

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

op. 65

2019

*for Michael Matsuno, Matt Kline
and their friends at UCSD*

- SCORE -

PLAINSOUND MUSIC EDITION

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PROGRAM NOTE

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The Plainsound Fanfare “Notre Dame” was composed during the summer weeks of 2019 for flutist Michael Matsuno, bassist Matt Kline and their friends at the University of California in San Diego. On April 15 of that year, the roof of the cathedral Notre-Dame de Paris had caught fire and burned down, and the cathedral, which has been one of the cradles of polyphony in European music, was severely damaged as a result of this incident. So the medieval composers Léonin and Pérotin who filled that grand acoustic space with their Gothic Organum music came to my mind while I was working on the parts for the trumpets and the alto trombone, which are alluding to this oldest form of polyphony with their many parallel fourths and fifths.

Here are some technical remarks with regard to the harmonic language of the piece, which is derived from and based on the harmonically related pitches that can be played on the trumpets without the need to alter the intonation of any note by liping it up or down:

The alto trombone must be equipped with a trill valve, the slide of which is tuned as a non-tempered diatonic semitone (with a frequency ratio $16/15$, or 112 cents) in the first position. The semitone trills generated with the trill valve are gradually getting a bit smaller as the trombone slide is extended step by step, until they reach the size of an 11-limit semitone $22/21$ or 81 cents. This phenomenon provides the conceptual basis for the pitch repertoire or tone system of the entire microtonal composition. The three valve slides of the trumpets are tuned to precisely match this u-tonal harmonic series of chromatic pitches (with wave length ratios $15:16:17:18:19:20:21:22$), and the notes of the timpani part are also tuned to this microtonal chromatic scale of pitches, all of which serve as temporary tonic notes or tonal centers throughout the piece. On the double bass, these pitches can all be tuned by ear below some natural harmonic played on the G string or D string. The A string and the E string are lowered by an 11-limit quartertone ($33/32$ or 53 cents) to support or harmonize the pitches played on the trombone with its longest possible tube length (which yields a series of harmonics based on A-quarter-flat).

The flutist joins in by performing a continuous melodic sequence of more or less challenging tuning tasks, and many pitches of the flute part must be produced with special microtonal fingerings in order to be in tune with the harmonies played by the brass and the bass. This ensemble intonation study is also a concerto for the flute. (WvS)

BIO

Wolfgang von Schweinitz was born in Hamburg, Germany in 1953. He studied in 1968-76 with Esther Ballou, Ernst Gernot Klusmann, György Ligeti, and John Chowning and is currently living in Southern California, thirty miles north of CalArts (California Institute of the Arts), where he was invited to assume the succession of James Tenney in 2007. Since 1997 his compositions are concerned with developing new microtonal tuning and ensemble playing techniques based on non-tempered just intonation.

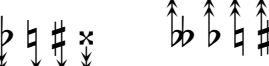
Website: www.plainsound.org

ACCIDENTALS

for microtonal just intonation

EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

The exact intonation of each pitch is written out by means of the following harmonically defined accidentals:

	<i>Pythagorean series of perfect fifths, based on the open strings (... c g d a e ...)</i>
	<i>lowers / raises the pitch by a syntonic comma: 81 : 80 = circa 21.5 cents</i>
	<i>lowers / raises the pitch by two syntonic commas: circa 43 cents</i>
	<i>lowers / raises the pitch by a septimal or 7-limit comma: 64 : 63 = circa 27.3 cents</i>
	<i>lowers / raises the pitch by two septimal commas: circa 54.5 cents (not used in this piece)</i>
	<i>raises / lowers the pitch by an 11-limit quarter-tone: 33 : 32 = circa 53.3 cents</i>
	<i>lowers / raises the pitch to diminish the Pythagorean major sixth 27:16 by a 13-limit third-tone to represent the 13:8 median sixth: 27 : 26 = circa 65.3 cents (not used in this piece)</i>
	<i>lowers / raises the pitch to diminish the 16:15 diatonic semitone by a 17-limit schisma to represent the 17:16 semitone: 256 : 255 = circa 6.8 cents</i>
	<i>raises / lowers the pitch to augment the 32:27 Pythagorean minor third by a 19-limit schisma to represent the 19:16 small minor third: 513 : 512 = circa 3.4 cents</i>
	<i>raises / lowers the pitch to augment the Pythagorean tritone 729:512 by the 23-limit comma to represent the 23:16 augmented tritone: 736 : 729 = circa 16.5 cents (not used in this piece)</i>

These 'Helmholtz-Ellis' accidentals for just intonation were designed in collaboration with Marc Sabat.

The attached arrows for pitch alterations by a syntonic comma are transcriptions of the notation used by Hermann von Helmholtz in his book "Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik" (1863). – The annotated English translation "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (published 1875/1885) was made by Alexander J. Ellis, who refined the definition of pitch within the 12-tone system of Equal Temperament by introducing a division of the octave into 1200 cents. – The accidental sign denoting an alteration by a septimal comma was devised by Guiseppe Tartini (1692-1770), the composer, violinist and researcher who investigated the difference tones created by double-stops.

Pitch-bend information:
In addition to the harmonic definition of a pitch by means of its accidentals, it is also possible to specify its absolute pitch-height as a cents-deviation from the respectively indicated chromatic pitch in the standard 12-tone System of Equal Temperament. – Such additional pitch-bend numbers are only included in the parts for the flute and timpani to facilitate solo rehearsals with the aid of a tuning device. In the ensemble rehearsals, every pitch may be tuned by ear.

TRUMPETS and ALTO TROMBONE

Trumpet in B-flat

The 1st valve slide is tuned in combination with valve 2 to harmonic 4 of the G string:

The 1st valve slide is tuned in combination with valve 2 to harmonic 4 of the G string

The trill valve slide ("T") is tuned in Position I with harmonic 4 to harmonic 4 of the double bass D string.

Table notated at sounding pitch

Trumpet in Eb

Trumpet in Bb

Alto Trombone

Position I

Position I with Trill valve = Position II

Position II with Trill valve = Position III

Position III with Trill valve = Position IV

The second system of musical notation continues the piece. It begins with a treble clef and a key signature of one sharp (F#). The notation is divided into three measures. The first measure is labeled "Position IV with Trill valve = Position V" and contains a treble staff with a whole note G4, a bass staff with a whole note G2, and a middle staff with a whole note G3. The second measure is labeled "Position V with Trill valve = Position VI" and contains a treble staff with a whole note A4, a bass staff with a whole note A2, and a middle staff with a whole note A3. The third measure is labeled "Position VI" and contains a treble staff with a whole note B4, a bass staff with a whole note B2, and a middle staff with a whole note B3. The notation includes various accidentals and trill markings.

The second system of musical notation consists of two measures. The first measure is labeled "Position VI with Trill valve = Position VII" and the second measure is labeled "Position VII with Trill valve". Both measures feature a treble clef, a key signature of one flat (B-flat), and a 3/4 time signature. The notation includes a series of eighth and sixteenth notes, with a trill indicated by a double dot above a note in the first measure. The second measure shows a similar sequence of notes, with a trill indicated by a double dot above a note.

4 TIMPANI and small TOMTOM

DOUBLE BASS Scordatura

III

16 : 15
(112 c)

17 : 16
(105 c)

18 : 17
(99 c)

II

19 : 18
(94 c)

20 : 19
(89 c)

21 : 20
(85 c)

I

22 : 21
(81 c)

IV

Tomtom

The pedal positions for these pitches should be marked on timpani I, II, and III.

Double Bass Scordatura
The A string and the E string are lowered by an 11-limit quarter-tone (frequency ratio 33/32 or 53 cents). The 3rd string may be tuned by ear as a consonant 11/2 below the double-octave harmonic of the D string by listening to and eliminating the beatings at D-5, and the 4th string may also be tuned by ear as an 11/1 consonance below the tuning reference pitch A = 440 Hz.

FLUTE
Fingering Suggestions

Pitches that are not used in the flute part are notated with a small diamond note head.

E♭ B♭ F♯

C♯ G♯ D♯

C $\sharp$

●●●/●○○C $\sharp$ ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●●●/●○○

-7 -3 -21 -9 -5 -23 -1 -19 -7 -3 -21 -9

(G $\sharp$) ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●○○/●○○(C $\natural$) ●●●/○○●(C $\sharp$) ●○○/○○○(D $\sharp$) ○●●/○●●D $\sharp$

-5 -23 -1 -19 -7 -3 -21 -36 -9 -5

B $\flat$

●●●/●●●D $\sharp$ C $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ○●●/●●●D $\sharp$ ↓

+1 +4 -13 -1 +2 -15 +6 -11 +1 +4 -13 -1

G $\sharp$ ●●●/●○○D $\sharp$ ●○○/●●●D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●●●D $\sharp$ ↓ ●●●/●○○D $\sharp$

+2 -15 +6 -31 -11 +1 +4 -13 -29 -1 +2

A $\sharp$

●●●/●○○D $\sharp$ ↑ ●●●/○○○D $\sharp$ ↑ G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↑ ○●●/●●●C $\sharp$ ○●●/●●●↑ ●●●/●○○B $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$

+29 +12 +33 +16 +27 +31 +14 +25 +29 +12 +33

G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ ○●●/○○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ●○○/●○○C $\natural$ ●○○/○○○C $\sharp$ ●○○/○○○ G $\sharp$ ○●●/●○○D $\sharp$ ○○○/●○○D $\sharp$

+16 +27 +31 +14 +25 +29 +12 +33 +16 +27

A $\flat$

●●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$ G $\sharp$ ●●●/●●● G $\sharp$ ●●●/○○○D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○○○/○○○ ○●●/●●●C $\sharp$ ○●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●●●/○○○(D $\sharp$)

-51 -69 -47 -65 -53 -49 -67 -55 -51 -69 -47 -65

G $\sharp$ ●●●/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○●●/○○○D $\sharp$ ○●●/○○○C $\sharp$ ●●●/●●● ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ●○○/○○○C $\sharp$ G $\sharp$ ●●●/○○○ G $\sharp$ ●○○/○○○ ○○○/●○○D $\sharp$ **

-53 -49 -67 -82 -55 -51 -69 -47 -84 -65 -53 -49

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ca. 54 *Lento con tempo rubato, piano maestoso, e sempre non vibrato*

Microtonal fingering suggestions for all the notes in the flute part are listed in the preface. All notes in the trumpet parts may be played by simply trying to center the pitch, never liping any note up or down. All the equidistant trombone slide positions may be found with the help of the trill valve slide, which is precisely tuned as a diatonic semitone (16 : 15 or 112 cents) in the 1st position. The entire trombone part may be played with perfect intonation even in solo rehearsals. The kettledrums should always be struck at the sweet spot, producing a harmonious, classical sound; and the pitch positions should be marked on the pedals of timpani I, II, and III. The double bass part may be played a little bit closer to the bridge than 'ordinario', to get a bright and nasal sound; the contact position of the bow is always defined by the various natural harmonics. Whenever one of the high harmonics is asking for some extra time to speak, the bass player may slow down the tempo as needed, conducting the ensemble. The distance between the 1st and the 4th finger is equal to 1/12 of the overall string length and precisely the same in every position, while the 2nd finger is always placed exactly in the middle between the 1st and the 4th finger. Performance duration : circa 13 minutes

7

13

O T O O O T O T O

più sonore

III The eight recurring pedal positions II II 182 c down Notes with accents are just a little bit louder than the others.

+10 should be marked on Timpani I, II, & III (-6) +12 (*più piano*)*

*) The first stroke on a retuned drum is always on a soft beat, to check the tuning.

-2 1 °4 °1 1 °4 °1- 4 °4 1- °4 °1 1 °4

19

10 : 9 (182 c) 21 : 20 (85 c)

T O T O O t O T O

II I

(+12) +27

al pont. ... *ord.*

°1- 4 4 °4 1 °1 °4 °1 °4 °2 2 °2 2 °4 2 °2

25

7 : 6 (267 c) poco ritenuto

flutter tongue

sfz e molto sonore marcato marcato marcato

T O T

I 81 c down

al pont. ... *ord.*

2 °4 °1 °2 1- 0 1- °4 1- °2 °4 °1 marcato

2  ca. 54 *a tempo*

31

musical score system 1 (measures 31-36)

Staff 1 (Treble): *piano* (-51, -4) → *più sonore* (+10)

Staff 2 (Treble): *pianissimo* (circles + dots)

Staff 3 (Bass): *piano* (T O O T) → *più sonore* (O) → *pianissimo* (T O T O T O)

Staff 4 (Bass): *pizz.* 0 (lv) → *arco al pont.* → *... ord.*

Staff 5 (Bass): *piano* (fingerings: °1- °4 °1, °2 2 °2 2 °2, 2 °2, °1- 2 0) → *più sonore* → *pianissimo*

37

musical score system 2 (measures 37-42)

Staff 1 (Treble): *più sonore* (+2) → *forte* (-51, -47, -65) → *piano* (-51, -53, +2, -4, +10, -18)

Staff 2 (Treble): *più sonore* → *piano* (circles + dots)

Staff 3 (Bass): *più sonore* (T O T) → *piano* (T O T O O)

Staff 4 (Bass): *più sonore* → *piano* (II 182 c up, -6)

Staff 5 (Bass): *più sonore* (fingerings: 1 °1- ↓ °1 °1 °4 °4 °1 1 °4 4 °4 4 °4) → *piano*

The musical score for 'L'Espresso' by Luciano Berio is presented in a multi-staff format. The top staff is a vocal line in treble clef, featuring complex rhythmic patterns with many beamed sixteenth and thirty-second notes. Above this staff, time signatures 6:7 (267 c) and 7:8 (231 c) are indicated. Below the vocal staff, there are two staves of piano accompaniment. The first piano staff is in treble clef, and the second is in bass clef. The piano part includes various rhythmic figures, including triplets and sixteenth-note runs. Below the piano staves, there are two more staves. The first is a bass line in bass clef, and the second is a grand staff (treble and bass clef) for a piano. The bass line includes markings such as 'II 182 c down', 'I 81 c up', and 'I'. The grand staff includes fingerings and articulation marks. The score is written in a key with one flat (B-flat) and a common time signature. The overall style is complex and experimental, characteristic of Berio's work.

poco ritenuto

49 20 : 21 (85 c)

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

III 112 c down

al pont. *ord.* *al pont.* *ord.*

molto sonore

19: 16
(298 c)

60

più sonore

più sonore

più sonore

più sonore

III 105 c down

II 182 c up

II 94 c down

17/6

19/8

19/3

♩ 4 2 ♩ 1- 2 ♩ 1- 1 ♩ 4 1 ♩ 1- 1 ♩ 4 1- ♩ 4 2 ♩ 1- 2 ♩ 4

65

II 89 c down

I (+27)

al pont. ... ord. al pont.

2 -04 01 04 1 01 1 04 1 ↓04 02 2 04 2 02 2 04 04 02

poco ritenuto

70

espr. più sonore marc.

più sonore più sonore più sonore marc.

I 81 c down

più sonore marc.

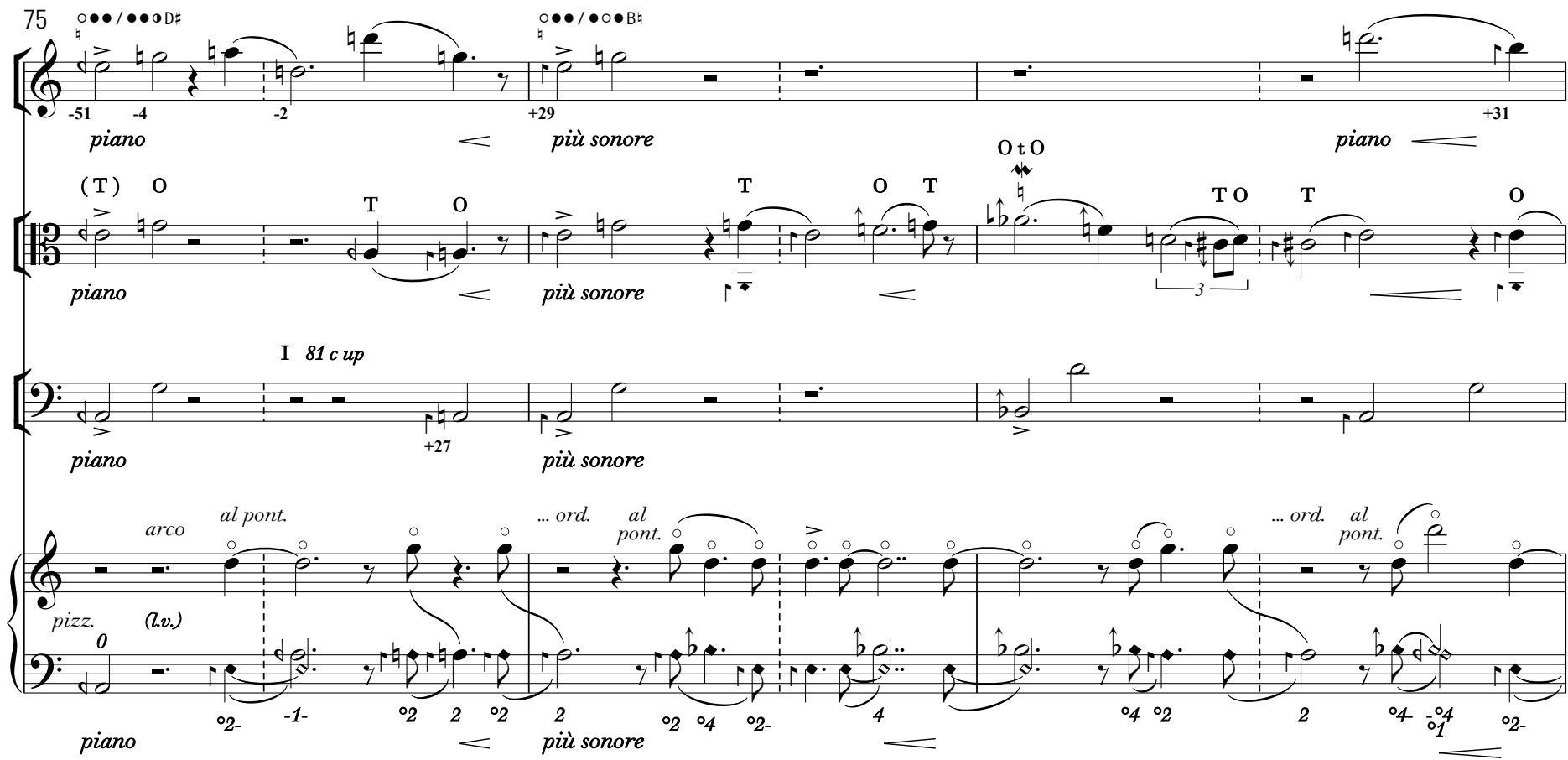
più sonore marc.

1- -02- -1- 2 -1- 02- 0 04 04 4 -02- 0 0 1-

4 ca. 54 *a tempo*

22 : 21
(81 c)

75  



piano *più sonore* *piano*

piano *più sonore*

piano *più sonore*

arco *al pont.* *... ord.* *al pont.* *... ord.* *al pont.*

pizz. *(l.v.)*

piano *più sonore*

 ca. 60 *poco più mosso*

81  



più sonore *piano* *espr.*

piano *espr.*

piano

piano *sonjore* *marc.*

più sonore *espr.*

marc. *al pont.*

più sonore

93 flutter tongue

forte piano espr.

T O T T O

piano

piano

1 0 1 0 4 0 4 0 1 0 1 0 4 0 1 0 4 0 1 0 4 1

98 5

piano più sonore piano

piano più sonore piano

T T O T O T O T O

piano più sonore piano

piano

1 0 4 4 0 2 2 0 4 0 1 1 0 4 0 2 1

al pont.

103 poco accelerando

1 0 4 0 2 4

6 ♩ ca. 66 *ancora poco più mosso*

109 $\circ \bullet \bullet / \bullet \bullet \circ D\#$

The musical score for "L'Espresso" by Luciano Berio is presented in three systems. The first system features a vocal line (soprano and alto staves) and a piano line (treble and bass staves). The vocal line includes lyrics: "T O T O T O". The piano line includes dynamic markings: *piano*, *poco più sonore*, and *poco più sonore*. The second system continues the vocal and piano parts, with dynamic markings: *piano*, *poco più sonore*, and *poco più sonore*. The third system features a piano line (treble and bass staves) with dynamic markings: *piano*, *poco più sonore*, and *poco più sonore*. The score includes various performance instructions such as *arco*, *al pont.*, *ord.*, *pizz.*, and *(l.v.)*. The piano line includes fingerings and breath marks.

115

Musical score for "L'Espresso" by Franz Schubert, Op. 112, in C major, 3/4 time. The score is for voice and piano. It features a vocal line with lyrics in Italian and a piano accompaniment. The score is divided into three systems. The first system has two measures, the second has two measures, and the third has four measures. The tempo is marked "piano" and the dynamics are "piano", "marcato", and "espr.". The piano part includes a section marked "III 112 c down" and "ord.". The score is in C major and 3/4 time.

The musical score for "L'Espresso" by Luciano Berio is presented in a multi-staff format. The top staff is for the vocal line, starting at measure 121. It features a complex melodic line with many accidentals and dynamic markings such as *poco più sonore*. Above the vocal staff, time signatures and ratios are indicated: 17:20 (281 c), 10:9 (182 c), 9:10 (182 c), and 19:15 (409 c). The piano accompaniment consists of three staves. The first two staves are for the right hand, and the third is for the left hand. The piano part includes various rhythmic patterns, including triplets and sixteenth notes, and dynamic markings like *poco più sonore*. The left hand part has a prominent bass line with notes like T, O, and T. The bottom staff shows a grand staff (treble and bass clef) with a complex rhythmic pattern, including a 17/8 time signature and a 17/6 time signature. The score is divided into measures by vertical bar lines, and some measures are marked with a double bar line and a repeat sign. The overall style is contemporary and experimental, with a focus on complex rhythms and timbre.

poco ritenuto

7 ♩ ca. 66 *a tempo*

49 : 48
(36 c)

21 : 20
(85 c)

$\circ \bullet \bullet / \circ \bullet \bullet D\#$ $\circ \bullet \bullet / \circ \bullet \bullet D\#$

28 : 27
(63 c)

133

piano *sonore*

piano *sonore*

piano *sonore*

(T) O T O T O T

piano *sonore* *espr.*

piano *sonore*

al pont. *ord.* *al pont.*

piano *sonore*

poco ritenuto

139

crescendo *flutter tongue*

crescendo *flutter tongue* *mettere sordino*

crescendo *flutter tongue* *mettere sordino*

crescendo *flutter tongue* *mettere sordino*

crescendo *mettere sordino*

crescendo *ord.*

crescendo

8 ♩ ca. 72 *andante - avanti*

145 $\bullet\bullet\bullet/\bullet\bullet\bullet D\sharp$

piano espr.

pianissimo *piano*

arco *al pont.* *ord.* *al pont.*

pizz. *(lv.)*

piano *pianissimo* *piano espr.*

151

sonore

con sordino (metal) *pianissimo* *piano*

con sordino (metal) *pianissimo* *piano*

ord. *al pont.* *ord.*

1 -02- 04 1 1 04 4 4 04 4 1 02- 0 04 1 2 04 4 04

157 *poco ritenuto*

piano *sonore*

sonore *sonore* *sonore*

(T) con sordino (metal) *piano espr.* *sonore*

sonore

al pont. *ord.*

1- 04 04 -1 04 02- 0 04 4 1 04 0

sonore

9 ca. 72 *a tempo - avanti*

147 : 132
(186 c)

163

163

piano *crescendo*

sempre con sord. *piano* *crescendo* *sfz* *flutter tongue*

sempre con sord. *piano* *crescendo* *sfz* *flutter tongue*

sempre con sord. *piano* *crescendo* *Split tone, with harmonics 3+4*

III 105 c up

arco *pizz.* *(lv.)* *piano* *crescendo*

168

sf *più piano* *crescendo*

sf *più piano* *crescendo*

sf *più piano* *crescendo*

III 105 c down

marcato *più piano* *crescendo*

più piano *crescendo*

173

flutter tongue

sf *più piano* *crescendo*

flutter tongue *sfz* *sf* *più piano* *crescendo*

flutter tongue *sfz* *sf* *più piano* *crescendo*

flutter tongue *T* *O* *T* *O* *sf* *più piano* *crescendo*

II 182 c up

marcato *più piano* *crescendo*

17/4 below trb.

molto sonore *più piano* *crescendo*

poco ritenuto

178

flutter tongue *forte* *piano*

flutter tongue *sfz* *forte* *piano*

flutter tongue *sfz* *forte* *piano*

flutter tongue *O* *T* *O* *T* *O* *T* *O* *T* *O* *T* *forte* *piano*

II 94 c down

marcato *piano*

9/2 below trb.

molto sonore *forte* *piano*

10  ca. 72 *a tempo - avanti*

183

188

+2 +12 -17 -2 +16 -4 -19 +14 +10 +31

più piano *crescendo*

••• + ••• + •••

sf *più piano* *crescendo*

••• + ••• + •••

sf *più piano* *crescendo*

T O T O T O

più piano *crescendo*

II 89 c down

marcato *piano* *crescendo*

+12

-2 °4 2 -°4 1- °1 1 -°4 1- °4 1 °4 °4 °4

più piano *crescendo*

193

flutter tongue

sfz *sf* *sf* *sf*

più piano *più piano* *più piano*

crescendo *crescendo* *crescendo*

T *T* *O*

molto sonore

marcato *piano* *crescendo*

al pont. *ord.* *al pont.* *ord.* *al pont.*

più piano *crescendo*

poco ritenuto

198

flutter tongue *sfz* *sfz* *sfz*

forte *forte* *forte*

T *O* *T* *O* *T* *O* *T*

I 81 c down

al pont. *ord.* *al pont.* *7/1 below trb.* *11/2 below trb.* *al pont.* *ord.*

molto sonore *forte*

♩ ca. 72 *a tempo* ...

... *e poco a poco ritardando* ... *fino al tempo* ♩ ca. 63

19:24
(404 c)

203

meno forte *e poco a poco diminuendo*

meno forte *e poco a poco diminuendo* *sf* *sf*

meno forte *e poco a poco diminuendo*

O T O T O T T O T O T

meno forte *e poco a poco diminuendo*

II 182 c up II 94 c down

meno forte *e poco a poco diminuendo*

arco *pizz.* (l.v.)

meno forte *e poco a poco diminuendo*

209

espr. *espr.* *sf* *sf* *sf*

espr. *sf* *espr.*

O T O T O T T T O

II 89 c down

meno forte *e poco a poco diminuendo*

215

-2 +18 +14 +12 +16 -4 -16 -14 +2 +51 +14 +16 +31

sf

T *O* *T* *O* *T* *O* *T* *O*

III 217 c up +10 III 112 c down -2 I 81 c up +27

al pont. *ord.*

2- °1- 2- -°1- -2 -°1- 2 1 2 °1- 2 ↓ °4 °1 ↓ °4 °1 ↓ °4 °2 2 °4

... ca. 63

... e poco ritenuto

221

19:21 (173 c)

-2 +33 -4 +4 -29 -4 -20 -18 -6 +3

espr. *piano*

espr. *sf* *piano* *sf*

sf *espr.* *piano* *piano*

O *T* *T* *O* *O* *T* *O* *T*

piano

II 89 c up +1 II 94 c up -6

piano

al pont. *ord.*

2 ↑ °1 °4 2 °4 2 ↑ °1 1 °1- °4 °1 °1- 4

piano

ca. 63 ... e poco a poco ritardando ... fino al tempo ca. 54

227

quasi forte *e poco a poco diminuendo*

quasi forte *e poco a poco diminuendo* *sf*

quasi forte *e poco a poco diminuendo* *sf*

T O T O T O T O

quasi forte *e poco a poco diminuendo*

III 105 c down II 182 c down II 182 c up

quasi forte *e poco a poco diminuendo*

233

quasi forte *e poco a poco diminuendo*

sf *sf* *sf*

T O T O T O T O

II 182 c down II 89 c up

al pont. *ord.*

239

II 89 c down

II 89 c up

... ♩ ca. 54 *tempo primo, e molto ritenuto*

245

molto piano

pianissimo

molto piano

pianissimo

molto piano

pianissimo

II 89 c down

I 81 c down

al pont.

ord.

molto piano

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

op. 65

2019

*for Michael Matsuno, Matt Kline
and their friends at UCSD*

- FLUTE -

PLAINSOUND MUSIC EDITION

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PROGRAM NOTE

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quartertone scordatura)
op. 65 (2019)

The Plainsound Fanfare “Notre Dame” was composed during the summer weeks of 2019 for flutist Michael Matsuno, bassist Matt Kline and their friends at the University of California in San Diego. On April 15 of that year, the roof of the cathedral Notre-Dame de Paris had caught fire and burned down, and the cathedral, which has been one of the cradles of polyphony in European music, was severely damaged as a result of this incident. So the medieval composers Léonin and Pérotin who filled that grand acoustic space with their Gothic Organum music came to my mind while I was working on the parts for the trumpets and the alto trombone, which are alluding to this oldest form of polyphony with their many parallel fourths and fifths.

Here are some technical remarks with regard to the harmonic language of the piece, which is derived from and based on the harmonically related pitches that can be played on the trumpets without the need to alter the intonation of any note by liping it up or down:

The alto trombone must be equipped with a trill valve, the slide of which is tuned as a non-tempered diatonic semitone (with a frequency ratio $16/15$, or 112 cents) in the first position. The semitone trills generated with the trill valve are gradually getting a bit smaller as the trombone slide is extended step by step, until they reach the size of an 11-limit semitone $22/21$ or 81 cents. This phenomenon provides the conceptual basis for the pitch repertoire or tone system of the entire microtonal composition. The three valve slides of the trumpets are tuned to precisely match this u-tonal harmonic series of chromatic pitches (with wave length ratios $15:16:17:18:19:20:21:22$), and the notes of the timpani part are also tuned to this microtonal chromatic scale of pitches, all of which serve as temporary tonic notes or tonal centers throughout the piece. On the double bass, these pitches can all be tuned by ear below some natural harmonic played on the G string or D string. The A string and the E string are lowered by an 11-limit quartertone ($33/32$ or 53 cents) to support or harmonize the pitches played on the trombone with its longest possible tube length (which yields a series of harmonics based on A-quarter-flat).

The flutist joins in by performing a continuous melodic sequence of more or less challenging tuning tasks, and many pitches of the flute part must be produced with special microtonal fingerings in order to be in tune with the harmonies played by the brass and the bass. This ensemble intonation study is also a concerto for the flute. (WvS)

BIO

Wolfgang von Schweinitz was born in Hamburg, Germany in 1953. He studied in 1968-76 with Esther Ballou, Ernst Gernot Klusmann, György Ligeti, and John Chowning and is currently living in Southern California, thirty miles north of CalArts (California Institute of the Arts), where he was invited to assume the succession of James Tenney in 2007. Since 1997 his compositions are concerned with developing new microtonal tuning and ensemble playing techniques based on non-tempered just intonation.

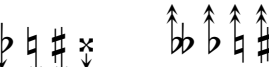
Website: www.plainsound.org

ACCIDENTALS

for microtonal just intonation

EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

The exact intonation of each pitch is written out by means of the following harmonically defined accidentals:

	<i>Pythagorean series of perfect fifths, based on the open strings (... c g d a e ...)</i>
	<i>lowers / raises the pitch by a syntonic comma: 81 : 80 = circa 21.5 cents</i>
	<i>lowers / raises the pitch by two syntonic commas: circa 43 cents</i>
	<i>lowers / raises the pitch by a septimal or 7-limit comma: 64 : 63 = circa 27.3 cents</i>
	<i>lowers / raises the pitch by two septimal commas: circa 54.5 cents (not used in this piece)</i>
	<i>raises / lowers the pitch by an 11-limit quarter-tone: 33 : 32 = circa 53.3 cents</i>
	<i>lowers / raises the pitch to diminish the Pythagorean major sixth 27:16 by a 13-limit third-tone to represent the 13:8 median sixth: 27 : 26 = circa 65.3 cents (not used in this piece)</i>
	<i>lowers / raises the pitch to diminish the 16:15 diatonic semitone by a 17-limit schisma to represent the 17:16 semitone: 256 : 255 = circa 6.8 cents</i>
	<i>raises / lowers the pitch to augment the 32:27 Pythagorean minor third by a 19-limit schisma to represent the 19:16 small minor third: 513 : 512 = circa 3.4 cents</i>
	<i>raises / lowers the pitch to augment the Pythagorean tritone 729:512 by the 23-limit comma to represent the 23:16 augmented tritone: 736 : 729 = circa 16.5 cents (not used in this piece)</i>

These 'Helmholtz-Ellis' accidentals for just intonation were designed in collaboration with Marc Sabat.

The attached arrows for pitch alterations by a syntonic comma are transcriptions of the notation used by Hermann von Helmholtz in his book "Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik" (1863). – The annotated English translation "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (published 1875/1885) was made by Alexander J. Ellis, who refined the definition of pitch within the 12-tone system of Equal Temperament by introducing a division of the octave into 1200 cents. – The accidental sign denoting an alteration by a septimal comma was devised by Guiseppe Tartini (1692-1770), the composer, violinist and researcher who investigated the difference tones created by double-stops.

Pitch-bend information:

In addition to the harmonic definition of a pitch by means of its accidentals, it is also possible to specify its absolute pitch-height as a cents-deviation from the respectively indicated chromatic pitch in the standard 12-tone System of Equal Temperament. – Such additional pitch-bend numbers are only included in the parts for the flute and timpani to facilitate solo rehearsals with the aid of a tuning device. In the ensemble rehearsals, every pitch may be tuned by ear.

TRUMPETS and ALTO TROMBONE

Trumpet in B-flat

Alto Trombone with trill valve

*Table notated at
sounding pitch*

The musical score is for Euphonium in E-flat major, featuring positions VI and VII with the trill valve. The score is divided into two systems, each with three staves (treble, alto, and bass clef). The first system is labeled "Position VI with Trill valve = Position VII" and the second system is labeled "Position VII with Trill valve". The key signature is one flat (B-flat), and the time signature is common time (C). The notation includes various musical symbols such as notes, rests, and trills, with a trill valve symbol (three dots) indicated at the beginning of the first system.

4 TIMPANI and small TOMTOM

DOUBLE BASS Scordatura

16 : 15 17 : 16 18 : 17 19 : 18 20 : 19 21 : 20 22 : 21 Tomtom

III (112 c) II (94 c) I (81 c) IV

+10 -2 -7 -6 +1 +12 +27 -53 -4 -2 -4 -2 -53 -51

The pedal positions for these pitches should be marked on timpani I, II, and III.

Double Bass Scordatura

The A string and the E string are lowered by an 11-limit quarter-tone (frequency ratio $33/32$ or 53 cents). The 3rd string may be tuned by ear as a consonant $11/2$ below the double-octave harmonic of the D string by listening to and eliminating the beatings at D-5, and the 4th string may also be tuned by ear as an $11/1$ consonance below the tuning reference pitch $A = 440$ Hz.

FLUTE

Fingering Suggestions

Pitches that are not used in the flute part are notated with a small diamond note head.

E $\flat$ B $\flat$ F $\sharp$

The musical notation shows a sequence of notes on a treble clef staff. The notes are E $\flat$, B $\flat$, F $\sharp$, and G $\sharp$. Fingerings are indicated by dots above the notes: E $\flat$ (4 dots), B $\flat$ (4 dots), F $\sharp$ (4 dots), and G $\sharp$ (4 dots). Accidentals are indicated by symbols above the notes: E $\flat$ (flat), B $\flat$ (flat), F $\sharp$ (sharp), and G $\sharp$ (sharp). The sequence is repeated, with the first four notes being E $\flat$, B $\flat$, F $\sharp$, and G $\sharp$, and the next four notes being E $\flat$, B $\flat$, F $\sharp$, and G $\sharp$.

Musical notation for Example 6, showing a sequence of notes on a staff with various accidentals and fingerings.

[illegible]

C♯ G♯ D♯

● ● ● / ● ● ○ C♯ ● ● ● / ○ ● ● D♯ ● ● G♯ / ● ● ○ D♯ ● ○ ○ / ○ ○ ○ D♯ † ○ ○ ○ / ○ ○ ○ (D♯)

-6 -14 -2 -20 +2 -8 -16 -4 -22 0 -18 +4 -6 -14

C $\sharp$

●●●/●○○C $\sharp$ ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●●●/●○○

-7 -3 -21 -9 -5 -23 -1 -19 -7 -3 -21 -9

(G $\sharp$) ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●○○/●○○(C $\natural$) ●●●/○○●(C $\sharp$) ●○○/○○○(D $\sharp$) ○●●/○●●D $\sharp$

-5 -23 -1 -19 -7 -3 -21 -36 -9 -5

B $\flat$

●●●/●●●D $\sharp$ C $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ○●●/●●●D $\sharp$ ↓

+1 +4 -13 -1 +2 -15 +6 -11 +1 +4 -13 -1

G $\sharp$ ●●●/●○○D $\sharp$ ●○○/●●●D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●●●D $\sharp$ ↓ ●●●/●○○D $\sharp$

+2 -15 +6 -31 -11 +1 +4 -13 -29 -1 +2

A $\sharp$

●●●/●○○D $\sharp$ ↑ ●●●/○○○D $\sharp$ ↑ G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↑ ○●●/●●●C $\sharp$ ○●●/●●●↑ ●●●/●○○B $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$

+29 +12 +33 +16 +27 +31 +14 +25 +29 +12 +33

G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ ○●●/○○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ●○○/●○○C $\natural$ ●○○/○○○C $\sharp$ ●○○/○○○ G $\sharp$ ○●●/●○○D $\sharp$ ○○○/●○○D $\sharp$

+16 +27 +31 +14 +25 +29 +12 +33 +16 +27

A $\flat$

●●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●●●/●●● G $\sharp$ ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○○○/○○○ ○●●/●●●C $\sharp$ ○●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○C $\sharp$ G $\sharp$ ●●●/○○○(D $\sharp$)

-51 -69 -47 -65 -53 -49 -67 -55 -51 -69 -47 -65

G $\sharp$ ●●●/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○●●/○○○D $\sharp$ ○●●/○○○C $\sharp$ ●●●/●●● ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ●○○/○○○C $\sharp$ G $\sharp$ ●●●/○○○ G $\sharp$ ●○○/○○○ ○○○/●○○D $\sharp$ **

-53 -49 -67 -82 -55 -51 -69 -47 -84 -65 -53 -49

Plainsound Fanfare "Notre Dame"

Concertino in Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

ca. 54 *Lento con tempo rubato, piano maestoso, e sempre non vibrato*

Wolfgang von Schweinitz
op. 65 (2019)

Flute

Trumpet 1 in E $\flat$

Trumpet 2 in B $\flat$

Alto Trombone

Small Tomtom and 4 Timpani

Double Bass

Microtonal notation: -2, 0, -4, -6, 1, 4, 1, 1, 1, 1, 1, 1, 4, 1, 1, 4, 1.

Performance instructions: *piano*, *arco*, *pizz.*, *loco*, *Tomtom (lv)*, *più vicino al pont.*

Microtonal fingering suggestions for all the notes in the flute part are listed in the preface. All notes in the trumpet parts may be played by simply trying to center the pitch, never lipping any note up or down. All the equidistant trombone slide positions may be found with the help of the trill valve slide, which is precisely tuned as a diatonic semitone (16 : 15 or 112 cents) in the 1st position. The entire trombone part may be played with perfect intonation even in solo rehearsals. The kettledrums should always be struck at the sweet spot, producing a harmonious, classical sound; and the pitch positions should be marked on the pedals of timpani I, II, and III. The double bass part may be played a little bit closer to the bridge than 'ordinario', to get a bright and nasal sound; the contact position of the bow is always defined by the various natural harmonics. Whenever one of the high harmonics is asking for some extra time to speak, the bass player may slow down the tempo as needed, conducting the ensemble. The distance between the 1st and the 4th finger is equal to 1/12 of the overall string length and precisely the same in every position, while the 2nd finger is always placed exactly in the middle between the 1st and the 4th finger. Performance duration : circa 13 minutes

7

Microtonal notation: -2, +2, +14, +12, +14, -4, -6, -16.

Performance instructions: *più sonore*, *ord.*, *al pont.*, *... ord.*, *piano*.

Microtonal notation: 5 : 6 (318 c), 15 : 16 (112 c), 16 : 15 (112 c).

Microtonal notation: 1.

13

più sonore

The eight recurring pedal positions should be marked on Timpani I, II, & III

Notes with accents are just a little bit louder than the others.

**) The first stroke on a retuned drum is always on a soft beat, to check the tuning.*

*(più piano)**

182 c down

19

10 : 9 (182 c)

21 : 20 (85 c)

al pont.

... ord.

25

7 : 6 (267 c)

poco ritenuto

flutter tongue

sfz e molto sonore

marcato

marcato

marcato

al pont.

... ord.

marcato

musical score system 1 (measures 31-36)

Staff 1 (Treble): *piano* (-51, -4) *più sonore* (+10)

Staff 2 (Treble): *pianissimo*

Staff 3 (Alto): *piano* (T, O, O, T) *più sonore* (O) *pianissimo* (T, O, T, O, T, O)

Staff 4 (Bass): *piano* *più sonore* *pianissimo*

Staff 5 (Piano): *pizz.* *arco* *al pont.* *... ord.*

Staff 6 (Piano): *piano* (0, 1, 2, 2, 2, 2, 2, 2, 2, 2, 0)

33 : 32
(53 c)

32 : 25
(427 c)

musical score system 2 (measures 37-42)

Staff 1 (Treble): *più sonore* (+2, +2, -51, -47, -65, -51, -53) *forte* *piano* (+2, -4, +10, -18)

Staff 2 (Treble): *più sonore* *piano*

Staff 3 (Alto): *più sonore* *piano*

Staff 4 (Bass): *più sonore* *piano* (II 182 c up -6)

Staff 5 (Piano): *più sonore* *piano*

poco ritenuto

49 20:21 (85 c)

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

III 112 c down

al pont. *ord.* *al pont.* *ord.*

molto sonore

3  ca. 54 *a tempo*

55

First system of musical notation (measures 55-60). It includes staves for Violin I, Violin II, Viola, Cello/Double Bass, and Piano. The piano part features complex fingerings and articulation marks. The Cello/Double Bass part includes a section labeled "III 112 c up" and "III 112 c down". The Piano part includes a section labeled "arco al pont. ... ord." and "pizz. (l.v.)". The system concludes with the instruction *piano*.

19 : 16
(298 c)

Second system of musical notation (measures 60-65). It continues the musical score with the same instrumentation. The piano part includes a section labeled "più sonore". The Cello/Double Bass part includes a section labeled "III 105 c down" and "II 182 c up". The Piano part includes a section labeled "17/6" and "19/8". The system concludes with the instruction *più sonore*.

65

+4 +16 +14 +12 -4 -17 -2 3 +29 +14 3 +16 +14

... + ...

... + ...

... + ...

T O T O T O T O

(178 c)

II 89 c down

+12 (+27)

al pont. ... ord. al pont.

2 -04 01 04 1 01 1 04 1 04 02 2 04 2 02 2 04 04 02

poco ritenuto

70

-2 -53 -4 -16 3 -33 +2 +47

espr. più sonore marc.

più sonore marc.

più sonore marc.

T O T O T O T

più sonore marc.

I 81 c down

-53 più sonore marc.

0 -02 -1- 2 -1- 02 0 04 04 4 -02- 0 marc. 0 1-

♩ ca. 60 *poco più mosso*

87

più sonore

espr.

marc.

al pont.

più sonore

93 flutter tongue

forte *piano* *espr.*

T O T T O T O

piano *espr.*

piano

1 0 1 0 4 0 4 0 1 0 1 0 4 0 1 0 4 0 1 0 4 1

98 5

piano *più sonore* *piano*

piano *più sonore* *piano*

piano *più sonore* *piano*

al pont. *più sonore*

1 *più sonore* 4 4 2 2 4 4 1 1 4 2 1-

103 *poco accelerando*

-1 4 2 4

115

più sonore *piano* *espr.* *marcato* *espr.*

piano *marcato*

più sonore *piano* *marcato* *espr.* *marcato*

più sonore *piano* *più sonore* *marcato*

più sonore *piano* *più sonore* *marcato*

ord.

marcato

17 : 20
(281 c)

10 : 9
(182 c)

9 : 10
(182 c)

19 : 15
(409 c)

121

poco più sonore

poco più sonore

poco più sonore

III 105 c down

17/8 17/6

poco più sonore

poco più sonore

poco più sonore

poco più sonore

II 94 c down

poco più sonore

poco più sonore

poco più sonore

poco più sonore

poco più sonore

poco ritenuto

127

crescendo

crescendo

crescendo

crescendo

II 89 c down

al pont. ord.

crescendo

crescendo

crescendo

crescendo

crescendo

(+27)

crescendo

crescendo

crescendo

crescendo

crescendo

crescendo

133

piano *sonore*

piano *sonore*

piano *sonore*

(T) *piano* *sonore* *espr.*

piano *sonore*

al pont. *ord.* *al pont.*

piano *sonore*

poco ritenuto

139

flutter tongue

crescendo

mettere sordino

crescendo

flutter tongue

crescendo

mettere sordino

crescendo

mettere sordino

crescendo

ord.

crescendo

8 ca. 72 *andante - avanti*

145        

9 ca. 72 *a tempo - avanti*

163

147 : 132
(186 c)

*flutter
tongue*

musical score system 1 (measures 163-172). Includes staves for Violin I, Violin II, Viola, Cello/Double Bass, and Piano. Dynamics: *piano*, *crescendo*, *sfz*. Performance instructions: *sempre con sord.*, *arco*, *pizz.*, *(lv)*, *Split tone, with harmonics 3+4*. Fingerings and articulations are indicated throughout.

168

musical score system 2 (measures 173-182). Includes staves for Violin I, Violin II, Viola, Cello/Double Bass, and Piano. Dynamics: *sf*, *più piano*, *crescendo*. Performance instructions: *marcato*. Fingerings and articulations are indicated throughout.

173

flutter tongue

sf — *più piano* *crescendo*

sfz *flutter tongue* *sf* — *più piano* *crescendo*

sfz *flutter tongue* *sf* — *più piano* *crescendo*

T *flutter tongue* *O* *T* *O* *sf* — *più piano* *crescendo*

II 182 c up

marcato *più piano* *crescendo*

17/4 below trb.

molto sonore *più piano* *crescendo*

poco ritenuto

178

flutter tongue

forte *piano*

sfz *flutter tongue* *sfz* *forte* *piano*

sfz *flutter tongue* *sfz* *forte* *piano*

O *O* *T* *O* *T* *flutter tongue* *O* *T* *O* *T* *O* *forte* *piano*

II 94 c down

marcato *piano*

9/2 below trb.

molto sonore *forte* *piano*

188

più piano *crescendo*

sf *più piano* *crescendo*

sf *più piano* *crescendo*

più piano *crescendo*

II 89 c down

marcato *piano* *crescendo*

più piano *crescendo*

193

flutter tongue

-2 -51 -84 +14 +27 -4 +31 +16 +14 +29

sf *più piano* *crescendo*

sfz *flutter tongue* *sf* *più piano* *crescendo*

sfz *flutter tongue* *sf* *più piano* *crescendo*

T *flutter tongue* *T* *sf* *più piano* *crescendo*

I 81 c up

marcato al pont. *ord.* *al pont.* *crescendo* *ord.* *al pont.*

molto sonore *più piano* *crescendo*

poco ritenuto

198

flutter tongue

sfz

forte

flutter tongue

sfz

forte

flutter tongue

forte

al pont.

ord.

al pont.

7/1 below trb.

11/2 below trb.

al pont.

ord.

molto sonore

forte

♩ ca. 72 *a tempo* ...

... *e poco a poco ritardando* ... *fino al tempo* ♩ ca. 63

19 : 24
(404 c)

musical score system 1 (measures 203-218)

Violin I: *meno forte* *e poco a poco diminuendo*

Violin II: *meno forte* *e poco a poco diminuendo* *sf*

Viola: *meno forte* *e poco a poco diminuendo* *sf*

Cello: *meno forte* *e poco a poco diminuendo* *T o T o T*

Bass: *meno forte* *e poco a poco diminuendo* *II 182 c up* *II 94 c down*

Piano: *pizz.* *arco* *(l.v.)* *meno forte* *e poco a poco diminuendo*

musical score system 2 (measures 209-224)

Violin I: *espr.*

Violin II: *sf* *espr.* *sf*

Viola: *sf* *espr.*

Cello: *espr.*

Bass: *II 89 c down*

Piano: *meno forte* *e poco a poco diminuendo*

215

-2 +18 +14 +12 +16 -4 -16 -14 +2 +51 +14 +16 +31

sf

sf

sf

T O T O T O

O t O

III 217 c up +10

III 112 c down -2

I 81 c up +27

al pont.

ord.

2- °1- 2- °1- 2- °1- 2 1 2 °1- 2 ↓ °4 °1 ↓ °4 °1 ↓ °4 °2 2 °4

... ♩ ca. 63

... *e poco ritenuto*

19:21
(173 c)

221

-2 +33 -4 +4 -29 -4 -20 -18 -6 +3

espr.

piano

espr.

sf

piano

sf

sf

espr.

piano

piano

O T T O T O T

piano

II 89 c up +1

II 94 c up -6

piano

al pont.

ord.

2 ↑ °1 °4 2 °4 2 ↑ °1 1 °1- °4 °1 °1- 4

piano

♩ ca. 63 ... e poco a poco ritardando ... fino al tempo ♩ ca. 54

12

227

quasi forte e poco a poco diminuendo

quasi forte e poco a poco diminuendo

quasi forte e poco a poco diminuendo

quasi forte e poco a poco diminuendo

quasi forte e poco a poco diminuendo

III 105 c down

II 182 c down

II 182 c up

quasi forte e poco a poco diminuendo

quasi forte e poco a poco diminuendo

233

quasi forte e poco a poco diminuendo

quasi forte e poco a poco diminuendo

quasi forte e poco a poco diminuendo

quasi forte e poco a poco diminuendo

II 182 c down

II 89 c up

al pont. ord.

239

Violin I: +4, -4, +14, +10, -2, -3, -29, -7, -5, +2, -29, +4

Violin II: *sf*, *sf*

Viola: *sf*

Cello/Double Bass: II 89 c down, +12, (-7), II 89 c up, +1

Piano: -2, °1-, 2-, 0, °4, 1-, -°4, -1, 0, ↑ °4, 2-, °1-, 2-, -°1, 2, °4, 2, ↓ °4, 2-, -°4

... ♩ ca. 54 *tempo primo, e molto ritenuto*

245

Violin I: -2, +12, +16, -17, -51, -4, -16

Violin II: *sf*, *molto piano*, *pianissimo*

Viola: *sf*, *molto piano*, *pianissimo*

Cello/Double Bass: II 89 c down, +12, I 81 c down, -53, *pianissimo*

Piano: *al pont.*, 4, -°2-, 1, *molto piano*, ↑ °1-, 0, °4, °1, °1-, 0

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

op. 65

2019

*for Michael Matsuno, Matt Kline
and their friends at UCSD*

- TRUMPETS -
(transposing notation)

PLAINSOUND MUSIC EDITION

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PROGRAM NOTE

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quartertone scordatura)
op. 65 (2019)

The Plainsound Fanfare “Notre Dame” was composed during the summer weeks of 2019 for flutist Michael Matsuno, bassist Matt Kline and their friends at the University of California in San Diego. On April 15 of that year, the roof of the cathedral Notre-Dame de Paris had caught fire and burned down, and the cathedral, which has been one of the cradles of polyphony in European music, was severely damaged as a result of this incident. So the medieval composers Léonin and Pérotin who filled that grand acoustic space with their Gothic Organum music came to my mind while I was working on the parts for the trumpets and the alto trombone, which are alluding to this oldest form of polyphony with their many parallel fourths and fifths.

Here are some technical remarks with regard to the harmonic language of the piece, which is derived from and based on the harmonically related pitches that can be played on the trumpets without the need to alter the intonation of any note by liping it up or down:

The alto trombone must be equipped with a trill valve, the slide of which is tuned as a non-tempered diatonic semitone (with a frequency ratio 16/15, or 112 cents) in the first position. The semitone trills generated with the trill valve are gradually getting a bit smaller as the trombone slide is extended step by step, until they reach the size of an 11-limit semitone 22/21 or 81 cents. This phenomenon provides the conceptual basis for the pitch repertoire or tone system of the entire microtonal composition. The three valve slides of the trumpets are tuned to precisely match this u-tonal harmonic series of chromatic pitches (with wave length ratios 15:16:17:18:19:20:21:22), and the notes of the timpani part are also tuned to this microtonal chromatic scale of pitches, all of which serve as temporary tonic notes or tonal centers throughout the piece. On the double bass, these pitches can all be tuned by ear below some natural harmonic played on the G string or D string. The A string and the E string are lowered by an 11-limit quartertone (33/32 or 53 cents) to support or harmonize the pitches played on the trombone with its longest possible tube length (which yields a series of harmonics based on A-quarter-flat).

The flutist joins in by performing a continuous melodic sequence of more or less challenging tuning tasks, and many pitches of the flute part must be produced with special microtonal fingerings in order to be in tune with the harmonies played by the brass and the bass. This ensemble intonation study is also a concerto for the flute. (WvS)

BIO

Wolfgang von Schweinitz was born in Hamburg, Germany in 1953. He studied in 1968-76 with Esther Ballou, Ernst Gernot Klusmann, György Ligeti, and John Chowning and is currently living in Southern California, thirty miles north of CalArts (California Institute of the Arts), where he was invited to assume the succession of James Tenney in 2007. Since 1997 his compositions are concerned with developing new microtonal tuning and ensemble playing techniques based on non-tempered just intonation.

Website: www.plainsound.org

ACCIDENTALS

for microtonal just intonation

EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

The exact intonation of each pitch is written out by means of the following harmonically defined accidentals:

	<i>Pythagorean series of perfect fifths, based on the open strings (... c g d a e ...)</i>
	<i>lowers / raises the pitch by a syntonic comma: 81 : 80 = circa 21.5 cents</i>
	<i>lowers / raises the pitch by two syntonic commas: circa 43 cents</i>
	<i>lowers / raises the pitch by a septimal or 7-limit comma: 64 : 63 = circa 27.3 cents</i>
	<i>lowers / raises the pitch by two septimal commas: circa 54.5 cents (not used in this piece)</i>
	<i>raises / lowers the pitch by an 11-limit quarter-tone: 33 : 32 = circa 53.3 cents</i>
	<i>lowers / raises the pitch to diminish the Pythagorean major sixth 27:16 by a 13-limit third-tone to represent the 13:8 median sixth: 27 : 26 = circa 65.3 cents (not used in this piece)</i>
	<i>lowers / raises the pitch to diminish the 16:15 diatonic semitone by a 17-limit schisma to represent the 17:16 semitone: 256 : 255 = circa 6.8 cents</i>
	<i>raises / lowers the pitch to augment the 32:27 Pythagorean minor third by a 19-limit schisma to represent the 19:16 small minor third: 513 : 512 = circa 3.4 cents</i>
	<i>raises / lowers the pitch to augment the Pythagorean tritone 729:512 by the 23-limit comma to represent the 23:16 augmented tritone: 736 : 729 = circa 16.5 cents (not used in this piece)</i>

These 'Helmholtz-Ellis' accidentals for just intonation were designed in collaboration with Marc Sabat.

The attached arrows for pitch alterations by a syntonic comma are transcriptions of the notation used by Hermann von Helmholtz in his book "Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik" (1863). – The annotated English translation "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (published 1875/1885) was made by Alexander J. Ellis, who refined the definition of pitch within the 12-tone system of Equal Temperament by introducing a division of the octave into 1200 cents. – The accidental sign denoting an alteration by a septimal comma was devised by Guiseppe Tartini (1692-1770), the composer, violinist and researcher who investigated the difference tones created by double-stops.

Pitch-bend information:

In addition to the harmonic definition of a pitch by means of its accidentals, it is also possible to specify its absolute pitch-height as a cents-deviation from the respectively indicated chromatic pitch in the standard 12-tone System of Equal Temperament. – Such additional pitch-bend numbers are only included in the parts for the flute and timpani to facilitate solo rehearsals with the aid of a tuning device. In the ensemble rehearsals, every pitch may be tuned by ear.

TRUMPETS and ALTO TROMBONE

Trumpet in B-flat

*The open horn is tuned with harmonic 5 to harmonic 4 of the double bass G string.
The 2nd valve slide is tuned with harmonic 4 to harmonic 4 of the double bass D string.
The 3rd valve slide is tuned with harmonic 3 to harmonic 4 of the double bass G string.
The 1st valve slide is tuned in combination with valve 2 to harmonic 4 of the G string.*

The open horn is tuned with harmonic 5 to harmonic 4 of the double bass D string.
The 2nd valve slide is tuned with harmonic 4 to harmonic 3 of the double bass D string.
The 3rd valve slide is tuned with harmonic 4 to harmonic 4 of the double bass G string.
The 1st valve slide is tuned in combination with valve 2 to harmonic 4 of the G string

*Position I of the open horn ("O") is tuned with harmonic 5 to harmonic 4 of the double bass G string.
The trill valve slide ("T") is tuned in Position I with harmonic 4 to harmonic 4 of the double bass D string.*

Position II with Trill valve = Position III

Position III with Trill valve = Position IV

Position IV with Trill valve = Position V

Position V with Trill valve = Position VI

The second system of musical notation consists of two measures. The first measure is labeled "Position VI with Trill valve = Position VII" and the second measure is labeled "Position VII with Trill valve". Both measures feature a treble clef, a key signature of one sharp (F#), and a 3/4 time signature. The notation includes a variety of note values (quarter, eighth, and sixteenth notes) and rests, with a trill valve indicated by a small 'v' symbol above the notes. The notes are written on a five-line staff, with the first line being the highest and the fifth line being the lowest.

4 TIMPANI and small TOMTOM

DOUBLE BASS Scordatura

III

16 : 15
(112 c)

17 : 16
(105 c)

18 : 17
(99 c)

II

19 : 18
(94 c)

20 : 19
(89 c)

21 : 20
(85 c)

I

22 : 21
(81 c)

IV

Tomtom

+10-2-7-6+1+12+27-53-4-2-4-2-53-51

The pedal positions for these pitches should be marked on timpani I, II, and III.

Double Bass Scordatura
The A string and the E string are lowered by an 11-limit quarter-tone (frequency ratio 33/32 or 53 cents). The 3rd string may be tuned by ear as a consonant 11/2 below the double-octave harmonic of the D string by listening to and eliminating the beatings at D-5, and the 4th string may also be tuned by ear as an 11/1 consonance below the tuning reference pitch A = 440 Hz.

FLUTE

Fingering Suggestions

Pitches that are not used in the flute part are notated with a small diamond note head.

E♭ B♭ F♯

-2+10+2+14-4+18+80+12-6+16-2

G#

+10+2+14-4+18-19+80+12-6+16

G#

-2-17+10+2+14-4+18+80+12

C♯ G♯ D♯

-6-14-2-20+2-8-16-4-220-18+4-6-14

-2-20+2-8-16-40-18+4-33-6+47

-14-2+51+3-20+2-35-8-16-4-220

C $\sharp$

●●●/●○○C $\sharp$ ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●●●/●○○

-7 -3 -21 -9 -5 -23 -1 -19 -7 -3 -21 -9

(G $\sharp$) ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●○○/●○○(C $\natural$) ●●●/○○●(C $\sharp$) ●○○/○○○(D $\sharp$) ○●●/○●●D $\sharp$

-5 -23 -1 -19 -7 -3 -21 -36 -9 -5

B $\flat$

●●●/●●●D $\sharp$ C $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ○●●/●●●D $\sharp$ ↓

+1 +4 -13 -1 +2 -15 +6 -11 +1 +4 -13 -1

G $\sharp$ ●●●/●○○D $\sharp$ ●○○/●●●D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●●●D $\sharp$ ↓ ●●●/●○○D $\sharp$

+2 -15 +6 -31 -11 +1 +4 -13 -29 -1 +2

A $\sharp$

●●●/●○○D $\sharp$ ↑ ●●●/○○○D $\sharp$ ↑ G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↑ ○●●/●●●C $\sharp$ ○●●/●●●↑ ●●●/●○○B $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$

+29 +12 +33 +16 +27 +31 +14 +25 +29 +12 +33

G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ ○●●/○○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ●○○/●○○C $\natural$ ●○○/○○○C $\sharp$ ●○○/○○○ G $\sharp$ ○●●/●○○D $\sharp$ ○○○/●○○D $\sharp$

+16 +27 +31 +14 +25 +29 +12 +33 +16 +27

A $\flat$

●●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●●●/●●● G $\sharp$ ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○○○/○○○ ○●●/●●●C $\sharp$ ○●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○C $\sharp$ G $\sharp$ ●●●/○○○(D $\sharp$)

-51 -69 -47 -65 -53 -49 -67 -55 -51 -69 -47 -65

G $\sharp$ ●●●/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○●●/○○○D $\sharp$ ○●●/○○○C $\sharp$ ●●●/●●● ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ●○○/○○○C $\sharp$ G $\sharp$ ●●●/○○○ G $\sharp$ ●○○/○○○ ○○○/●○○D $\sharp$ *

-53 -49 -67 -82 -55 -51 -69 -47 -84 -65 -53 -49

Plainsound Fanfare "Notre Dame"

Concertino in Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

Wolfgang von Schweinitz
op. 65 (2019)

♩ ca. 54 **Lento con tempo rubato, piano maestoso, e sempre non vibrato**

Flute

Trumpet 1 in E♭

Trumpet 2 in B♭

Alto Trombone

Small Tomtom and 4 Timpani

Double Bass

transposing notation

transposing notation

The E-flat trumpet sounds a Pythagorean Minor Third (32/27) higher, and the B-flat trumpet sounds a Major Whole Tone (9/8) lower than written.

IV Tomtom (lv) II

loco arco pizz. (lv)

piano

0 01- 04 1 01- 4 04 1 01 1 01 1 01 04 1 01- 4 01-

piano

Microtonal fingering suggestions for all the notes in the flute part are listed in the preface. All notes in the trumpet parts may be played by simply trying to center the pitch, never liping any note up or down. All the equidistant trombone slide positions may be found with the help of the trill valve slide, which is precisely tuned as a diatonic semitone (16 : 15 or 112 cents) in the 1st position. The entire trombone part may be played with perfect intonation even in solo rehearsals. The kettledrums should always be struck at the sweet spot, producing a harmonious, classical sound; and the pitch positions should be marked on the pedals of timpani I, II, and III. The double bass part may be played a little bit closer to the bridge than 'ordinario', to get a bright and nasal sound; the contact position of the bow is always defined by the various natural harmonics. Whenever one of the high harmonics is asking for some extra time to speak, the bass player may slow down the tempo as needed, conducting the ensemble. The distance between the 1st and the 4th finger is equal to 1/12 of the overall string length and precisely the same in every position, while the 2nd finger is always placed exactly in the middle between the 1st and the 4th finger. Performance duration : circa 13 minutes

7

5 : 6 (318 c)

15 : 16 (112 c)

1

16 : 15 (112 c)

più sonore

più sonore

ord.

al pont.

... ord.

più sonore

13

più sonore

III *The eight recurring pedal positions* II II *182 c down* *Notes with accents are just a little bit louder than the others.*

+10 should be marked on Timpani I, II, & III (-6) +12 (*più piano*)*

* *The first stroke on a retuned drum is always on a soft beat, to check the tuning.*

19

10:9 (182 c) *21:20 (85 c)*

T O T O O t O T O

II I

(+12) +27

al pont. *... ord.*

25

7:6 (267 c) *poco ritenuto* *flutter tongue* *sfz e molto sonore* *marcato*

I *81 c down* -53 *marcato*

al pont. *... ord.* *marcato*

31

31

piano *più sonore* *pianissimo* *pianissimo*

T O O T O T O T O

piano *più sonore* *pianissimo*

piano *più sonore* *pianissimo*

pizz. *arco* *al pont.* *ord.*

piano *più sonore* *pianissimo*

37

33 : 32
(53 c)

32 : 25
(427 c)

più sonore *forte* *piano*

più sonore *piano* *più sonore* *piano*

T O T O T O O

più sonore *piano*

più sonore *piano*

II 182 c up

più sonore *piano*

[illegible]

poco ritenuto

49

20 : 21
(85 c)

poco rullando

più sonore

molto sonore

più sonore

molto sonore

più sonore

molto sonore

più sonore

molto sonore

più sonore

molto sonore

al pont.

ord.

al pont.

ord.

molto sonore

3 ca. 54 *a tempo*

55

musical score system 1 (measures 55-60)

Staff 1 (Treble): *piano*, fingerings: -2, -3, -14, -18, +2

Staff 2 (Treble): *piano*, fingerings: 5, 5, 3

Staff 3 (Treble): *piano*, fingerings: 5, 5

Staff 4 (Bass): *piano*, fingerings: 5, 5, 3, 3, 3

Staff 5 (Bass): *piano*, fingerings: +10, (+12), -2

Staff 6 (Piano): *pizz.*, *arco*, *al pont.*, *ord.*, *ord.*, *17/8*

Staff 7 (Piano): *piano*, fingerings: 0, 1, 2, 2, 1, 2, 4, 1, 1, 1, 1, 4, 1, 2

60

musical score system 2 (measures 60-65)

Staff 1 (Treble): *più sonore*, fingerings: -5, -3, -21, -36, -3, -19, -7, -4, -4, -35, -20, +4, +2, +1, -11

Staff 2 (Treble): *più sonore*, fingerings: 3

Staff 3 (Treble): *più sonore*, fingerings: 3

Staff 4 (Bass): *più sonore*, fingerings: 3

Staff 5 (Bass): *più sonore*, fingerings: 3

Staff 6 (Bass): *più sonore*, fingerings: 3

Staff 7 (Piano): *17/6*, *19/8*, *19/3*

Staff 8 (Piano): *17/6*, *19/8*, *19/3*

65

+4 +16 +14 +12 -4 -17 -2 3 +29 +14 3 +16 +14

••• + ••• ••• + •••

••• + ••• ••• + •••

T O T O T O T O

(178 c)

II 89 c down

I

al pont. ... ord. al pont.

2 -04 01 04 1 01 1 04 1 04 02 2 04 2 02 2 04 01 02

poco ritenuto

70

-2 -53 -4 -16 3 -33 +2 +47

espr. più sonore marc.

più sonore marc.

più sonore marc.

T O T O T O T

I 81 c down

-53 più sonore marc.

più sonore marc.

81

più sonore *piano* *espr.*

piano *espr.*

I 81 c down

piano

piano *sonjore* *marc.*

87

più sonore

marc.

espr.

al pont.

più sonore

93 flutter tongue

forte piano espr.

T O T T O T

piano T o T espr.

piano

1 0 1 0 4 0 4 0 1 0 4 0 1 0 4 0 1 0 4 1

5

98

piano più sonore piano

piano più sonore piano

T T O T O T O T O T

piano più sonore piano

al pont. più sonore

1 0 4 4 0 2 2 0 4 0 1 1 0 4 0 2 1.

poco accelerando

103

-1 0 4 0 2 4

109

○●●/●●●D#

piano

poco più sonore

poco più sonore

piano

poco più sonore

piano

poco più sonore

T O T O T O

piano

poco più sonore

poco più sonore

I 81 c up

II 182 c up

III 217 c up

piano

poco più sonore

poco più sonore

arco

al pont.

ord.

al pont.

pizz.

piano

poco più sonore

poco più sonore

115

più sonore

piano

espr.

marcato

espr.

piano

piano

marcato

marcato

più sonore

piano

più sonore

marcato

III 112 c down

ord.

marcato

[illegible]

poco ritenuto

[illegible]

7 ♩ ca. 66 *a tempo*

133

49 : 48 (36 c) 21 : 20 (85 c) 28 : 27 (63 c)

piano *sonore*

piano *sonore*

(T) O T O T O T

piano *sonore* *espr.*

piano *sonore*

al pont. *ord.* *al pont.*

piano *sonore*

81 c down

8 ca. 72 *andante - avanti*

145                                              

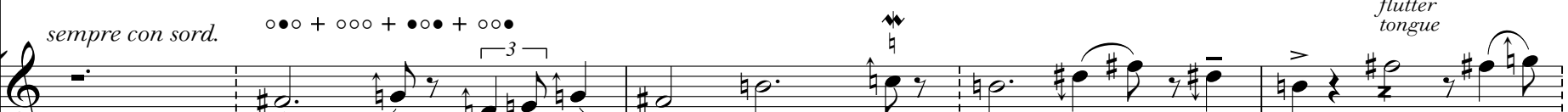
9 ca. 72 *a tempo - avanti*

163



piano *crescendo* +12 3 +10 -18 -82 -4 -53 -49 -84 +29

sempre con sord.



piano *crescendo* *sfz* *flutter tongue*

sempre con sord.



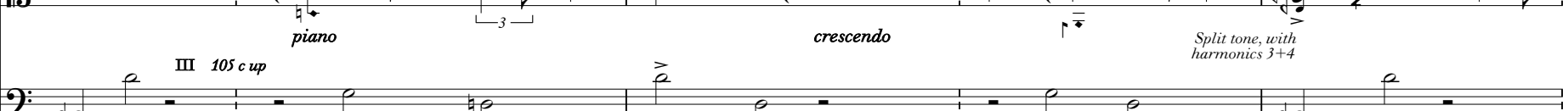
piano *crescendo* *sfz* *flutter tongue*

sempre con sord.



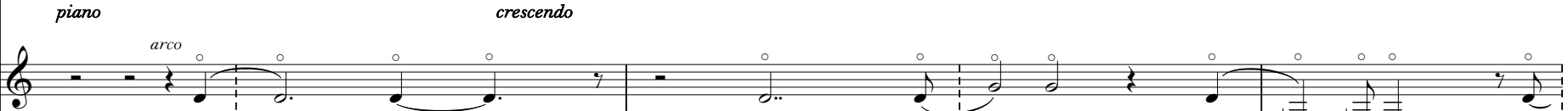
piano *crescendo* *Split tone, with harmonics 3+4*

III 105 c up

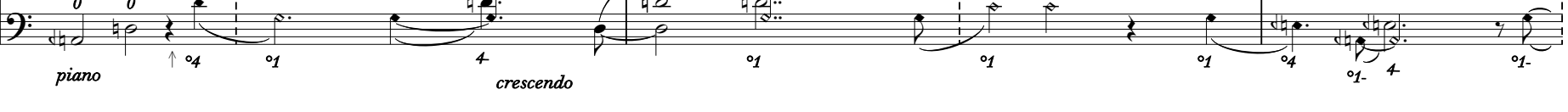


piano *crescendo*

arco



pizz. *piano* *crescendo*

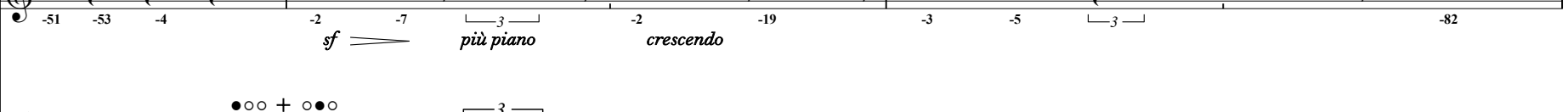


piano *crescendo*

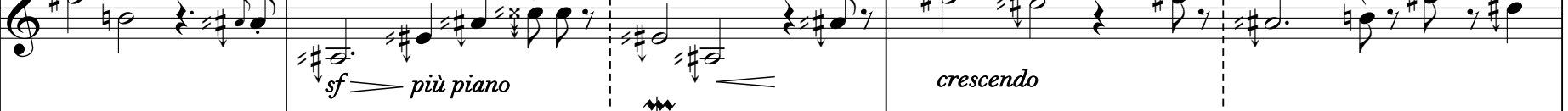
168



sf *più piano* *crescendo* -51 -53 -4 -2 -7 3 -2 -19 -3 -5 3 -82



sf *più piano* *crescendo*



sf *più piano* *crescendo*

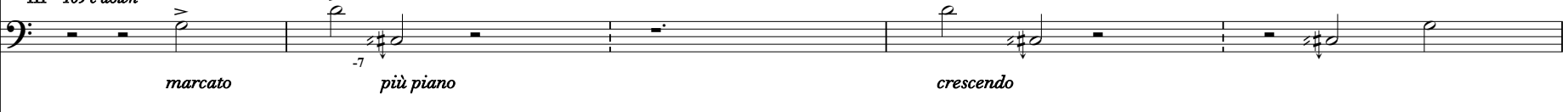


sf *più piano* *crescendo*

III 105 c down



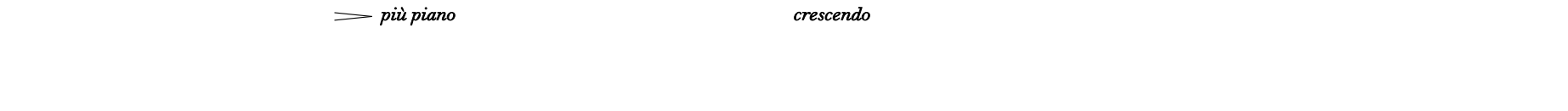
marcato *più piano* *crescendo*



più piano *crescendo*



più piano *crescendo*



più piano *crescendo*

173

flutter tongue

sf *più piano* *crescendo*

flutter tongue

sfz *sf* *più piano* *crescendo*

flutter tongue

sfz *sf* *più piano* *crescendo*

T

flutter tongue

sf *più piano* *crescendo*

II 182 c up

17/4 below trb.

marcato *più piano* *crescendo*

molto sonore *più piano* *crescendo*

poco ritenuto

178

flutter tongue

-6 -20 -4 -2 -82 -51 -84 +29 -51 -53 -4 *forte* -35 *piano*

flutter tongue

sfz *forte* *piano*

flutter tongue

sfz *forte* *piano*

O O T O T flutter tongue O T O O T

forte *piano*

II 94 c down

9/2 below trb.

marcato *piano*

molto sonore *forte* *piano*

10 $\text{ca. } 72$ *a tempo - avanti*

183

sf piano *crescendo*

sf piano *crescendo* *sfz* *flutter tongue*

sf piano *crescendo* *sfz* *flutter tongue*

piano *crescendo* *flutter tongue*

piano *crescendo*

sf piano *molto sonore*

188

più piano *crescendo*

sf più piano *crescendo*

sf più piano *crescendo*

più piano *crescendo*

marcato *piano* *crescendo*

più piano *crescendo*

193

flutter tongue

sf *più piano* *crescendo*

flutter tongue

sfz *sf* *più piano* *crescendo*

flutter tongue

sfz *sf* *più piano* *crescendo*

T

flutter tongue

piano *crescendo*

I 81 c up

marcato al pont. *ord.* *piano al pont.* *crescendo ord.* *al pont.*

molto sonore *più piano* *crescendo*

poco ritenuto

198

flutter tongue

sfz *forte*

flutter tongue

sfz *forte*

T O T O T

flutter tongue

forte

I 81 c down

al pont. *ord.* *al pont.* *7/1 below trb.* *11/2 below trb.* *al pont.* *forte* *ord.*

molto sonore *forte*

215

-2 +18 +14 +12 +16 -4 -16 -14 +2 +51 +14 +16 +31

sf *sf* *sf*

T O T O T O T O

III 217 c up +10 III 112 c down -2 I 81 c up +27

2- °1- 2- -°1- -2 -°1- -2 1 2 °1- 2 ↓ °4 °1 ↓ °4 °1 ↓ °4 °2 2 °4

al pont. ord.

... ca. 63 ... e poco ritenuto

221

19:21 (173 c)

-2 +33 -4 +4 -29 -4 -20 -18 -6 +3

espr. *piano*

espr. *sf* *piano* *sf*

sf *espr.* *piano*

O T T O T O T

II 89 c up +1 II 94 c up -6

piano *piano*

2 ↑ °1 °4 2 °4 2 ↑ °1 1 °1- °4 °1 °1- 4

piano

al pont. ord.

227

quasi forte *e poco a poco diminuendo*

quasi forte *e poco a poco diminuendo* *sf*

quasi forte *e poco a poco diminuendo* *sf*

quasi forte *e poco a poco diminuendo*

III 105 c down II 182 c down II 182 c up

quasi forte *e poco a poco diminuendo*

233

sf *sf* *sf*

II 182 c down II 89 c up

al pont. *ord.*

239

... *ca. 54 tempo primo, e molto ritenuto*

245

molto piano *pianissimo*

sf *molto piano* *pianissimo*

molto piano *pianissimo*

II 89 c down *I 81 c down*

al pont. *ord.*

molto piano

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

op. 65

2019

*for Michael Matsuno, Matt Kline
and their friends at UCSD*

- TRUMPETS -
(notated at sounding pitch)

PLAINSOUND MUSIC EDITION

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PROGRAM NOTE

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quartertone scordatura)
op. 65 (2019)

The Plainsound Fanfare “Notre Dame” was composed during the summer weeks of 2019 for flutist Michael Matsuno, bassist Matt Kline and their friends at the University of California in San Diego. On April 15 of that year, the roof of the cathedral Notre-Dame de Paris had caught fire and burned down, and the cathedral, which has been one of the cradles of polyphony in European music, was severely damaged as a result of this incident. So the medieval composers Léonin and Pérotin who filled that grand acoustic space with their Gothic Organum music came to my mind while I was working on the parts for the trumpets and the alto trombone, which are alluding to this oldest form of polyphony with their many parallel fourths and fifths.

Here are some technical remarks with regard to the harmonic language of the piece, which is derived from and based on the harmonically related pitches that can be played on the trumpets without the need to alter the intonation of any note by liping it up or down:

The alto trombone must be equipped with a trill valve, the slide of which is tuned as a non-tempered diatonic semitone (with a frequency ratio $16/15$, or 112 cents) in the first position. The semitone trills generated with the trill valve are gradually getting a bit smaller as the trombone slide is extended step by step, until they reach the size of an 11-limit semitone $22/21$ or 81 cents. This phenomenon provides the conceptual basis for the pitch repertoire or tone system of the entire microtonal composition. The three valve slides of the trumpets are tuned to precisely match this u-tonal harmonic series of chromatic pitches (with wave length ratios $15:16:17:18:19:20:21:22$), and the notes of the timpani part are also tuned to this microtonal chromatic scale of pitches, all of which serve as temporary tonic notes or tonal centers throughout the piece. On the double bass, these pitches can all be tuned by ear below some natural harmonic played on the G string or D string. The A string and the E string are lowered by an 11-limit quartertone ($33/32$ or 53 cents) to support or harmonize the pitches played on the trombone with its longest possible tube length (which yields a series of harmonics based on A-quarter-flat).

The flutist joins in by performing a continuous melodic sequence of more or less challenging tuning tasks, and many pitches of the flute part must be produced with special microtonal fingerings in order to be in tune with the harmonies played by the brass and the bass. This ensemble intonation study is also a concerto for the flute. (WvS)

BIO

Wolfgang von Schweinitz was born in Hamburg, Germany in 1953. He studied in 1968-76 with Esther Ballou, Ernst Gernot Klusmann, György Ligeti, and John Chowning and is currently living in Southern California, thirty miles north of CalArts (California Institute of the Arts), where he was invited to assume the succession of James Tenney in 2007. Since 1997 his compositions are concerned with developing new microtonal tuning and ensemble playing techniques based on non-tempered just intonation.

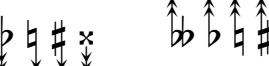
Website: www.plainsound.org

ACCIDENTALS

for microtonal just intonation

EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

The exact intonation of each pitch is written out by means of the following harmonically defined accidentals:

	<i>Pythagorean series of perfect fifths, based on the open strings (... c g d a e ...)</i>
	<i>lowers / raises the pitch by a syntonic comma: 81 : 80 = circa 21.5 cents</i>
	<i>lowers / raises the pitch by two syntonic commas: circa 43 cents</i>
	<i>lowers / raises the pitch by a septimal or 7-limit comma: 64 : 63 = circa 27.3 cents</i>
	<i>lowers / raises the pitch by two septimal commas: circa 54.5 cents (not used in this piece)</i>
	<i>raises / lowers the pitch by an 11-limit quarter-tone: 33 : 32 = circa 53.3 cents</i>
	<i>lowers / raises the pitch to diminish the Pythagorean major sixth 27:16 by a 13-limit third-tone to represent the 13:8 median sixth: 27 : 26 = circa 65.3 cents (not used in this piece)</i>
	<i>lowers / raises the pitch to diminish the 16:15 diatonic semitone by a 17-limit schisma to represent the 17:16 semitone: 256 : 255 = circa 6.8 cents</i>
	<i>raises / lowers the pitch to augment the 32:27 Pythagorean minor third by a 19-limit schisma to represent the 19:16 small minor third: 513 : 512 = circa 3.4 cents</i>
	<i>raises / lowers the pitch to augment the Pythagorean tritone 729:512 by the 23-limit comma to represent the 23:16 augmented tritone: 736 : 729 = circa 16.5 cents (not used in this piece)</i>

These 'Helmholtz-Ellis' accidentals for just intonation were designed in collaboration with Marc Sabat.

The attached arrows for pitch alterations by a syntonic comma are transcriptions of the notation used by Hermann von Helmholtz in his book "Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik" (1863). – The annotated English translation "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (published 1875/1885) was made by Alexander J. Ellis, who refined the definition of pitch within the 12-tone system of Equal Temperament by introducing a division of the octave into 1200 cents. – The accidental sign denoting an alteration by a septimal comma was devised by Guiseppe Tartini (1692-1770), the composer, violinist and researcher who investigated the difference tones created by double-stops.

Pitch-bend information:

In addition to the harmonic definition of a pitch by means of its accidentals, it is also possible to specify its absolute pitch-height as a cents-deviation from the respectively indicated chromatic pitch in the standard 12-tone System of Equal Temperament. – Such additional pitch-bend numbers are only included in the parts for the flute and timpani to facilitate solo rehearsals with the aid of a tuning device. In the ensemble rehearsals, every pitch may be tuned by ear.

TRUMPETS and ALTO TROMBONE

Trumpet in B-flat

*The open horn is tuned with harmonic 5 to harmonic 4 of the double bass G string.
The 2nd valve slide is tuned with harmonic 4 to harmonic 4 of the double bass D string.
The 3rd valve slide is tuned with harmonic 3 to harmonic 4 of the double bass G string.
The 1st valve slide is tuned in combination with valve 2 to harmonic 4 of the G string.*

*The open horn is tuned with harmonic 5 to harmonic 4 of the double bass D string.
The 2nd valve slide is tuned with harmonic 4 to harmonic 3 of the double bass D string.
The 3rd valve slide is tuned with harmonic 4 to harmonic 4 of the double bass G string.
The 1st valve slide is tuned in combination with valve 2 to harmonic 4 of the G string*

*Position I of the open horn ("O") is tuned with harmonic 5 to harmonic 4 of the double bass G string.
The trill valve slide ("T") is tuned in Position I with harmonic 4 to harmonic 4 of the double bass D string.*

Position II with Trill valve = Position III

Position III with Trill valve = Position IV

The image displays a musical score for Euphonium and Trombone parts, divided into two systems. The first system is labeled "Position IV with Trill valve = Position V" and the second system is labeled "Position V with Trill valve = Position VI".

System 1: Position IV with Trill valve = Position V

- Euphonium Part (Top Staff):**
 - Measure 1: G4 (half note), F#4 (half note).
 - Measure 2: E4 (half note), D#4 (half note).
 - Measure 3: C#4 (half note), B3 (half note).
 - Measure 4: A3 (half note), G3 (half note).
 - Measure 5: F#3 (half note), E3 (half note).
 - Measure 6: D#3 (half note), C#3 (half note).
 - Measure 7: B2 (half note), A2 (half note).
 - Measure 8: G2 (half note), F#2 (half note).
- Trombone Part (Bottom Staff):**
 - Measure 1: G4 (half note), F#4 (half note).
 - Measure 2: E4 (half note), D#4 (half note).
 - Measure 3: C#4 (half note), B3 (half note).
 - Measure 4: A3 (half note), G3 (half note).
 - Measure 5: F#3 (half note), E3 (half note).
 - Measure 6: D#3 (half note), C#3 (half note).
 - Measure 7: B2 (half note), A2 (half note).
 - Measure 8: G2 (half note), F#2 (half note).

System 2: Position V with Trill valve = Position VI

- Euphonium Part (Top Staff):**
 - Measure 9: G4 (half note), F#4 (half note).
 - Measure 10: E4 (half note), D#4 (half note).
 - Measure 11: C#4 (half note), B3 (half note).
 - Measure 12: A3 (half note), G3 (half note).
 - Measure 13: F#3 (half note), E3 (half note).
 - Measure 14: D#3 (half note), C#3 (half note).
 - Measure 15: B2 (half note), A2 (half note).
 - Measure 16: G2 (half note), F#2 (half note).
- Trombone Part (Bottom Staff):**
 - Measure 9: G4 (half note), F#4 (half note).
 - Measure 10: E4 (half note), D#4 (half note).
 - Measure 11: C#4 (half note), B3 (half note).
 - Measure 12: A3 (half note), G3 (half note).
 - Measure 13: F#3 (half note), E3 (half note).
 - Measure 14: D#3 (half note), C#3 (half note).
 - Measure 15: B2 (half note), A2 (half note).
 - Measure 16: G2 (half note), F#2 (half note).

Position VI with Trill valve = Position VII

Position VII with Trill valve

4 TIMPANI and small TOMTOM

DOUBLE BASS Scordatura

III

16 : 15
(112 c)

17 : 16
(105 c)

18 : 17
(99 c)

II

19 : 18
(94 c)

20 : 19
(89 c)

21 : 20
(85 c)

I

22 : 21
(81 c)

IV

Tomtom

The pedal positions for these pitches should be marked on timpani I, II, and III.

Double Bass Scordatura

The A string and the E string are lowered by an 11-limit quarter-tone (frequency ratio 33/32 or 53 cents). The 3rd string may be tuned by ear as a consonant 11/2 below the double-octave harmonic of the D string by listening to and eliminating the beatings at D-5, and the 4th string may also be tuned by ear as an 11/1 consonance below the tuning reference pitch A = 440 Hz.

FLUTE
Fingering Suggestions

Pitches that are not used in the flute part are notated with a small diamond note head.

E♭

B♭

F♯

C♯

G♯

D♯

C $\sharp$

●●●/●○○C $\sharp$ ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●●●/●○○

-7 -3 -21 -9 -5 -23 -1 -19 -7 -3 -21 -9

(G $\sharp$) ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●○○/●○○(C $\natural$) ●●●/○○●(C $\sharp$) ●○○/○○○(D $\sharp$) ○●●/○●●D $\sharp$

-5 -23 -1 -19 -7 -3 -21 -36 -9 -5

B $\flat$

●●●/●●●D $\sharp$ C $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ○●●/●●●D $\sharp$ ↓

+1 +4 -13 -1 +2 -15 +6 -11 +1 +4 -13 -1

G $\sharp$ ●●●/●○○D $\sharp$ ●○○/●●●D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●●●D $\sharp$ ↓ ●●●/●○○D $\sharp$

+2 -15 +6 -31 -11 +1 +4 -13 -29 -1 +2

A $\sharp$

●●●/●○○D $\sharp$ ↑ ●●●/○○○D $\sharp$ ↑ G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↑ ○●●/●●●C $\sharp$ ○●●/●●●↑ ●●●/●○○B $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$

+29 +12 +33 +16 +27 +31 +14 +25 +29 +12 +33

G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ ○●●/○○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ●○○/●○○C $\natural$ ●○○/○○○C $\sharp$ ●○○/○○○ G $\sharp$ ○●●/●○○D $\sharp$ ○○○/●○○D $\sharp$

+16 +27 +31 +14 +25 +29 +12 +33 +16 +27

A $\flat$

●●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$ G $\sharp$ ●●●/●●● G $\sharp$ ●●●/○○○D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○○○/○○○ ○●●/●●●C $\sharp$ ○●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●●●/○○○C $\sharp$ G $\sharp$ ●○○/○○○(D $\sharp$)

-51 -69 -47 -65 -53 -49 -67 -55 -51 -69 -47 -65

G $\sharp$ ●●●/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○●●/○○○D $\sharp$ ○●●/○○○C $\sharp$ ●●●/●○○ ●○○/○○○D $\sharp$ ○●●/○○○D $\sharp$ ●○○/○○○C $\sharp$ G $\sharp$ ●●●/○○○ G $\sharp$ ●○○/○○○ ○○○/●○○○D $\sharp$ **

-53 -49 -67 -82 -55 -51 -69 -47 -84 -65 -53 -49

Wolfgang von Schweinitz
op. 65 (2019)

Microtonal fingering suggestions for all the notes in the flute part are listed in the preface. All notes in the trumpet parts may be played by simply trying to center the pitch, never lipping any note up or down. All the equidistant trombone slide positions may be found with the help of the trill valve slide, which is precisely tuned as a diatonic semitone (16 : 15 or 112 cents) in the 1st position. The entire trombone part may be played with perfect intonation even in solo rehearsals. The kettledrums should always be struck at the sweet spot, producing a harmonious, classical sound; and the pitch positions should be marked on the pedals of timpani I, II, and III. The double bass part may be played a little bit closer to the bridge than 'ordinario', to get a bright and nasal sound; the contact position of the bow is always defined by the various natural harmonics. Whenever one of the high harmonics is asking for some extra time to speak, the bass player may slow down the tempo as needed, conducting the ensemble. The distance between the 1st and the 4th finger is equal to 1/12 of the overall string length and precisely the same in every position, while the 2nd finger is always placed exactly in the middle between the 1st and the 4th finger. Performance duration : circa 13 minutes

[illegible]

13

più sonore

III The eight recurring pedal positions II II 182 c down Notes with accents are just a little bit louder than the others.

+10 (-6) +12 *

should be marked on Timpani I, II, & III *(più piano)** ** The first stroke on a retuned drum is always on a soft beat, to check the tuning.*

19

10 : 9 (182 c) 21 : 20 (85 c)

T O T O O t O T O

II I

(+12) +27

al pont. ... ord.

25

7 : 6 (267 c) poco ritenuto

flutter tongue *sfz e molto sonore* marcato

T O T

I 81 c down marcato

-53 marcato

al pont. ... ord.

2 04 04 02 1- 0 1- 04 1- 02 ↑ 04 01 marcato

2 ca. 54 *a tempo*

31

musical score system 1 (measures 31-36)

Staff 1: *piano* (-51, -4) → *più sonore* (+10)

Staff 2: *pianissimo* (circles + dots)

Staff 3: *pianissimo* (circles + dots)

Staff 4: *piano* (T, O) → *più sonore* (T, O) → *pianissimo* (T, O)

Staff 5: *piano* → *più sonore* → *pianissimo*

Staff 6: *pizz.* 0 (lv) → *arco* *al pont.* → *ord.* → *pianissimo*

Staff 7: *piano* → *più sonore* → *pianissimo*

37

musical score system 2 (measures 37-42)

Staff 1: *più sonore* (+2) → *forte* (-51, -47, -65, -51, -53) → *piano* (+2, -4, +10, -18)

Staff 2: *più sonore* → *piano* (circles + dots)

Staff 3: *più sonore* → *piano* (circles + dots)

Staff 4: *più sonore* → *piano* (T, O, T, O, O)

Staff 5: *più sonore* → *piano* → *II 182 c up* (-6)

Staff 6: *più sonore* → *piano*

Staff 7: *più sonore* → *piano* (circles + dots)

43

6:7 (267 c) 7:8 (231 c)

••• + •••

••• + •••

T O T O T O T O T

II 182 c down I 81 c up I

4 4 1 4 1 4 2 2 2 2 2 4

più sonore

49

20:21 (85 c)

poco ritenuto

più sonore molto sonore

più sonore molto sonore

più sonore molto sonore

più sonore molto sonore

III 112 c down

al pont. ... ord. al pont. ord.

2 1 2 1 2 1 1 1 1 1 1 1

molto sonore

3 ca. 54 *a tempo*

55

First system of musical notation (measures 55-60). It includes staves for piano (piano), violin (piano), cello (piano), and double bass (piano). The piano part features a melodic line with various ornaments and dynamics. The violin and cello parts provide harmonic support. The double bass part includes a bass line with a 112 c up and 112 c down section. The system concludes with a 17/8 time signature.

60

Second system of musical notation (measures 60-65). It continues the piano, violin, cello, and double bass parts. The piano part features a melodic line with various ornaments and dynamics. The violin and cello parts provide harmonic support. The double bass part includes a bass line with a 105 c down, 182 c up, and 94 c down section. The system concludes with a 19/3 time signature.

65

+4 +16 +14 +12 -4 -17 -2 3 +29 +14 3 +16 +14

••• + •••

••• + •••

••• + •••

••• + •••

T O T O T O T O T O

(178 c)

II 89 c down

+12 (+27)

al pont. ... ord. al pont.

2 -°4 °1 °4 1 °1 1 °4 1 ↓°4 °2 2 °4 2 °2 2 °4 °1 °2

poco ritenuto

70

-2 -53 -4 -16 3 -33 +2 +47

espr. più sonore marc.

più sonore marc.

più sonore marc.

T O T O T O T O

I 81 c down

-53 più sonore marc.

più sonore marc.

1. -°2. -1. 2 -1. °2. 0 °4 °4 4 -°2. 0 0 1.

81

più sonore

piano

espr.

piano

espr.

I 81 c down

piano

piano

sonjore

marc.

93 flutter tongue

forte piano espr.

T O T T O T

piano T o T espr.

piano

1 0 1 0 4 0 4 1 0 1 0 4 0 1 0 4 0 1 0 4 1

98 5

piano più sonore piano

piano più sonore piano

T T O T O T O T O T

piano più sonore piano

1 più sonore

al pont. più sonore

1 0 4 4 0 2 2 0 4 0 4 0 1 1 0 4 0 2 1

103 poco accelerando

-1 0 4 0 2 4

[illegible]

[illegible]

poco ritenuto

[illegible]

7 ca. 66 *a tempo*

49 : 48
(36 c)

21 : 20
(85 c)

28 : 27
(63 c)

133

piano

sonore

piano

sonore

piano

sonore

(T)

piano

sonore

espr.

piano

sonore

al pont.

ord.

al pont.

piano

sonore

poco ritenuto

139

crescendo

flutter tongue

crescendo

flutter tongue

crescendo

flutter tongue

crescendo

mettere sordino

mettere sordino

mettere sordino

crescendo

ord.

crescendo

8 ca. 72 *andante - avanti*

145  *piano espr.*

pianissimo *piano*

arco *al pont.* *ord.* *al pont.*

pizz. *piano* *pianissimo* *piano espr.*

151 *sonore*

con sordino (metal) *pianissimo* *piano*

con sordino (metal) *pianissimo* *piano*

ord. *al pont.* *ord.*

poco ritenuto

157 *piano* *sonore*

sonore *sonore* *sonore*

(T) con sordino (metal) *piano espr.* *sonore*

sonore *al pont.* *ord.*

sonore

9 ca. 72 *a tempo - avanti*

163

piano *crescendo* +12 3 +10 -18 -82 -4 -53 -49 -84 +29

sempre con sord. *piano* *crescendo* *sforzando* flutter tongue

sempre con sord. *piano* *crescendo* *sforzando* flutter tongue

sempre con sord. *piano* *crescendo* Split tone, with harmonics 3+4

III 105 c up

pizz. *arco* *(lv.)* *piano* *crescendo*

168

sf *più piano* *crescendo* -51 -53 -4 -2 -7 3 -2 -19 -3 -5 3 -82

sf *più piano* *crescendo*

sf *più piano* *crescendo*

T O T O T O T O

III 105 c down

marcato *più piano* *crescendo*

più piano *crescendo*

173

flutter tongue

sf — *più piano* *crescendo*

flutter tongue

sfz — *sf* — *più piano* *crescendo*

flutter tongue

sfz — *sf* — *più piano* *crescendo*

T

flutter tongue

sf — *più piano* *crescendo*

II 182 c up

marcato

più piano *crescendo*

17/4 below trb.

molto sonore — *più piano* *crescendo*

poco ritenuto

178

flutter tongue

-6 -20 -4 -2 -82 -51 -84 +29 -51 -53 -4 *forte* -35 *piano*

flutter tongue

sfz — *forte* *piano*

flutter tongue

sfz — *forte* *piano*

O O T O T flutter tongue O T O T

forte *piano*

II 94 c down

marcato

piano

9/2 below trb.

molto sonore — *forte* *piano*

10 ca. 72 *a tempo - avanti*

183

sf piano *crescendo*

sf piano *crescendo* *sfz* *flutter tongue*

sf piano *crescendo* *sfz* *flutter tongue*

piano *crescendo* *flutter tongue*

piano *crescendo*

sf piano *molto sonore*

188

più piano *crescendo*

sf più piano *crescendo*

sf più piano *crescendo*

più piano *crescendo*

marcato *piano* *crescendo*

più piano *crescendo*

poco ritenuto

215

-2 +18 +14 +12 +16 -4 -16 -14 +2 +51 +14 +16 +31

sf *sf* *sf*

T O T O T O T O

III 217 c up +10 III 112 c down -2 I 81 c up +27

2- °1- 2- °1- -2 -°1- 2 1 2 °1- 2 ↓ °4 °1 ↓ °4 °1 ↓ °4 °2 2 °4

al pont. ord.

... ca. 63 ... e poco ritenuto

221

19:21 (173 c)

-2 +33 -4 +4 -29 -4 -20 -18 -6 +3

espr. *piano*

espr. *sf* *piano* *sf*

sf *espr.* *piano*

O T T O T O T

II 89 c up +1 II 94 c up -6

piano

2 ↑ °1 °4 2 °4 2 ↑ °1 1 °1- °4 °1- °1- 4

piano

al pont. ord.

227

quasi forte *e poco a poco diminuendo*

quasi forte *e poco a poco diminuendo* *sf*

quasi forte *e poco a poco diminuendo* *sf*

quasi forte *e poco a poco diminuendo*

III 105 c down II 182 c down II 182 c up

quasi forte *e poco a poco diminuendo*

quasi forte *e poco a poco diminuendo*

233

sf *sf* *sf*

II 182 c down II 89 c up

al pont. *ord.*

239

sf

sf

II 89 c down

II 89 c up

... ♩ ca. 54 *tempo primo, e molto ritenuto*

245

molto piano

pianissimo

sf

molto piano

pianissimo

molto piano

pianissimo

II 89 c down

I 81 c down

al pont.

ord.

molto piano

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

op. 65

2019

*for Michael Matsuno, Matt Kline
and their friends at UCSD*

- ALTO TROMBONE -

PLAINSOUND MUSIC EDITION

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PROGRAM NOTE

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quartertone scordatura)
op. 65 (2019)

The Plainsound Fanfare “Notre Dame” was composed during the summer weeks of 2019 for flutist Michael Matsuno, bassist Matt Kline and their friends at the University of California in San Diego. On April 15 of that year, the roof of the cathedral Notre-Dame de Paris had caught fire and burned down, and the cathedral, which has been one of the cradles of polyphony in European music, was severely damaged as a result of this incident. So the medieval composers Léonin and Pérotin who filled that grand acoustic space with their Gothic Organum music came to my mind while I was working on the parts for the trumpets and the alto trombone, which are alluding to this oldest form of polyphony with their many parallel fourths and fifths.

Here are some technical remarks with regard to the harmonic language of the piece, which is derived from and based on the harmonically related pitches that can be played on the trumpets without the need to alter the intonation of any note by liping it up or down:

The alto trombone must be equipped with a trill valve, the slide of which is tuned as a non-tempered diatonic semitone (with a frequency ratio $16/15$, or 112 cents) in the first position. The semitone trills generated with the trill valve are gradually getting a bit smaller as the trombone slide is extended step by step, until they reach the size of an 11-limit semitone $22/21$ or 81 cents. This phenomenon provides the conceptual basis for the pitch repertoire or tone system of the entire microtonal composition. The three valve slides of the trumpets are tuned to precisely match this u-tonal harmonic series of chromatic pitches (with wave length ratios $15:16:17:18:19:20:21:22$), and the notes of the timpani part are also tuned to this microtonal chromatic scale of pitches, all of which serve as temporary tonic notes or tonal centers throughout the piece. On the double bass, these pitches can all be tuned by ear below some natural harmonic played on the G string or D string. The A string and the E string are lowered by an 11-limit quartertone ($33/32$ or 53 cents) to support or harmonize the pitches played on the trombone with its longest possible tube length (which yields a series of harmonics based on A-quarter-flat).

The flutist joins in by performing a continuous melodic sequence of more or less challenging tuning tasks, and many pitches of the flute part must be produced with special microtonal fingerings in order to be in tune with the harmonies played by the brass and the bass. This ensemble intonation study is also a concerto for the flute. (WvS)

BIO

Wolfgang von Schweinitz was born in Hamburg, Germany in 1953. He studied in 1968-76 with Esther Ballou, Ernst Gernot Klusmann, György Ligeti, and John Chowning and is currently living in Southern California, thirty miles north of CalArts (California Institute of the Arts), where he was invited to assume the succession of James Tenney in 2007. Since 1997 his compositions are concerned with developing new microtonal tuning and ensemble playing techniques based on non-tempered just intonation.

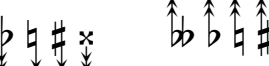
Website: www.plainsound.org

ACCIDENTALS

for microtonal just intonation

EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

The exact intonation of each pitch is written out by means of the following harmonically defined accidentals:

	<i>Pythagorean series of perfect fifths, based on the open strings (... c g d a e ...)</i>
	<i>lowers / raises the pitch by a syntonic comma: 81 : 80 = circa 21.5 cents</i>
	<i>lowers / raises the pitch by two syntonic commas: circa 43 cents</i>
	<i>lowers / raises the pitch by a septimal or 7-limit comma: 64 : 63 = circa 27.3 cents</i>
	<i>lowers / raises the pitch by two septimal commas: circa 54.5 cents (not used in this piece)</i>
	<i>raises / lowers the pitch by an 11-limit quarter-tone: 33 : 32 = circa 53.3 cents</i>
	<i>lowers / raises the pitch to diminish the Pythagorean major sixth 27:16 by a 13-limit third-tone to represent the 13:8 median sixth: 27 : 26 = circa 65.3 cents (not used in this piece)</i>
	<i>lowers / raises the pitch to diminish the 16:15 diatonic semitone by a 17-limit schisma to represent the 17:16 semitone: 256 : 255 = circa 6.8 cents</i>
	<i>raises / lowers the pitch to augment the 32:27 Pythagorean minor third by a 19-limit schisma to represent the 19:16 small minor third: 513 : 512 = circa 3.4 cents</i>
	<i>raises / lowers the pitch to augment the Pythagorean tritone 729:512 by the 23-limit comma to represent the 23:16 augmented tritone: 736 : 729 = circa 16.5 cents (not used in this piece)</i>

These 'Helmholtz-Ellis' accidentals for just intonation were designed in collaboration with Marc Sabat.

The attached arrows for pitch alterations by a syntonic comma are transcriptions of the notation used by Hermann von Helmholtz in his book "Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik" (1863). – The annotated English translation "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (published 1875/1885) was made by Alexander J. Ellis, who refined the definition of pitch within the 12-tone system of Equal Temperament by introducing a division of the octave into 1200 cents. – The accidental sign denoting an alteration by a septimal comma was devised by Guiseppe Tartini (1692-1770), the composer, violinist and researcher who investigated the difference tones created by double-stops.

Pitch-bend information:

In addition to the harmonic definition of a pitch by means of its accidentals, it is also possible to specify its absolute pitch-height as a cents-deviation from the respectively indicated chromatic pitch in the standard 12-tone System of Equal Temperament. – Such additional pitch-bend numbers are only included in the parts for the flute and timpani to facilitate solo rehearsals with the aid of a tuning device. In the ensemble rehearsals, every pitch may be tuned by ear.

TRUMPETS and ALTO TROMBONE

Trumpet in B-flat

Alto Trombone with trill valve

*Table notated at
sounding pitch*

The musical score is written for Euphonium and consists of two measures. The first measure is labeled "Position VI with Trill valve = Position VII" and the second measure is labeled "Position VII with Trill valve". The key signature is one flat (B-flat) and the time signature is 2/4. The score is written on a grand staff with two staves per system. The first staff of each system contains a treble clef and the second staff contains a bass clef. The music features a series of eighth and sixteenth notes, with trills indicated by a trill symbol (a vertical line with two dots) above the notes. The first measure ends with a double bar line, and the second measure ends with a double bar line.

4 TIMPANI and small TOMTOM

DOUBLE BASS Scordatura

III

16 : 15
(112 c)

17 : 16
(105 c)

18 : 17
(99 c)

II

19 : 18
(94 c)

20 : 19
(89 c)

21 : 20
(85 c)

I

22 : 21
(81 c)

IV

Tomtom

+10-2-7-6+1+12+27-53-4-2-4-2-53-51

The pedal positions for these pitches should be marked on timpani I, II, and III.

Double Bass Scordatura
The A string and the E string are lowered by an 11-limit quarter-tone (frequency ratio 33/32 or 53 cents). The 3rd string may be tuned by ear as a consonant 11/2 below the double-octave harmonic of the D string by listening to and eliminating the beatings at D-5, and the 4th string may also be tuned by ear as an 11/1 consonance below the tuning reference pitch A = 440 Hz.

FLUTE

Fingering Suggestions

Pitches that are not used in the flute part are notated with a small diamond note head.

E♭ B♭ F♯

-2+10+2+14-4+18+80+12-6+16-2

G#

+10+2+14-4+18-19+80+12-6+16

G#

-2-17+10+2+14-4+18+80+12

C♯ G♯ D♯

-6-14-2-20+2-8-16-4-220-18+4-6-14

-2-20+2-8-16-40-18+4-33-6+47

-14-2+51+3-20+2-35-8-16-4-220

C $\sharp$

●●●/●○○C $\sharp$ ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●●●/●○○

-7 -3 -21 -9 -5 -23 -1 -19 -7 -3 -21 -9

(G $\sharp$) ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●○○/●○○(C $\natural$) ●●●/○○●(C $\sharp$) ●○○/○○○(D $\sharp$) ○●●/○●●D $\sharp$

-5 -23 -1 -19 -7 -3 -21 -36 -9 -5

B $\flat$

●●●/●●●D $\sharp$ C $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ○●●/●●●D $\sharp$ ↓

+1 +4 -13 -1 +2 -15 +6 -11 +1 +4 -13 -1

G $\sharp$ ●●●/●○○D $\sharp$ ●○○/●●●D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●●●D $\sharp$ ↓ ●●●/●○○D $\sharp$

+2 -15 +6 -31 -11 +1 +4 -13 -29 -1 +2

A $\sharp$

●●●/●○○D $\sharp$ ↑ ●●●/○○○D $\sharp$ ↑ G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↑ ○●●/●●●C $\sharp$ ○●●/●●●↑ ●●●/●○○B $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$

+29 +12 +33 +16 +27 +31 +14 +25 +29 +12 +33

G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ ○●●/○○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ●○○/●○○C $\natural$ ●○○/○○○C $\sharp$ ●○○/○○○ G $\sharp$ ○●●/●○○D $\sharp$ ○○○/●○○D $\sharp$

+16 +27 +31 +14 +25 +29 +12 +33 +16 +27

A $\flat$

●●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●●●/●●● G $\sharp$ ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○○○/○○○ ○●●/●●●C $\sharp$ ○●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○C $\sharp$ G $\sharp$ ●●●/○○○(D $\sharp$)

-51 -69 -47 -65 -53 -49 -67 -55 -51 -69 -47 -65

G $\sharp$ ●●●/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○●●/○○○D $\sharp$ ○●●/○○○C $\sharp$ ●●●/●●● ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ●○○/○○○C $\sharp$ G $\sharp$ ●●●/○○○ G $\sharp$ ●○○/○○○ ○○○/●○○○D $\sharp$ *

-53 -49 -67 -82 -55 -51 -69 -47 -84 -65 -53 -49

Plainsound Fanfare "Notre Dame"

Concertino in Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

Wolfgang von Schweinitz
op. 65 (2019)

ca. 54 **Lento con tempo rubato, piano maestoso, e sempre non vibrato**

The score for measures 1-6 features the following parts and markings:

- Flute:** Treble clef, 3/4 time. Notes are marked with microtonal adjustments: -2, 0, -4. A *piano* dynamic is indicated.
- Trumpet 1 in E $\flat$:** Treble clef. Marked "sounding pitch".
- Trumpet 2 in B $\flat$:** Treble clef. Marked "sounding pitch".
- Alto Trombone:** Bass clef, 3/4 time. Marked with a 13/12 ratio.
- Small Tomtom and 4 Timpani:** Bass clef, 3/4 time. Notes are marked with microtonal adjustments: -4, -2, -6. A *piano* dynamic is indicated. A *Tomtom (lv.)* marking is present.
- Double Bass:** Treble and bass staves. Treble staff has *loco* and *arco* markings. Bass staff has *pizz.* and *(lv.)* markings. Notes are marked with microtonal adjustments: 0, $\flat 1$, $\flat 4$, 1, $\flat 1$, 4, $\flat 4$, 1, $\flat 1$, 1, $\flat 1$, 1, $\flat 1$, $\flat 4$, 1, $\flat 1$, 4, $\flat 1$. A *piano* dynamic is indicated. A *più vicino al pont.* marking is present.

Microtonal fingering suggestions for all the notes in the flute part are listed in the preface. All notes in the trumpet parts may be played by simply trying to center the pitch, never liping any note up or down. All the equidistant trombone slide positions may be found with the help of the trill valve slide, which is precisely tuned as a diatonic semitone (16 : 15 or 112 cents) in the 1st position. The entire trombone part may be played with perfect intonation even in solo rehearsals. The kettledrums should always be struck at the sweet spot, producing a harmonious, classical sound; and the pitch positions should be marked on the pedals of timpani I, II, and III. The double bass part may be played a little bit closer to the bridge than 'ordinario', to get a bright and nasal sound; the contact position of the bow is always defined by the various natural harmonics. Whenever one of the high harmonics is asking for some extra time to speak, the bass player may slow down the tempo as needed, conducting the ensemble. The distance between the 1st and the 4th finger is equal to 1/12 of the overall string length and precisely the same in every position, while the 2nd finger is always placed exactly in the middle between the 1st and the 4th finger. Performance duration : circa 13 minutes

7

The score for measures 7-12 features the following parts and markings:

- Flute:** Treble clef, 3/4 time. Notes are marked with microtonal adjustments: -2, +2, +14, +12, +14, -4, -6, -16. A *più sonore* marking is present. A box with the number **1** is above the staff.
- Trumpet 1 in E $\flat$:** Treble clef.
- Trumpet 2 in B $\flat$:** Treble clef.
- Alto Trombone:** Bass clef, 3/4 time. Notes are marked with microtonal adjustments: 0, T. A *piano* dynamic is indicated.
- Small Tomtom and 4 Timpani:** Bass clef, 3/4 time. Notes are marked with microtonal adjustments: $\flat 4$, 4, $\flat 1$, $\flat 4$, $\flat 1$, $\flat 2$, $\flat 1$, 2, $\flat 1$, $\flat 4$, $\flat 2$, 2, $\flat 1$. A *più sonore* marking is present.
- Double Bass:** Treble and bass staves. Treble staff has *ord.* and *al pont.* markings. Bass staff has *ord.* marking. Notes are marked with microtonal adjustments: $\flat 4$, 4, $\flat 1$, $\flat 4$, $\flat 1$, $\flat 2$, $\flat 1$, 2, $\flat 1$, $\flat 4$, $\flat 2$, 2, $\flat 1$. A *più sonore* marking is present.

13

O T O O O T O

più sonore

III The eight recurring pedal positions II 182 c down Notes with accents are just a little bit louder than the others.

+10 should be marked on Timpani I, II, & III (-6) +12 (più piano)*

*) The first stroke on a retuned drum is always on a soft beat, to check the tuning.

-2 1 ↓ ¼ ½ 1 ↓ ¼ ½ 4 ¼ 1- ¼ 1 ¼

19

10: 9
(182 c)

21: 9
(85 c)

T O T O T O

O t O

II

I

al pont.

ord.

19 20 21 22 23 24 25 26 27

25

7:6
(267 c)

poco ritenuto

flutter tongue

sfz e molto sonore

marcato

marcato

I 81 c down

al pont.

... ord.

marcato

31

31

piano *più sonore* *pianissimo* *pianissimo*

T O O T O T O T O

piano *più sonore* *pianissimo*

piano *più sonore* *pianissimo*

pizz. *arco* *al pont.* *ord.*

piano *più sonore* *pianissimo*

37

33 : 32
(53 c)

32 : 25
(427 c)

più sonore *forte* *piano* *più sonore* *piano* *più sonore* *piano*

T O T O T O T O

più sonore *piano*

più sonore *piano*

più sonore *piano*

II 182 c up

più sonore *piano*

[illegible][illegible]

3 ca. 54 *a tempo*

55

piano

piano

piano

T O T O T O T O

piano

III 112 c up III 112 c down

piano

arco al pont. ... ord. ord. 17/8

pizz. 0 (lv)

piano

↑ °1 °2 2 °1- 2 °4- °1- °1 1 °1 1 °1 ↓ °4 °1- 2-

60

19:16 (298 c)

più sonore

più sonore

più sonore

T O T O T O T O

O t O t O

più sonore

III 105 c down II 182 c up II 94 c down

17/6 19/8 19/3

65

+4 +16 +14 +12 -4 -17 -2 3 +29 +14 3 +16 +14

... + ...

... + ...

T O T O T O T O T O

(178 c)

II 89 c down

+12 (+27)

al pont. ... ord. al pont.

2 -04 01 04 1 01 1 04 1 04 02 2 04 2 02 2 04 01 02

poco ritenuto

70

-2 -53 -4 -16 3 -33 +2 +47

espr. più sonore marc.

più sonore marc.

più sonore marc.

T O T O T O T

più sonore marc.

I 81 c down

-53 più sonore marc.

0 -02 -1- 2 -1- 02- 0 04 04 4 -02- 0 marc. 0 1-

4 ca. 54 *a tempo*

22 : 21
(81 c)

75  

piano *più sonore* *piano*

(T) O T O T O t O T O T O

piano *più sonore*

I 81 c up

piano *più sonore*

arco *al pont.* *... ord.* *al pont.* *... ord.* *al pont.*

pizz. 0 (lv)

piano *più sonore*

 ca. 60 *poco più mosso*

81 

più sonore *piano* *espr.*

T O T O T O

piano *espr.*

I 81 c down

piano

1 *piano* *sonjore* *marc.*

87

più sonore *espr.*

marc. *al pont.*

più sonore

93 flutter tongue

forte piano espr.

T O T T O T O

piano T o T espr.

piano

1 0 1 0 4 0 4 0 1 0 4 0 1 0 4 0 1 0 4 1

98 5

piano più sonore piano

piano più sonore piano

T T O T O T O T O T O T

piano più sonore piano

1 più sonore

al pont.

1 0 4 4 0 2 2 0 4 0 4 0 1 1 0 4 0 2 1

103 poco accelerando

-1 0 4 0 2 4

6 ca. 66 *ancora poco più mosso*

109

♩ ●●●/●●●D♯

♩ ●●●/●●●B♯

♩ ●●●/●●●C♯

piano *poco più sonore* *poco più sonore*

piano *poco più sonore* *poco più sonore*

T O T O T O O T

piano *poco più sonore* *poco più sonore*

I 81 c up II 182 c up III 217 c up

piano *poco più sonore* *poco più sonore*

pizz. *arco* *al pont.* *ord.* *al pont.*

piano *poco più sonore* *poco più sonore*

115

+10 -4 +29 +10 -4 +14 -2 -16 -18

più sonore *piano* *espr.* *marcato* *espr.*

piano *piano* *marcato*

O T O T O T

più sonore *piano* *marcato* *espr.* *marcato*

III 112 c down

più sonore *piano* *più sonore* *marcato*

ord.

marcato

[illegible]

poco ritenuto

127

crescendo

crescendo

crescendo

O T O T O T

crescendo

II 89 c down

crescendo

al pont.

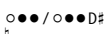
ord.

crescendo

7 ca. 66 *a tempo*

49 : 48
(36 c)

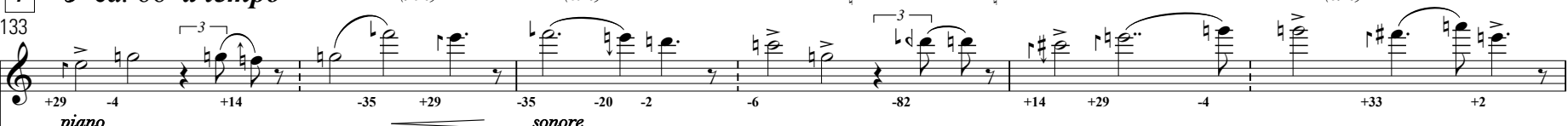
21 : 20
(85 c)


3

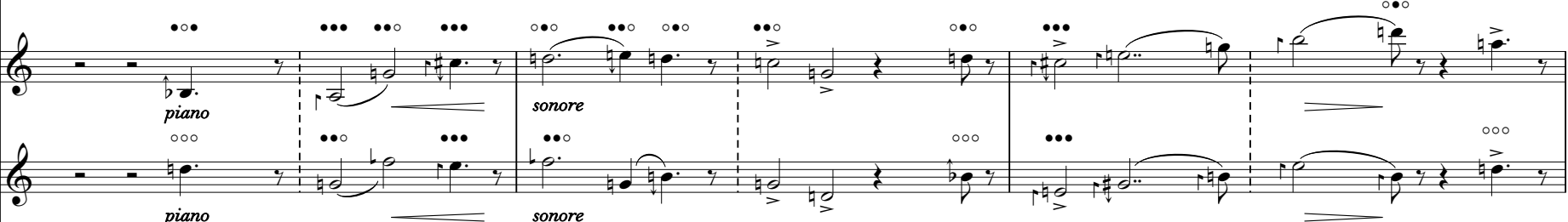

3

28 : 27
(63 c)

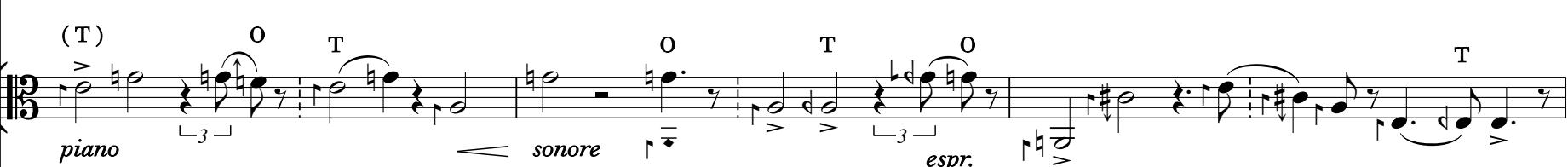
133



piano *sonore*



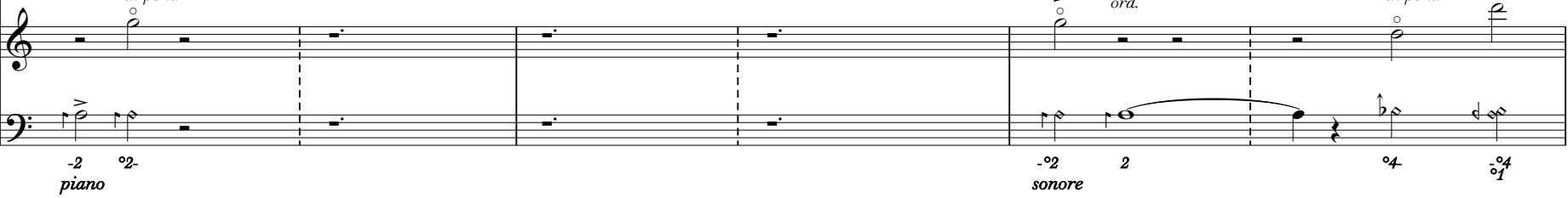
piano *sonore*



piano *sonore* *espr.*



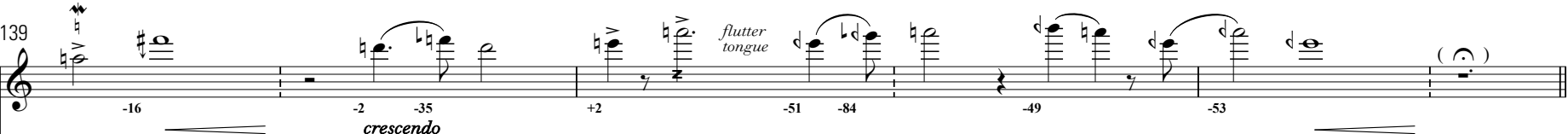
piano *sonore*



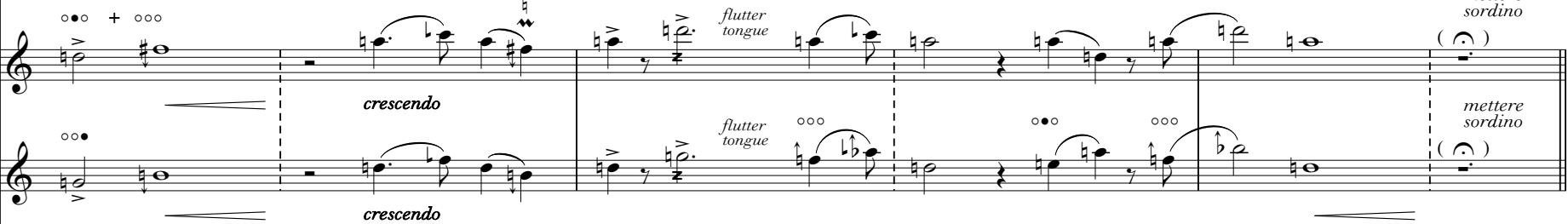
piano *sonore*

poco ritenuto

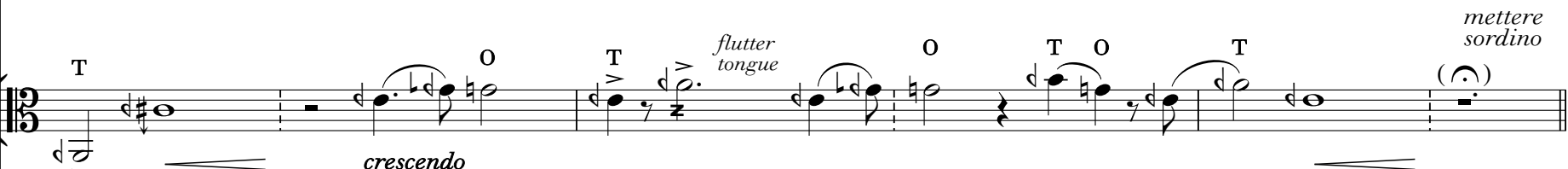
139



crescendo *flutter tongue*



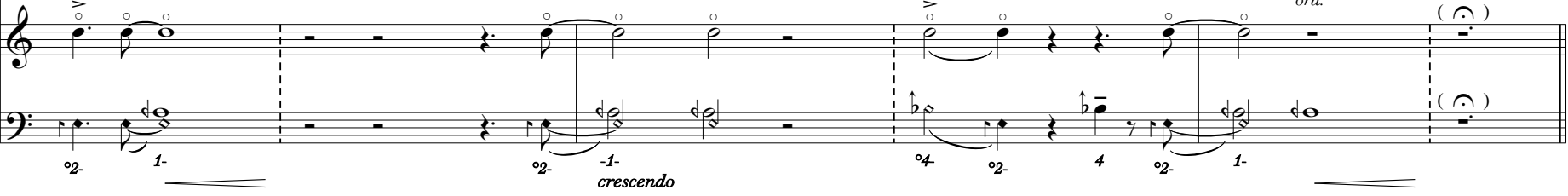
crescendo *flutter tongue* *mettere sordino*



crescendo *flutter tongue* *mettere sordino*



crescendo



crescendo

8 ca. 72 *andante - avanti*

145                                              

9 $\text{ca. } 72$ *a tempo - avanti*

163

sempre con sord.

piano *crescendo*

flutter tongue

sfz

Split tone, with harmonics 3+4

III 105 c up

pizz. *arco* *(lv)*

piano *crescendo*

168

sf *più piano* *crescendo*

sf *più piano* *crescendo*

sf *più piano* *crescendo*

III 105 c down

marcato *più piano* *crescendo*

più piano *crescendo*

173

flutter tongue

sf *più piano* *crescendo*

flutter tongue

sfz *sf* *più piano* *crescendo*

flutter tongue

sfz *sf* *più piano* *crescendo*

T O T O

sf *più piano* *crescendo*

II 182 c up

marcato *più piano* *crescendo*

17/4 below trb.

molto sonore *più piano* *crescendo*

poco ritenuto

178

flutter tongue

sfz *forte* *piano*

flutter tongue

sfz *forte* *piano*

flutter tongue

sfz *forte* *piano*

O O T O T O T

forte *piano*

II 94 c down

marcato *piano*

9/2 below trb.

molto sonore *forte* *piano*

10 ca. 72 a tempo - avanti

183

Flute: *piano* *crescendo* *flutter tongue*

Piano: *sf* *piano* *crescendo* *sfz* *flutter tongue* *sfz*

Trombone: *piano* *crescendo* *flutter tongue*

Bass: *piano* *crescendo* *19/4 below trb.* *molto sonore*

188

Flute: *più piano* *crescendo*

Piano: *sf* *più piano* *crescendo*

Trombone: *più piano* *crescendo*

Bass: *marcato* *piano* *crescendo*

II 89 c down

193

flutter tongue

-2 -51 -84 +14 +27 -4 +31 +16 +14 +29

sf *più piano* *crescendo*

sfz *flutter tongue* *sf* *più piano* *crescendo*

sfz *flutter tongue* *sf* *più piano* *crescendo*

T *flutter tongue* T O

sf *più piano* *crescendo*

I 81 c up

marcato al pont. *ord.* *al pont.* *ord.* *al pont.*

o₁ o₄ 1- o₄ 1- ↓ o₄ o₂ o₁ 1 o₁ 1 o₁ o₄ 2 o₁ o₂

molto sonore *più piano* *crescendo*

poco ritenuto

198

4

10

14

31

2

6

31

2

51

84

49

16

31

flutter tongue

flutter tongue

sfz

sfz

forte

forte

forte

T

O

T

O

T

flutter tongue

O

T

forte

I 81 c down

27

al pont.

ord.

al pont.

7/1 below trb.

ord.

11/2 below trb.

al pont.

ord.

4

2

4

2

2

4

1

4

2

forte

forte

molto sonore

♩ ca. 72 *a tempo* ...

... *e poco a poco ritardando ... fino al tempo* ♩ ca. 63

19:24
(404 c)

203

musical score system 1 (measures 203-218)

Violin I: *meno forte*, *e poco a poco diminuendo*

Violin II: *meno forte*, *e poco a poco diminuendo*, *sf*

Piano: *meno forte*, *e poco a poco diminuendo*

Double Bass: *meno forte*, *e poco a poco diminuendo*

Violoncello: *meno forte*, *e poco a poco diminuendo*

II 182 c up, II 94 c down

209

musical score system 2 (measures 209-224)

Violin I: *espr.*

Violin II: *sf*, *espr.*, *sf*

Piano: *sf*

Double Bass: *espr.*

Violoncello: *espr.*

II 89 c down

215

-2 +18 +14 +12 +16 -4 -16 -14 +2 +51 +14 +16 +31

sf *sf* *sf*

T O T O T O T O O

III 217 c up +10 III 112 c down -2 I 81 c up +27

al pont. *ord.*

2- °1- 2- °1- -2 °1- 2 1 2 °1- 2 ↓ °4 °1 ↓ °4 °1 ↓ °4 °2 2 °4

... ca. 63 ... e poco ritenuto

19:21 (173 c)

221

-2 +33 -4 +4 -29 -4 -20 -18 -6 +3

espr. *piano*

espr. *sf* *piano* *sf*

sf *espr.* *piano*

O T T O O T O T

piano

II 89 c up +1 II 94 c up -6

piano

al pont. *ord.*

2 ↑ °1 °4 2 °4 2 ↑ °1 1 °1- °4 °1- °1- 4

piano

12 ca. 63 ... *e poco a poco ritardando ... fino al tempo* ca. 54

227

quasi forte *e poco a poco diminuendo*

quasi forte *e poco a poco diminuendo* *sf*

quasi forte *e poco a poco diminuendo* *sf*

quasi forte *e poco a poco diminuendo*

III 105 c down II 182 c down II 182 c up

quasi forte *e poco a poco diminuendo*

quasi forte *e poco a poco diminuendo*

233

sf *sf* *sf*

sf *sf* *sf*

sf *sf* *sf*

II 182 c down II 89 c up

al pont. *ord.*

239

4

-4 +14 +10 -2

-3 -29 -7 -5

+2 -29 +4

sf

sf

sf

O O T O T O T O T

O t O

II 89 c down

+12

(-7)

II 89 c up

+1

-2 0 1- 2- 0 4 1- -4 -1 0 4 2- 0 2- -1 2 4 2 4 2- -4

... ♩ ca. 54 *tempo primo, e molto ritenuto*

245

ca. 54 tempo primo, e molto ritardato

sf *molto piano* *pianissimo*

sf *molto piano* *pianissimo*

molto piano *pianissimo*

II 89 c down I 81 c down

al pont. *ord.*

molto piano

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

op. 65

2019

*for Michael Matsuno, Matt Kline
and their friends at UCSD*

- TIMPANI & TOMTOM -

PLAINSOUND MUSIC EDITION

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PROGRAM NOTE

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quartertone scordatura)
op. 65 (2019)

The Plainsound Fanfare “Notre Dame” was composed during the summer weeks of 2019 for flutist Michael Matsuno, bassist Matt Kline and their friends at the University of California in San Diego. On April 15 of that year, the roof of the cathedral Notre-Dame de Paris had caught fire and burned down, and the cathedral, which has been one of the cradles of polyphony in European music, was severely damaged as a result of this incident. So the medieval composers Léonin and Pérotin who filled that grand acoustic space with their Gothic Organum music came to my mind while I was working on the parts for the trumpets and the alto trombone, which are alluding to this oldest form of polyphony with their many parallel fourths and fifths.

Here are some technical remarks with regard to the harmonic language of the piece, which is derived from and based on the harmonically related pitches that can be played on the trumpets without the need to alter the intonation of any note by liping it up or down:

The alto trombone must be equipped with a trill valve, the slide of which is tuned as a non-tempered diatonic semitone (with a frequency ratio $16/15$, or 112 cents) in the first position. The semitone trills generated with the trill valve are gradually getting a bit smaller as the trombone slide is extended step by step, until they reach the size of an 11-limit semitone $22/21$ or 81 cents. This phenomenon provides the conceptual basis for the pitch repertoire or tone system of the entire microtonal composition. The three valve slides of the trumpets are tuned to precisely match this u-tonal harmonic series of chromatic pitches (with wave length ratios $15:16:17:18:19:20:21:22$), and the notes of the timpani part are also tuned to this microtonal chromatic scale of pitches, all of which serve as temporary tonic notes or tonal centers throughout the piece. On the double bass, these pitches can all be tuned by ear below some natural harmonic played on the G string or D string. The A string and the E string are lowered by an 11-limit quartertone ($33/32$ or 53 cents) to support or harmonize the pitches played on the trombone with its longest possible tube length (which yields a series of harmonics based on A-quarter-flat).

The flutist joins in by performing a continuous melodic sequence of more or less challenging tuning tasks, and many pitches of the flute part must be produced with special microtonal fingerings in order to be in tune with the harmonies played by the brass and the bass. This ensemble intonation study is also a concerto for the flute. (WvS)

BIO

Wolfgang von Schweinitz was born in Hamburg, Germany in 1953. He studied in 1968-76 with Esther Ballou, Ernst Gernot Klusmann, György Ligeti, and John Chowning and is currently living in Southern California, thirty miles north of CalArts (California Institute of the Arts), where he was invited to assume the succession of James Tenney in 2007. Since 1997 his compositions are concerned with developing new microtonal tuning and ensemble playing techniques based on non-tempered just intonation.

Website: www.plainsound.org

ACCIDENTALS

for microtonal just intonation

EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

The exact intonation of each pitch is written out by means of the following harmonically defined accidentals:

	<i>Pythagorean series of perfect fifths, based on the open strings (... c g d a e ...)</i>
	<i>lowers / raises the pitch by a syntonic comma: 81 : 80 = circa 21.5 cents</i>
	<i>lowers / raises the pitch by two syntonic commas: circa 43 cents</i>
	<i>lowers / raises the pitch by a septimal or 7-limit comma: 64 : 63 = circa 27.3 cents</i>
	<i>lowers / raises the pitch by two septimal commas: circa 54.5 cents (not used in this piece)</i>
	<i>raises / lowers the pitch by an 11-limit quarter-tone: 33 : 32 = circa 53.3 cents</i>
	<i>lowers / raises the pitch to diminish the Pythagorean major sixth 27:16 by a 13-limit third-tone to represent the 13:8 median sixth: 27 : 26 = circa 65.3 cents (not used in this piece)</i>
	<i>lowers / raises the pitch to diminish the 16:15 diatonic semitone by a 17-limit schisma to represent the 17:16 semitone: 256 : 255 = circa 6.8 cents</i>
	<i>raises / lowers the pitch to augment the 32:27 Pythagorean minor third by a 19-limit schisma to represent the 19:16 small minor third: 513 : 512 = circa 3.4 cents</i>
	<i>raises / lowers the pitch to augment the Pythagorean tritone 729:512 by the 23-limit comma to represent the 23:16 augmented tritone: 736 : 729 = circa 16.5 cents (not used in this piece)</i>

These 'Helmholtz-Ellis' accidentals for just intonation were designed in collaboration with Marc Sabat.

The attached arrows for pitch alterations by a syntonic comma are transcriptions of the notation used by Hermann von Helmholtz in his book "Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik" (1863). – The annotated English translation "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (published 1875/1885) was made by Alexander J. Ellis, who refined the definition of pitch within the 12-tone system of Equal Temperament by introducing a division of the octave into 1200 cents. – The accidental sign denoting an alteration by a septimal comma was devised by Guiseppe Tartini (1692-1770), the composer, violinist and researcher who investigated the difference tones created by double-stops.

Pitch-bend information:

In addition to the harmonic definition of a pitch by means of its accidentals, it is also possible to specify its absolute pitch-height as a cents-deviation from the respectively indicated chromatic pitch in the standard 12-tone System of Equal Temperament. – Such additional pitch-bend numbers are only included in the parts for the flute and timpani to facilitate solo rehearsals with the aid of a tuning device. In the ensemble rehearsals, every pitch may be tuned by ear.

TRUMPETS and ALTO TROMBONE

Trumpet in B-flat

The 1st valve slide is tuned in combination with valve 2 to harmonic 4 of the G string:

The 1st valve slide is tuned in combination with valve 2 to harmonic 4 of the G string

The trill valve slide ("T") is tuned in Position I with harmonic 4 to harmonic 4 of the double bass D string.

Table notated at sounding pitch

Trumpet in Eb

Trumpet in Bb

Alto Trombone

Position I

Position I with Trill valve = Position II

Position II with Trill valve = Position III

Position III with Trill valve = Position IV

Position IV with Trill valve = Position V

Position V with Trill valve = Position VI

Position VI with Trill valve = Position VII

Position VII with Trill valve

4 TIMPANI and small TOMTOM

DOUBLE BASS Scordatura

III

16 : 15
(112 c)

17 : 16
(105 c)

18 : 17
(99 c)

II

19 : 18
(94 c)

20 : 19
(89 c)

21 : 20
(85 c)

I

22 : 21
(81 c)

IV

Tomtom

The pedal positions for these pitches should be marked on timpani I, II, and III.

Double Bass Scordatura

The A string and the E string are lowered by an 11-limit quarter-tone (frequency ratio 33/32 or 53 cents). The 3rd string may be tuned by ear as a consonant 11/2 below the double-octave harmonic of the D string by listening to and eliminating the beatings at D-5, and the 4th string may also be tuned by ear as an 11/1 consonance below the tuning reference pitch A = 440 Hz.

FLUTE

Fingering Suggestions

Pitches that are not used in the flute part are notated with a small diamond note head.

E♭

B♭

F♯

C♯

G♯

D♯

C $\sharp$

●●●/●○○C $\sharp$ ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●●●/●○○

-7 -3 -21 -9 -5 -23 -1 -19 -7 -3 -21 -9

(G $\sharp$) ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●○○/●○○(C $\natural$) ●●●/○○●(C $\sharp$) ●○○/○○○(D $\sharp$) ○●●/○●●D $\sharp$

-5 -23 -1 -19 -7 -3 -21 -36 -9 -5

B $\flat$

●●●/●●●D $\sharp$ C $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ○●●/●●●D $\sharp$ ↓

+1 +4 -13 -1 +2 -15 +6 -11 +1 +4 -13 -1

G $\sharp$ ●●●/●○○D $\sharp$ ●○○/●●●D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●●●D $\sharp$ ↓ ●●●/●○○D $\sharp$

+2 -15 +6 -31 -11 +1 +4 -13 -29 -1 +2

A $\sharp$

●●●/●○○D $\sharp$ ↑ ●●●/○○○D $\sharp$ ↑ G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↑ ○●●/●●●C $\sharp$ ○●●/●●●↑ ●●●/●○○B $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$

+29 +12 +33 +16 +27 +31 +14 +25 +29 +12 +33

G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ ○●●/○○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ●○○/●○○C $\natural$ ●○○/○○○C $\sharp$ ●○○/○○○ G $\sharp$ ○●●/●○○D $\sharp$ ○○○/●○○D $\sharp$

+16 +27 +31 +14 +25 +29 +12 +33 +16 +27

A $\flat$

●●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$ G $\sharp$ ●●●/●●● G $\sharp$ ●●●/○○○D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○○○/○○○ ○●●/●●●C $\sharp$ ○●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●●●/○○○C $\sharp$ G $\sharp$ ●○○/○○○(D $\sharp$)

-51 -69 -47 -65 -53 -49 -67 -55 -51 -69 -47 -65

G $\sharp$ ●●●/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○●●/○○○D $\sharp$ ○●●/○○○C $\sharp$ ●●●/●○○ ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ●○○/○○○C $\sharp$ G $\sharp$ ●●●/○○○ G $\sharp$ ●○○/○○○ ○○○/●○○○D $\sharp$ *

-53 -49 -67 -82 -55 -51 -69 -47 -84 -65 -53 -49

Plainsound Fanfare "Notre Dame"

Concertino in Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

Wolfgang von Schweinitz
op. 65 (2019)

ca. 54 *Lento con tempo rubato, piano maestoso, e sempre non vibrato*

Flute

Trumpet 1 in E $\flat$

Trumpet 2 in B $\flat$

Alto Trombone

Double Bass

Small Tomtom and 4 Timpani

loco *arco* *pizz.* *(lv.)* *piano* *Tomtom* *IV* *(lv.)* *II* *piano*

sounding pitch *sounding pitch* *più vicino al pont.*

Microtonal fingering suggestions for all the notes in the flute part are listed in the preface. All notes in the trumpet parts may be played by simply trying to center the pitch, never liping any note up or down. All the equidistant trombone slide positions may be found with the help of the trill valve slide, which is precisely tuned as a diatonic semitone (16 : 15 or 112 cents) in the 1st position. The entire trombone part may be played with perfect intonation even in solo rehearsals. The kettledrums should always be struck at the sweet spot, producing a harmonious, classical sound; and the pitch positions should be marked on the pedals of timpani I, II, and III. The double bass part may be played a little bit closer to the bridge than 'ordinario', to get a bright and nasal sound; the contact position of the bow is always defined by the various natural harmonics. Whenever one of the high harmonics is asking for some extra time to speak, the bass player may slow down the tempo as needed, conducting the ensemble. The distance between the 1st and the 4th finger is equal to 1/12 of the overall string length and precisely the same in every position, while the 2nd finger is always placed exactly in the middle between the 1st and the 4th finger. Performance duration : circa 13 minutes

7

più sonore *1* *16 : 15 (112 c)*

ord. *al pont.* *... ord.* *piano*

più sonore *più sonore*

13

O T O O O T O

più sonore

III The eight recurring pedal positions II II 182 c down Notes with accents are just a little bit louder than the others.

+10 (-6) +12 >

should be marked on Timpani I, II, & III (più piano)*

*) The first stroke on a retuned drum is always on a soft heart to check the tuning.

19

10 : 9
(182 c)

21 : 20
(85 c)

T O T O

al pont. ... ord.

II I

(+12) +27

25

7 : 6
(267 c)

poco ritenuto

flutter tongue

sfz e molto sonore

marcato

al pont.

... ord.

marcato

I 81 c down

marcato

-53

[illegible]

43

6:7 (267 c)

7:8 (231 c)

-6 -18 -2 +14 +16 -17 -4 +14 +31 +16 3 3

... + ...

... + ...

(*)

... + ...

T O T O T O T

4 4 1 4 1 4 2 4 2 2 2 4

più
sonore

II II 182 c down I 81 c up I

(-6) +12 +27

poco ritenuto

49 20 : 21 (85 c)

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

al pont. *ord.* *ord.* *molto sonore*

III 112 c down

più sonore *molto sonore*

60

19:16
(298 c)

più sonore

più sonore

più sonore

più sonore

17/6

19/8

19/3

III 105 c down

II 182 c up

II 94 c down

65

+4 +16 +14 +12 -4 -17 -2 3 +29 +14 3 +16 +14

... + ...

... + ...

... + ...

T O T O T O T O T O

(178 c)

al pont. ... ord. al pont.

2 -4 1 4 1 1 1 4 1 4 2 2 2 4 2 2

II 89 c down

+12 (+27) I

poco ritenuto

70

-2 -53 -4 -16 3 -33 +2 +47

espr. più sonore marc.

più sonore marc.

or più sonore marc.

T O T O T O T O T O

più sonore marc.

0 -2 -1 2 -1 2 0 4 4 4 -2 0 0 1

più sonore marc.

I 81 c down

-53 più sonore marc.

93 flutter tongue

forte *piano* *espr.*

T O T T O T

piano *espr.*

1 0 1 0 4 0 4 1 0 1 0 4 0 4 0 1 0 4 0 1 0 4 1

piano

piano

98 5

piano *più sonore* *piano*

piano *più sonore* *piano*

T T O T O T O T O T

piano *più sonore* *piano*

al pont.

1 *più sonore* 4 4 0 4 0 2 2 0 4 0 4 0 1 1 0 4 0 2 1

più sonore

103 *poco accelerando*

-1 0 4 0 2 0 2 4

6 ca. 66 *ancora poco più mosso*

109

piano *poco più sonore* *poco più sonore*

piano *poco più sonore* *poco più sonore*

piano *poco più sonore* *poco più sonore*

pizz. *arco* *al pont.* *ord.* *al pont.*

piano *poco più sonore* *poco più sonore*

I 81 c up II 182 c up III 217 c up

piano *poco più sonore*

115

più sonore *piano* *espr.* *marcato* *espr.*

piano *piano* *marcato* *marcato*

più sonore *piano* *marcato* *espr.* *marcato*

ord. *marcato*

III 112 c down

più sonore *piano* *più sonore* *marcato*

[illegible]

poco ritenuto

[illegible]

8 ♩ ca. 72 *andante - avanti*

145

●●●/●●●D#

piano espr.

arco

al pont.

ord.

al pont.

pizz.

piano

pianissimo

pianissimo

piano

151

●● con sordino (metal)

pianissimo

●●● con sordino (metal)

pianissimo

ord.

al pont.

ord.

piano

piano

157

poco ritenuto

piano

sonore

●● + ●●

sonore

●●● + ●●●

sonore

con sordino (metal)

sonore

piano espr.

sonore

al pont.

ord.

sonore

sonore

9 ca. 72 *a tempo - avanti*

163

147 : 132 (186 c)

flutter tongue

sempre con sord.

piano *crescendo*

sfz *flutter tongue*

Split tone, with harmonics 3+4

arco

pizz. *0* *0* *(lv)*

piano *crescendo*

III 105 c up

piano *crescendo*

168

sf *più piano* *crescendo*

sf *più piano* *crescendo*

sf *più piano* *crescendo*

sf *più piano* *crescendo*

più piano *crescendo*

III 105 c down

marcato *più piano* *crescendo*

[illegible]

poco ritenuto

178

flutter tongue

sfz

forte

piano

flutter tongue

sfz

forte

piano

flutter tongue

sfz

forte

piano

9/2 below trb.

molto sonore

forte

piano

marcato

piano

II 94 c down

193

flutter tongue

sf *più piano* *crescendo*

sfz *flutter tongue* *sf* *più piano* *crescendo*

sfz *flutter tongue* *sf* *più piano* *crescendo*

sf *più piano* *crescendo*

al pont. *ord.* *al pont.* *ord.* *al pont.*

molto sonore *più piano* *crescendo*

I 81 c up

marcato *piano* *crescendo*

198

flutter tongue *forte*

sfz *flutter tongue* *forte*

sfz *flutter tongue* *forte*

al pont. *ord.* *al pont.* *7/1 below trb.* *11/2 below trb.* *al pont.* *ord.*

molto sonore *forte*

I 81 c down

forte

ca. 72 *a tempo* ...

... *e poco a poco ritardando* ... *fino al tempo* ca. 63

19:24
(404 c)

203

meno forte *e poco a poco diminuendo*

meno forte *e poco a poco diminuendo* *sf* *sf*

meno forte *e poco a poco diminuendo*

O T O T O T T O T o T

meno forte *e poco a poco diminuendo*

arco *pizz.* *(lu.)*

meno forte *e poco a poco diminuendo*

II 182 c up II 94 c down

meno forte *e poco a poco diminuendo*

209

espr. *espr.* *sf* *espr.* *sf* *espr.*

II 89 c down

215

-2 +18 +14 +12 +16 -4 -16 -14 +2 +51 +14 +16 +31

sf

T *O* *T* *O* *T* *O* *T* *O*

al pont. *ord.*

2- °1- 2- °1- -2 °1- 2 1 2 °1- 2 ↓ °4 °1 ↓ °4 °1 ↓ °4 °2 2 °4

III 217 c up +10 III 112 c down -2 I 81 c up +27

... ♩ ca. 63 ... e poco ritenuto

19 : 21 (173 c)

221

-2 +33 -4 +4 -29 -4 -20 -18 -6 +3

espr. *piano*

espr. *sf* *piano* *sf*

sf *espr.* *piano* *piano*

O *T* *T* *O* *O* *T* *O* *T*

piano

al pont. *ord.*

2 ↑ °1 °4 2 °4 2 ↑ °1 1 °1- °4 °1 °1- 4

II 89 c up +1 II 94 c up -6 *piano*

227

quasi forte *e poco a poco diminuendo*

quasi forte *e poco a poco diminuendo* *sf*

quasi forte *e poco a poco diminuendo* *sf*

quasi forte *e poco a poco diminuendo*

quasi forte *e poco a poco diminuendo*

III 105 c down II 182 c down II 182 c up

quasi forte *e poco a poco diminuendo*

233

sf *sf* *sf*

al pont. *ord.*

II 182 c down II 89 c up

239

II 89 c down

II 89 c up

... ♩ ca. 54 *tempo primo, e molto ritenuto*

245

molto piano

pianissimo

molto piano

pianissimo

molto piano

pianissimo

molto piano

pianissimo

al pont.

ord.

molto piano

II 89 c down

I 81 c down

molto piano

pianissimo

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

op. 65

2019

*for Michael Matsuno, Matt Kline
and their friends at UCSD*

- DOUBLE BASS -

PLAINSOUND MUSIC EDITION

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PROGRAM NOTE

Wolfgang von Schweinitz

Plainsound Fanfare “Notre Dame”

Concertino in 19-limit Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quartertone scordatura)
op. 65 (2019)

The Plainsound Fanfare “Notre Dame” was composed during the summer weeks of 2019 for flutist Michael Matsuno, bassist Matt Kline and their friends at the University of California in San Diego. On April 15 of that year, the roof of the cathedral Notre-Dame de Paris had caught fire and burned down, and the cathedral, which has been one of the cradles of polyphony in European music, was severely damaged as a result of this incident. So the medieval composers Léonin and Pérotin who filled that grand acoustic space with their Gothic Organum music came to my mind while I was working on the parts for the trumpets and the alto trombone, which are alluding to this oldest form of polyphony with their many parallel fourths and fifths.

Here are some technical remarks with regard to the harmonic language of the piece, which is derived from and based on the harmonically related pitches that can be played on the trumpets without the need to alter the intonation of any note by liping it up or down:

The alto trombone must be equipped with a trill valve, the slide of which is tuned as a non-tempered diatonic semitone (with a frequency ratio $16/15$, or 112 cents) in the first position. The semitone trills generated with the trill valve are gradually getting a bit smaller as the trombone slide is extended step by step, until they reach the size of an 11-limit semitone $22/21$ or 81 cents. This phenomenon provides the conceptual basis for the pitch repertoire or tone system of the entire microtonal composition. The three valve slides of the trumpets are tuned to precisely match this u-tonal harmonic series of chromatic pitches (with wave length ratios $15:16:17:18:19:20:21:22$), and the notes of the timpani part are also tuned to this microtonal chromatic scale of pitches, all of which serve as temporary tonic notes or tonal centers throughout the piece. On the double bass, these pitches can all be tuned by ear below some natural harmonic played on the G string or D string. The A string and the E string are lowered by an 11-limit quartertone ($33/32$ or 53 cents) to support or harmonize the pitches played on the trombone with its longest possible tube length (which yields a series of harmonics based on A-quarter-flat).

The flutist joins in by performing a continuous melodic sequence of more or less challenging tuning tasks, and many pitches of the flute part must be produced with special microtonal fingerings in order to be in tune with the harmonies played by the brass and the bass. This ensemble intonation study is also a concerto for the flute. (WvS)

BIO

Wolfgang von Schweinitz was born in Hamburg, Germany in 1953. He studied in 1968-76 with Esther Ballou, Ernst Gernot Klusmann, György Ligeti, and John Chowning and is currently living in Southern California, thirty miles north of CalArts (California Institute of the Arts), where he was invited to assume the succession of James Tenney in 2007. Since 1997 his compositions are concerned with developing new microtonal tuning and ensemble playing techniques based on non-tempered just intonation.

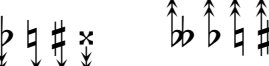
Website: www.plainsound.org

ACCIDENTALS

for microtonal just intonation

EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

The exact intonation of each pitch is written out by means of the following harmonically defined accidentals:

	<i>Pythagorean series of perfect fifths, based on the open strings (... c g d a e ...)</i>
	<i>lowers / raises the pitch by a syntonic comma: 81 : 80 = circa 21.5 cents</i>
	<i>lowers / raises the pitch by two syntonic commas: circa 43 cents</i>
	<i>lowers / raises the pitch by a septimal or 7-limit comma: 64 : 63 = circa 27.3 cents</i>
	<i>lowers / raises the pitch by two septimal commas: circa 54.5 cents (not used in this piece)</i>
	<i>raises / lowers the pitch by an 11-limit quarter-tone: 33 : 32 = circa 53.3 cents</i>
	<i>lowers / raises the pitch to diminish the Pythagorean major sixth 27:16 by a 13-limit third-tone to represent the 13:8 median sixth: 27 : 26 = circa 65.3 cents (not used in this piece)</i>
	<i>lowers / raises the pitch to diminish the 16:15 diatonic semitone by a 17-limit schisma to represent the 17:16 semitone: 256 : 255 = circa 6.8 cents</i>
	<i>raises / lowers the pitch to augment the 32:27 Pythagorean minor third by a 19-limit schisma to represent the 19:16 small minor third: 513 : 512 = circa 3.4 cents</i>
	<i>raises / lowers the pitch to augment the Pythagorean tritone 729:512 by the 23-limit comma to represent the 23:16 augmented tritone: 736 : 729 = circa 16.5 cents (not used in this piece)</i>

These 'Helmholtz-Ellis' accidentals for just intonation were designed in collaboration with Marc Sabat.

The attached arrows for pitch alterations by a syntonic comma are transcriptions of the notation used by Hermann von Helmholtz in his book "Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik" (1863). – The annotated English translation "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (published 1875/1885) was made by Alexander J. Ellis, who refined the definition of pitch within the 12-tone system of Equal Temperament by introducing a division of the octave into 1200 cents. – The accidental sign denoting an alteration by a septimal comma was devised by Guiseppe Tartini (1692-1770), the composer, violinist and researcher who investigated the difference tones created by double-stops.

Pitch-bend information:

In addition to the harmonic definition of a pitch by means of its accidentals, it is also possible to specify its absolute pitch-height as a cents-deviation from the respectively indicated chromatic pitch in the standard 12-tone System of Equal Temperament. – Such additional pitch-bend numbers are only included in the parts for the flute and timpani to facilitate solo rehearsals with the aid of a tuning device. In the ensemble rehearsals, every pitch may be tuned by ear.

TRUMPETS and ALTO TROMBONE

Trumpet in B-flat

Alto Trombone with trill valve

*Table notated at
sounding pitch*

The musical score is for Euphonium and is written in 2/4 time with a key signature of one flat (B-flat). It consists of two systems, each with two staves. The first system is labeled "Position VI with Trill valve = Position VII" and the second system is labeled "Position VII with Trill valve". The notation includes various musical symbols such as treble and bass clefs, a key signature of one flat, a 2/4 time signature, and various note values (quarter, eighth, and sixteenth notes) and rests. The score is divided into two measures by a double bar line. The first measure of the first system contains a sequence of notes and rests, while the second measure of the first system contains a sequence of notes and rests. The second system follows a similar pattern, with notes and rests in both measures. The score is written in a standard musical notation style, with notes and rests placed on the staves. The key signature is indicated by a flat symbol (b) on the B line of the treble clef. The time signature is indicated by a "2" over a "4". The first system is labeled "Position VI with Trill valve = Position VII" and the second system is labeled "Position VII with Trill valve".

4 TIMPANI and small TOMTOM

DOUBLE BASS Scordatura

The pedal positions for these pitches should be marked on timpani I, II, and III.

Double Bass Scordatura

The A string and the E string are lowered by an 11-limit quarter-tone (frequency ratio $33/32$ or 53 cents). The 3rd string may be tuned by ear as a consonant $11/2$ below the double-octave harmonic of the D string by listening to and eliminating the beatings at D-5, and the 4th string may also be tuned by ear as an $11/1$ consonance below the tuning reference pitch $A = 440$ Hz.

FLUTE

Fingering Suggestions

Pitches that are not used in the flute part are notated with a small diamond note head.

[illegible]

C $\sharp$ G $\sharp$ D $\sharp$

The musical notation shows a treble clef with a key signature of one sharp (F#). The notes are C# (first space), G# (second space), and D# (third space). The notes are beamed together. Below the staff, there are numbers: -6, -14, -2, -20, +2, -8, -16, -4, -22, 0, -18, +4, -6, -14. Above the staff, there are symbols: three black dots, a slash, three black dots, an open circle, and C $\sharp$; three black dots, a slash, three open circles, and D $\sharp$; three black dots, an open circle, a slash, three open circles, and D $\sharp$; three open circles, a slash, three open circles, and D $\sharp$ with a downward arrow; three open circles, a slash, three open circles, and (D $\sharp$).

[illegible]

C $\sharp$

●●●/●○○C $\sharp$ ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●●●/●○○

-7 -3 -21 -9 -5 -23 -1 -19 -7 -3 -21 -9

(G $\sharp$) ●○○/○○●D $\sharp$ ●○○/●○○D $\sharp$ ●○○/●○○(C $\natural$) ●●●/○○●(C $\sharp$) ●○○/○○○(D $\sharp$) ○●●/○●●D $\sharp$

-5 -23 -1 -19 -7 -3 -21 -36 -9 -5

B $\flat$

●●●/●●●D $\sharp$ C $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ○●●/●●●D $\sharp$ ↓

+1 +4 -13 -1 +2 -15 +6 -11 +1 +4 -13 -1

G $\sharp$ ●●●/●○○D $\sharp$ ●○○/●●●D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●●●D $\sharp$ ↓ ●●●/●○○D $\sharp$

+2 -15 +6 -31 -11 +1 +4 -13 -29 -1 +2

A $\sharp$

●●●/●○○D $\sharp$ ↑ ●●●/○○○D $\sharp$ ↑ G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↑ ○●●/●●●C $\sharp$ ○●●/●●●↑ ●●●/●○○B $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$

+29 +12 +33 +16 +27 +31 +14 +25 +29 +12 +33

G $\sharp$ ●●●/○○○D $\sharp$ ↑ ●○○/○○○D $\sharp$ G $\sharp$ ●●●/●○○D $\sharp$ ○●●/○○○D $\sharp$ G $\sharp$ ●○○/○○○D $\sharp$ ●○○/●○○C $\natural$ ●○○/○○○C $\sharp$ ●○○/○○○ G $\sharp$ ○●●/●○○D $\sharp$ ○○○/●○○D $\sharp$

+16 +27 +31 +14 +25 +29 +12 +33 +16 +27

A $\flat$

●●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ ●●●/○○○B $\sharp$ G $\sharp$ ●●●/●●● G $\sharp$ ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○○○/○○○ ○●●/●●●C $\sharp$ ○●●/●●●D $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●●●/○○○D $\sharp$ G $\sharp$ ●○○/○○○C $\sharp$ G $\sharp$ ●●●/●○○(D $\sharp$)

-51 -69 -47 -65 -53 -49 -67 -55 -51 -69 -47 -65

G $\sharp$ ●●●/○○○D $\sharp$ ●●●/●●●D $\sharp$ ○○○/○○○D $\sharp$ ↓ ○●●/○○○D $\sharp$ ○●●/○○○C $\sharp$ ●●●/●○○ ●○○/○○○D $\sharp$ ○○○/○○○D $\sharp$ ●○○/○○○C $\sharp$ G $\sharp$ ●●●/○○○ G $\sharp$ ●○○/○○○ ○○○/●○○○D $\sharp$ *

-53 -49 -67 -82 -55 -51 -69 -47 -84 -65 -53 -49

Plainsound Fanfare "Notre Dame"

Concertino in Just Intonation

for flute, 2 trumpets (in E-flat and B-flat), alto trombone (with trill valve),
4 timpani, small tomtom, and double bass (with quarter-tone scordatura)

Wolfgang von Schweinitz
op. 65 (2019)

ca. 54 *Lento con tempo rubato, piano maestoso, e sempre non vibrato*

Flute

Trumpet 1 in E $\flat$

Trumpet 2 in B $\flat$

Alto Trombone

Small Tomtom and 4 Timpani

Double Bass

0 0 $\flat$ 1- 0 $\flat$ 4 1 0 $\flat$ 1- 4 0 $\flat$ 4 1 0 $\flat$ 1 1 0 $\flat$ 1 1 0 $\flat$ 1 0 $\flat$ 4 1 0 $\flat$ 1- 4 0 $\flat$ 1-

piano

loco arco

pizz. (lv.)

Tomtom IV (lv.) II

più vicino al pont.

Microtonal fingering suggestions for all the notes in the flute part are listed in the preface. All notes in the trumpet parts may be played by simply trying to center the pitch, never liping any note up or down. All the equidistant trombone slide positions may be found with the help of the trill valve slide, which is precisely tuned as a diatonic semitone (16 : 15 or 112 cents) in the 1st position. The entire trombone part may be played with perfect intonation even in solo rehearsals. The kettledrums should always be struck at the sweet spot, producing a harmonious, classical sound; and the pitch positions should be marked on the pedals of timpani I, II, and III. The double bass part may be played a little bit closer to the bridge than 'ordinario', to get a bright and nasal sound; the contact position of the bow is always defined by the various natural harmonics. Whenever one of the high harmonics is asking for some extra time to speak, the bass player may slow down the tempo as needed, conducting the ensemble. The distance between the 1st and the 4th finger is equal to 1/12 of the overall string length and precisely the same in every position, while the 2nd finger is always placed exactly in the middle between the 1st and the 4th finger. Performance duration : circa 13 minutes

7

5 : 6 (318 c) 15 : 16 (112 c) 16 : 15 (112 c)

più sonore

ord. al pont. ... ord.

più sonore

0 $\flat$ 4 -0 $\flat$ 1 4 0 $\flat$ 4 -0 $\flat$ 1 0 $\flat$ 2 0 $\flat$ 1- 2- 0 $\flat$ 1- 0 $\flat$ 4 -0 $\flat$ 1 0 $\flat$ 2 2- 0 $\flat$ 1

13

più sonore

The eight recurring pedal positions should be marked on Timpani I, II, & III

Notes with accents are just a little bit louder than the others.

**) The first stroke on a retuned drum is always on a soft beat, to check the tuning.*

*(più piano)**

182 c down

III

II

II

O

T

O

O

T

O

T

O

-4

+12

-6

+10

-4

-2

+14

+12

+14

+2

-2

1

↓ °4

°1

1

↓ °4

°1-

4

°4

1-

°4

°1

1

°4

19

10 : 9 (182 c)

21 : 20 (85 c)

al pont.

... ord.

Ot O

T

O

T

O

O

T

O

-2

-4

+14

+2

-2

+16

+12

+12

+14

+29

+14

-2

-4

+12

(+12)

+27

°1-

4

4

°4

1

°1

↓ °4

°1

°4

°2

2

°2

2

°4

2

°2

25

7 : 6 (267 c)

poco ritenuto

flutter tongue

sfz e molto sonore

marcato

marcato

marcato

al pont.

... ord.

I

81 c down

-53

2

°4

°1-

°2-

1-

0

1-

°4

1-

°2-

↑ °4

°1

marcato

[illegible]

[illegible]

poco ritenuto

49 20 : 21
(85 c)

+33 +31 +16 +14 +10 +12 +2 -14 +4

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

più sonore *molto sonore*

III 112 c down

al pont. *... ord.* *ord.*

2 ↑ °1 °2 2 °1- 2 °4 -°4- °1 1 °1 1 °1 °1 1 °1

molto sonore

60

19 : 16
(298 c)

più sonore

più sonore

più sonore

più sonore

O t O t O

III 105 c down

II 182 c up

II 94 c down

17/6

19/8

19/3

°4 2 °1- 2 °1- 1 °4 1 °1- 1 ↓ °4 °1- °4 2 °1- 2 °4

65

+4 +16 +14 +12 -4 -17 -2 3 +29 +14 3 +16 +14

... + ...

... + ...

... + ...

T O T O T O T O

(178 c)

II 89 c down

+12 (+27)

I

al pont. ... ord. al pont.

2 -°4 °1 °4 1 °1 1 °4 1 ↓°4 °2 2 °4 2 °2 2 °4 °4 1 °2-

poco ritenuto

70

-2 espr. -53 -4 più sonore -16 3 -33 +2 +47 marc.

più sonore marc.

più sonore marc.

più sonore marc.

I 81 c down

-53 più sonore marc.

più sonore marc.

1- -°2- -1- 2 -1- °2- 0 °4 °4 4 -°2- 0 0 1-

ca. 60 *poco più mosso*

81

più sonore *piano* *espr.*

T O T O T O

piano *espr.*

I 81 c down

piano

1 *piano* *sonjore* *marco*

87

più sonore

espr.

marc.

al pont.

più sonore

93 flutter tongue

forte *piano* *espr.*

T O T T O T

piano *espr.*

piano

1 0 1 °4 °4 ↑°1 °1 °4 °1 °4 °4 °1 °4 °1 °4 1

piano

98 5

°°° + °°°

piano *più sonore* *piano*

°°° + °°°

piano *più sonore* *piano*

T T O T O T O T O

piano *più sonore* *piano*

più sonore

al pont.

1 ↓°4 4 °4 °2 2 °4 °1 °1 1 °4 °2- 1-

più sonore

103 poco accelerando

-1 °4 °4 °2- °2- 4

6 ca. 66 *ancora poco più mosso*

109

piano *poco più sonore* *poco più sonore*

piano *poco più sonore* *poco più sonore*

piano *poco più sonore* *poco più sonore*

I 81 c up II 182 c up III 217 c up

arco *al pont.* *ord.* *al pont.*

pizz. *(lv.)*

piano *poco più sonore* *poco più sonore*

115

più sonore *piano* *espr.* *marcato* *espr.*

piano *piano* *marcato* *marcato* *marcato*

più sonore *piano* *marcato* *espr.* *marcato*

più sonore *piano* *più sonore* *marcato*

ord. *marcato*

The musical score for "L'Espresso" by Luciano Berio is presented in a multi-staff format. The top staff is a vocal line with lyrics in Italian: "poco più sonore". Above the staff, there are time signatures and measures: 17:20 (281 c), 10:9 (182 c), 9:10 (182 c), and 19:15 (409 c). The second staff is a piano accompaniment, also marked "poco più sonore". The third staff is a piano accompaniment, marked "poco più sonore". The fourth staff is a piano accompaniment, marked "poco più sonore". The fifth staff is a piano accompaniment, marked "poco più sonore". The sixth staff is a piano accompaniment, marked "poco più sonore". The seventh staff is a piano accompaniment, marked "poco più sonore". The eighth staff is a piano accompaniment, marked "poco più sonore". The ninth staff is a piano accompaniment, marked "poco più sonore". The tenth staff is a piano accompaniment, marked "poco più sonore". The eleventh staff is a piano accompaniment, marked "poco più sonore". The twelfth staff is a piano accompaniment, marked "poco più sonore". The thirteenth staff is a piano accompaniment, marked "poco più sonore". The fourteenth staff is a piano accompaniment, marked "poco più sonore". The fifteenth staff is a piano accompaniment, marked "poco più sonore". The sixteenth staff is a piano accompaniment, marked "poco più sonore". The seventeenth staff is a piano accompaniment, marked "poco più sonore". The eighteenth staff is a piano accompaniment, marked "poco più sonore". The nineteenth staff is a piano accompaniment, marked "poco più sonore". The twentieth staff is a piano accompaniment, marked "poco più sonore".

poco ritenuto

[illegible]

poco ritenuto

139

-16

-2 -35

+2

-51 -84

-49

-53

crescendo

flutter tongue

mettere sordino

crescendo

flutter tongue

mettere sordino

crescendo

flutter tongue

mettere sordino

crescendo

mettere sordino

crescendo

ord.

crescendo

8 $\text{ca. 72 andante - avanti}$

145

piano *piano espr.*

pianissimo

piano

arco *al pont.*

pizz. *ord.* *al pont.*

0 0 (lv)

piano

pianissimo

piano *piano espr.*

151

sonore

con sordino (metal)

pianissimo

piano

pianissimo

piano

ord.

al pont.

ord.

1 -2- 4 1 1 4 4 4 1 -2- 0 4 1 2 4 4 4

poco ritenuto

157

piano

sonore

sonore

sonore

con sordino (metal)

piano *piano espr.*

sonore

sonore

al pont.

ord.

1- 4 -1 0 -2- 0 4 4 1 4 0

sonore

9 ca. 72 *a tempo - avanti*

163

163

piano *crescendo* *flutter tongue* 147 : 132 (186 c)

sempre con sord. *piano* *crescendo* *sfz* *flutter tongue*

sempre con sord. *piano* *crescendo* *sfz* *flutter tongue*

sempre con sord. *piano* *crescendo* *Split tone, with harmonics 3+4*

arco *pizz.* *(lv.)* *piano* *crescendo*

168

168

sf *più piano* *crescendo* *sf* *più piano* *crescendo*

sf *più piano* *crescendo* *crescendo*

sf *più piano* *crescendo* *crescendo*

marcato *più piano* *crescendo*

più piano *crescendo*

173

flutter tongue

sf *più piano* *crescendo*

flutter tongue *sfz* *sf* *più piano* *crescendo*

flutter tongue *sfz* *sf* *più piano* *crescendo*

flutter tongue *sf* *più piano* *crescendo*

II 182 c up

marcato *più piano* *crescendo*

17/4 below trb.

molto sonore *più piano* *crescendo*

poco ritenuto

178

flutter tongue *forte* *piano*

flutter tongue *sfz* *forte* *piano*

flutter tongue *sfz* *forte* *piano*

flutter tongue *sfz* *forte* *piano*

II 94 c down

marcato *forte* *piano*

9/2 below trb.

molto sonore *forte* *piano*

10 ca. 72 a tempo - avanti

183

sf *piano* *crescendo* *flutter tongue*

sf *piano* *crescendo* *sfz* *flutter tongue*

sf *piano* *crescendo* *sfz* *flutter tongue*

piano *crescendo* *19/4 below trb.*

sf *piano* *molto sonore*

188

più piano *crescendo*

sf *più piano* *crescendo*

sf *più piano* *crescendo*

più piano *crescendo*

II 89 c down

marcato *piano* *crescendo*

più piano *crescendo*

198

flute
tongue

oboe
flutter
tongue

clarinet
sfz
flutter
tongue

bassoon
sfz
flutter
tongue

piano
I 81 c down

al pont. ord.
al pont. 7/1 below trb.
ord. 11/2 below trb.
al pont. ord.

molto sonore

forte

♩ ca. 72 *a tempo* ...

... *e poco a poco ritardando* ... *fino al tempo* ♩ ca. 63

19:24
(404 c)

203

meno forte *e poco a poco diminuendo*

meno forte *e poco a poco diminuendo* *sf* *sf*

meno forte *e poco a poco diminuendo*

meno forte *e poco a poco diminuendo* T o T o T

meno forte *e poco a poco diminuendo* II 182 c up II 94 c down

arco *pizz.* (lv.)

meno forte *e poco a poco diminuendo*

209

espr.

sf *espr.* *sf* *sf*

espr. *sf* *espr.*

II 89 c down

meno forte *e poco a poco diminuendo*

215

-2 +18 +14 +12 +16 -4 -16 -14 +2 +51 +14 +16 +31

sf

T O T O T O

III 217 c up +10 III 112 c down -2 I 81 c up +27

al pont. ord.

2- °1- 2- -°1- -2 -°1- -2 1 2 °1- 2 ↓ °4 °1 ↓ °4 °1 ↓ °4 °2 2 °4

... $\text{ca. } 63$... *e poco ritenuto*

19:21 (173 c)

221

-2 +33 -4 +4 -29 -4 -20 -18 -6 +3

espr. piano

espr. sf piano sf

O T T O T O T

II 89 c up +1 II 94 c up -6

piano

al pont. ord.

2 ↑ °1 °4 2 °4 2 ↑ °1 1 °1- °4 °1 °1- 4

piano

ca. 63 ... e poco a poco ritardando ... fino al tempo ca. 54

227

quasi forte

e poco a poco diminuendo

quasi forte

e poco a poco diminuendo

quasi forte

e poco a poco diminuendo

quasi forte

e poco a poco diminuendo

III 105 c down

II 182 c down

II 182 c up

quasi forte

e poco a poco diminuendo

quasi forte

e poco a poco diminuendo

233

quasi forte

e poco a poco diminuendo

quasi forte

e poco a poco diminuendo

quasi forte

e poco a poco diminuendo

quasi forte

e poco a poco diminuendo

II 182 c down

II 89 c up

al pont.

ord.

quasi forte

e poco a poco diminuendo

239

4
-4 +14 +10 -2
-3 -29 -7 -5
+2 -29 +4

sf

sf

sf

II 89 c down
+12 (-7) +1

II 89 c up

-2 °1- 2- 0 °4 1- -°4 -1 0 ↑°4 2- °1- 2- -°1 2 °4 2 ↓°4 2- -°4

... ♩ ca. 54 *tempo primo, e molto ritenuto*

245

-2 +12 +16 -17 -51 -4 -16

molto piano *pianissimo*

sf *molto piano* *pianissimo*

sf *molto piano* *pianissimo*

molto piano *pianissimo*

II 89 c down
+12

I 81 c down
-53

molto piano *pianissimo*

al pont. *ord.*

-2 °1- 2 0 ↓°4 °2- 4 -°2 1 ↑°1- 0 °4 °1 °1- 0

molto piano