Wolfgang von Schweinitz

Plainsound String Quartet

“HOLY HOWL”

in 19-limit Just Intonation

op. 57
2011-2012

PLAIN SOUND MUSIC EDITION
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PART 1
Cadence and Modulations
(Exposition and Development)

PART 2
Chords and Tunes
(Final Dance and Postlude)

SCORE

Besides this study score there is also a set of parts which should be used for a performance of this piece.

PLAINSOUND MUSIC EDITION

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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:

- \(\flat\) lowers / raises the pitch by a syntonic comma
- \(\#\) raises / lowers the pitch by an 13-limit tridecimal third-tone
- \(\D\) lowers / raises the pitch by an 11-limit undecimal quarter-tone
- \(\;\) lowers / raises the pitch by a 17-limit schisma
- \(\;\) raises / lowers the pitch by a 19-limit schisma
- \(\;\) raises / lowers the pitch by a 23-limit comma

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 1877/1885) 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 Giuseppe 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. – In this score, however, such additional pitch-bend numbers are only used for the notes representing the micro-chromatic scale or cantus firmus which is played on the lowest string of the viola and constitutes the backbone of the harmonic musical structure.

Frequency ratios
The score also denotes the mathematical frequency ratios of the various just intervals performed as double stops or melodic steps. The numbers of these ratios contain a lot of information which is extremely valuable for tuning the intervals by ear. The frequency ratio serves as the stenographic "code name" of the interval, specifying not only its size, but also the partial unisons and difference tones relevant for its timbre, as well as the fundamental pitch or root of the interval (its periodicity pitch) and the relative degree of consonance or harmonic complexity of the tone relationship.

PERFORMANCE DURATION circa 30 minutes

This piece was commissioned by the Lucerne Festival and premiered at this festival on August 24, 2013 by the J.A.C.K Quartet.
Wolfgang von Schweinitz (*1953)

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in 19-limit Just Intonation, op. 57 (2011-12)

**PART 1:** Cadence and Modulations (Exposition and Development)  
**PART 2:** Chords and Tunes (Final Dance and Postlude)

Over the past twenty years, I have been fascinated by the mesmerizing sensations that can be established by making use of the ancient musical performance practice of microtonal Just Intonation—as opposed to Equal or unequal Temperament, which has been the prevailing performance practice in Western music throughout the past 500 years. I have dedicated my music entirely to exploring and featuring some of the many new sounds that can be found in what James Tenney has called *harmonic space,* a concept he devised as a model of our ear’s astounding psychoacoustic capability of harmonic perception.

This experiment requires the development and systematic rehearsal of appropriate new instrumental tuning and ensemble playing techniques. At the same time, it requires the conception of compositional methods to organize the specific sonorities, the various non-tempered intervals between all the carefully tuned pitches. A functional microtonal counterpoint is needed—and a whole new harmonic language with cadences and microtonal modulations—to create musical contexts which ensure that all pitches may be tuned and performed with a sufficient degree of precision, so that the characteristic timbre of just intonation can in fact be generated and perceived.

While composing this string quartet, I was concerned with facing the intrinsic paradox of just intonation counterpoint: How can several simultaneous melodies be perceived at once, when all their successive pitches are absorbed by a strikingly strong harmonic gravitation, getting fused into the momentary overall sounds, simply and exactly because of their well-focused non-tempered intonation? But even if the tunes are not completely audible, I believe their melodic energy cannot possibly get lost. Whenever they can actually be sung and performed with a caressing phrasing and articulation, they must contribute their gestures to the musical flow of the sound progressions.

The counterpoint of this composition is based on a micro-chromatic scale played by the viola in the lowest register on the C string. Each note of this “cantus firmus” is also sounded as a double stop with the adjacent open G string. Even though these dyads are always harmonized in the most consonant possible way by the pitches of the other three instruments, some of these chords constitute the most somber and dissonant timbres of the piece. This sequence of precisely tuned “howls” is stretched out across the entire performance duration and has suggested the title of the piece, which is inspired by Allen Ginsberg’s enthusiastic *Footnote to Howl,* written in Berkeley in 1955. (WvS)
Plainsound String Quartet "Holy Howl"

in 19-limit Just Intonation

PART 1 : Cadence and Modulations (Exposition and Development)

Wolfgang von Schweinitz
op. 57 (2011 - 2012)

![Musical score]

*) The open strings are tuned in non-tempered perfect fifths. **) i.e. no frequency vibrato, please! But the occasional use of amplitude vibrato (once the intonation has been established) is recommended — periodic or aperiodic changes of bow pressure, bowing speed, or bow position (distance from the bridge and angle of the bow, controlling the amount of hair on the strings).

1. a tempo

Make each fermata as long as needed, but keep it as short as possible (any other sound may be prolonged ad lib. as well). The precisely tuned partial-antisons and combination tones serve to establish the specific timbre of the various intervals. Some of these deserving particular attention are spelled out in this score.

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avanti (a ca. 106)

avanti (a ca. 108)

ritenuto
PART 2: Chords and Tunes (Final Dance and Postlude)

\( \approx \frac{54}{4} \) Lento con rubato, sempre non vibrato, * ... e poco a poco più mosso, accelerando sin' al fine: \( \Rightarrow \ \approx \frac{72}{4} \)

Use open strings whenever possible!

* (i.e. no frequency vibrato, please!) But the occasional use of amplitude vibrato (once the intonation has been established) is very welcome and strongly encouraged.

NB: Throughout this movement, the string quartet should sound somewhat like a consort of viols.

** These precise tempo markings may help to facilitate the rehearsal of a gradual intensification of gesture and movement; in concert, everything can be played a little bit faster (beginning at 55 bpm, instead of 54).

\( \approx \frac{54}{4} \) avanti (\( \approx \frac{54}{4} \)) **
ritenuto

ritardando

change position

vicino al tasto

a tempo

21

avanti (≈ 67.8)

canzare!

sempre vicino al sord.

Postlude

SLIDE 2 PAGES

SLIDE PAGE

please leave 2nd finger on C string

please leave 2nd finger on C string and put 1st finger on G string from the side

WHEN PAGE IS COMPLETE

SLIDE PAGE

SLIDE PAGE

please leave 1st finger on G string

please leave 1st finger on G string

SLIDE NEXT PAGE

please leave 1st finger on G string