

Joseph Klein

Occam's Razor

seven studies for ten players

(1994-99)

supported by a Composer Fellowship from the National Endowment for the Arts, a federal agency,
and by a Faculty Research Grant from the University of North Texas

duration: c. 22'

INSTRUMENTATION

- flute / alto flute / piccolo
- English horn
- clarinet in A & B \flat / bass clarinet in B \flat
- trumpet in C & B \flat
- horn in F
- percussion (1 player):

- harp
- harpsichord
- viola
- contrabass

marimba, vibraphone, glockenspiel, chimes, 4 tom-toms, 2 tam-tams, China cymbal, 2 suspended cymbals, ratchet, vibraslap, wood block, brake drum



2 tuned bell plates*, wood chimes, glass chimes (suspended from dome of China cymbal), alarm clock (w/ bell), metal shaker

* if these pitches are not available, any two bell plates a tritone apart (and in the same general register) may be substituted.

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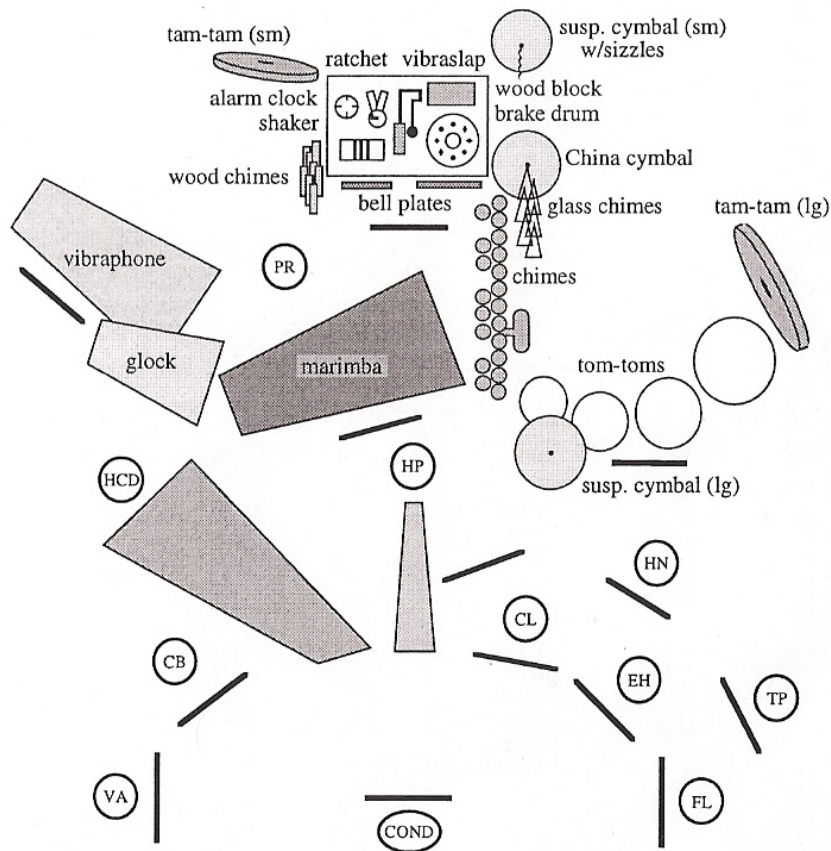
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- Flute requires B foot (out-of-range passages may be played on alto flute if such an instrument is unavailable).
- Bass clarinet should extend to a low written C (out-of-range pitches may be played an octave higher if such an instrument is unavailable).
- Horn requires a standard mute, and optional stopping mute; recommended instrument is a double descant (B-flat/high F) horn with A+ stopping valve (movement III, m. 9 is easier to play transposed with the A valve depressed).
- Trumpet requires straight, cup, harmon, bucket, felt hat, and plunger mutes.
- Percussionist requires the following striking implements: yarn mallets (2 soft, 2 medium, 4 hard), rubber mallets (2 medium, 2 hard), 2 hard plastic, 2 chime hammers, tam-tam beater. The vibraphone is to be prepared in movement VI (mm. 56-64) by taping quarters near the nodes of the specified bars; the resulting effect should be a sustained buzzing when the bars are struck. The small tam-tam is to be prepared by clamping a large metal coil to the lip, resulting in a metallic rattling sound when struck (movement VII). The China cymbal is to be prepared by suspending the glass chimes from the dome and allowing them to hang over the edge (movement V). The small suspended cymbal is to be prepared with a light gauge chain (“sizzle”) attached at the dome (movement VII).
- Harpsichord must be tuned in equal temperament at A=440, and requires two manuals: the lower manual (I) requires 8', 4', and lute stops; the upper manual (II) requires an 8' stop that can be coupled with the lower manual. Subtle amplification may be used only if absolutely necessary.
- Contrabass requires C extension (out-of-range pitches may be played an octave higher if such an instrument is unavailable).

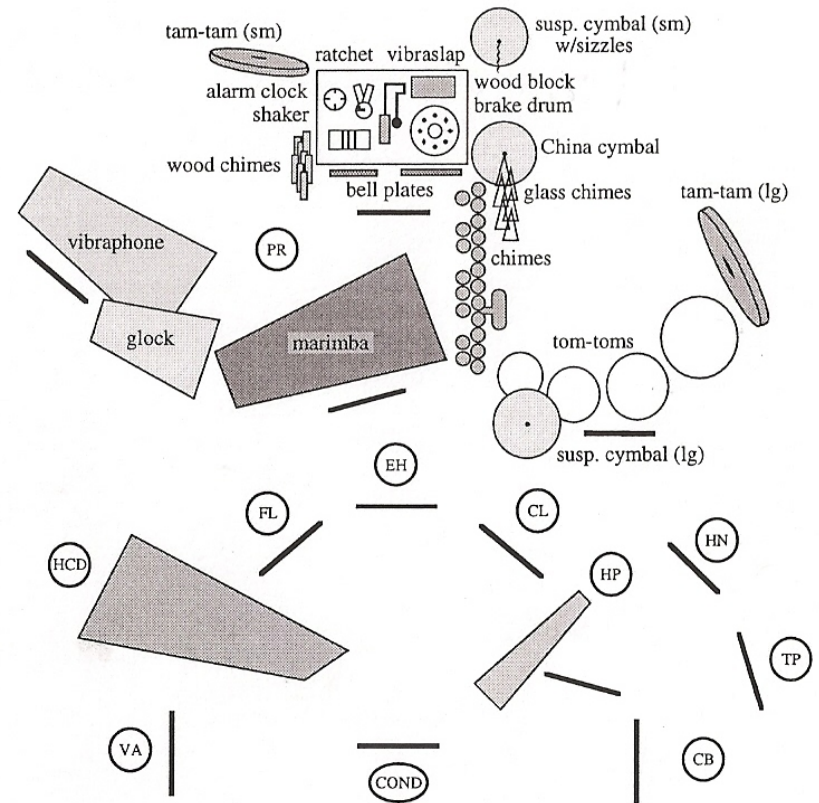
NOTES

- Score is notated in concert pitch; all instruments sound as written with the following exceptions:
 - piccolo sounds one octave higher than written
 - glockenspiel sounds two octaves higher than written
 - harp harmonics sound one octave higher than written
 - harpsichord on 4' stop sounds one octave higher than written
- Accidentals apply only to the notes they immediately precede, with the exception of repeated pitches.
- The ensemble may be set up in one of two configurations:

Setup A



Setup B



NOTES (cont.)

Movement I — Dynamics and phrasing must remain consistent throughout, with only a slight crescendo in measures 88-89. In the coda (measures 90-96), the marimba and harpsichord should be perceived as echoes of the clarinet.

Movement II — The harp should be prominent in measures 1-26 and measures 47-52; all other instruments should be equally balanced. Interrupting sections should be quite distinct, set off by the forceful *sforzando* attacks.

Movement III — In ten of the thirteen brief variations, one instrument should be prominent: viola (m. 1), horn (m. 5), harp (m. 7), piccolo (m. 11), trumpet (m. 13), clarinet (m. 15), contrabass (m. 19), marimba (m. 21), harpsichord (m. 23), and English horn (m. 25). In measures 3, 9, and 17, instruments should be equally balanced. During the silences, players should remain as still as possible and the conductor's gestures should be restricted to a minimum.



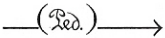


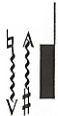
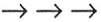




























Movement IV — The harp and harpsichord are prominent from the beginning of the movement, and should be perceived as a single, continuous entity. Though the trumpet and horn are also linked throughout this movement, the remaining instruments are to maintain some degree of independence and individuality until the texture becomes saturated. Beginning around measure 55 through the end of the movement, group accents must be clearly defined. The pause between movements IV and V must be substantial — significantly longer than those between any of the other movements (see note on page 63 of the score).

Movement V — Beginning in measure 7, the effect should be one of disintegration, with the harp and harpsichord gradually emerging from the texture. In measures 6-13, the chime-glissandi grace notes into the China cymbal (prepared with the glass chimes, as indicated above) should be executed as a single rapid gesture, with the right-hand mallet striking the China cymbal (thus activating the glass chimes as well) as it comes off of the chime tubes. Beamed flourishes in the harp and harpsichord should be executed as rapidly as possible (though it is not necessary for them to be rhythmically even) and allowed to resonate indefinitely; this is particularly critical in measures 21-48, where no other instruments are playing. The harp pedal changes should be executed as discreetly as possible—although to some extent, the extraneous sound produced by the harp pedals and the harpsichord action are important by-products of the music throughout this section.

Movement VI — The *ritornelli* (measures 1-4, 19-24, 77-84, and 93-103) should be distinct at each occurrence. The section in measures 25-41 consists of two accompanied solos — piccolo with harpsichord and contrabass with vibraphone; attacks in the accompanying instruments always initiate phrases in the respective solo instrument, and must therefore be precisely coordinated. This is also the case in measures 65-76, where the bass clarinet and trumpet are accompanied by the harp and viola, respectively. Measures 55-64 are intended as a parody of measures 42-55, where the piccolo, horn, vibraphone, harpsichord, and contrabass present a caricature of the bass clarinet, English horn, harp, trumpet, and viola, respectively.

Movement VII — The harp, harpsichord, viola, and contrabass should be equally balanced and each should maintain its independence in measures 1-40. The percussion entrances must be clearly heard, but should seem somewhat more remote than the other instruments through measure 37. Beginning around measure 25, the four stringed instruments become increasingly active, but should not necessarily increase in volume. This process continues (later joined by percussion) through the end of the movement, becoming more chaotic and building momentum throughout. The percussion part in particular should seem increasingly frantic, as the player attempts to activate all the instruments as indicated (though the bell plate attacks must remain relatively calm throughout). Mobile events in the viola, contrabass, and harp (beginning in measure 50) should become increasingly dense, particularly beginning in measure 56, as the percussion continues *ad libitum*. The wind drones beginning in measure 46 should be clearly audible, but must remain in the background.

SYMBOLS

	clean, distinct release/break in sound		senza tempo		percussion: depress pedal for the duration of the line
	attack/release unnoticeably		smooth, even portamento/glissando		chimes: beginning with arms crossed, rapidly glissando upward across the sharp tubes and downward across the natural tubes
	gradual change from one mode of play to another		special timbral effect (as described in score, movement VII, mm.46-62)		harp: play near the soundboard
	rapid change from one mode of play to another		chromatic cluster (indeterminate pitch)		harp: pedal glissando
	continue as indicated		chromatic cluster (within specified range)		harp: short, rapid glissando ("gushing chord")
	rapidly re-articulate the given pitch as indicated by the small beamed grouping		"white key" cluster (indeterminate pitch)		harp: thunder effect (violently glissando downward from note indicated, allowing strings to rattle)
	play beamed group as rapidly as possible		knock on resonant part of instrument's body		harp: half-pedal (string buzz)
	accelerando		winds: fluttertongue		harp: scrape along wound string
	ritardando		winds: sing pitch (diamond-shaped notehead) while playing ordinary tone (oval notehead)		strings: overpressure (bow with such force as to create scratching sound)
	play material within repeat brackets in the order indicated for the duration of the solid line		brass: closed (mute); horn: stopped		strings: snap pizzicato
	play material within brackets (<i>ad libitum</i>) for the duration of the wavy line		brass: open		strings: play between bridge and tailpiece
			brass: fingerings		strings: muffle strings with left hand while playing pizzicato (resulting in a dry, percussive sound)

PROGRAM NOTES

Composed between May of 1994 and February of 1999, *Occam's Razor* is a collection of seven brief studies for ten players intended as an exploration of a variety of musical procedures, structural devices, and interdisciplinary references. Numerical sequences serve as the basic organizing element, from the micro-level rhythmic and pitch cells, to movement durations (resulting in a proportional ratio of 7:8:5:11:6:10:9), to the instrumentation itself (one percussion, two brass, three woodwinds, four strings). Moreover, the work is constructed as a dynamic unfolding of "sub-ensembles" within the whole; thus, the work comprises ten solo sections, nine duos, eight trios, etc., with only a single section that includes the entire complement of ten players. The work's title refers to a principle devised by the English philosopher William of Occam (c.1285 - c.1349) which states that where more than one theory exists, the simplest one should be applied; also known as the law of parsimony, "Occam's Razor" implies a degree of complexity beyond that which is manifest.

The first study of the set, *estuary (chaotic fugato quasi toccata)*, takes as its metaphorical model a geological formation—specifically, the point where a river is met by the tides at an inlet of the sea. The movement is loosely fugal, though the character is reminiscent of a toccata (a rapid, florid, introductory movement); in this instance, the structure is derived from chaos theory, whereby erratic oscillations create bifurcations within the texture (musically represented by the splitting of a single line, first into two parts, then four, then seven). The point at which a river meets the sea displays a similar type of turbulent behavior.

The second study, *au seuil de la ruine (notturmo interrotto)*, is in two equal parts, the first of which consists of a cluster derived from two octatonic collections (pivoting around a central E-flat) which undergoes a gradual registral expansion and rhythmic compression. This opening section is interrupted by three brief, unrelated episodes, the first of which returns prior to a highly condensed recapitulation of the opening section in retrograde. The movement's title ("on the threshold of decay") refers to a painting by surrealist artist René Magritte, *Au Seuil de la Liberté (On the Threshold of Liberty)*, 1929, as considered through the deconstructionist prism of Jacques Derrida.

The third study, *one of many circles (hyperfractal variants)*, consists simply of thirteen brief statements of a motive in various guises. The distilled, self-similar quality of these variants reflects the influence of fractal geometry—a term coined by Belgian mathematician Benoit Mandelbrot to classify those fragmented and irregular structures that are not represented in classic Euclidean geometry. The title is from a line in Wallace Stevens' poem "Thirteen Ways of Looking at a Blackbird" (1917), which also served as a model for this study.

The fourth study, *maßenkristalle (loxodromic chaconne)*, is modeled after the Baroque *chaconne*, or continuous variation process. The *chaconne* subject consists of an eleven-note row which gradually spirals upward in pitch while simultaneously descending in register through a series of octave displacements; thus, it is similar in design to a loxodrome—an imaginary line on the surface of a sphere which is oblique to the equator, crossing all meridians at the same angle in a spiral path toward the pole. The title is from Elias Canetti's book *Maße und Macht (Crowds and Power)*, 1960 and refers to the loss of individual identity experienced during the formation of a crowd, initiated by what Canetti refers to as Maßenkristalle or "crowd crystals."

The fifth study, *the myth of eternal return (entropic ostinato)*, consists of a disintegrating ostinato texture that is followed by a brief coda reminiscent of the second movement *notturmo*. The title comes from the opening ruminations of Milan Kundera's novel *The Unbearable Lightness of Being* (1984), in which the author reflects upon (and ultimately rejects) Friedrich Nietzsche's concept of eternal return. Kundera's contemplation of an existence that recurs ad infinitum—becoming "a solid mass, permanently protuberant"—and the inherent weight of such a burden is the basic premise of the novel, and the conceptual germ of this movement.

The sixth study, *crown knots & cascades (meta-rondo in chiasmus)*, consists of two intertwined processes: the first process is associated with a core unit of three instruments—bass clarinet, trumpet, and viola—and is characterized by a decrease in tempo (from MM 180 to MM 90) and unit size (from seven to three instruments) throughout; the second process is associated with a core unit of three different instruments—piccolo, harpsichord, and contrabass—and is characterized by an increase in tempo (from MM 60 to MM 120) and unit size (from three to seven). These two processes are presented in alternation, resulting in a palindrome that crosses at brief overlapping solos in the trumpet and harpsichord. The title is drawn from a line in Alice Fulton's poem "Volunteers" (from *Sensual Math*, 1995), part of a sequence that draws upon genetic crossover as a significant aspect of its trope and subject.

The seventh study, *time's maw (moto perpetuo)*, deals with the perception of time and its passage. The title is borrowed from a line in John Ashbery's poem "All and Some" (from the collection *Self-Portrait in a Convex Mirror*, 1974), and the musical model is that of a *moto perpetuo* (a short piece built upon repetitive patterns). The pitch material is derived from "The Westminster Chimes" melody, which is subjected to various temporal and pitch distortions, and a kinetic intensification that ultimately leads to a complete textural saturation.

Occam's Razor was supported in part by a Composer Fellowship from the National Endowment for the Arts and a Faculty Research Grant from the University of North Texas. The complete work was premiered on 8 March 1999 at the University of North Texas by the UNT Faculty Chamber Ensemble, conducted by the composer.

I. estuary (*chaotic fugato quasi toccata*)

II. au seuil de la ruine (*notturmo interrotto*)

III. one of many circles (*hyperfractal variants*)

IV. maßenkristalle (*loxodromic chaconne*)

V. the myth of eternal return (*entropic ostinato*)

VI. crown knots & cascades (*meta-rondo in chiasmus*)

VII. time's maw (*moto perpetuo*)

Occam's Razor

seven studies for ten players

Joseph Klein
(1994-99)

I. estuary (chaotic fugato quasi toccata)

Murmuring ♩ = 150

5

ALTO FLUTE

ENGLISH HORN 9 16

CLARINET (A) 16

TRUMPET (C)

HORN

PERCUSSION

HARP

HARPSICHORD 9 16

VIOLA 16

CONTRABASS

p

sim., sempre

Musical score for page 10, featuring parts for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The score includes dynamic markings like "mute", "p", and "sim., sempre", and large time signature changes from 12/16 to 9/16 and back to 12/16.

15

AFL *p* *sim., sempre*

EH **12** **9** **12** **9**

CL **16** **16** **16** **16** *p*

TP *mute (bucket)* *p* *sim., sempre*

HN

PR *MARIMBA w/ med. yarn* *p*

HP

HCD *I: 8' lute* *p* (< >)

VA **12** **9** **12** **9**

CB

20 25

AFL

EH

CL

TP

HN

PR

HP

HCD

VA

CB

sim., sempre

The image shows a page of a musical score for a woodwind and string ensemble, covering measures 20 to 25. The instruments listed on the left are AFL (Alto Flute), EH (English Horn), CL (Clarinet), TP (Trumpet), HN (Horn), PR (Percussion), HP (Harp), HCD (Horn/Clarinet Double), VA (Viola), and CB (Cello/Bass). Measures 20 and 25 are marked with boxed numbers. The CL and PR parts include the instruction 'sim., sempre'. The score features various musical notations such as slurs, ties, and dynamic markings.

30

Musical score for multiple instruments: AFL, EH, CL, TP, HN, PR, HP, HCD, VA, CB. The score includes complex rhythmic patterns with slurs and accents. Large numbers '12/16' and '9/16' are placed over the music, likely indicating time signatures or measures.

35

Musical score for multiple instruments including AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The score features complex rhythmic patterns with large time signature changes (9/16, 12/16, 9/16) and includes a rehearsal mark '35'.

40

Musical score for multiple instruments. The score includes parts for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The score features complex rhythmic patterns with large numerical annotations (12/16 and 9/16) and time signature changes (5:4) in the HCD part.

45

AFL

EH

CL

TP

HN

PR

HP

HCD

VA

CB

12/16

50

Musical score for measures 50-53, featuring various instruments and time signatures. The score is divided into four measures, with time signatures changing from 9/16 to 12/16 and back to 9/16.

Measures 50-53:

- Measures 50-51:** 9/16 time signature.
- Measures 52-53:** 12/16 time signature.

Instrumentation: AFL, EH, CL, TP, HN, PR, HP, HCD, VA, CB.

Time Signatures: 9/16, 12/16, 9/16, 12/16.

Key Signatures: B-flat major / D minor.

Tempo/Style: Not explicitly stated, but the notation suggests a complex, rhythmic piece.

Notes: The score includes various musical notations such as eighth notes, sixteenth notes, and rests, along with dynamic markings and articulation symbols.

55

Musical score for a concert band, measures 55-60. The score includes parts for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. Large numbers 9/16 and 12/16 are placed over the music to indicate time signature changes.

60

The musical score is arranged in a system with ten staves. The instruments are labeled on the left: AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The score is written in treble clef for most instruments, with VA in alto clef and CB in bass clef. The key signature has one sharp (F#). The score is divided into five measures. Large numerical annotations are placed between the staves: 15, 9, 12, 9, 12. The CL and HCD staves have smaller annotations: 5:4, 5:6, 5:4, 5:4, 4:3, 4:3, 4:3. The VA staff has a 13/8 time signature at the end of the piece.

65

Musical score for measures 65-69. The score includes staves for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The time signatures for EH and CL are 12/16, 9/16, 15/16, 12/16, and 9/16. The time signatures for HCD and VA are 12/16, 9/16, 15/16, 12/16, and 9/16. The score features various musical notations, including notes, rests, and articulation marks. The key signature is one sharp (F#).

70

Musical score for measures 70-74, featuring the following instruments and parts:

- AFL**: Alto Flute
- EH**: Euphonium
- CL**: Clarinet
- TP**: Trumpet
- HN**: Horn
- PR**: Percussion
- HP**: Harp
- HCD**: Horns/Clarinets/Drums
- VA**: Viola
- CB**: Cello/Bass

Key features of the score include:

- Time Signatures**: 9/16, 5:4, 12/16, 4:3, and 9/16.
- Rehearsal Markers**: Large numbers 9, 12, and 9 are placed above the EH and CL staves, and below the VA staff.
- Musical Notation**: Includes various note values, rests, and articulations across all staves.

75

Musical score for measures 75-78. The score includes staves for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The key signature is one flat (B-flat). The time signature changes from 5/4 to 12/16 in measure 75, to 15/16 in measure 76, and back to 12/16 in measure 77. The music features complex rhythmic patterns with many sixteenth notes and rests. The HCD part has a 4/3 time signature in measures 75 and 77. The VA part has a 5/4 time signature in measures 75 and 77. The CB part has a 6/8 time signature in measure 75. The HP part is empty.

80

rit.

(♩ = 133)

Musical score for measures 80-89. The score includes parts for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The key signature has one flat (B-flat). The tempo is marked *rit.* with a metronome marking of 133 (♩ = 133). The score features complex rhythmic patterns with various time signatures (5:4, 4:3, 9:16, 15:16, 12:16) and articulations (accents, slurs, ties). The percussion part (PR) is instructed to continue in original tempo, *senza ritardando* (i.e., do not follow conductor) through measure 89.

85

(♩ = 110)

(♩ = 94)

(♩ = 81)

AFL
 EH
 CL
 TP
 HN
 PR
 HP
 HCD
 VA
 CB

Musical score for multiple instruments including AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The score is divided into three measures with tempo markings (♩ = 110, 94, 81) and includes performance instructions like "I: 8' (lute) + 4'" and "mp".

- (♩ = 69) - - - ♩ = 60 90 ← ♩ = ♩ → (= 60)

AFL *poco cresc.* *mf* 7:6
 EH *poco cresc.* *mf*
 CL *poco cresc.* *mf* *p sub.*
 TP *poco cresc.* 4:3 4:3 *mf*
 HN
 PR *poco cresc.* *mf* (in tempo) *p sub.*
 HP
 HCD *mf* I: 8' (ord.) + 4' I: 8' lute *p sub.*
 VA *poco cresc.* 5:4 5:4 5:4 5:4 *mf*
 CB

2/4 3/4

AFL
 EH
 CL
 TP
 HN
 PR
 HP
 HCD
 VA
 CB

3/4 4/4 5/4 4/4

Musical score for a concert band, featuring parts for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The score is divided into four measures with time signatures 3/4, 4/4, 5/4, and 4/4. The score includes various musical notations such as slurs, accents, and fingerings.

Musical score for rehearsal mark 95, featuring parts for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The score includes complex rhythmic patterns with slurs and fingerings, and large time signature changes (4/4, 2/4, 4/4, 5/4) indicated by large numbers.

Parts shown: AFL, EH, CL, TP, HN, PR, HP, HCD, VA, CB.

Time signatures: 4/4, 2/4, 4/4, 5/4.

Complex rhythmic patterns with slurs and fingerings (7, 6, 3) are present in the CL, PR, and HCD parts.

Fleeting (*senza tempo*)

AFL

EH

CL

TP

HN

PR

HP

HCD

VA

CB

5/4

Ø

(49)

ppp barely audible, as a whisper

Detailed description: This is a page of a musical score for a piece titled 'Fleeting (senza tempo)'. The score is arranged in a vertical staff system with ten parts: AFL (Alto Flute), EH (English Horn), CL (Clarinet), TP (Trumpet), HN (Horn), PR (Percussion), HP (Harp), HCD (Horn/Contra Drum), VA (Viola), and CB (Cello/Bass). The time signature is 5/4, indicated by large numbers '5' over '4' on the EH and VA staves. The key signature has one flat (B-flat), shown on the CL staff. The CL staff contains a long, continuous melodic line starting with a circled 'Ø' (no music) and ending with a comma. The first measure of the CL staff is marked with a circled 'Ø'. The tempo is 'senza tempo'. A dynamic marking of *ppp* (pianissimo) is placed below the CL staff with the instruction 'barely audible, as a whisper'. A rehearsal mark '(49)' is placed above the CL staff. The other staves (AFL, TP, HN, PR, HP, HCD, VA, CB) are empty, indicating that these instruments are silent during this passage.

II. au seuil de ruine

(notturmo interrotto)

Emerging ♩ = 60

5

Musical score for 'II. au seuil de ruine' (notturmo interrotto). The score is for a full orchestra and includes the following parts:

- FLUTE:** *p* (non vib.)
- ENGLISH HORN:** *p* (non vib.)
- CLARINET (B \flat):** *p* (non vib.)
- TRUMPET (C):** *p* (non vib.), mute (cup)
- HORN:** *p* (non vib.), mute
- PERCUSSION:** (Empty staff)
- HARP:** *mf*, chords: D \sharp , F \flat , B \sharp , G \sharp
- HARPSICHORD:** (Empty staff)
- VIOLA:** *p* (non vib.), mute
- CONTRABASS:** *p* (non vib.), II

Large numbers 12 and 8 are placed vertically on the Clarinet, Trumpet, and Harpsichord staves, indicating specific measures or dynamics.

Musical score for multiple instruments. The score is divided into two systems. The instruments listed are FL (Flute), EH (English Horn), CL (Clarinet), TP (Trumpet), HN (Horn), PR (Percussion), HP (Harp), HCD (Cello/Double Bass), VA (Viola), and CB (Cello/Bass). The score includes various musical notations such as notes, rests, and accidentals. Large numbers 9 and 15 are placed over the Clarinet (CL) and Horns (HN) parts, indicating measure counts. The HP part includes specific notes labeled E# and Eb. The VA part includes a first ending bracket labeled I.

Musical score for a concert band, measures 15-19. The score includes parts for Flute (FL), Euphonium (EH), Clarinet (CL), Trumpet (TP), Horn (HN), Percussion (PR), Harp (HP), Horn/Contra Bass Drum (HCD), Viola (VA), and Cymbal (CB). Large numbers 9, 12, 15, and 9 are placed above the Clarinet and Horn/Contra Bass Drum staves. The Harp part shows chords F# and D#.

Musical score for a jazz ensemble. The score includes parts for:

- FL (Flute)
- EH (Euphonium)
- CL (Clarinet) with large numbers 9, 12, 15, 9, 12 and 8 below.
- TP (Trumpet) with a "mute (plunger)" instruction.
- HN (Horn)
- PR (Percussion)
- HP (Harmonica) with notes Db, Gb, Bb, F#.
- HCD (Horn/Clarinet/Drum) with large numbers 9, 12, 15, 9, 12 and 8 below.
- VA (Vibraphone)
- CB (Cymbal) with a Roman numeral III.

Exuberant ♩ = 90 (← ♩ = ♩ →)

FL *sfz* *mp* *f* *p*

EH *sfz* *mf* *f* *p* *f* *p*

CL *sfz* *mp* *p* *f*

TP *sfz* (open)

HN *sfz*

PR

HP

HCD

VA *sfz*

CB *sfz* (open extension)

4 4 5 4 4 5 4 4

30

FL *f* *p* *f* *sffz*

EH *f* *p* *f* *p* *sffz*

CL **5**
4 *p* *f* **4**
4 *f* **9**
8 *p* *sffz*

TP *sffz*

HN *sffz*

PR

HP

HCD **5**
4 **4**
4 **9**
8

VA *sffz*

CB *sffz*

Calm (*senza tempo*)

10"

FL

EH

CL

TP

HN

PR

HP

HCD

VA

CB

poco

mf

mp

mf

D# C# B#
E# F# G# A#

F# G# A# D# C#

8

805

805

Capricious ♩ = 120

35 40

FL *sfz*

EH *sfz*

CL **5** **4** **5** **3** **4**

TP *sfz mp* 5:6 7:6 5:6 7:6

HN *sfz mp* 7:6 5:6 7:6

PR

HP

HCD **5** **4** **5** **3** **4**

VA *sfz*

CB *sfz*

Exuberant ♩ = 90 (← $\overset{3}{\curvearrowright}$ ♩ = ♩ →)

FL *sfz* *f* *p* *f*

EH *sfz* *mp* *p* *f* *p* *f*

CL *sfz* *mf* *f* *p*

TP *sfz*

HN *sfz*

PR

HP

HCD 5/4 4/4 5/4

VA *sfz*

CB *sfz*

45

FL *p* *f* *p* *sfz*

EH *p* *f* *p* *f* *sfz*

CL *f* *p* *f* *sfz*

TP *sfz*

HN *sfz*

PR

HP *mf*

HCD *mf*

VA *sfz*

CB *sfz*

D: C# B:
E: F# G# A#

5/4 4/4 9/8 12/8

Receding ♩ = 60 (← ♩ = ♩ →)

50

Musical score for page 50, featuring woodwinds, strings, and piano. The score is in 4/4 time with a tempo of ♩ = 60. The key signature has one flat (Bb). The woodwind parts (FL, EH, CL, TP, HN) are marked with dynamics *f* and *p* (non vib.). The string parts (PR, VA, CB) are marked with dynamics *f* and *p* (non vib.). The piano part (HP) is marked with dynamics *ff* and *mf*. The percussion part (HCD) features large numbers 12 and 9 over the staff, indicating specific rhythmic patterns. The score includes various musical notations such as slurs, accents, and dynamic markings.

FL *f* *p* (non vib.)

EH *f* *p* (non vib.)

CL *f* *p* (non vib.)

TP mute (plunger) *f* *p* (non vib.)

HN *f* *p* (non vib.)

PR

HP *ff* *mf*

HCD

VA *f* *p* (non vib.)

CB *f* *p* (non vib.)

F_b B_# F_b A_b G_b B_b D_# E_b B_# G_b

III. one of many circles

(hyperfractal variants)

Fluid ♩ = 114 (♩ = 57; ♩ = 38)

ALTO FLUTE/PICCOLO
ENGLISH HORN
CLARINET (B)
TRUMPET (C)
HORN
PERCUSSION
HARP
HARPSICHORD
VIOLA
CONTRABASS

10:6 10:6 10:6 7:4 4:3
pp pp pp pp p p p p p p p p p p

9:6 9:6 9:6 6:4 5:4 7 = 5 5:3 6 = 5 3:2 8 = 5

11 5 11 8 8 8 8 11 5 11 8 8

mute (cup) mute 8:6 8:6 8:6 5:4 w/ med. yarn w/ med. yarn

D: C# B#
E# F# G# A#

mp anxious 5:4 5 = 5

7:6 7:6 7:6 5:4 7:6

△ | | | △ | | △



AFLEHCLTPHNPRHPHCDVA CB

11 8 10 8 6 8

tr
pp

tr
pp

tr
pp

tr
pp

open
mp eloquent

MARIMBA
w/ soft yarn
pp

IV
pp

pp

△ △ | | △ △ | △ | | |

AFL *pp* 5:3 7:6

EH *pp* 5:3 **10** **9** 9:6 6:4 6:4 6:4 **7**

CL *pp* **8** **8** 9:6 6:4 6:4 6:4

TP *pp* 3:2 9:6 6:4 6:4 6:4

HN *pp* 5:4 3:2 open 9:6 6:4 6:4 6:4

PR VIBRAPHONE w/ med. yarn *pp* 3:2 5:4 MARIMBA w/ med. yarn *pp* 9:6 6:4 6:4 6:4

HP *mp* *mp* *emphatic* *f* E \flat D \flat B \flat F \sharp 9:6 6:4 6:4 6:4

HCD

VA **10** **9** *sul tasto* *pp* *port.* **8** **7**

CB *pp* *sul tasto* *pp* *port.* **8**

10

PICCOLO

ft.

mf agitated

4:3 3:2 7

tr

EH

7

8

CL

pp 5:3 5:4

7:4 6:4 5:4

TP

pp 8:6 3:2

HN

pp

GLOCKENSPIEL w/ med. rubber

PR

pp 9:6 5:4

HP

HCD

tr

pp 7:4 6:4

I: 8' lute

tr

7:4 6:4

VA

8

sul pont.

pp

tr

CB

PC *tr* *pp*

EH *pp* 5:3 5:4

CL *pp* 7:6 5:3 3:2

TP *open* *mp flamboyant* 3

HN *open* 4:3 7:6 *pp*

PR *VIBRAPHONE w/ med. yarn* 3:2 3:2 3:2 3:2 *pp* *Red.*

HP *pp* 3:2 5:4

HCD *D# C# B#*
E# F# G# A#
I: 8' (ord.) + 8' + 4' }

VA *ord.* *pp* 7:6 5:3 3:2 *9* *sul tasto* *pp* 3:2 7:4 3 *7*

CB *ord.* *pp* *(◦)* *pp*

PC: *ff* 8=d *f* 5=d *ff*

EH: 10

BCL: BASS CLAR *pp* 8 3 8:6 5:3 6

TP: *f* 8=d *ff* 5=d *f* 8=d

HN: *ff* 5=d *f* *ff* 8=d

PR: MARIMBA w/hard yarn *ff* violent 3 B \flat 5

HP: *ff* violent C \sharp → A \sharp → 5 G \sharp → D \sharp → #

HCD: *ff* violent 5 A \sharp → 3:2 7:6 3:2 7:6

VA: *ff* mechanical (arco) ord. (arco)

CB: *f* 5=d *ff* 8=d *f* *mf* aggressive *port.* *mf* *fz* 3:2 5:4 5:4

Accordions: D \sharp C \sharp B \flat E \sharp F \sharp G \sharp A \sharp 9:8 G \sharp 5:3 A \sharp 4:3 E \flat F \sharp G \flat

△ △ | | △ △ △ △ △ |

ALTO FLUTE
fl.
pp

AFL *pp*

EH *pp* 10 11 5

BCL *pp* 3:2 3:2 3:2 8 8 8

TP *pp* mute (harmon, stem in) + → → →

HN *pp* 3:2 3:2 3:2 4:3 5:3 5:4

PR (MAR) 3 3:2 3:2 *mp* exuberant

HP *pp* *bisb.*

HCD I: 8' (ord.) + 8' + 4' } *mf* erratic

VA *pp* *sul tasto* 10 11 5

CB *pp* 5:3 4:3 7:6 5:3 3:2

The image shows a musical score for a chamber ensemble. At the top, there are triangle symbols and vertical lines indicating a sequence of events. The score includes parts for Alto Flute (AFL), English Horn (EH), Bass Clarinet (BCL), Trumpet (TP), Horn (HN), Percussion (PR), Harp (HP), Harpsichord (HCD), Viola (VA), and Cello/Bass (CB). The score is divided into two systems. The first system ends with large numbers 10, 11, and 5. The second system also ends with large numbers 10, 11, and 5. Various musical notations such as dynamics (pp, mp, mf), articulation (fl., sul tasto), and performance instructions (mute, bisb.) are present. Rhythmic markings like 3:2, 4:3, 5:3, 7:6, and 5:4 are also included.



25



AFLE
EH
BCL
TP
HN
PR
HP
HCD
VA
CB

pp
mp *jocular*
pp
pp
pp
pp
pp
pp

(harmon, stem out)
VIBRAPHONE w/ soft yarn

5
8
11
8

IV. maßenkristalle

(loxodromic chaconne)

Impending ♩ = 76 (← ♩ = ♩ →)

FLUTE

ENGLISH HORN

BASS CLARINET

TRUMPET

HORN

PERCUSSION

HARP

HARPSICHORD

VIOLA

CONTRABASS

3

4

4

3

4

4

3

4

4

3

4

4

f delicate

mf

mp

f

mf delicate

f

n
anxious

D^b C[#] B^b
E[#] F[#] G[#] A[#]

B^b G^b B^b C^b G[#] E^b

II: 8' (ord.) } I: 8'

5

FL

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

p *sfz* *n* *p* *sfz* *p* *sfz* *p* *sfz* *p* *sfz* *p*

mp
austere

mf *5 = ♩* *f* *pdlt* *(ord.)*

mf *II: mf*

*D^b C[♯] B[♭]
E[♯] F[♯] G[♯] A[♯]*

E^b F^b *D[♯] F[♯]*

Musical score for multiple instruments including FL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. The score features complex rhythmic patterns, dynamic markings like *sfz*, *p*, *mp*, and *mf*, and large time signature changes from 3/4 to 4/4 and back to 3/4. The HP part includes chord changes: C#, Bb F#, C#, and Eb F#.

FL

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

mute (harmon, stem out); cover w/ plunger

n *anxious*

p *sfz* *n*

mf *f*

mf *mp*

f

5 = \downarrow (ord.)

4 = \downarrow

C# → ♮ → ♯ → ♮

tr

3

4

3

4

3

4

3

4

3

4

FL

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

5

3

3

8 = $\frac{1}{2}$

tr

mf

3

4

4

5

mp

3

4

mp brooding

3

+

sfz

n

p

sfz

p

sfz

p

sfz

mute

3

3

3

p

sfz

p

SUSP CYM w/ hard yarn

TOM-TOMS

mp incisive

3

mf

mf

7 = $\frac{1}{2}$

3

4

4

3

4

mp

port.

poco

1

III #

FL

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

mp

sfz

p

f

mf

tr

mute (straight)
cover w/ felt hat

4 = ♩

5 = ♩

(ord.)

I: }

D# Bb A# Db C# f G# D#

Musical score for measures 35-38, featuring parts for FL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. The score includes complex rhythmic patterns, triplets, and dynamic markings such as *sfz*, *p*, *mp*, and *mf*. Large numbers '3' and '4' indicate triplet and sextuplet groupings.

Musical score for a concert band, featuring parts for Flute (FL), Euphonium (EH), Bass Clarinet (BCL), Trumpet (TP), Horn (HN), Percussion (PR), Harp (HP), Horns/Double Basses (HCD), Viola (VA), and Cello/Bass (CB). The score includes various musical notations such as dynamics (*mf*, *mp*, *p*, *sfz*, *f*), articulation (*tr*, *sfz*), and performance instructions (*open*, TAM-TAM w/ hard yarn). It also features large time signature changes from 4/4 to 3/4 and back to 4/4.

FL *f* *tr* *mp* *f* *mf* *f* *mp* *mf*

EH **3** **4** **4** **3**

BCL *f* *mf* *f* *mf* *f* *mf*

TP *mf* *p* *sfz* *p* *sfz* *p*

HN *sfz* *p* *sfz* *p* *sfz* *p*

PR TOM-TOMS *mf* SUSP CYM

HP *C_b* *B_♯ F_b* *F_b* *D_b* *C_♯*

HCD **3** **4** **3** **4**

VA *mf* *f* *mf*

CB II III I II

Musical score for page 55, featuring multiple staves for woodwinds, strings, and percussion. The score includes dynamic markings such as *mf*, *f*, *sfz*, *p*, and *port.*, and articulation like *tr*. It also features large time signature changes from 3/4 to 4/4 and back to 3/4. The woodwind parts (FL, EH, BCL, TP, HN) include complex rhythmic patterns with triplets and quintuplets. The string parts (PR, HP, HCD, VA, CB) provide harmonic support with various textures and dynamics. The percussion part (PR) has a steady rhythmic accompaniment. The score is marked with a *mf* dynamic at the beginning and includes a *port.* marking in the double bass part.

60

FL *f* *mf* *f*

EH **3** **4** **3**

BCL *mf* **4** **4**

TP *p* *sfz* *p* *sfz* *fp*

HN *fp* *sfz* *p* *sfz* *mfp*

PR

HP

HCD

VA *f* *mf* *f* *mf* *f* *f*

CB *f* *mf* *f* *mf*

tr *7 = ♩* *3* *3* *5* *tr* *7 = ♩*

D₄ C₄ B₄ *C₄ B₄ G₄ A₄*

III *IV* *I* *II* *I* *II* *III*

Detailed description of the musical score: This page contains measures 60, 61, and 62 of a musical score. The score is for a full orchestra and includes parts for Flute (FL), Euphonium (EH), Bass Clarinet (BCL), Trumpet (TP), Horn (HN), Percussion (PR), Harp (HP), Horns/Conductors (HCD), Viola (VA), and Cello/Bass (CB). The key signature is one flat (B-flat major or D minor). The time signature is 3/4. Measure 60 starts with a Flute trill (tr) and a 7-measure rest (7 = ♩). The Flute part has dynamics *f*, *mf*, and *f*. The Euphonium and Bass Clarinet parts have large numbers 3 and 4 indicating articulation or phrasing. The Trumpet and Horn parts have dynamics *p*, *sfz*, *p*, *sfz*, and *fp*. The Viola and Cello/Bass parts have dynamics *f* and *mf*. The score includes various musical notations such as slurs, ties, and fingerings.

FL *mf* *f*

EH **3** **4** *mf* **3** **4**

BCL *f* *mf*

TP *sfz* *mfp* *fp* *sfz* *p*

HN *sfz* *p* *sfz* *fp*

PR

HP *Db* *Fb* *Gb* *Ab* *D#* *F#* *A#* *b*

HCD

VA **3** **4** *tr* *mf* *f* *tr* *mf* *f* *tr* *mf*

CB *port.* *f* *mf* *port.*

65

FL

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

mf

f

mf

fp

sfz

p

mf

p

sfz

mf

sfz

p

f

mf

f

mf

f

tr mf

f

tr mf

f

tr mf

f

tr mf

f

f

mf

f

becoming resolute...

Musical score for multiple instruments including FL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. The score features various musical notations such as dynamics (f, mf, sfz), articulation (tr, sfz, port.), and time signatures (3/4, 4/4).

Musical score for page 75, featuring multiple instruments including Flute (FL), Horns (EH, BCL), Trumpets (TP), Horns (HN), Percussion (PR), Harp (HP), Horns (HCD), Violins (VA), and Cellos (CB). The score includes various musical notations such as dynamics (f, mf, sfz, p), articulation (tr, sfz), and time signatures (3/4, 4/4). The piece is marked with a box containing the number 75 at the top center.

Musical score for multiple instruments including FL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. The score features complex rhythmic patterns, dynamic markings (mf, f, sfz, p), and time signature changes (2/4, 5/4).

FL

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

2/4

5/4

mf

f

mfz

f

mf

f

fp

sfz

p

sfz

sfz (poco)

mf

sfz

sfz

sfz

f

mf

f

mf

sfz

sfz

tr

f

mf

f

mf

sfz

sfz

FL *mfz* *f* *mfz* *f* *mfz* *f* *lunga*

EH *f* *f* *f*

BCL *f* *f* *f*

TP *fp* *fp* *fp*

HN *fp* *sfz* *fp* *sfz* *fp* *sfz*

PR *sfz (poco)* *mf* *sfz (poco)* *mf* *sfz (poco)* *mf*

HP *sfz* *sfz* *sfz*

HCD *sfz* *sfz* *sfz*

VA *f* *mf* *f* *mf*

CB *sfz* *sfz* *sfz*

NOTE: In order for the opening of movement V to be most effective, the pause between movements IV and V should be substantial and deliberate (at least one minute), but must not seem unnatural. During this pause, the conductor may mop his/her brow with a handkerchief, the wind players should empty/clean out their instruments, the percussionist may adjust his setup, etc. If any tuning takes place at this time, it should be brief and subtle, and restricted to individual players (i.e., a general *tutti* tuning — as at the beginning — must *not* occur).

V. the myth of eternal return

(entropic ostinato)

Relentless ♩ = 76

Musical score for "the myth of eternal return" (entropic ostinato). The score is for a full orchestra and includes the following parts:

- FLUTE:** Melodic line with triplets and slurs. Dynamics: *f*, *mfz*, *f*, *mfz*, *f*.
- ENGLISH HORN:** Melodic line with slurs. Dynamics: *f*, *f*, *f*.
- BASS CLARINET:** Melodic line with slurs. Dynamics: *f*, *f*, *f*.
- TRUMPET (B):** Melodic line. Dynamics: *p*, *fp*, *fp*.
- HORN:** Melodic line with triplets. Dynamics: *mp*, *sfz*, *fp*, *sfz*, *fp*.
- PERCUSSION:** TOM-TOMS w/ hard yarn; TAM-TAM. Dynamics: *mf*, *sfz (poco)*, *mf*, *sfz (poco)*, *mf*.
- HARP:** Chordal accompaniment. Dynamics: *f*, *sfz*, *sfz*.
- HARPSICHORD:** Chordal accompaniment. Dynamics: *(sim.) f*, *sfz*, *sfz*.
- VIOLA:** Melodic line with triplets and trills. Dynamics: *f*, *mf*, *f*, *mf*, *f*, *mf*.
- CONTRABASS:** Chordal accompaniment. Dynamics: *f*, *sfz*, *sfz*.

Tempo: Relentless ♩ = 76. The score features a 2/4 time signature that changes to 5/4 at the beginning of the second measure.

Performance instructions for Percussion: LH & RH: hard yarn (inside); hard plastic (outside).

Chordal accompaniment for Harp and Harpsichord includes the following chords: D# C# B# E# F# G# A#.

5

FL *mfz* *f* *mfz* *f* *mfz* (bend)

EH *f* *f* *f*

BCL *f* *f* *f*

TP *fp* *fp* *fp*

HN *fp* *sfz* *fp* *sfz* *fp*

PR *sfz (poco)* *mf* *sfz (poco)* *mf* *sfz (poco)* *mf* CHIMES w/ hard plastic *sfz*

HP *sfz* *sfz* *sfz*

HCD *sfz* *sfz* *sfz*

VA *f* *mf* *f* *mf*

CB *sfz* *sfz* *sfz* *port.*

4
4
4
4

♩ = 90

♩ = 104

10

AFL
 EH
 BCL
 TP
 HN
 PR
 HP
 HCD
 VA
 CB

CHINA CYM w/ GLASS CHIMES
 w/ hard yam
 (sim.)
 * See note below
 II: 8' }
 I: 8' + 8' }
 (d)
 (port. + trill)

Musical score for measures 10-12, featuring various instruments and complex rhythmic patterns. The score includes parts for AFL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. The tempo is 90 bpm for measures 10-11 and 104 bpm for measure 12. The key signature is one sharp (F#). The score includes various dynamics (f, mf, sfz, fp), articulations (trills, portato), and performance instructions (e.g., "CHINA CYM w/ GLASS CHIMES w/ hard yam", "(sim.)", "* See note below", "II: 8' }", "I: 8' + 8' }", "(d)", "(port. + trill)"). Large numbers (4, 3, 5) indicate complex rhythmic groupings or time signatures. The bottom staff (CB) includes figured bass notation (II, III, V) and a portato instruction.

* HARP & HARPSICORD: Beamed note groupings should be executed as rapidly as possible (though not necessarily evenly), and must last no longer than the duration indicated parenthetically.



♩ = 118

Score for various instruments including AFL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. The score features complex rhythmic patterns, dynamic markings (mf, f, sfz), and articulation (accents, slurs). The BCL and VA parts include large numbers (5/4, 7/8, 3/4, 4/4, 5/4) indicating time signature changes. The PR part includes a *(sim.)* marking and a *f* dynamic. The HP and HCD parts include *sfz* markings and specific notes like Eb and D4. The VA part includes an *ord.* marking and a *f* dynamic. The CB part includes a *f* dynamic.

15

Musical score for measures 15-18. The score includes parts for AFL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. Large time signature changes are indicated by the numbers 5/4 and 3/4. The BCL part features a melodic line with triplets. The HP and HCD parts include chords and triplets. The VA part is a double bass line. The CB part is a cello line. The PR part includes a piano part with triplets and a forte (f) dynamic. The HP part includes a piano part with triplets and a forte (f) dynamic. The HCD part includes a piano part with triplets and a forte (f) dynamic. The VA part includes a piano part with triplets and a forte (f) dynamic. The CB part includes a piano part with triplets and a forte (f) dynamic.

20

|



♩ = 132

AFL

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

3/4

5/8

2/4

3/4

4/4

to A CLARINET

TAM-TAM w/ heavy beater

mfz

sfz

mf

poco f

sfz

mf

poco f

sfz

mf

poco f

Ab

F# Eb

E# Eb

(d.)

I: 8'

3/4

5/8

2/4

3/4

4/4

3/4

5/8

2/4

3/4

4/4

Musical score for page 25, measures 1-5. The score includes parts for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. Large numbers 4 and 3 are placed above the EH and CL staves to indicate time signature changes. The HP and HCD parts have dynamic markings like *fz*, *poco f*, and *mf*.

Musical score for rehearsal mark 30, featuring ten staves: AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The score is divided into three measures. The first measure shows a 4/4 time signature for EH and CL, and a 4/4 time signature for HCD and VA. The second measure shows a 5/4 time signature for EH and CL, and a 5/4 time signature for HCD and VA. The third measure shows a 4/4 time signature for EH and CL, and a 4/4 time signature for HCD and VA. The HP staff contains musical notation with notes, rests, and dynamic markings such as *fz* and *f*. The HCD staff contains musical notation with notes, rests, and dynamic markings such as *fz* and *f*. The VA staff contains musical notation with notes and rests. The CB staff contains musical notation with notes and rests. The AFL, TP, HN, and PR staves are empty.

Musical score for page 35, measures 1-4. The score includes staves for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. Large numbers 5/4, 3/4, 4/4, and 5/4 are placed on the EH and CL staves to indicate time signature changes. The HP and HCD staves contain musical notation with dynamics (*mf*, *mp*) and articulation marks.

accel.

(♩ = 136)

The musical score is arranged in a standard concert band layout. The parts are as follows:

- AFL:** Alto Flute, treble clef.
- EH:** Euphonium, treble clef.
- CL:** Clarinet, treble clef.
- TP:** Trumpet, treble clef.
- HN:** Horn, bass clef.
- PR:** Percussion, two staves.
- HP:** Harp, grand staff.
- HCD:** Harp/Conductor, grand staff.
- VA:** Viola, alto clef.
- CB:** Cello/Bass, bass clef.

Time signature changes are indicated by large numbers in the EH and CL staves, and smaller numbers in the HCD staff:

- 3/4 (EH, CL, HCD)
- 2/4 (EH, CL, HCD)
- 6/4 (EH, CL, HCD)

Key signature changes are indicated in the HP and HCD staves:

- C# Eb (HP)
- B# Gb (HP)
- A# (HP)

Dynamics and performance markings include *mfz*, *mp*, and *mp* with accents. The HCD staff includes a section marked "I: 4'" and "sounds 8^{ve}".

45 (♩ = 140) - - (♩ = 144) - - (♩ = 148) - - (♩ = 156)

AFL

EH

CL

TP

HN

PR

HP

HCD

VA

CB

5
4

5
4

CODA: "microrounds"

Languid ♩ = 52 (← ♩ = ♩ →)

50

A musical score for a CODA section titled "microrounds". The score is for a full orchestra and includes parts for AFL, EH, CL, TP, HN, PR, HP, HCD, VA, and CB. The tempo is "Languid" with a metronome marking of ♩ = 52. The score is in 5/4 time, with a key signature of one sharp (F#). The piece is marked *pp* (pianissimo) and *mfz* (mezzo-forte, *z* for *zando*). The score features complex rhythmic patterns, including triplets and quintuplets, and is divided into two measures by a double bar line. The first measure is marked with a large "5" and the second with a large "4". The VA part is marked *pp (legato)* and includes a "mute" instruction. The HP part is marked *mfz* and includes a "mute" instruction. The HCD part is marked *mfz* and includes a "mute" instruction. The PR part is marked *pp* and includes a "mute (cup)" instruction. The TP part is marked *pp* and includes a "mute" instruction. The HN part is marked *pp* and includes a "mute" instruction. The AFL, EH, and CL parts are marked *pp* and include a "mute" instruction. The CB part is marked *pp* and includes a "mute" instruction. The score is divided into two measures by a double bar line. The first measure is marked with a large "5" and the second with a large "4".

AFL
 EH
 CL
 TP
 HN
 PR
 HP
 HCD
 VA
 CB

Musical score for page 77, featuring various instruments and large time signature changes. The score is divided into three measures. The first measure is in 5/4 time, the second in 4/4, and the third in 3/4. The instruments are: AFL (Alto Flute), EH (English Horn), CL (Clarinet), TP (Trumpet), HN (Horn), PR (Percussion), HP (Harp), HCD (Horn/Contra Bassoon), VA (Viola), and CB (Cello/Bass). The score includes various musical notations such as slurs, ties, and dynamic markings.

Large time signature changes are indicated by the numbers 5, 4, and 3, which appear in the middle of the staves for EH, CL, and VA.

Dynamic markings include *pp* (pianissimo) and *legato* (legato), located in the Cello/Bass staff.

55

Musical score for measures 55-58. The score includes parts for Flute (FL), Euphonium (EH), Clarinet (CL), Trumpet (TP), Horn (HN), Percussion (PR), Harp (HP), Horns/Double Basses (HCD), Viola (VA), and Cello/Double Bass (CB). The key signature has one flat (B-flat). The time signature changes from 3/4 to 5/4 at measure 55. The score features various musical notations including triplets, slurs, and fermatas. A note in the Trumpet part at measure 58 is marked "to C TRUMPET".

VI. crown knots & cascades

(meta-rondo in chiasmus)

Volatile ♩ = 180

5 Restrained ♩ = 60

Musical score for VI. crown knots & cascades, (meta-rondo in chiasmus). The score is divided into two sections: Volatile (♩ = 180) and Restrained (♩ = 60). The instruments and their parts are:

- PICCOLO**: Restrained section, *p*.
- ENGLISH HORN**: Volatile section, *ff*; Restrained section, *mp*.
- BASS CLARINET**: Volatile section, *ff*; Restrained section, *p*.
- TRUMPET (C)**: Volatile section, *ff*, mute (straight); Restrained section, *mp*.
- HORN**: Volatile section, *ff* *cuivré*; Restrained section, *mp*.
- PERCUSSION**: Volatile section, *ff* (pedal off), CHIMES w/ hammers; Restrained section, *pizz.*.
- HARP**: Volatile section, *ff*, (sim.); Restrained section, *mp*.
- HARPSICHORD**: Restrained section, *mp*.
- VIOLA**: Volatile section, *ff*, at the frog; Restrained section, *p*.
- CONTRABASS**: Restrained section, *p*.

Large numbers (12, 9, 15, 4) are placed above the staves for English Horn, Bass Clarinet, and Viola, indicating measures or groups of notes. The score includes various dynamic markings (*ff*, *p*, *mp*) and performance instructions (mute, *cuivré*, *pizz.*, *at the frog*).

PC

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

tr

4

II: }

3

3

3/4

5/4

3/4

5/4

3

3

15

PC

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

mp

mf

mf

ft.

mp

mf

poco cresc.

3

5

2

7

5

4

4

4

8

4

3

5

2

7

5

4

4

4

8

4

△ | |

Dissipating ♩ = 132

20

PC

EH **5** *ff* **4** **3** **4** *poco dim.*

BCL **4** *ff* **4** **4** **4** *poco dim.*

TP *mute (cup)* *ff* *poco dim.*

HN *(open)* *ff* *poco dim.*

PR

HP *ff* *poco dim.*
D: C# B♭
E: F# G♭ A♭
B: #

HCD

VA **5** *ff* **4** **3** **4** *poco dim.*

CB

30

PC
EH
BCL
TP
HN
PR
HP
HCD
VA
CB

mf *mf* *mf* *mf* *mf*

ft. *5=4* *tr*

Red. → *(sim.)*

12/8 4/4 3/4 12/8 4/4 3/4

tr *mf* *mf*

5 ♮

Detailed description: This page of a musical score covers measures 30, 31, and 32. The score is for a full orchestra and piano. The piano part (PC) is in the top staff, with dynamics of mezzo-forte (mf) and markings for fortissimo (ft.), a five-measure phrase (5=4), and a trill (tr). The percussion (PR) part features a snare drum (Red.) and cymbal (sim.) in measures 30 and 31. The woodwinds (TP, HN) and strings (VA, CB) have various parts, including a trill in the violin (VA) and a five-measure phrase in the cello/bass (CB). The score is divided into three systems, with time signatures of 12/8, 4/4, and 3/4.

Resolute ♩ = 108

45

PC

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

3/4

ff

ff

open

6 = 5

tr

f

ff

f

f

ff

sffz

sffz

sffz

3/4

ff

ff

PC

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

The musical score for page 55 is arranged in a multi-staff format. The instruments listed on the left are PC (Percussion), EH (Euphonium), BCL (Baritone/Cornet), TP (Trumpet), HN (Horn), PR (Percussion), HP (Harp), HCD (Horn/Clarinet/Double Bass), VA (Viola), and CB (Cello/Bass). The score is divided into four measures. Large time signature changes are indicated by the numbers 3 and 4, which are placed vertically between the EH and BCL staves in the first and second measures, and between the VA and CB staves in the first and second measures. The HCD staff contains musical notation with various dynamics and ornaments: *f* (forte), *tr* (trill), and *p* (piano). A triplet of eighth notes is marked with a '3' in the second measure. In the third measure, there is a five-measure rest labeled '5 = d.'. In the fourth measure, there is a trill marked with 'tr' and a fermata, and a section labeled 'I: 8' + 4'' with a brace. A '5:3' ratio is noted at the end of the fourth measure.

Ironic — «Parodie» (l'istesso tempo)

60

PC
EH
BCL

TP
HN

PR

VIBRAPHONE
(hand slap)

sfz
Red. →

w/ hard rubber

[prepared] *f*

(hand slap) *sfz*

HP

HCD

I: 8' + 8' + 4' }
II: } *mf*

tr

ff

4:3

5 = d

VA
CB

mp

IV

5

80

PC

EH

BCL

TP

HN

PR

HP

HCD

I: 8' + 4'

VA

CB

PC

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

3/4 4/4 3/4 5/4 3/4

mf *f* *mp*

sfz

tr

8 = $\frac{1}{2}$

n

PC

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

3 5 4 3

4 4 4 4

mf *tr* *pp*

mf *mf* *poco* *f* *f* *poco*

3 5 4 3

4 4 4 4

sfz *sfz* *sfz* *sfz* *sfz* *sfz*

PC

EH

BCL

TP

HN

PR

HP

HCD

VA

CB

3
4

4
4

7
8

5
4

mp

mf *molto* *n*

I: 8' + 8' + 4' }

sfz

Volatile ♩ = 120

100

PC *ff* 5 3 5 3 5 3 5 3

EH **5/4** *ff* 5 3 5 3 5 3 5 3 **3/4** 4 **4/4**

BCL **4** **4** **4**

TP

HN *ff* 5 3 5 3 5 3 5 3

PR *ff* (pedal off) 5 3 5 3 5 3 5 3

HP *ff* 5 3 5 3 5 3 5 3

D \flat C \flat B \flat
E \flat F \flat G \sharp A \sharp

HCD *ff* 5 3 5 3 5 3 5 3 (sim.)

VA **5/4** **3/4** **4/4**

CB *ff* 5 3 5 3 5 3 5 3

VII. time's maw

(moto perpetuo)

Mechanical ♩ = 72

ALTO FLUTE
remove headjoint

ENGLISH HORN

BASS CLARINET
3 4
5 4
remove mouthpiece

TRUMPET (C)
remove tuning slide

HORN
remove tuning slide(s)

PERCUSSION

HARP
mf secco
D \flat C \sharp B \flat
E \flat F \sharp G \sharp A \flat
3

HARPSICHORD
II: 8' *mf secco*
3 5 5 5 5 5 5

VIOLA
pizz. 3 4
5 3 5 5 5 5 5
mf secco
pizz. 3

CONTRABASS
mf secco
3

5

The musical score is arranged in a vertical stack of staves. The instruments are labeled on the left: AFL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. The BCL staff has large numbers '3' and '4' in the first measure, and '5' and '4' in the second measure. The HCD staff has large numbers '3' and '4' in the first measure, and '5' and '4' in the second measure. The VA staff has large numbers '3' and '4' in the first measure, and '5' and '4' in the second measure. The HP staff has notes for B \flat , B \flat , and G \sharp . The CB staff has a triplet of notes in the second measure. The score includes various rhythmic markings such as triplets, quintuplets, and slurs.

10

Musical score for measures 10-13. The score includes parts for AFL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. Large numbers 3/4 and 5/4 are placed in the BCL and HCD staves to indicate time signature changes. The PR part features a tremolo effect in measure 13. The HP part includes triplets and slurs. The HCD part includes slurs and triplets. The VA and CB parts include slurs and triplets. The VA part includes *arco* and *pizz.* markings.

The musical score is arranged in a system of ten staves, each labeled with an instrument or section:

- AFL**: Alto Flute (treble clef)
- EH**: English Horn (treble clef)
- BCL**: Bass Clarinet (treble clef)
- TP**: Trumpet (treble clef)
- HN**: Horn (treble clef)
- PR**: Percussion (two staves)
- HP**: Harp (bass clef)
- HCD**: Harp (bass clef)
- VA**: Viola (bass clef)
- CB**: Cello (bass clef)

The score contains various musical notations and performance instructions:

- HP and HCD**: Feature complex rhythmic patterns with triplets and quintuplets, indicated by brackets and numbers (3, 5) below the notes. Dashed lines above the notes indicate phrasing.
- VA**: Includes markings for *arco* (arco) and *pizz.* (pizzicato).
- CB**: Includes markings for *arco* and *pizz.*

3
4

3
4

AFL
 EH
 BCL **3**
4
 TP
 HN
 PR
 HP
 HCD
3
4
 VA
3
4
 CB

Musical score for a chamber ensemble. The score includes parts for AFL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. The BCL and VA parts feature large time signature changes from 3/4 to 5/4. The HP and HCD parts contain complex rhythmic patterns with triplets and slurs. The VA part includes 'pizz.' and 'arco' markings. The CB part has a simple bass line with slurs.

The musical score for measures 20-22 is arranged in a system with ten staves. The staves are labeled as follows: AFL, EH, BCL, TP, HN, PR, HP, HCD, VA, and CB. The BCL staff features large time signature changes from 3/4 to 5/4 in measure 21 and back to 3/4 in measure 22. The HP staff contains bass clef notation with notes B \natural , F \sharp , and B \flat , and includes a triplet of eighth notes in measure 22. The HCD staff features a complex melodic line with a quintuplet in measure 21 and a triplet in measure 22. The VA staff includes articulation markings for *arco* and *pizz.* and contains a quintuplet in measure 20. The CB staff also includes *arco* and *pizz.* markings and contains a quintuplet in measure 22. The TP and HN staves are empty. The PR staff is empty, with a double bar line at the beginning of the system.

AFL
 EH
 BCL **5/4** **4/4** **3/4** **4/4**
 TP
 HN
 PR (CHIMES) 5
 HP
 HCD
 VA **5/4** (martelé) **4/4** **3/4** **4/4**
 CB pizz. arco (martelé) *

The score is written for a concert band. The BCL part is the most prominent, showing a sequence of time signatures: 5/4, 4/4, 3/4, and 4/4. The VA part also mirrors these time signatures. The PR part features a 'CHIMES' section with a five-measure phrase. The HP part has a sustained note in the first measure and a specific pitch marking 'F4' in the second. The HCD part has a complex rhythmic pattern with many five-measure phrases. The VA part includes 'martelé' markings and triplet rhythms. The CB part includes 'pizz.' and 'arco' markings, and a 'martelé' section.

**ossia*: if double-stops are impractical, lower notes may be eliminated

AFL

EH

BCL

TP

HN

PR

BELL PLATES w/ hard yarn

mf

TAM-TAM [prepared]

* See note below

n *mp*

HP

C^b D^b A^b F[#] F^b

HCD

VA

CB

* **PERCUSSION:** Continue playing bell plates (top staff) in tempo; other instruments (bottom staff) should be played freely, approximately following the proportional relationships indicated. The natural kineticism that results from the rapid change of instruments and striking implements should not be suppressed!

AFL
 EH
 BCL **3/4** **5/4** **4/4** **3/4**
 TP
 HN
 PR (BELL PLATES) *mf* WOOD BLOCK *sfz* SUSP CYM (w/ sizzles) *n* → *mp* BRAKE DRUM *sfz*
 HP *E₄ → ♯* → *A_b*
 HCD (II) *3* *7* *5* *6* *5* *3*
 VA **3/4** **5/4** **4/4** **3/4**
 CB *pizz.* *arco* *port.* *mf*

* VIOLA: Continue playing rapidly yet erratically; it is not necessary to stay within the measures—broken barlines are for reference only.

AFL
 EH
 BCL
 TP
 HN
 PR
 HP
 HCD
 VA
 CB

RATCHET *rit.* → → →
 WOOD CHIMES
 SHAKER *n* *mf* *n*
 WOOD BLOCK *sfz*

sfz *mf* *sfz*

pdlt (ord.) pdlt (ord.)
 Eb

6 5 5 5 7
 5 3 7 5
 * See note below

5 o.p. *f* (ord.) *mf* (ord.) (z)
 pizz. 3 clb arco (ord.) 3 *sfz* (arco) *v* → → → o.p. (ord.) 3 3 *mf*

5 4 2 4 4 4

* HARPSICHORD: Repeat flourishes rapidly yet erratically; do not attempt to coordinate hands; breaks between note groups must be very brief.

The musical score for measures 54-56 is arranged as follows:

- AFL:** Treble clef, notes on a whole note.
- EH:** Treble clef, notes on a whole note.
- BCL:** Bass clef, notes on a whole note.
- TP:** Bass clef, eighth notes.
- HN:** Bass clef, eighth notes.
- PR:** Percussion staff with various instruments:
 - WOOD BLOCK: *sfz* (measures 54-55)
 - VIBRASLAP: *sfz* (measures 54-55)
 - BRAKE DRUM: *sfz* (measure 55)
 - WOOD CHIMES: *mf* (measures 54-55)
 - (BELL PLATES): *mf* (measures 55-56)
 - SHAKER: *mf* (measures 55-56)
- HP:** Harpsichord, includes instructions: "scrape along string w/metal plectrum" (*mp* to *f*), *ff*, *sfz*, and *mf*. A bracket indicates "(3-5" between events)".
- HCD:** Harpsichord, includes instruction "w/ forearm" and "* See note below".
- VA:** Viola, eighth notes.
- CB:** Cello, eighth notes.

Time signatures: 5/4 (measures 54 and 56), 3/4 (measure 55).

* HARPSICHORD: Right hand continues uninterrupted; left hand is occasionally discontinued by aggressive forearm clusters.

AFL
 EH
 BCL
 TP
 HN
 PR
 HP
 HCD
 VA
 CB

Continue in the same manner (*ad libitum*), reacting to the rest of the ensemble; become increasingly agitated and frenetic while simultaneously maintaining the relative calm and regularity of the gong attacks.

mf

becoming more aggressive (*al fine*)...

becoming more aggressive (*al fine*)...

becoming more aggressive (*al fine*)...

60

(lunga)

AFL
 EH
 BCL
 TP
 HN
 PR
 ALARM CLOCK
 HP
 HCD
 VA
 CB

4
4
5
4
3
4
4
5
4
3
4

(BELL PLATES)
 mf
 mf
 (allow bell plates to ring)

f (non troppo)