

Rand Steiger

A Menacing Plume

for flute (piccolo and alto), oboe (cor anglais), clarinet (bass clarinet),

2 percussion, piano, violin, viola, cello and electronics

Premiere: March 24, 2011; Merkin Hall, New York City; Scott Voyles conducting the Talea ensemble; Miller Puckette, computer music programming

Program Note: From the moment I read about the explosion of the Deepwater Horizon oil platform (April 20, 2010), I was filled with a sense of dread. I thought immediately of the strange, unworldly creatures that thrive in the ocean's depths, as well as those that swim near the surface or fly above it. My feeling of horror grew as we read day after day of the massive, uninhibited flow of oil from the sea floor, and the unregulated use of chemical dispersants (which we now know will linger longer than the oil itself, with as yet unknown consequences.) After a few weeks, news reports described huge plumes of oil gathering in the gulf and drifting out into the Atlantic Ocean. It was impossible to know how large these were or how deadly they would be, but that image of a menacing plume, obliterating life in its wake, stayed with me. Although in many of my earlier works I have reflected on the natural world, I have never before attempted so directly, almost literally, to narrate something like this event in musical terms.

My piece begins with an image of the vast undisturbed surface of the sea as the blinding, bright morning light first arises, followed by a flock of seabirds that soar above. Then layers of material emerge through all the instruments, inspired by the diversity and complexity of undersea life. Finally, an ominous darkness enters and ultimately squeezes out all life.

In addition to the conventional instruments on stage, you will hear two vibraphones with specially tuned bars that enable just intonation. We will also be deploying digital signal processing to transform the sound of the instruments in a variety of ways (just-tuned harmonizing, delays, filters, etc.)

I would like to thank Talea, and Miller Puckette for their inspiring collaboration. I dedicate this performance to the memory of my friend, the composer Arthur Jarvinen, who recently passed away at the untimely age of 54.

Dynamics: The dynamic marking **n** is frequently used to indicate notes that begin imperceptibly and gradually fade in over the length of the indicated crescendo. Similarly, decrescendos that end at a rest without a dynamic marking indicate a complete diminuendo to silence. Please note the starting and ending points of these transitions precisely.

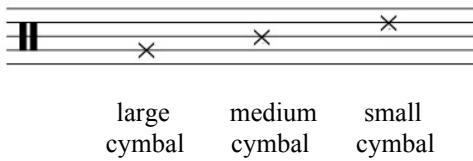
Accidentals and Microtonality: Accidentals carry through the length of the bar, but only in the octave in which they appear. The backwards filled-in flat is used to indicate -31 cents (7th partial) in string harmonics.

Flute: Triangular note heads indicate a tongue ram, and X note heads indicate a key click.

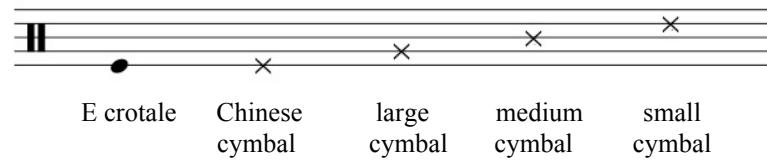
Strings: Jeté, or "thrown bow" technique is used often in all the string parts. This is indicated by a slur following the note with a series of dots underneath it. The motion begins at the indicated note, and the bow is then allowed to freely bounce as long as possible after the note begins. **OP** over a note indicates over-pressure, or "bow distortion" which should always produce noise and not a clear pitch. This notation only applies to the note it appears above unless continued with a bracket.

Percussion:

percussion 1 suspended cymbals:



percussion 2:



Choice of mallets is left to the discretion of the performers. Please note that 5 bass bows are needed for the final section of the piece (2 for each percussionist and 1 for the pianist who assists percussion 1). The two vibraphones must be the Musser M-55 Pro Vibe model. The composer will supply a custom tuned set of bars to replace one set on each instrument (diatonic set on Vibraphone 2 and sharp/flat set on vibraphone 1). The following chart shows the actual sound this will produce for each played note (quarter sharps = +41 cents, backwards flat = -49 cents, filled backwards flat = -31 cents):

Electronics:

A laptop computer running Miller Puckette's Pd software is used for digital signal processing of the sound of the instruments in a variety of ways throughout the piece. Hypercardioid microphones (preferably ones attached to the instruments to avoid bleeding in of other sounds) are to be used on the winds and string instruments, connected to the computer audio interface (no mics are needed for piano or percussion). Two channels of processed sound are then returned to the house system. Great care is to be taken when setting the level of the signal processing amplification. The sound from the speakers should not be louder than the original acoustical sound of the instruments. Ideally, the listener will hear the natural sound of the ensemble, along with a "halo" of transformed sound, blending together equally. Monitor speakers are not necessary for the performers. The ensemble should follow the indicated dynamics and balance and tune in the usual manner. The electronic processing follows the performance, and therefore the conductor has complete interpretive freedom.

More details about the electronics are available in a separate document. A few general notes are provided here. Throughout the piece the strings are slightly amplified, and a halo of resonance is generated using resonant filters in a variety of ways. The winds from 25 - 95 are treated with an echo process (delay with feedback) and stereo panning. A similar process is applied to the alto flute starting at 157. All the winds from 54-62 and 100-142, and the Cor Anglais only from 142-240, are harmonized with one or two just-tuned intervals (producing a chord with the same timbre). Starting at measure 221 the computer begins to introduce sustained pitches in the same range as the ensemble and then gradually widening and growing denser and louder and arriving at a thick mass of sound at 242. After the strings reenter at 243, this starts to fade away gradually (low frequencies first) and when it is completely inaudible, the conductor begins again at measure 245.

Stage Diagram:

Please note: to avoid sound getting into each others microphones the players should be as far apart from one another as possible (with the exception of the strings, who may sit close together, but as far as possible from the other instruments).



Contact:

For further information please contact the composer by email to this address:
rand@ucsd.edu

Additional information may be found on the following web site:
<http://rand.info>

A Menacing Plume

Flute **40** *n* **mf** **6"**

Oboe **40** *n* **mf** **6"** **to cor anglais** **12"**

Clarinet in B♭ **40** *n* **mf** **6"** **to bass clarinet** **12"**

Piano **f** **Ped.** **40** **sempre l.v.** **6"** **12"**

Percussion 1 **f** **Ped.** **40** *n* **mf** *n* **mf** *n* **mf** **12"** **f**

Percussion 2 **f** **Ped.** **40** **sempre l.v.** **6"** **12"**

Violin **f** **IV** **III** **II**

Viola **f** **III** **II**

Violoncello **f** **IV** **IV**

13

accel. $\text{♩} = 48$ $\text{♩} = 44$

fl.

ob.

cl.

cor anglais

bass clarinet

pno

to piccolo

to oboe

to B♭ clarinet

perc.1

perc.2

vln.

vla.

vc.

13

$\text{♩} = 48$ $\text{♩} = 44$

accel. $\text{♩} = 48$ $\text{♩} = 44$

13

I

IV

II 8va

III

III loco

IV

III (h)

I

$n - \text{mf}$

$n - \text{mf}$

$n - \text{mf}$

$n - \text{mf}$

Musical score for orchestra and piano, page 23, measures 23-24.

Measure 23: picc. (piccolo) plays eighth-note patterns with dynamics *n*, *f*, *mf*, *ff*, *n*, *f*, *pp*, *f*. ob. (oboe) and b. cl. (bassoon) provide harmonic support. The piano part consists of sustained chords.

Measure 24: picc. continues eighth-note patterns. ob. and b. cl. play sustained notes. The piano part ends with a dynamic *f*.

Measure 25: The tempo changes to $\text{♩} = 112$. perc. 1 (percussion 1) and perc. 2 (percussion 2) play eighth-note patterns with dynamics *f*, *ppp*, *mf*, *pp*. The piano part continues with sustained chords.

Measure 26: The tempo changes back to $\text{♩} = 112$. vln. (violin), vla. (viola), and vc. (cello) play eighth-note patterns with dynamics *f*, *f*, and *f* respectively.

31

picc.

ob.

b. cl.

pno.

perc.1

perc.2

vln.

vla.

vc.

31

Musical score for orchestra and piano, page 38. The score includes parts for picc., ob., clarinet in B \flat , b. cl., pno., perc.1, perc.2, vln., vla., and vc. The score features complex rhythmic patterns and dynamic markings such as f , pp , mf , mp , and fp . The piano part includes performance instructions like "Ped." and asterisks (*). The percussion parts (perc.1 and perc.2) feature sustained notes with grace marks and dynamic markings like mf and pp . The strings (vln., vla., vc.) provide harmonic support with sustained notes and grace marks.

44

picc. (d.)

ob.

cl.

pno.

perc.1

perc.2

vln.

vla.

vc.

Musical score page 50, featuring nine staves of music for various instruments. The instruments include picc. (piccolo), ob. (oboe), cl. (clarinet), pno. (piano), perc.1 (percussion 1), perc.2 (percussion 2), vln. (violin), vla. (viola), and vc. (cello). The score is divided into measures by vertical bar lines. Measure 1 starts with picc. and ob. playing eighth-note patterns, followed by cl. and pno. in measure 2. perc.1 and perc.2 provide rhythmic patterns throughout. vln. and vla. enter in measure 3 with sustained notes. The score concludes with a ritardando (rit.) instruction.

55

picc. *mf* *pp*

ob. *n* *mf* *n* *mf* *n* *mf* *n* *mf* *pp*

cl. *mf* *n* *mf* *ppp* *mf* *n* *mf* *n* *mf* *n* *mf*

pno. *mp* *ppp* *mp* *ppp* *mf* *ppp* *(d.)* *mp* *ppp* *ppp* *mf* *pp*

perc.1 *pp* ⁹ *mf* *n* *mf* *n* *mf* *n* *mf* *n* *mf* *p* *n* *mf* *p* *n* *mf* *p* *n* *mf* *p*

perc.2 *pp* ⁵ *mf* *pp* *n* *mf* *n* *mf* *n* *mf* *n* *mf* *p* *n* *mf* *p* *n* *mf* *p* *n* *mf* *p*

vln. *mf* *pp*

vla. *n* *mf* *n* *mf*

vc. *n* *mf* *n* *mf*

accel.

vln. *mf* *pp*

vla. *n* *mf* *n* *mf*

vc. *n* *mf* *n* *mf*

(harmonic glissando)

(harmonic glissando)

55

$\text{♩} = 112$

Musical score for picc., ob., cl., and pno. The score consists of four staves. The picc. staff has a treble clef, 4/4 time, and a key signature of one flat. It features six measures of sixteenth-note patterns with various dynamics like f , pp , p , and mf . The ob. and cl. staves also have treble clefs and 4/4 time, with dynamics pp , f , pp , $5f$, p , and $mf < f$. The pno. staff has a bass clef and 4/4 time, with dynamics mf , pp , mf , pp , pp , mf , pp , pp , and pp . Measures are numbered 62 at the top left.

Musical score for perc.1 and perc.2. Both staves have a treble clef and 4/4 time. perc.1 starts with mf , followed by a series of eighth-note patterns with dynamics pp , mf , pp , mf , pp , pp , mf , pp , pp , and pp . perc.2 starts with pp , followed by a series of eighth-note patterns with dynamics mf , pp , mf , pp , pp , mf , pp , pp , pp , and mf . Measures are numbered 62 at the top left.

Musical score for vln., vla., and vc. The vln. staff has a treble clef and 4/4 time, starting with f . The vla. staff has a bass clef and 3/4 time, starting with f . The vc. staff has a bass clef and 4/4 time, starting with f . All three instruments play sustained notes with grace notes above them. Measures are numbered 62 at the bottom left.

Musical score for orchestra and piano, page 10, measures 67-72.

Measure 67: picc. (5) tr., ob. (5) f, cl. (tr) n mf, pno. mf pp, perc.1 9, perc.2 5, vln. - 3, vla. - 3, vc. -

Measure 68: picc. (5) mp, ob. (5) f, cl. (tr) 3 6, pno. mf pp, perc.1 9, perc.2 5, vln. - 3, vla. - 3, vc. -

Measure 69: picc. (5) tr. 6, ob. (5) f, cl. (tr) 6, pno. f, perc.1 9, perc.2 5, vln. - 3, vla. - 3, vc. -

Measure 70: picc. (5) mp, ob. (5) f, cl. (tr) 5, pno. f, perc.1 9, perc.2 5, vln. - 3, vla. - 3, vc. -

Measure 71: picc. (5) n, ob. (5) p, cl. (tr) 5, pno. mf pp, perc.1 9, perc.2 5, vln. - 3, vla. - 3, vc. -

Measure 72: picc. (5) f, ob. (5) f, cl. (tr) 5, pno. pp, perc.1 9, perc.2 5, vln. - 3, vla. - 3, vc. -

A detailed musical score for orchestra and piano, page 77. The score includes parts for piccolo, oboe, clarinet, piano, percussion 1, percussion 2, violin, viola, and cello. The piano part features rhythmic patterns with dynamics like mf, pp, and mf. The percussion parts show complex patterns with dynamics like mf and pp. The woodwind parts have melodic lines with dynamics like f and n. The strings provide harmonic support with sustained notes and rhythmic patterns.

picc. *mp* *f* *mf* *f* *sfp* *ff* *f*

ob. *mp* *f* *mf* *f* *sfp* *ff* *f*

cl. *mf* *f* *mf* *f* *sfp* *ff* *f*

pno. *mf pp* *mf* *pp* *mf* *pp f* *pp f* *pp f* *pp f* (hold pedal until sound completely fades)

perc.1 *mf pp* *mf pp* *mf pp f* *pp f* *pp f* *pp f* (hold pedal until sound completely fades)

perc.2 *mf pp* *mf pp* *mf pp* *pp f* *pp f* *pp f* *pp f* (hold pedal until sound completely fades)

vln. *3* *3* *3*

vla. *3* *3*

vc. *3*

picc. 5

ob. 9

cl. 5

pno.

perc.1

perc.2

vln.

vla.

vc. 11

13

15

93 (tr) to flute

$\text{♩} = 90$

picc.

ob.

cl.

flute

93 (tr) to flute

$\text{♩} = 90$

picc.

ob.

cl.

flute

pno.

pno.

$\text{♩} = 90$

perc.1

perc.1

perc.2

perc.2

vln.

vla.

vc.

$\text{♩} = 90$

sul pont.

f

ord.

pizz.

arco sul pont. ($\frac{1}{4}$ -tone gliss)

f

ord.

pizz.

arco OP

ord.

sul pont.

n — f

sul pont.

f

pizz. arco pizz.

ff n — ff

arco sul pont. ($\frac{1}{4}$ -tone gliss)

f

ord. pizz.

ff pp — ff

arco OP

ord.

sul pont.

n — f

sul pont.

f

ff

arco sul pont. ($\frac{1}{4}$ -tone gliss)

f

ord. pizz.

ff pp — ff

arco OP

ord.

sul pont.

n — f

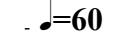
93

15

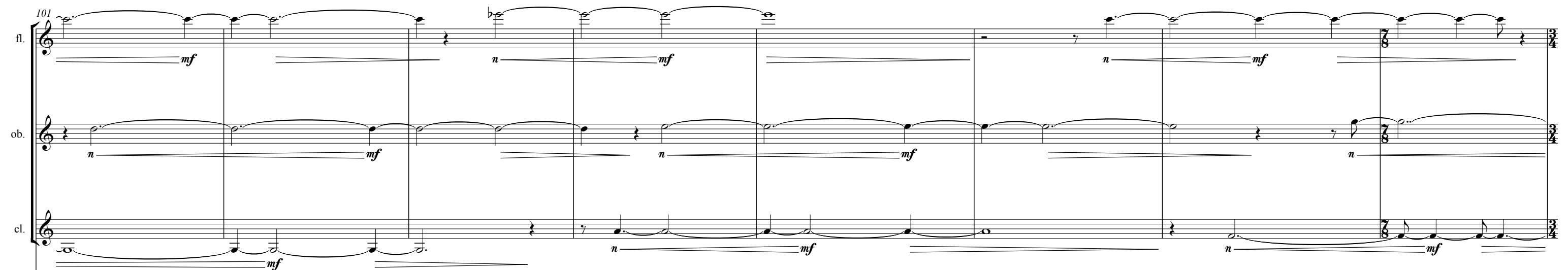
vln.

vla.

vc.

rit.  =60

101

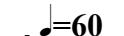


fl.

ob.

cl.

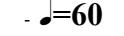
pno.

rit.  =60



perc.1

perc.2

rit.  =60



vln.

vla.

vc.

bassoon

101 

Musical score for flute (fl.), oboe (ob.), and clarinet (cl.) in 3/4 time. The score consists of six measures. Measure 1: Flute and Oboe play eighth-note patterns with grace notes, Clarinet rests. Measure 2: Flute and Oboe continue eighth-note patterns, Clarinet enters with eighth-note chords. Measure 3: Flute and Oboe play eighth-note patterns, Clarinet rests. Measure 4: Flute and Oboe continue eighth-note patterns, Clarinet enters with eighth-note chords. Measure 5: Flute and Oboe play eighth-note patterns, Clarinet rests. Measure 6: Flute and Oboe continue eighth-note patterns, Clarinet enters with eighth-note chords.

perc.1

$\text{♩} = 60 \quad \text{accel.}$ $\text{♩} = 80$

rit. $\text{♩} = 60$

$\text{♩} = 80$

A musical score for perc.2. The score consists of six measures. Measure 1: 3/4 time signature, treble clef, dynamic forte. Measure 2: 5/4 time signature. Measure 3: 4/4 time signature. Measure 4: 4/4 time signature. Measure 5: 5/4 time signature. Measure 6: 4/4 time signature.

vln.

vla.

vc.

109

Musical score for orchestra and piano, page 118, measures 80-145.

Measure 80: Flute (fl.) and Bass Clarinet (b. cl.) play eighth-note patterns. Piano (pno.) plays eighth-note chords.

Measure 81 (rit.): Oboe (ob.) and Clarinet (cl.) play eighth-note patterns. Bass Clarinet (b. cl.) joins in. Piano (pno.) continues eighth-note chords.

Measure 82: Bass Clarinet (b. cl.) continues eighth-note pattern. Piano (pno.) changes to sixteenth-note patterns.

Measure 83: Piano (pno.) continues sixteenth-note patterns. Measures 84-85: Piano (pno.) continues sixteenth-note patterns with dynamic markings *pp*, *5*, *(8va)*, *3*, *5*, *8va*, *3*, *5*, *8vb*, *5*, *8vb*, *3*, *5*, *8vb*, *5*.

Measure 86 (rit.): Percussion 1 (perc. 1) and Percussion 2 (perc. 2) play eighth-note patterns. Dynamic: *with bow*, *(hold pedal through m. 145)*.

Measure 87: Percussion 1 (perc. 1) and Percussion 2 (perc. 2) continue eighth-note patterns. Dynamic: *pp*, *mf*, *pp*, *mf*, *sim.*

Measure 88 (rit.): Violin (vln.) and Viola (vla.) play eighth-note patterns. Dynamic: *pizz.*, *ff*, *arco non vib.*, *n-f*, *pizz.*, *ff*, *arco non vib.*, *n-f*, *pizz.*, *ff*, *arco non vib.*, *n-f*.

Measure 89: Violin (vln.) and Viola (vla.) continue eighth-note patterns. Dynamic: *OP*, *pizz.*, *arco ord.*, *sul pont.*, *ord.*, *f*, *n-f*, *pizz.*, *arco ord.*, *sul pont.*, *ord.*, *f*, *n-f*, *pizz.*, *arco ord.*, *sul pont.*, *ord.*, *f*, *n-f*.

Measure 90: Violin (vln.) and Viola (vla.) continue eighth-note patterns. Dynamic: *pp*, *mf*, *pp*, *mf*.

Measure 91 (rit.): Cello (vc.) and Double Bass (db.) play eighth-note patterns. Dynamic: *ff*, *pizz.*, *arco non vib.*, *n-f*, *pizz.*, *f*, *n-f*, *pizz.*, *f*, *n-f*, *pizz.*, *f*, *n-f*.

Measure 92: Cello (vc.) and Double Bass (db.) continue eighth-note patterns. Dynamic: *OP*, *pizz.*, *arco ord.*, *sul pont.*, *ord.*, *f*, *n-f*, *pizz.*, *arco ord.*, *sul pont.*, *ord.*, *f*, *n-f*, *pizz.*, *arco ord.*, *sul pont.*, *ord.*, *f*, *n-f*.

Measure 93: Cello (vc.) and Double Bass (db.) continue eighth-note patterns. Dynamic: *pp*, *mf*, *pp*, *mf*.

Measure 94: Cello (vc.) and Double Bass (db.) continue eighth-note patterns. Dynamic: *n-f*, *mf*.

Musical score for orchestra and piano, page 127. The score includes parts for flute (fl.), oboe (ob.), bassoon (b. cl.), piano (pno.), percussion 1 (perc. 1), percussion 2 (perc. 2), violin (vln.), viola (vla.), and cello (vc.). The tempo is $\text{♩} = 40$. The score features sustained notes with grace marks, dynamic markings like *mp* and *pp*, and performance instructions such as *rit.* (ritardando) and *Ped.* (pedal). The piano part includes complex rhythmic patterns with 5/8 and 3/8 time signatures. The percussion parts feature sustained notes with grace marks and dynamic markings like *mf*.

135

fl. : *mp*

ob. : *n* *mp*

b. cl. : *n* *mp*

pno. : *Ped.* *8vb* *Ped.* *8vb* *Ped.* *8vb* *Ped.* *8vb* *Ped.*

perc.1

perc.2

vln. : >*pp*< *mf* >*pp*< *mf* >*pp*< *mf* >*pp*< *mf* >*pp*< *mf* >*pp*<

vla. : >*pp*< *mf* >*pp*< *mf* >*pp*< *mf* >*pp*< *mf* >*pp*< *f*

vc. : >*pp*< *mf* >*pp*< *mf* >*pp*< *mf* >*pp*< *mf* >*pp*< *mf* >*pp*< *f*

to cor anglais

sul pont.

sul pont.

sul pont.

accel. $\text{♩}=90$

142

fl. to alto flute

c. a. cor anglais

b. cl.

This musical score excerpt shows three staves for woodwind instruments. The first staff is for flute (fl.), which has a single note followed by a rest. The second staff is for cor anglais (c. a.), featuring a melodic line with dynamic markings *f*, *n*, *f*, *p*, *f*, *n*, *f*, and *f*. The third staff is for bassoon (b. cl.), which remains silent throughout the measure. The tempo is indicated as $\text{♩}=90$.

pno.

This musical score excerpt shows two staves for piano (pno.). The top staff is in treble clef and the bottom staff is in bass clef. Both staves remain silent throughout the measure.

accel. $\text{♩}=90$

perc.1

This musical score excerpt shows one staff for first percussion (perc.1). It remains silent throughout the measure.

perc.2

This musical score excerpt shows one staff for second percussion (perc.2). It remains silent throughout the measure.

accel. $\text{♩}=90$

vln. *f*

vla.

vc.

This musical score excerpt shows three staves for strings. The first staff is for violin (vln.), the second for viola (vla.), and the third for cello/bass (vc.). All three instruments play eighth-note patterns. The tempo is indicated as $\text{♩}=90$. Various performance techniques are marked, including *pizz. 3*, *arco sul pont.*, *ff*, *f*, *pizz. 5*, *arco*, *sul pont.*, *p*, and *f*.

151

J=80

fl.

c. a.

b. cl.

alto flute

f

This section of the score shows parts for flute (fl.), clarinet in A (c. a.), bassoon (b. cl.), and alto flute. The tempo is J=80. The flute has eighth-note patterns. The clarinet and bassoon play sustained notes with dynamic changes between p, ff, f, pp, and ff. The alto flute has a sixteenth-note pattern starting at f.

pno.

This section shows a piano part (pno.) with two staves. The piano is silent throughout the measures shown.

J=80

perc.1

This section shows a first percussion part (perc.1) with two staves. The percussion is silent throughout the measures shown.

perc.2

This section shows a second percussion part (perc.2) with two staves. The percussion is silent throughout the measures shown.

vln.

vla.

vc.

J=80

arco

sul pont.

pizz.

pp

f

arco

sul pont.

pizz.

pp

f

arco

OP

pizz.

pp

f

arco

sul pont.

pizz.

f

arco

sul pont.

pizz.

f

arco

OP

pizz.

pp

f

arco

sul pont.

pizz.

f

arco

OP

pizz.

f

arco

sul pont.

pizz.

f

arco

OP

pizz.

f

arco

sul pont.

pizz.

f

arco

OP

pizz.

f

arco

sul pont.

pizz.

f

arco

OP

pizz.

f

arco

sul pont.

pizz.

f

arco

OP

pizz.

f

This section shows parts for violin (vln.), viola (vla.), and cello/bass (vc.). The tempo is J=80. The parts feature alternating arco and pizzicato strokes. Dynamics include arco (f), sul pont. (f), pizz. (f), pp, and f. Measure 151 starts with arco and sul pont. for all three instruments.

Musical score for orchestra, page 159, measures 1-10. The score includes parts for A. Flute, C. Alto, and Bassoon. Measure 1: A. Flute starts with a sustained note (pp) followed by eighth-note pairs (f). Measure 2: C. Alto enters with eighth-note pairs (f). Measure 3: Both instruments play eighth-note pairs (f). Measures 4-5: A. Flute plays eighth-note pairs (f), C. Alto plays eighth-note pairs (f). Measures 6-7: Both instruments play eighth-note pairs (f). Measures 8-9: Both instruments play eighth-note pairs (f). Measure 10: Both instruments play eighth-note pairs (f).

A musical score for percussion 1. It consists of five measures. The first measure starts with a treble clef and a 4/4 time signature. The second measure begins with a 4/4 time signature. The third measure begins with a 4/4 time signature. The fourth measure begins with a 3/4 time signature. The fifth measure begins with a 5/4 time signature. The score is written on a staff with four lines and a space.

A musical score for perc.2. The score consists of six measures. Measure 1 starts with a treble clef, a common time signature (indicated by a '4'), and a bass clef. Measures 2 through 4 are in common time (indicated by a '4'). Measures 5 and 6 start with a treble clef, a three-quarter time signature (indicated by a '3'), and a bass clef. The score is written on five staves.

vln. *arco sul pont.*

vla. *arco OP* *sul pont.*

vc. *arco OP* *sul pont.*

<*ff*>

pizz. *arco* *pizz.* *arco*

f *p* *ff* *f*

sul pont. *pizz.* *arco OP* *sul pont.* *pizz.*

ff *f*

159

Musical score page 172 featuring multiple staves for various instruments. The top section includes staves for A. Fl., c. a., b. cl., and piano. The middle section includes staves for perc.1 and perc.2. The bottom section includes staves for vln., vla., and vc. The score is filled with complex rhythmic patterns, dynamic markings like ff, f, pp, and ff, and performance instructions such as 'sul pont.', 'pizz.', 'arco', and 'Ped.'. Measure numbers 172 are present at the beginning and end of the section.

Musical score page 178 featuring multiple staves for various instruments. The top section includes staves for A. Fl., c. a., b. cl., and piano. The middle section includes staves for perc.1 and perc.2. The bottom section includes staves for vln., vla., and vc. The score is filled with complex rhythmic patterns, dynamic markings like *ff*, *p*, and *f*, and performance instructions such as "secure pedal with weight (through end of piece)" and "with medium mallets". The piano part features many grace notes and slurs. The percussion parts show sustained notes with attack strokes. The string section uses a variety of techniques including arco, sul pont., pizz., and arco sul pont.

Musical score for orchestra and piano, page 185. The score includes parts for A. Flute, c. alto, b. clarinet, piano, percussion 1, percussion 2, violin, viola, and cello. The piano part features complex sixteenth-note patterns with dynamic markings like *p*, *mf*, *f*, *ff*, and *pp*. The string section uses various bowing techniques including *arco*, *pizz.*, and *sul pont.*. The score is set in common time with a key signature of one sharp.

Musical score for orchestra and piano, page 192. The score includes parts for A. Flute, C. Alto, Bassoon, Piano, Percussion 1, Percussion 2, Violin, Viola, and Cello. The score features complex rhythmic patterns and dynamic markings such as *pizz.*, *arco*, *sul pont.*, and *OP*. The piano part includes various pedaling instructions like *Ped.*, ** Ped.*, *8vb*, and *sost.*. The score is divided into measures by vertical bar lines.

Musical score page 197, measures 197-200. The score includes parts for A. Flute, C. Alto, Bass Clarinet, Piano, Percussion 1, Percussion 2, Violin, Viola, and Cello. The instrumentation and dynamics are as follows:

- A. Flute:** Measures 197-200. Dynamics: f , f , f , pp , ff , f .
- C. Alto:** Measures 197-200. Dynamics: ff , f , p , ff , f , pp , ff , f .
- B. Bass Clarinet:** Measures 197-200. Dynamics: n , f , mf , f , n , f , n , f .
- Piano:** Measures 197-200. Dynamics: $8vb$, $8vb$, $*$, $8vb$, $8vb$, $*$, $8vb$, $*$. Pedal markings: Ped. , Ped. , Ped. , Ped. .
- Percussion 1:** Measures 197-200. Dynamics: 5 , 5 , 5 , 5 , 5 , 5 , 5 , 5 .
- Percussion 2:** Measures 197-200. Dynamics: 5 , 5 , 5 , 5 , 5 , 5 , 5 , 5 .
- Violin:** Measures 197-200. Dynamics: $pizz.$, $arco$, $sul pont.$, f , $pizz.$, $arco$, $sul pont.$, f , $pizz.$, $arco$, $sul pont.$, pp , ff , f , $pizz.$, $arco$, $pizz.$, 3 , $arco$, $sul pont.$, $pizz.$, $arco$, $pizz.$, 3 , $pizz.$, $arco$.
- Viola:** Measures 197-200. Dynamics: $pizz.$, $arco$, $sul pont.$, f , $pizz.$, $arco$, $sul pont.$, f , $pizz.$, $arco$, $sul pont.$, pp , ff , f , $pizz.$, $arco$, $pizz.$, 3 , $arco$, $sul pont.$, $pizz.$, $arco$, $pizz.$, 3 , $pizz.$, $arco$.
- Cello:** Measures 197-200. Dynamics: $pizz.$, $arco$, $sul pont.$, f , $pizz.$, $arco$, $sul pont.$, f , $pizz.$, $arco$, $sul pont.$, pp , ff , f , $pizz.$, $arco$, $pizz.$, 3 , $arco$, $sul pont.$, $pizz.$, $arco$, $pizz.$, 3 , $pizz.$, $arco$.

203

A. Fl.

c. a.

b. cl.

pno.

perc.1

perc.2

vln.

vla.

vc.

203

pizz. *f* *arco* *pizz.* *arco sul pont.* *pizz.* *arco sul pont.* *pizz.* *arco* *pizz.* *arco* *pizz.* *arco* *pizz.*

pizz. *f* *arco* *pizz.* *arco sul pont.* *pizz.* *arco sul pont.* *pizz.* *arco* *pizz.* *arco* *pizz.* *arco* *pizz.*

ff *f* *pizz.* *arco* *pizz.* *arco sul pont.* *pizz.* *arco sul pont.* *pizz.* *arco* *pizz.* *arco* *pizz.* *arco* *pizz.*

Musical score for orchestra and piano, page 209. The score includes parts for A. Flute, C. Alto, B. Clarinet, Piano (pno.), Percussion 1 (perc.1), Percussion 2 (perc.2), Violin (vln.), Viola (vla.), and Cello/Bass (vc.). The score features complex rhythmic patterns, dynamic markings like *p*, *f*, *pp*, and *ff*, and performance instructions such as *ped.*, *8va*, *8vb*, *pizz.*, *arco*, *sul pont.*, *ord.*, and *OP*. The piano part requires holding a pedal through measure 243. Measures 209-210 are shown.

Musical score for orchestra and piano, page 215. The score includes parts for A. Flute, C. Alto, Bassoon, Piano, Percussion 1, Percussion 2, Violin, Viola, and Cello. The piano part features complex sixteenth-note patterns. The percussion parts show rhythmic patterns with accents and dynamic markings like *pizz.*, *arco sul pont.*, and *ord.*. The strings play sustained notes with dynamic changes between *f* and *pp*.

Musical score for orchestra and piano, page 221. The score includes parts for A. Flute, C. Alto, B. Clarinet, Piano, Percussion 1, Percussion 2, Violin, Viola, and Cello. The score features complex rhythmic patterns and dynamic markings such as *pizz.*, *arco*, *sul pont.*, and various dynamics like *ff*, *f*, *pp*, and *mp*. The piano part is particularly prominent with its six staves of notes. The score is divided into measures by vertical bar lines.

Musical score for orchestra and piano, page 226. The score includes parts for A. Flute, C. Alto, B. Clarinet, Piano, Percussion 1, Percussion 2, Violin, Viola, and Cello. The piano part features complex sixteenth-note patterns with dynamic markings like *ff*, *p*, and *pp*. The percussion parts show rhythmic patterns with various note heads and rests. The string section includes dynamic markings such as *pizz.*, *arco*, *OP*, *ord.*, and *sul pont.*.

Musical score page 231 featuring nine staves of music. The staves are as follows:

- A. Fl.**: Flute part, treble clef, mostly eighth-note patterns with dynamic markings like *p*, *ff*, and *f*.
- c. a.**: Alto part, treble clef, includes dynamic markings *ff*, *p*, *f*, *p*, *ff*, and *p*.
- b. cl.**: Bass Clarinet part, bass clef, includes dynamic markings *p*, *ff*, *sfp*, and *ff*.
- pno.**: Piano part, treble and bass staves, includes dynamic markings *6*, *3*, *8va*, *8vb*, *6*, *7*, *7*, *7*, and *7*.
- perc. 1**: Percussion 1 part, treble clef, includes dynamic markings *5*, *5*, *5*, *5*, *5*, *5*, *5*, *5*, and *5*.
- perc. 2**: Percussion 2 part, treble clef, includes dynamic markings *9*, *9*, *9*, *9*, *9*, *9*, *9*, *9*, and *9*.
- vln.**: Violin part, treble clef, sustained notes with dynamic marking *f*.
- vla.**: Cello part, bass clef, sustained notes with dynamic marking *f*.
- vc.**: Double Bass part, bass clef, sustained notes with dynamic marking *f*.

The score is divided into measures by vertical bar lines, and each measure is numbered with a circled number (e.g., 5, 6, 7) above the staff. The page number "231" is located at the bottom left.

Musical score page 238, measures 15-18. The score includes parts for A. Fl., c. a., b. cl., pno., perc.1, perc.2, vln., vla., and vc. Measure 15: A. Fl. sustained note, c. a. sustained note, b. cl. eighth-note pattern with dynamics 5-5, 15''. Measure 16: b. cl. eighth-note pattern with dynamics 3-3, 15''. Measure 17: b. cl. eighth-note pattern with dynamics 3-3, 15''. Measure 18: b. cl. eighth-note pattern with dynamics 3-3, 15''. Measure 19: pno. eighth-note pattern with dynamic ff pos., 15''. Measure 20: perc.1 sixteenth-note pattern with dynamics 6-3, 15''. Measure 21: perc.2 sixteenth-note pattern with dynamics 9-5, 15''. Measure 22: vln. sustained note, 15''. Measure 23: vla. sustained note, 15''. Measure 24: vc. sustained note, 15''.

243 $\text{d}=26$
 wait for
 electronics to
 completely fade out

$\text{d}=40$

A. Fl.
 c. a.
 b. cl.

pno. { go to vibraphone 1

$\text{d}=26$
 $\text{d}=40$
 vibraphone with
 2 bows
 pianist bows on
 vibraphone 1
 (pedal held with weight)

perc.1

perc.2 { vibraphone with 2 bows
 (pedal held with weight) mf

vln. I
 vla. III
 vc. IV

n f mp p $non vib.$ n p n p

n f mp n p n p n p

n f mp n p n p n p

243

251 rit. $\text{♩}=30$

A. Fl.

c. a.

b. cl.

perc.1

perc.2

vln.

vla.

vc.

rit. $\text{♩}=30$

perc.1

perc.2

vln.

vla.

vc.

rit. $\text{♩}=30$

251