This is a sample of the score.

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Heliotrope

(for Frank O'Hara)

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Composed for Ostravská banda

Ostrava New Music Days 2007

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Chiyoko Szlavnics, Berlin, 2007

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Duration: approx. 11' 08"

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2 Flutes, Oboe, 2 Bb Clarinets, Bassoon
2 Bb Trumpets, 2 French Horns, 2 Trombones, Tuba
3 Violins, 2 Violas, 2 Violoncellos, 2 Contrabasses
2 Percussionists (Crotales, Vibraphone, Bass Drum)
Sine Tone playback (stereo)

Heliotrope (for Frank O'Hara)

Heliotrope (a plant that turns towards the sun) is a composition about positive vitalit . Frank O'Hara (1926-1966) was an American poet who wrote about life experiences with wit, intellect, and passion, and who had a profound understanding of visual art and music. His poetr has sustained me over the past ear, a ver intense ear during which, while grieving m mother's death, I have had to come to terms with the realities of mortalit , identit , ethics, current political realities, and have been challenged to maintain m generosit of spirit. This composition was made possible through the generosit of Petr Kotik and Ostrava New Music Da s 2007, and was composed for Ostravska banda.

Instrumentation:

2 Flutes
1 Oboe
2 Bb Clarinets
1 Bassoon
2 Bb Trumpets
2 Horns in F
2 Trombones
1 Tuba in F

3 Violins
2 Violas
2 Violoncellos
2 Contrabasses

2 Percussionists (Perc. 1: Bowed Crotales; Bowed Vibraphone, Perc. 2: Bowed Vibraphone; Bass Drum–rolled, with Med/Hard mallets)

Electronic Playback (Sine Tones, Frequency Range: 32.6–3978 Hz, Stereo Playback)

Duration: **approx. 11'08"**

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Notes on Electronic Playback: Concept of Sound & Speaker Placement:

Sound Concept: the sine tones complete the composition b providing an outer contour to the highest and lowest registers, as well as filling out pitches in the middle-upper register. The are not meant to be projected into the performance space as a separate element—one which contrasts with the acoustic ensemble, as is often the case with electroacoustic music—the are rather meant to be as equall present in the performance space as the acoustic instruments themselves. Fusion of sound is, in general, facilitated b the use of ratios derived from the Just Intonation tuning s stem—therefore, the sine tones should simpl add to the pitches, the fusion and/or beating audible in the overall sound.

Speaker Placement: two (or more) speakers should be positioned in the room so that the sine tones are present, but not dominant. Depending on the size and shape of the room, it is recommended that the speakers be positioned so that the are not pointing directl at the audience (or musicians), rather, that the are pointed at angles towards the side or back walls, to enable the sine tones to reflect off the surfaces in the room, and mix better with the ensemble sound in the space. It is recommended to use a subwoofer for the lower sine tones (right channel).

Playback/Tempo: Since the tempo of the ensemble ma var (the piece ma be performed slower than indicated), the electronics are best performed directl from Max/MSP,whereb each sine tone ma be triggered manuall . Where this is not possible, the sine tones ma be pla ed from CD—however, the ensemble must then be strictl conducted at 60 bpm.

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General Performance Notes

Tuning

The core of fundamentals used in this piece are the open strings of the Violoncelli, Violas, and Violins. Strings should tune to A = 0¢, and tune perfect fifths (+/-2¢) above and below, as accuratel (i.e., no beating) as possible. Electronics are based on A = 442 Hz, as is standard in Europe. For brass tuning, see note called "Brass Tuning".

Tuning Symbols

Numerous Just Intonation s mbols appear in this piece. All pitches are derived from the overtone series of fundamentals ascending in perfect fifths (F, C, G, D, A, E, B), with their octave equivalences appearing freel .

♭ ♮ ♯	Represent octaves and the 3-limit series (pure 5ths), and the 17-limit. Fundamentals in this work range from F to B (C cle of fifths: F, C, G, D, A, E, B)
𝅘𝅥𝅯♮ 𝅘𝅥𝅯♯	Represent the 5-limit series (pure major 3rds). Pitches are generall lowered b 10-20¢.
𝅘𝅥𝅯♭	Represents the 7-limit series (pure lowered 7ths). Written pitches are generall lowered b 31-37¢.
𝅘𝅥𝅯♯	Represents the 11-limit series (tritone). Written pitches are generall raised b 47-51¢.
𝅘𝅥𝅯♭ 𝅘𝅥𝅯♯	Represent the 13-limit series (pure major 6ths). Written pitches are generall lowered b 63-67¢ (or raised b 33-37¢ in Bb instruments' transposed parts).

*Accidentals courtes of Marc Sabat & Wolfgang von Schweinitz's *Extended Helmholtz-Ellis JI Pitch Notation* s stem.

Musicians can refer to the chart on the following page to understand how the pitches in their parts are related to the overtone series of the fundamentals. String pla ers can check the accurac of their pitches against an open string, in most cases. Cent indications are given for all pitches that are more than 2¢ awa from equal temperament. Musicians are encouraged to work with a tuner that shows precise cent values, to practise their pitches. A rehearsal guide will be provided to the conductor, highlighting specific simple (audible) intervallic relationships between instruments throughout the piece, to facilitate comprehension of, and rehearsal of the piece, if time allows.

Heliotrope (After Frank O'Hara)

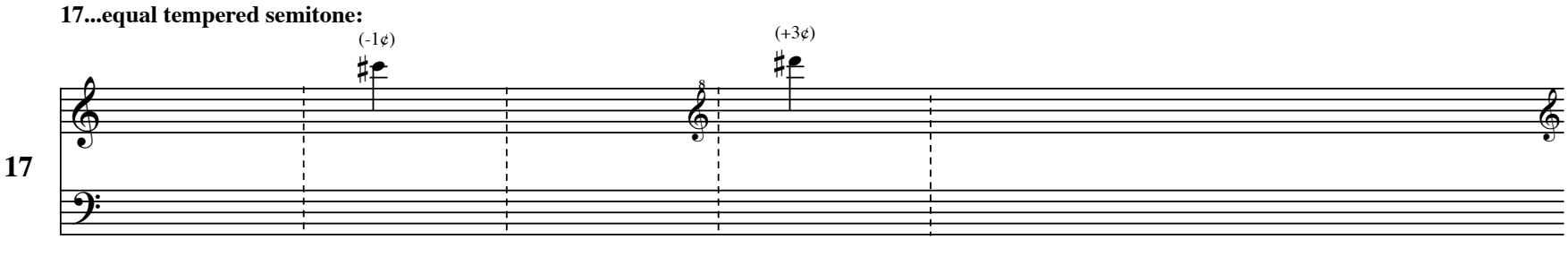
Tuning Symbols

The symbols used for accidentals represent the pitches used in this composition. The chart shows a pitch's relationship to a fundamental, within the context of an overtone series. The chart also shows how overtones are related to each other: just as the fundamentals ascend in perfect fifths, so do their respective overtones. These pitches are different octaves in this composition.

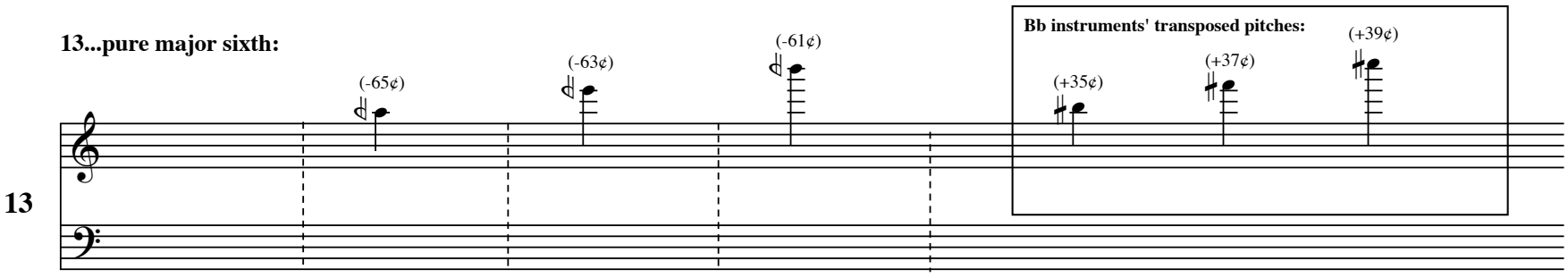
Most of these pitches are already familiar to musicians, as they represent common pure intervals used in traditional harmonic music. The less familiar intonations are the lowered seventh, and the tritone.

It is recommended to practise with a tuner, and to play the pitch against a sustaining octave equivalent of the fundamental, in order to learn to hear the intonation, find alternate fingerings (woodwinds), etc.

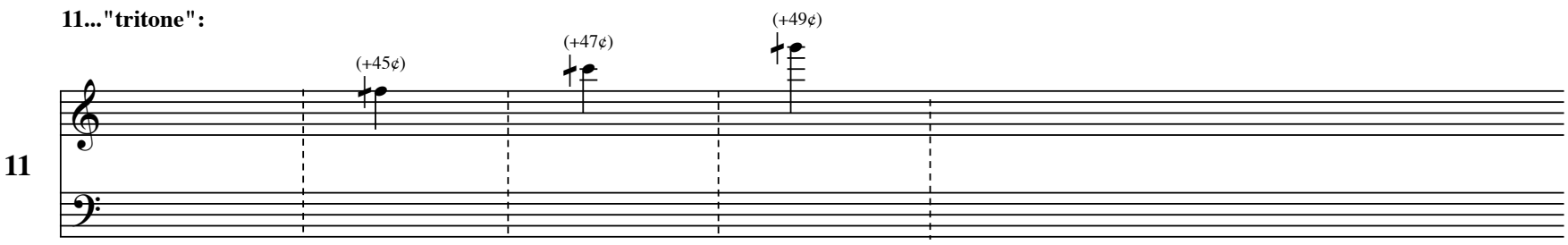
17...equal tempered semitone:



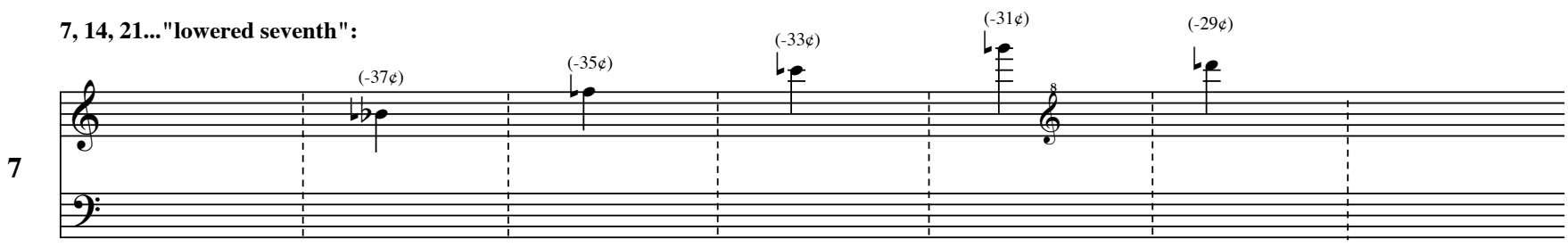
13...pure major sixth:



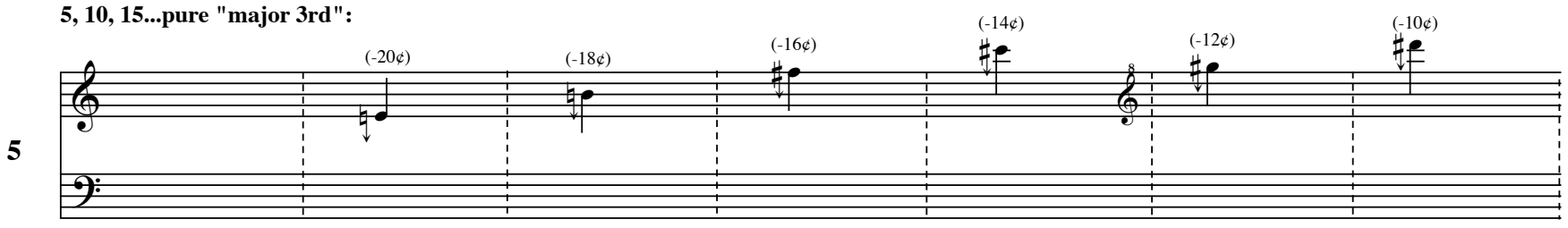
11..."tritone":



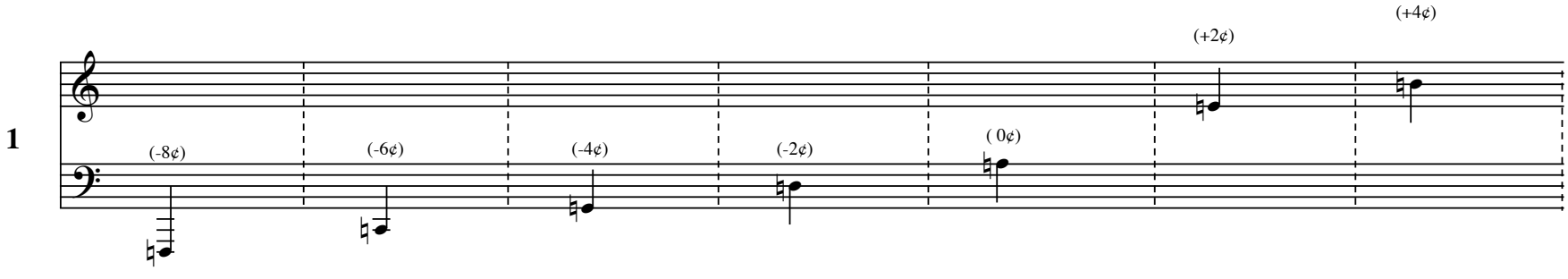
7, 14, 21..."lowered seventh":



5, 10, 15...pure "major 3rd":



1, 2, 3, 4, 6, 8, 9, 12, 16...fundamental; pure major second & ninth; pure fourths & fths, octaves:



Symbol Chart for Musicians Performing "Heliotrope (After Frank O'Hara)", by Chiyoko Szlavnics, Berlin 2007
Accidentals used are from "The Extended Helmholtz-Ellis Pitch Notation System", developed by Marc Sabat and Wolfgang von Schweinitz.

General Performance Notes (cont'd)

Vibrato

All instruments must play without vibrato. Vibrato would obscure the audibility of beating, and other audible phenomena in the piece.

Entrances & Endings

In general, entrances should be clear, but not emphasized. In many cases, I have written a short crescendo entrance, and in many cases, varying lengths of decrescendo at the end of sustains. All sustains should have a slight taper, around one beat in duration.

Expression

Musicians should avoid romantic expression in the work, and should treat crescendos and decrescendos as plain acts, much like electronic music simply fades in or fades out. Extremely high pitches on all instruments, but especially the violins, should be played as softly as possible. They should be present, but not dominate.

Bowing

There are no bowing indications in the score. Strings (and percussion) should play with full length bowing, and be sensitive to the sound they hear when changing direction. The audibility of change of bow direction is not problematic, it is part of the sound. However, it should never be emphasized. Players can try, as in a string quartet, to “breathe” their bowing, either for themselves individually (when not doubling pitches), or when doubling parts, or in relation to the sustains (phrases) that the wind instruments are playing.

Glissandi

Musicians who are playing a glissando should always be aware of their pitch within the overall context. During any glissando, musicians might hear pure, consonant intervals (fifths, thirds, octaves, unisons, etc.), dissonances, beating, and so on. It is important to listen to the context and be aware of all of these phenomena, as well as how one’s own sound fits into the overall sound.

If a string has a glissando which crosses from one string to another, the glissando should have a natural silence where the string change occurs, and should continue as if it had not stopped. The same applies to the trombone, when a glissando crosses from I to VII, or vice versa. Musicians shouldn’t pick up the pitch *exactly* where they left off, rather, continue the glissando as if it had not stopped at all.

Brass Tuning

Where possible, I have tried to incorporate the natural overtone series of the brass instruments. Fingering indications appear throughout the Horn parts, and Trumpets have one or two indications (where no indication is made, the usual fingering should be used). For this reason, it is inappropriate for the brass to tune to A—as is traditional—since A has very little to do with the brasses' fundamentals. Once the ensembles' strings have tuned, it is recommended that the Trumpets tune (written) D [1 2 0], the Horns tune (written) open G, and the Tuba tune open C in unisoni or octaves to the Violoncellos' (or Violas') open C string(s). The Trombones should either tune C5 [I] in octaves with the other brass instruments to these same strings, or tune F3 [I] in perfect fifths with Horns.

Balance

The ensemble should balance equally as much as possible. Winds will generally have to play much more quietly than usual, and strings a little bit more. Although the sound will be quite full, the aim is to create a balance which is light and transparent, so that every glissando and sustaining pitch is audible, and any beating that might be present can also be heard. Note to Conductor: when dynamics are indicated more rigorously, especially in the strings after rehearsal letter A, these figures should slightly come out of the overall sound. The general tendency will be for strings to be covered by winds and brass, and this should be rectified by ensuring that the wind instruments hold back—play pianissimo and lightly—as much as possible. The piece begins softly, has two sections of varying dynamics, and ends softly. Musicians should treat crescendos and decrescendos as plain acts, much like electronics music simply fades in or fades out, and avoid romantic expression at all times. Extremely high pitches should be played as softly as possible, and extremely low pitches should come out slightly.

Percussion Notes

Please see section on “Bowing” and “Entrances & Endings”. As indicated in your parts, all bowed pitches on crotales and vibraphone should be left to decay/ring to silence. The pitched material should generally be balanced with the wind instruments. If a crotale has trouble “speaking” at a soft dynamic, then it would be best to vary the dynamic, to bring it in and out, if a long sustain is required. If there are any difficulties with bowing these pitches, a solution might be to find a Glockenspiel that can be removed from its box, and to use it in lieu of problematic pitches.

The bass drum part often occurs with a tuba entrance. The idea of the bass drum part is to emphasize the acoustics of the performance space, by filling it with an additional resonant low frequency. The part should be performed with medium-hard mallets (or those deemed best in a given performance space), and the dynamic should be such that the figure does not dominate the overall sound, but provide a bass frequency boost. Note to the Conductor: when the bass drum figure ends, its absence should be felt in the room.

Score is written in concert pitch

Heliotrope

(for Frank O'Hara)

Chiyoko Szlavnics, Berlin 2007

♩= 60 (or slower)

Flute 1
Flute 2
Oboe
Clarinet in B♭ 1
Clarinet in B♭ 2
Bassoon
Horn in F 1
Horn in F 2
Trumpet in B♭ 1
Trumpet in B♭ 2
Trombone 1
Trombone 2
Tuba
Perc. 1: Crotales/ Vibraphone
Vibraphone
Bass Drum
Violin 1
Violin 2
Violin 3
Viola 1
Viola 2
Violoncello 1
Violoncello 2
Contrabass 1
Contrabass 2

No Vibrato Throughout

Arco III (8/D)

All sustains are bowed. All pitches are crotales, unless otherwise indicated.

All sustains are bowed.

(lv.)

ppp *p* *niente* *pp* *Arco* (-4¢) (-63¢)

7

Fl. 1

Fl. 2

Ob.

B♭ Cl. 1

(-18¢)

mp *niente*

B♭ Cl. 2

Bsn.

7

Hn. 1

> *niente*

Hn. 2

p *niente*

B♭ Tpt. 1

B♭ Tpt. 2

Tbn. 1

Tbn. 2

Tuba

7

Perc. 1: Crot./ Vibr.

Vibr.

Bass Dr.

7

Vln. 1

mp *pp*

(-35¢)

p

Vln. 2

Arco III

mp

Vln. 3

Vla. 1

Arco

(-61¢)

Vla. 2

mp

Vc. 1

Arco

(-18¢)

Vc. 2

mp

Cb. 1

8

mp

Cb. 2

8

mp

13

Fl. 1

Fl. 2

Ob.

B♭ Cl. 1

B♭ Cl. 2

Bsn.

13

Hn. 1

(-14¢)

p

Hn. 2

p

B♭ Tpt. 1

B♭ Tpt. 2

Tbn. 1

(-20¢)

(-35¢)

p

Tbn. 2

Tuba

13

Perc. 1: Crot./ Vibr.

Vibr.

Bass Dr.

13

Vln. 1

(-16¢)

(-33¢)

mp

Vln. 2

(-6¢)

Vln. 3

Arco

(+45¢)

mp

Vla. 1

(-16¢)

Vla. 2

(-37¢)

Vc. 1

Vc. 2

(-14¢)

Cb. 1

(-12¢)

(-4¢)

Cb. 2

(-12¢)

(-4¢)

19

Fl. 1

Fl. 2

Ob.

p

B♭ Cl. 1

(-37¢)

mp

B♭ Cl. 2

Bsn.

p

19

Hn. 1

Hn. 2

B♭ Tpt. 1

B♭ Tpt. 2

Tbn. 1

(+51¢)

(-29¢)

(-4¢)

p

Tbn. 2

(-6¢)

p

Tuba

19

Perc. 1: Crot./ Vibr.

Vibr.

Bass Dr.

19

Vln. 1

Vln. 2

(-18¢)

(-33¢)

mp

Vln. 3

Arco

IV

mp

Vla. 1

(-35¢)

(-16¢)

(-37¢)

Vla. 2

(-37¢)

(-61¢)

Vc. 1

(-35¢)

Vc. 2

Cb. 1

(-12¢)

Cb. 2

(-12¢)