11/30/05.

Studio 21, 268 East Broadway, A-1102, New York, NY, 10002

Tel: 212-388-0202 Email: elodie@mail232.pair.com www.elodielauten.net

Strange Attractors

Elodie Lauten
2005

C SCORE
 $\text{♩} = 110$

The musical score consists of ten staves, each representing a different instrument or section. The instruments listed on the left are Flute, Oboe, Clarinet in Bb, Bass Clarinet, Bassoon, Horn in F, Trumpet in C 1, Trumpet in C 2, Trombone, Metal, Wood, Piano, Violin I, Violin II, Viola, Cello, and Contrabass. The score includes dynamic markings such as *f*, *p*, *mf*, and *spiccato*. Special instructions for the Metal and Wood sections specify "Triangles, windchimes, bells, cymbals Loud and clear throughout triangle" and "Any combination of wood percussion instruments Loud and clear throughout". The Cello and Contrabass staves both have "martele" markings. The score concludes with "arco" markings for the Cello and Contrabass.

Flute

Oboe

Clarinet in Bb

Bass Clarinet

Bassoon

Horn in F

Trumpet in C 1

Trumpet in C 2

Trombone

Metal

Wood

Piano

Violin I

Violin II

Viola

Cello

Contrabass

Triangles, windchimes, bells, cymbals
Loud and clear throughout
triangle

Any combination of wood percussion instruments
Loud and clear throughout

p

f

spiccato

mf arco

f

spiccato

mf arco

mf

spiccato

p martele

arco p

p martele

arco p

Fl. *mf*

Ob. *mf*

B♭ Cl.

B. Cl.

Bsn. *Gtr.* *p*

f

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal *wind chimes outburst* *2* *c* *triangle*

Wood *2* *c*

Pno.

Vln. I *f* *3*

Vln. II *f* *3*

Vla. *mf*

Vc. *mf*

Cb. *mf*

Musical score for orchestra and various instruments, page 3. The score consists of ten staves of music, each with a key signature of one sharp (F#) and a time signature of common time (indicated by 'C'). The instruments listed from top to bottom are: Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Bass Clarinet (B. Cl.), Bassoon (Bsn.), Horn (Hn.), C Trumpet 1 (C Tpt. 1), C Trumpet 2 (C Tpt. 2), Trombone (Tbn.), Metal (Metal), Wood (Wood), Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Cello (Vc.), and Double Bass (Cb.). The score includes dynamic markings such as *mf*, *f*, and *bell tree*. Measure 13 is shown, with the piano part featuring a dynamic *f* and the violin parts featuring dynamics *mf* and *f*. The woodwind section includes entries for the bassoon, bass clarinet, and horn. The brass section includes entries for the two trumpets and the trombone. The percussion section includes entries for the metallophone and the wood block. The strings section includes entries for the violin, viola, cello, and double bass.

Musical score for orchestra and woodwind quintet, page 4. The score consists of 11 staves of music. The instruments are:

- Fl. (Flute)
- Ob. (Oboe)
- B♭ Cl. (B♭ Clarinet)
- B. Cl. (Bass Clarinet)
- Bsn. (Bassoon)
- Hn. (Horn)
- C Tpt. 1 (C Trumpet 1)
- C Tpt. 2 (C Trumpet 2)
- Tbn. (Tuba)
- Metal (Metals)
- Wood (Woodblock)
- Pno. (Piano)
- Vln. I (Violin I)
- Vln. II (Violin II)
- Vla. (Cello)
- Vc. (Double Bass)
- Cb. (Cello Bass)

The score is marked with measure numbers 19 throughout. The piano part includes a dynamic marking *mf*. The triangle is used in the metal section. The bassoon has sustained notes in measures 19-20. The violins play eighth-note patterns in measures 19-20. The double bass has sustained notes in measures 19-20.

Fl. *p*

Ob. *p*

B♭ Cl. *p*

B. Cl. *p*

Bsn. *f*

Hn. *p*

C Tpt. 1 *mf*

C Tpt. 2 *mf*

Tbn. *p*

Metal

Wood

Pno.

Vln. I *p*

Vln. II *p*

Vla. *p*

Vc. *p*

Cb. *p*

Strange Attractors

Fl. *f*

Ob. *f*

B♭ Cl. *f*

B. Cl. *f*

Bsn. *p*

Hn. *f* *Glissando*

C Tpt. 1 *f* *agitato*

C Tpt. 2 *f* *agitato*

Tbn. *f* *Glissando*

Metal *triangle*

Wood

Pno. *ff* *f*

Vln. I tremolo *subito p*

Vln. II tremolo *subito p*

Vla. tremolo *subito p*

Vc. tremolo *subito p*

Cb. *martele* *subito p*

37

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

crash cymbal (use stick) plain cymbal (stick)

f

p

Strange Attractors

Musical score for orchestra and piano, page 8, section Strange Attractors.

The score consists of ten staves of music, numbered 43 at the beginning of each staff. The instruments are:

- Fl. (Flute)
- Ob. (Oboe)
- B♭ Cl. (B-flat Clarinet)
- B. Cl. (Bass Clarinet)
- Bsn. (Bassoon)
- Hn. (Horn)
- C Tpt. 1 (C Trumpet 1)
- C Tpt. 2 (C Trumpet 2)
- Tbn. (Tuba)
- Metal (Metallophone)
- Wood (Marimba)
- Pno. (Piano)
- Vln. I (Violin I)
- Vln. II (Violin II)
- Vla. (Viola)
- Vc. (Cello)
- Cb. (Double Bass)

Performance instructions include dynamics such as *f*, *mf*, *p*, and *p*.

Musical score page 9, system 49. The score consists of ten staves, each with a key signature of one sharp (F#). The instruments are:

- Fl. (Flute)
- Ob. (Oboe)
- B. Cl. (Bassoon)
- B. Cl. (Bassoon)
- Bsn. (Bassoon)
- Hn. (Horn)
- C Tpt. 1 (C Trumpet 1)
- C Tpt. 2 (C Trumpet 2)
- Tbn. (Trombone)
- Metal (Metallophone)
- Wood (Wood Block)
- Pno. (Piano)
- Vln. I (Violin I)
- Vln. II (Violin II)
- Vla. (Cello)
- Vc. (Double Bass)
- Cb. (Bassoon)

The score shows various musical markings and dynamics. In the Vln. I and Vln. II staves, there are slurs and grace notes. In the Vc. staff, there is a dynamic marking **f** solo. The bassoon (Cb.) staff ends with a dynamic marking **p**.

Musical score for orchestra and piano, page 10. The score consists of two systems of music. The top system (measures 55-56) includes parts for Flute, Oboe, Bassoon, Horn, Trombones, C Tpt. 1, C Tpt. 2, Tuba, Metal, Wood, and Piano. The bottom system (measures 55-56) includes parts for Violin I, Violin II, Cello, Double Bass, and Piano. Measure 55 begins with dynamic *f*. Measure 56 begins with dynamic *p*.

Fl.
Ob.
B. Cl.
B. Cl.
Bsn.
p
Hn.
C Tpt. 1
C Tpt. 2
Tbn.
Metal
Wood
Pno.
Vln. I
p
Vln. II
Vla.
p
Vc.
p
Cb.

Fl. *6I*

Ob.

B♭ Cl. *f*

B. Cl.

Bsn. *mf* *Glivende* *f*

Hn. *6I*

C Tpt. 1

C Tpt. 2 *6I*

Tbn.

Metal *bell tree* *triangle*

Wood

Pno. *p*

Vln. I *6I*

Vln. II *6I*

Vla. *mf*

Vc. *mf* legato

Cb. *mf* legato

This page of musical notation shows a complex arrangement for a large orchestra. The instrumentation includes Flute, Oboe, Bassoon, Horn, Trombones, Percussion (Metal, Wood), Piano, Violin I, Violin II, Cello, Double Bass, Clarinet, Bassoon, Trombone, Trumpet, and Bassoon. The music is in 6/4 time. Various dynamics and performance instructions are included, such as 'Glivende' for Bassoon at measure 61, 'bell tree' for Metal at measure 61, and 'triangle' for Metal at measure 61. The piano part includes dynamics 'p' and 'mf'. The strings (Violin, Cello, Double Bass) have sustained notes with grace marks. Measures 61 through 64 are shown, with measure 65 indicated by a vertical bar.

Fl. *f*

Ob. *f*

B♭ Cl. *mf*

B. Cl.

Bsn. *p* *Glissando*

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal crash cymbal (use stick) *bell tree* explosion of chimes

Wood

Pno. *f* *p*

Vln. I 3

Vln. II 3

Vla. 3

Vc. *mf* 3

Cb. *mf* 3

Strange Attractors

13

73

Fl. *p* *mf*

Ob. *f* *mf*

B♭ Cl. *f* *mf*

B. Cl. *mf*

Bsn. *mf*

Hn. *p*

C Tpt. 1 *f*

C Tpt. 2 *f*

Tbn. *mf*

Metal triangle

Wood

crash cymbal (use stick) triangle

Pno. *f* *p*

Vln. I *p* *f*

Vln. II *p* *f*

Vla. *p* *f*

Vc. *p*

Cb. *p*

Musical score for orchestra and piano, page 14, titled "Strange Attractors". The score consists of ten staves of music, numbered 79 at the beginning of each staff.

- Flute (Fl.):** Starts with a dynamic **p**.
- Oboe (Ob.):** Starts with a dynamic **p**.
- B♭ Clarinet (B♭ Cl.):** Starts with a dynamic **p**.
- Bassoon (Bsn.):** Rests throughout the measure.
- Horn (Hn.):** Rests throughout the measure.
- C Trumpet 1 (C Tpt. 1):** Starts with a dynamic **f**.
- C Trumpet 2 (C Tpt. 2):** Rests throughout the measure.
- Trombone (Tbn.):** Rests throughout the measure.
- Metal:** Playing eighth-note patterns.
- Wood:** Playing eighth-note patterns.
- Piano (Pno.):** Dynamics: **f**, **mf**, **p**.
- Violin I (Vln. I):** Playing sixteenth-note patterns.
- Violin II (Vln. II):** Playing sixteenth-note patterns.
- Viola (Vla.):** Playing sixteenth-note patterns.
- Cello (Vc.):** Playing sustained notes.
- CDouble Bass (Cb.):** Playing sustained notes.

The score concludes with a dynamic **p** at the bottom of the page.

Fl. *pp*

Ob. *pp*

B♭ Cl. *mf*

B. Cl.

Bsn. *mf*

Hn.

C Tpt. 1

C Tpt. 2 *mf*

Tbn. *p*

Metal

Wood

Pno. *pp* simile

Vln. I tremolo

Vln. II tremolo

Vla. tremolo

Vc. *f*

Cb. *p*

plain cymbal (stick)

92

Fl. *Glyssando*
f

Ob.

B♭ Cl. *Glyssando*
f

B. Cl.

Bsn. *mf* *p*

Hn.

C Tpt. 1 *f*

C Tpt. 2 *f*

Tbn. *mf*

Metal *triangle*

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

99

Fl. *f agitato*

Ob. *f agitato*

B♭ Cl. *f agitato*

B. Cl.

Bsn. *mf* *Glossando* *mf*

Hn.

C Tpt. 1 *mf* *f agitato* *Glossando*

C Tpt. 2 *mf* *f agitato* *Glossando*

Tbn. *mf* *f agitato* *Glossando* *Glossando*

Metal

Wood

99

Pno. *f*

99

Vln. I tremolo

Vln. II

Vla.

Vc. *f agitato*

Cb. *f agitato*

Fl. *Gliissando*

Ob.

B♭ Cl.

B. Cl.

Bsn. *Gliissando*

Hn. *Gliissando*

C Tpt. 1 *Gliissando*

C Tpt. 2

Tbn. *Gliissando* *Gliissando*

Metal plain cymbal (stick)

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

III

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

mf

plain cymbal (stick)

spiccato p, cresc poco a poco

spiccato p, cresc poco a poco

spiccato p, cresc poco a poco

martele

martele

Musical score for orchestra and metal instruments, page 20. The score consists of ten staves of music. The top five staves are woodwind and brass instruments: Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Horn (Hn.), and Trombone (Tbn.). The middle section contains two staves for metal instruments: Metal and Wood. The bottom five staves are strings: Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Cello (Cb.), and Double Bass (Vcl.). The score is marked with dynamic instructions such as *mf*, *ff*, and *p*. Measures are numbered 117 at the beginning of each staff.

Fl.
Ob. *mf*
B♭ Cl.
B. Cl.
Bsn.
Hn.
C Tpt. 1
C Tpt. 2
Tbn.
Metal
Wood
Pno.
Vln. I
Vln. II
Vla.
Vcl.
Cb.

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

p, cresc poco a poco

f

mf

p

arco

p

Strange Attractors

Fl. *p*

Ob. *p*

B♭ Cl. *p*

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2 *f*

Tbn.

Metal

Wood

Pno. *p*

Vln. I

Vln. II

Vla.

Vc. spiccato

Cb. spiccato

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

triangle

f solo to 43

rubato

simile

mf

Fl. *f*

Ob.

B♭ Cl.

B. Cl. *p*

Bsn. *p*

Hn. *p*

C Tpt. 1 *f* lead melody

C Tpt. 2

Tbn. *f* lead melody

Metal triangle crash cymbal triangle

Wood

Pno. *a tempo* *mf*

Vln. I arco *mf* lead melody

Vln. II *p* arco

Vla. *p* arco

Vc. *p*

Cb. *f* *f* *p*

Musical score for orchestra and piano, page 25, measures 148-152.

The score consists of ten systems of music, each with two staves. The instruments listed on the left are: Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Horn (Hn.), C Trumpet 1 (C Tpt. 1), C Trumpet 2 (C Tpt. 2), Trombone (Tbn.), Metal (Metal), Wood (Wood), Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Cello (Cv.), and Double Bass (Cb.).

Measure 148:

- Fl., Ob., Bsn., Hn., C Tpt. 1, C Tpt. 2, Tbn., Metal, Wood, Pno.: Rests.
- B. Cl.: Dynamics *p*.
- B. Cl., Bsn.: Slurs.

Measure 149:

- Fl., Ob., Bsn., Hn., C Tpt. 1, C Tpt. 2, Tbn., Metal, Wood, Pno.: Rests.
- B. Cl.: Dynamics *p*.
- B. Cl., Bsn.: Slurs.

Measure 150:

- Fl., Ob., Bsn., Hn., C Tpt. 1, C Tpt. 2, Tbn., Metal, Wood, Pno.: Rests.
- B. Cl.: Slurs.
- B. Cl., Bsn.: Slurs.

Measure 151:

- Fl., Ob., Bsn., Hn., C Tpt. 1, C Tpt. 2, Tbn., Metal, Wood, Pno.: Rests.
- B. Cl.: Slurs.
- B. Cl., Bsn.: Slurs.

Measure 152:

- Fl., Ob., Bsn., Hn., C Tpt. 1, C Tpt. 2, Tbn., Metal, Wood, Pno.: Rests.
- B. Cl.: Slurs.
- B. Cl., Bsn.: Slurs.

Performance notes:

- Measure 148: B. Cl. dynamics *p*, B. Cl., Bsn. slurs.
- Measure 149: B. Cl. dynamics *p*, B. Cl., Bsn. slurs.
- Measure 150: B. Cl. slurs, B. Cl., Bsn. slurs.
- Measure 151: B. Cl. slurs, B. Cl., Bsn. slurs.
- Measure 152: B. Cl. slurs, B. Cl., Bsn. slurs.

Crash cymbal is indicated in measure 148 between the Metal and Wood staves.

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

wind chimes

Musical score for orchestra and piano, page 27. The score consists of ten staves of music. The instruments are:

- Fl. (Flute)
- Ob. (Oboe)
- B♭ Cl. (B-flat Clarinet)
- B. Cl. (Bassoon)
- Hn. (Horn)
- C Tpt. 1 (C Trumpet 1)
- C Tpt. 2 (C Trumpet 2)
- Tbn. (Tuba)
- Metal (Bell)
- Wood (Maracas)
- Pno. (Piano)
- Vln. I (Violin I)
- Vln. II (Violin II)
- Vla. (Cello)
- Vc. (Double Bass)
- Cb. (Cello)

The score is in common time, key signature of one sharp, and includes dynamic markings such as *f*, *p*, *mf*, and *triangle*. Measures 160 through 168 are shown, with each measure containing four measures of music.

Musical score for orchestra and metal instruments, page 28. The score consists of ten staves of music. The top five staves include Flute, Oboe, Bassoon, Horn, and Trombone. The middle section includes two sets of C Tpt. (C Trumpet), Metal (cymbal), and Wood (timpani). The bottom five staves include Piano, Violin I, Violin II, Viola, and Cello. The score is marked with dynamic changes such as *p*, *f*, and *ff*. The piano part features a prominent eighth-note pattern. The wood timpani part includes a note labeled "plain cymbal (stick)". The violins play eighth-note patterns, while the cellos provide harmonic support.

Musical score for orchestra and piano, page 29, measures 172-173.

The score consists of 15 staves, each with a key signature of one sharp (F#). Measures 172 and 173 are shown, separated by a vertical bar line.

- Flute (Fl.):** Rests in m. 172, eighth-note patterns in m. 173.
- Oboe (Ob.):** Eighth-note patterns in m. 172, sixteenth-note patterns in m. 173.
- B♭ Clarinet (B♭ Cl.):** Sixteenth-note patterns in m. 172, eighth-note patterns in m. 173.
- Bassoon (Bsn.):** Eighth-note patterns in m. 172, sixteenth-note patterns in m. 173.
- Horn (Hn.):** Slurs in m. 172, eighth-note patterns in m. 173.
- C Trumpet 1 (C Tpt. 1):** Eighth-note patterns in m. 172, sixteenth-note patterns in m. 173.
- C Trumpet 2 (C Tpt. 2):** Rests in m. 172, eighth-note patterns in m. 173.
- Trombone (Tbn.):** Eighth-note patterns in m. 172, sixteenth-note patterns in m. 173.
- Metal:** Single note slurs in m. 172.
- Wood:** Single note slurs in m. 172.
- Piano (Pno.):** Chords in m. 172, sixteenth-note patterns in m. 173.
- Violin I (Vln. I):** Eighth-note patterns in m. 172, sixteenth-note patterns in m. 173.
- Violin II (Vln. II):** Eighth-note patterns in m. 172, sixteenth-note patterns in m. 173.
- Viola (Vla.):** Eighth-note patterns in m. 172, sixteenth-note patterns in m. 173.
- Cello (Vc.):** Eighth-note patterns in m. 172, sixteenth-note patterns in m. 173.
- CDouble Bass (Cb.):** Eighth-note patterns in m. 172, sixteenth-note patterns in m. 173.

Dynamic markings: *p* (piano) appears in measures 172 for C Tpt. 1, C Tpt. 2, and Tbn.; *f* (fortissimo) appears in measure 172 for Vln. I; *p* (piano) appears in measure 173 for Vln. I.

Fl. f

Ob. f

B♭ Cl. f

B. Cl. mf

Bsn. f Glissando Glissando

Hn. Glissando

C Tpt. 1 Glissando mf Glissando

C Tpt. 2 mf Glissando Glissando

Tbn. f Glissando Glissando Glissando

Metal wind chimes outburst bell tree

Wood

Pno. f

Vln. I spiccato f tremolo

Vln. II spiccato f

Vla. spiccato f

Vc. f

Cb.

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal plain cymbal (stick) > > > >

Wood > > > > > >

Pno. *p* > > > >

Vln. I *p* pizz. > > >

Vln. II *p* pizz. > > >

Vla. *p* pizz. > > >

Vc. *f* *p* pizz. > > >

Cb. *f* *p* pizz. > > >

crash cymbal >

Strange Attractors

Elodie Lauten

2005

TRANSPOSED SCORE

= 110

Flute

Oboe

Clarinet in Bb

Bass Clarinet

Bassoon

Horn in F

Trumpet in C 1

Trumpet in C 2

Trombone

Metal

Wood

Piano

Violin I

Violin II

Viola

Cello

Contrabass

as written

Gliaccando

Triangles, windchimes, bells, cymbals
Loud and clear throughout
triangle

Any combination of wood percussion instruments
Loud and clear throughout

p

f 3

p spiccato

mf arco

f 3

p spiccato

mf arco

mf

p spiccato

p martele

mf arco *p*

p martele

mf arco *p*

Strange Attractors

Fl. *mf*

Ob. *mf*

B♭ Cl.

B. Cl.

Bsn. *p*

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal *wind chimes outburst*

Wood *triangle*

Pno.

Vln. I *f³*

Vln. II *f³*

Vla. *mf*

Vc. *mf*

Cb. *mf*

Musical score for Strange Attractors, page 3, featuring 13 staves of music for various instruments. The score includes parts for Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Bass Clarinet (B. Cl.), Bassoon (B. Cl.), Horn (Hn.), Trombone (Tbn.), Trombone (Tbn.), Trombone (Tbn.), Metallophone (Metal), Woodblock (Wood), Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), Cello (Vc.), and Double Bass (Cb.). The score is in common time, with measures numbered 13. Dynamics and performance instructions include *mf*, *f*, and *bell tree*.

Fl. Ob. B. Cl. B. Cl. Bsn.

Hn. C Tpt. 1 C Tpt. 2 Tbn.

Metal Wood

Pno. *f*

Vln. I *mf* *f*³

Vln. II *f*³

Vla. *mf*

Vc. Cb.

Musical score for orchestra and woodwind quintet, page 4. The score consists of 15 staves, each with a key signature of two sharps. Measure numbers 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19 are indicated above the staves.

The instruments listed from top to bottom are:

- Fl. (Flute)
- Ob. (Oboe)
- B♭ Cl. (B-flat Clarinet)
- B. Cl. (Bassoon)
- Bsn. (Bassoon)
- Hn. (Horn)
- C Tpt. 1 (C Trumpet 1)
- C Tpt. 2 (C Trumpet 2)
- Tbn. (Tuba)
- Metal (Metals)
- Wood (Wood)
- Pno. (Piano)
- Vln. I (Violin I)
- Vln. II (Violin II)
- Vla. (Cello)
- Vc. (Double Bass)
- Cb. (Double Bass)

Performance instructions include dynamic markings like *mf* and *triangle*.

Fl. *p*

Ob. *p*

B♭ Cl.

B. Cl. *p*

Bsn. *f*

Hn. *p*

C Tpt. 1

C Tpt. 2 *mf* *p*

Tbn. *p*

Metal

Wood

Pno. *p*

Vln. I *p*

Vln. II *p*

Vla. *p*

Vc. *p*

Cb. *p*

wind chimes

Strange Attractors

Fl. *f*

Ob. *f*

B♭ Cl. *f*

B. Cl. *f*

Bsn. *p*

Hn. *f* *Crescendo*

C Tpt. 1 *f* *agitato*

C Tpt. 2 *f* *agitato*

Tbn. *f* *Crescendo*

Metal triangle

Wood

Pno. *ff* *f*

Vln. I tremolo *subito p*

Vln. II tremolo *subito p*

Vla. tremolo *subito p*

Vc. tremolo *subito p*

Cb. *martele* *subito p*

Musical score for orchestra and metal instruments, page 7. The score consists of six systems of staves, each starting with a measure number 37.

Flute (Fl.): Measures 37-40. Dynamics: *mf*, *mf*.

Oboe (Ob.): Measures 37-40. Dynamics: *mf*, *mf*.

B♭ Clarinet (B♭ Cl.): Measures 37-40. Dynamics: *mf*, *p*.

B. Clarinet (B. Cl.): Measures 37-40.

Bassoon (Bsn.): Measures 37-40. Dynamics: *p*.

Horn (Hn.): Measures 37-40. Dynamics: *mf*, *f*.

C Trumpet 1 (C Tpt. 1): Measures 37-40. Dynamics: *mf*, *f*.

C Trumpet 2 (C Tpt. 2): Measures 37-40. Dynamics: *mf*, *f*.

Trombone (Tbn.): Measures 37-40. Dynamics: *mf*.

Metal: Measures 37-40. Dynamics: crash cymbal (use stick), plain cymbal (stick).

Wood: Measures 37-40. Dynamics: *p*.

Piano (Pno.): Measures 37-40.

Violin I (Vln. I): Measures 37-40. Dynamics: *mf*.

Violin II (Vln. II): Measures 37-40. Dynamics: *f*, *mf*.

Viola (Vla.): Measures 37-40. Dynamics: *f*, *p*.

Cello (Vc.): Measures 37-40. Dynamics: *f*, *p*.

CDouble Bass (Cb.): Measures 37-40. Dynamics: *f*, *p*.

Musical score for orchestra and piano, page 8, measures 43-45.

The score consists of ten staves:

- Flute (Fl.)
- Oboe (Ob.)
- B♭ Clarinet (B♭ Cl.)
- B. Clarinet (B. Cl.)
- Bassoon (Bsn.)
- Horn (Hn.)
- C Trumpet 1 (C Tpt. 1)
- C Trumpet 2 (C Tpt. 2)
- Trombone (Tbn.)
- Metal (Metal)
- Wood (Wood)
- Piano (Pno.)
- Violin I (Vln. I)
- Violin II (Vln. II)
- Viola (Vla.)
- Cello (Vc.)
- CDouble Bass (Cb.)

Measure 43:

- Flute, Oboe, B♭ Clarinet, B. Clarinet, Bassoon play eighth-note patterns.
- Horn, C Trumpet 1, C Trumpet 2, Trombone, Metal, Wood remain silent.
- Piano plays eighth-note patterns.
- Violin I, Violin II, Viola, Cello play eighth-note patterns.

Measure 44:

- Flute, Oboe, B♭ Clarinet, B. Clarinet, Bassoon play eighth-note patterns.
- Horn, C Trumpet 1, C Trumpet 2, Trombone, Metal, Wood remain silent.
- Piano plays eighth-note patterns.
- Violin I, Violin II, Viola, Cello play eighth-note patterns.

Measure 45:

- Flute, Oboe, B♭ Clarinet, B. Clarinet, Bassoon play eighth-note patterns.
- Horn (p), C Trumpet 1, C Trumpet 2, Trombone, Metal, Wood remain silent.
- Piano plays eighth-note patterns.
- Violin I, Violin II, Viola, Cello play eighth-note patterns.

Musical score for orchestra and piano, page 9, measures 49-50.

The score consists of two systems of music. The top system (measures 49-50) includes parts for Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Horn (Hn.), Trombone (Tbn.), C Trumpet 1 (C Tpt. 1), C Trumpet 2 (C Tpt. 2), Metal (a percussion instrument), Wood (another percussion instrument), and Piano (Pno.). The bottom system (measures 49-50) includes parts for Violin I (Vln. I), Violin II (Vln. II), Cello (Cb.), Double Bass (Vcl.), and Bassoon (Bsn.).

Measure 49:

- Flute: Rests throughout.
- Oboe: Rests throughout.
- Bassoon: Rests throughout.
- Horn: Rests throughout.
- Trombone: Rests throughout.
- C Trumpet 1: Rests throughout.
- C Trumpet 2: Rests throughout.
- Piano: Rests throughout.
- Violin I: Rests throughout.
- Violin II: Rests throughout.
- Cello: Rests throughout.
- Double Bass: Rests throughout.

Measure 50:

- Flute: Rests throughout.
- Oboe: Rests throughout.
- Bassoon: Rests throughout.
- Horn: Rests throughout.
- Trombone: Rests throughout.
- C Trumpet 1: Rests throughout.
- C Trumpet 2: Rests throughout.
- Piano: Rests throughout.
- Violin I: Playing eighth-note patterns.
- Violin II: Playing eighth-note patterns.
- Cello: Playing eighth-note patterns.
- Double Bass: Playing eighth-note patterns.

Performance instructions:

- Dynamic: **p** (pianissimo) at the beginning of measure 50.
- Articulation: Slurs and grace notes.
- Performance: Measure 50 starts with a forte dynamic (f) for the bassoon solo.

Strange Attractors

Musical score for orchestra and piano, page 10, titled "Strange Attractors". The score consists of two systems of music.

System 1 (Measures 55-56):

- Flute (Fl.):** Playing eighth-note patterns, dynamic **f**.
- Oboe (Ob.):** Playing eighth-note patterns, dynamic **f**.
- B♭ Clarinet (B♭ Cl.):** Playing eighth-note patterns.
- Bassoon (Bsn.):** Playing eighth-note patterns.
- Horn (Hn.):** Playing eighth-note patterns.
- C Trumpet 1 (C Tpt. 1):** Playing eighth-note patterns, dynamic **f**.
- C Trumpet 2 (C Tpt. 2):** Playing eighth-note patterns.
- Trombone (Tbn.):** Playing eighth-note patterns.
- Metal:** Playing eighth-note patterns.
- Wood:** Playing eighth-note patterns.
- Piano (Pno.):** Playing eighth-note patterns.

System 2 (Measures 57-58):

- Violin I (Vln. I):** Playing eighth-note patterns, dynamic **f**.
- Violin II (Vln. II):** Playing eighth-note patterns, dynamic **p**.
- Cello (Cb.):** Playing eighth-note patterns, dynamic **p**.
- Violoncello (Vc.):** Playing eighth-note patterns, dynamic **p**, dynamic **mf**.
- Double Bass (Vla.):** Playing eighth-note patterns, dynamic **mf**.

Fl. *6I*

Ob.

B♭ Cl. *f*

B. Cl.

Bsn. *mf* *Gliissando* *f*

Hn. *6I*

C Tpt. 1

C Tpt. 2 *6I*

Tbn. *6I*

Metal *bell tree* *triangle*

Wood *6I*

Pno. *6I* *p*

Vln. I *6I*

Vln. II *bassoon* *f*

Vla. *bassoon* *mf*

Vc. *bassoon* *mf legato*

Cb. *bassoon* *mf legato*

Strange Attractors

73

Fl. *p*

Ob. *f*

B♭ Cl. *f*

B. Cl.

Bsn.

Hn. *p*

C Tpt. 1

C Tpt. 2

Tbn. *mf*

Metal

Wood

Pno. *f* *p*

Vln. I *p*

Vln. II *p*

Vla. *p*

Vc. *p*

Cb. *p*

triangle

crash cymbal (use stick)

triangle

Strange Attractors

79

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

This musical score page contains ten staves of music. The instruments listed from top to bottom are Flute, Oboe, Bassoon, Horn, Trombones, Metallophone, Wood Block, Piano, Violin I, Violin II, Viola, Cello, and Double Bass. The piano staff includes dynamics for both hands. Various performance techniques are indicated throughout the page, such as slurs, grace notes, and dynamic markings like *p*, *f*, and *mf*. Measures 1 through 4 are mostly rests or simple patterns. Measure 5 begins with more active playing, particularly for the woodwind section and piano.

Fl. *pp*

Ob. *pp*

B♭ Cl. *mf*

B. Cl.

Bsn. *mf*

Hn.

C Tpt. 1

C Tpt. 2 *mf*

Tbn. *p*

Metal plain cymbal (stick)

Wood

Pno. *pp* simile

Vln. I tremolo

Vln. II tremolo

Vla. tremolo

Vc. *f*

Cb. *p*

92

Fl. *Gissando* *f* *p*

Ob.

B♭ Cl. *f* *p*

B. Cl.

Bsn. *mf* *p*

Hn.

C Tpt. 1 *f*

C Tpt. 2 *f*

Tbn. *mf*

Metal *triangle*

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

99

Fl.

Ob.

B. Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

f agitato

f agitato

f agitato

mf

mf

Glossando

mf

f agitato

f agitato

Glossando

Glossando

f agitato

tremolo

f agitato

f agitato

Strange Attractors

Fl. *Glissando*

Ob.

B♭ Cl.

B. Cl.

Bsn. *Glissando*

Hn. *Glissando*

C Tpt. 1 *Glissando*

C Tpt. 2

Tbn. *Glissando*

Metal plain cymbal (stick)

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

105

p

p

p

p

f

mf

p

p

p

p

p

arco

arco

arco

arco

Strange Attractors

19

III

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

mf

plain cymbal (stick)

spiccato p, cresc poco a poco

spiccato p, cresc poco a poco

spiccato p, cresc poco a poco

martele

martele

Musical score for Strange Attractors, page 20, featuring a 12-measure system. The score includes parts for Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Horn (Hn.), Trombone (Tbn.), Metallophone (Metal), Wood Block (Wood), Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Cello (Vcl.), Double Bass (Cb.), and Bassoon (Bsns.). Measure 1: Flute, Oboe (mf), Bassoon, Horn, Trombones, Metallophone, Wood Block, Piano, Violin I, Violin II, Cello, Double Bass, Bassoon. Measure 2: Flute, Oboe, Bassoon, Horn, Trombones, Metallophone, Wood Block, Piano, Violin I, Violin II, Cello, Double Bass, Bassoon. Measures 3-4: Flute, Oboe, Bassoon, Horn, Trombones, Metallophone, Wood Block, Piano, Violin I, Violin II, Cello, Double Bass, Bassoon. Measures 5-6: Flute, Oboe, Bassoon, Horn, Trombones, Metallophone, Wood Block, Piano, Violin I, Violin II, Cello, Double Bass, Bassoon. Measures 7-8: Flute, Oboe, Bassoon, Horn, Trombones, Metallophone, Wood Block, Piano, Violin I, Violin II, Cello, Double Bass, Bassoon. Measures 9-10: Flute, Oboe, Bassoon, Horn, Trombones, Metallophone, Wood Block, Piano, Violin I, Violin II, Cello, Double Bass, Bassoon. Measures 11-12: Flute, Oboe, Bassoon, Horn, Trombones, Metallophone, Wood Block, Piano, Violin I, Violin II, Cello, Double Bass, Bassoon.

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

p, cresc poco a poco

f

mf

p

p

Strange Attractors

Fl. *p*

Ob. *p*

B♭ Cl. *p*

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2 *f*

Tbn.

Metal

Wood

Pno. *p*

Vln. I

Vln. II

Vla.

Vc. spiccato

Cb. spiccato

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

triangle

Wood

f solo to rubato 43 *ff* *ff* simile

mf

Fl. *f*

Ob.

B♭ Cl.

B. Cl. *p*

Bsn. *p*

Hn. *p*

C Tpt. 1 *f* lead melody

C Tpt. 2

Tbn. *f* lead melody

Metal triangle crash cymbal triangle

Wood

Pno. *a tempo* *mf*

Vln. I arco lead melody

Vln. II *p* arco

Vla. *p* arco

Vc. *p*

Cb. *f* *p*

Fl.

Ob.

B♭ Cl. *p*

B. Cl.

Bsn.

Hn. *p*

C Tpt. 1

C Tpt. 2

Tbn.

Metal

Wood

Pno.

Vln. I

Vln. II

Vla.

Vc.

Cb.

Musical score for orchestra and piano, page 26, section "Strange Attractors". The score includes parts for Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Bass Clarinet (B. Cl.), Clarinet (Cl.), Horn (Hn.), Trombone (Tbn.), C Tpt. 1, C Tpt. 2, Metal, Wood, Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), and Cello (Cv.). The score shows various musical staves with notes, rests, and dynamics like "p" (piano). A "wind chimes" instruction is present on the Metal part.

Musical score for orchestra and piano, page 27, measures 160-161.

The score consists of two systems of music, each containing 12 staves. The instruments are:

- Fl. (Flute)
- Ob. (Oboe)
- B♭ Cl. (B-flat Clarinet)
- B. Cl. (Bassoon)
- Bsn. (Bassoon)
- Hn. (Horn)
- C Tpt. 1 (C Trumpet 1)
- C Tpt. 2 (C Trumpet 2)
- Tbn. (Tuba)
- Metal (Bell)
- Wood (Maracas)
- Pno. (Piano)
- Vln. I (Violin I)
- Vln. II (Violin II)
- Vla. (Cello)
- Vc. (Double Bass)
- Cb. (Cello)

Measure 160 (top system):

- Fl., Ob., B♭ Cl., B. Cl., Bsn.: Various rhythmic patterns, mostly eighth-note groups.
- Hn.: Slurs and grace notes.
- C Tpt. 1: Slurs and grace notes.
- C Tpt. 2: Slurs and grace notes.
- Tbn.: Slurs and grace notes.
- Metal: Single notes.
- Wood: Single notes.
- Pno.: Chords.
- Vln. I: Slurs and grace notes.
- Vln. II: Slurs and grace notes.
- Vla.: Slurs and grace notes.
- Vc.: Slurs and grace notes.
- Cb.: Slurs and grace notes.

Measure 161 (bottom system):

- Fl., Ob., B♭ Cl., B. Cl., Bsn.: Various rhythmic patterns, mostly eighth-note groups.
- Hn.: Slurs and grace notes.
- C Tpt. 1: Slurs and grace notes.
- C Tpt. 2: Slurs and grace notes.
- Tbn.: Slurs and grace notes.
- Metal: Single notes.
- Wood: Single notes.
- Pno.: Chords.
- Vln. I: Slurs and grace notes.
- Vln. II: Slurs and grace notes.
- Vla.: Slurs and grace notes.
- Vc.: Slurs and grace notes.
- Cb.: Slurs and grace notes.

Text "triangle" is written above the Metal staff in measure 161.

Musical score for orchestra and various instruments, page 28, section "Strange Attractors". The score consists of ten systems of music, each with multiple staves. The instruments listed on the left are Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Horn (Hn.), C Tpt. 1, C Tpt. 2, Trombone (Tbn.), Metal (Metals), Wood (Wood), Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Cello (C. Cello), Double Bass (Cb.), and Bassoon (Bsn.). The tempo is marked as 166 BPM throughout the score.

The score features a variety of musical elements including:

- Flute, Oboe, Bassoon, and Horn play eighth-note patterns.
- C Tpt. 1 and C Tpt. 2 play eighth-note patterns with dynamic markings like *p*.
- Trombone (Tbn.) rests throughout the score.
- Metals and Wood play eighth-note patterns.
- Piano (Pno.) plays eighth-note chords.
- Violins (Vln. I and Vln. II) play eighth-note patterns.
- Cello (C. Cello) and Double Bass (Cb.) play eighth-note patterns.

A specific instruction "plain cymbal (stick)" is indicated above the Metal and Wood staves in the fourth system.

Musical score for orchestra and piano, page 29, measures 172-173.

The score consists of two systems of music, each with 12 measures. The instrumentation includes Flute (Fl.), Oboe (Ob.), Bassoon (Bsn.), Bass Clarinet (B. Cl.), Horn (Hn.), C Trumpet 1 (C Tpt. 1), C Trumpet 2 (C Tpt. 2), Trombone (Tbn.), Metallophone (Metal), Wood Block (Wood), Piano (Pno.), Violin I (Vln. I), Violin II (Vln. II), Cello (Cb.), Double Bass (Vcl.), and Bassoon (Vla.).

Measure 172 (top system):

- Flute: Rests throughout.
- Oboe: eighth-note patterns.
- Bassoon: eighth-note patterns.
- Bass Clarinet: eighth-note patterns.
- Horn: eighth-note patterns.
- C Trumpet 1: eighth-note patterns.
- Trombone: eighth-note patterns.
- Piano: eighth-note chords.
- Violin I: eighth-note patterns.
- Violin II: eighth-note patterns.
- Cello: eighth-note patterns.
- Bassoon: eighth-note patterns.

Measure 173 (bottom system):

- Flute: Rests throughout.
- Oboe: eighth-note patterns.
- Bassoon: eighth-note patterns.
- Bass Clarinet: eighth-note patterns.
- Horn: eighth-note patterns.
- C Trumpet 1: eighth-note patterns.
- Trombone: eighth-note patterns.
- Piano: eighth-note chords.
- Violin I: eighth-note patterns.
- Violin II: eighth-note patterns.
- Cello: eighth-note patterns.
- Bassoon: eighth-note patterns.

Dynamics and performance instructions:

- Measure 172: C Trumpet 1 dynamic *p*.
- Measure 173: Violin I dynamic *p*.

Fl. f

Ob. f

B♭ Cl. f

B. Cl. mf

Bsn. f

Hn. Glissando

C Tpt. 1 Glissando

C Tpt. 2 mf

Tbn. Glissando mf

Metal wind chimes outburst bell tree

Wood

Pno. f

Vln. I spiccato f tremolo

Vln. II spiccato f

Vla. spiccato f

Vc. f

Cb.

Fl.

Ob.

B♭ Cl.

B. Cl.

Bsn.

Hn.

C Tpt. 1

C Tpt. 2

Tbn.

Metal plain cymbal (stick) > > > >

Wood > > > > > > > >

Pno. *p* > > > > > > > >

Vln. I *p* pizz. > > > > > > > >

Vln. II *p* pizz. > > > > > > > >

Vla. *p* pizz. > > > > > > > >

Vc. *f* *p* pizz. > > > > > > > >

Cb. *f* *p* pizz. > > > > > > > >