

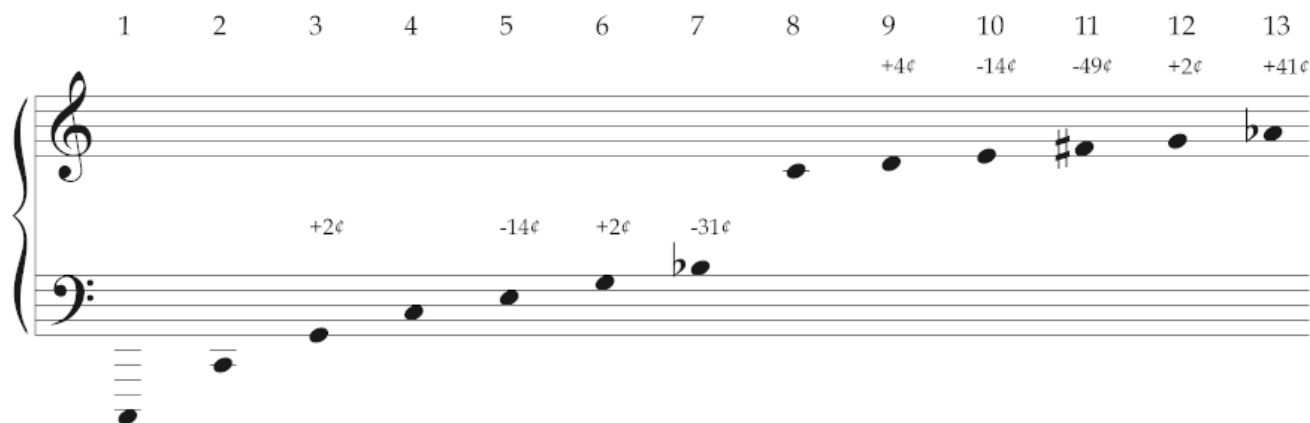


MTO 28.2 Examples: Stephenson, The Poetics and Politics of Ambiguity

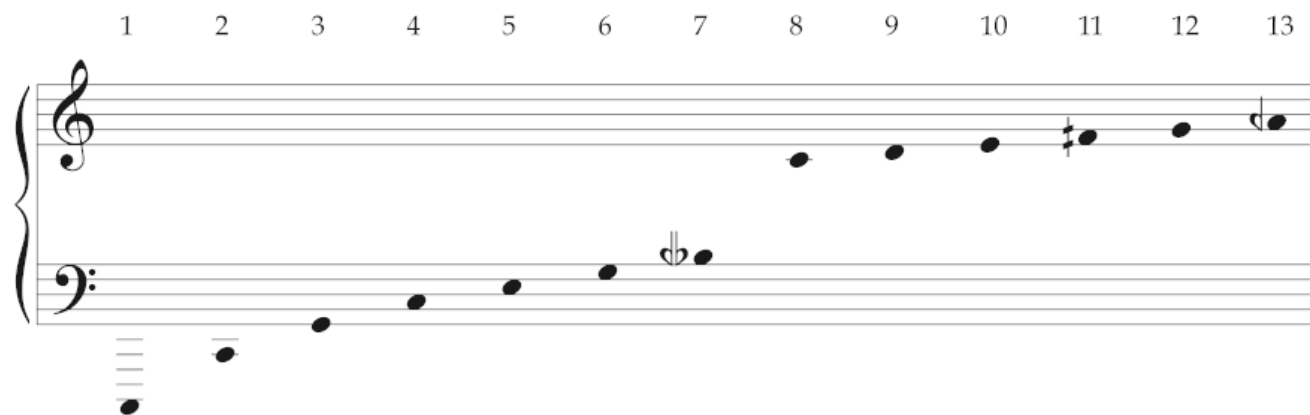
(Note: audio, video, and other interactive examples are only available online)

<https://www.mtosmt.org/issues/mto.22.28.2/mto.22.28.2.stephenson.html>

Example 1. The first thirteen partials of a C1 fundamental rounded to the nearest cent



Example 2. The first thirteen partials of a C1 fundamental rounded to the nearest equal-tempered quartertone



Example 3. Anderson, *Eden*, mm. 1–20

Tempo giusto, come una musica virginale $\text{♩} = 66$
 senza vibrato e pochissimo sul pont. sempre

1
 Solo viola
p innocente
 senza vibrato e pochissimo sul pont. sempre
 Solo cello
pp

6
 Vla.
pp
 Vc.
p innocente *mf*

11
 Vla.
pp *mf* sim.
 Vc.
pp

16
 Vla.
p *mp* sim.
 Vc.
mp sim.
 partials of C: 11 12 9 8 7 6 8 7 6 12 11

Example 4. Reduction and analysis of Anderson, *Eden*, mm. 40–48.1

40 X [C, D, E, G] clarinet, keyboard
bassoons, horns, harp
partials of C: 6 7
bassoons, horns, harp

44 X [C, D, E, G] clarinets, harp, keyboard
clarinet
flute, harp
flute, vibraphone
bassoons, horns, harp
horn, harp

47 48

Example 5. Reduction and analysis of Anderson, *Eden*, mm. 48.2–58.1

48 T7X [G, A, B, D]
flutes, oboes, clarinets, vibraphone, harp, keyboard, high strings
bassoons, horns, harp, low strings

49 partials of C: 9 10 11

52 T7X [G, A, B, D]
not in T7X
(from T7X)

56 T7X [G, A, B, D]

Example 6. Mode for Anderson, *Eden*, mm. 1–20 and mm. 40–58.1

white-note collection
X

C harmonic series
6 7 8 9 10 11 12

T_7X

resulting hybrid mode

Detailed description: This musical notation illustrates the construction of a hybrid mode. The top staff shows a 'white-note collection' (C major scale) with a bracket labeled 'X' spanning the first six notes (C to F). Below it, the same notes are shown with a bracket labeled T_7X spanning the last six notes (F to C). The bottom staff shows the 'resulting hybrid mode', which is a C major scale with the seventh degree (B) replaced by a B-flat, derived from the 7th degree of the C harmonic series.

Example 7. Reduction and analysis of Anderson, *Eden*, mm. 58.2–64

T_4X {E, F $\sharp$, G $\sharp$, B}

58

12 13 14

12 10 11

10 8 7 8 9

11 12

not in T_4X

7 8

62

10 11 12 13

7 8 9

14

wash of partials (individual instruments with various rhythms/permutations)

10

$\sharp$ added to set

Detailed description: This musical notation shows the reduction and analysis of mm. 58.2–64. The top staff (starting at measure 58) shows a T_4X set {E, F $\sharp$, G $\sharp$, B} and various pitch classes (12, 13, 14, 12, 10, 11, 10, 8, 7, 8, 9) with some notes marked as 'not in T_4X '. The bottom staff (starting at measure 62) shows a 'wash of partials' with pitch classes 10, 11, 12, 13, 14, 8, 9, and a note marked as ' $\sharp$ added to set'.

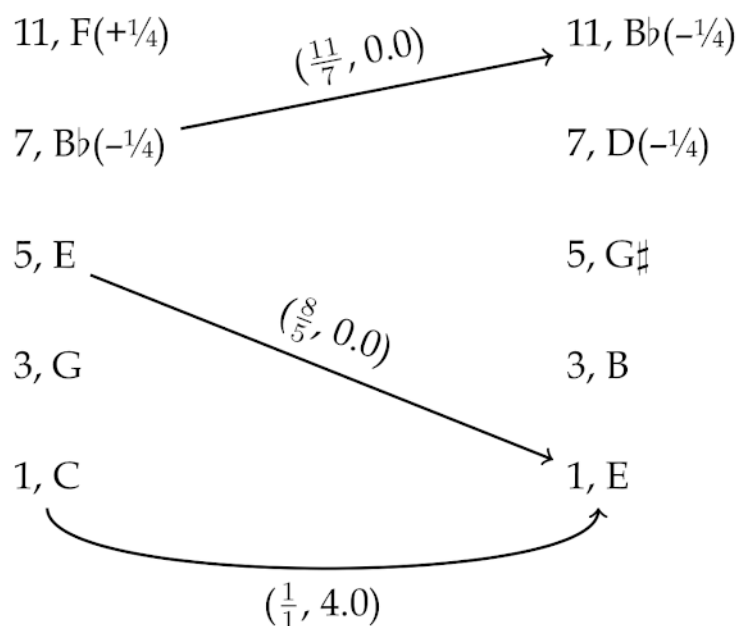
Example 8. Mode for Anderson, *Eden*, mm. 58.2–64

E harmonic series
7 8 9 10 11 12 13

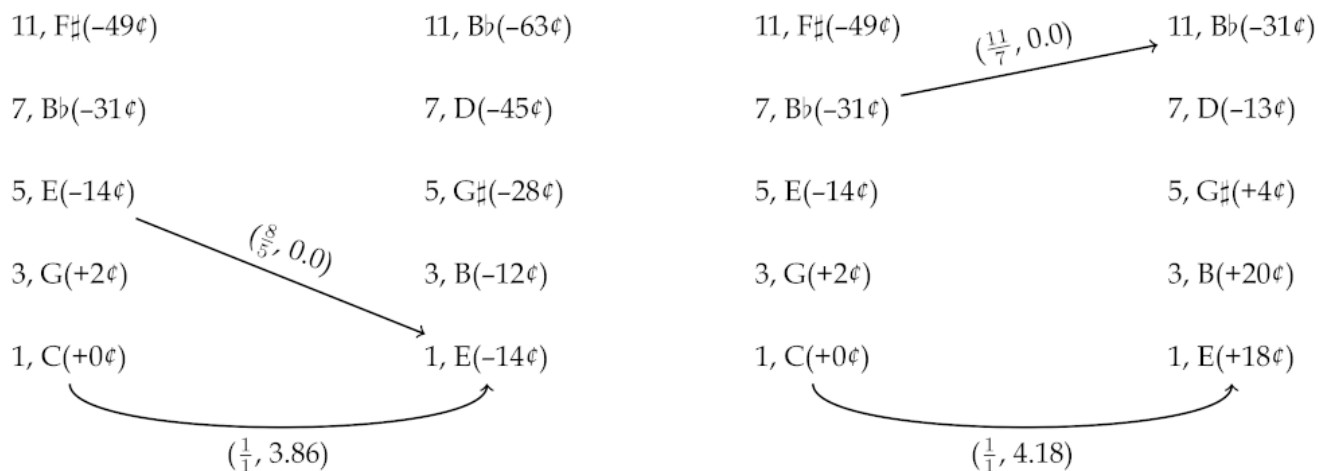
T_4X

Detailed description: This musical notation shows the E harmonic series (7, 8, 9, 10, 11, 12, 13) and a T_4X set spanning the last four notes (10, 11, 12, 13).

Example 9. Analysis of the modulation between collections in Anderson, *Eden*, mm. 40–64, showing overtone-class interval and pitch-class interval transformations obtaining between the collections' common tones (straight arrows) and fundamentals (curved arrow)



Example 10. Two possibilities for realizing the modulation shown in Example 9 in just intonation



Example 11. Reduction and analysis of Anderson, *Eden*, mm. 80–106

$\text{♩} = 132$ winds, harp, keyboard, violins
D: 6, 7, 8, 9, 10

80 horns G: 8 9 G: 7 6 solo viola (senza vib., poco sul pont.) G: 8 10 9
mf semplice

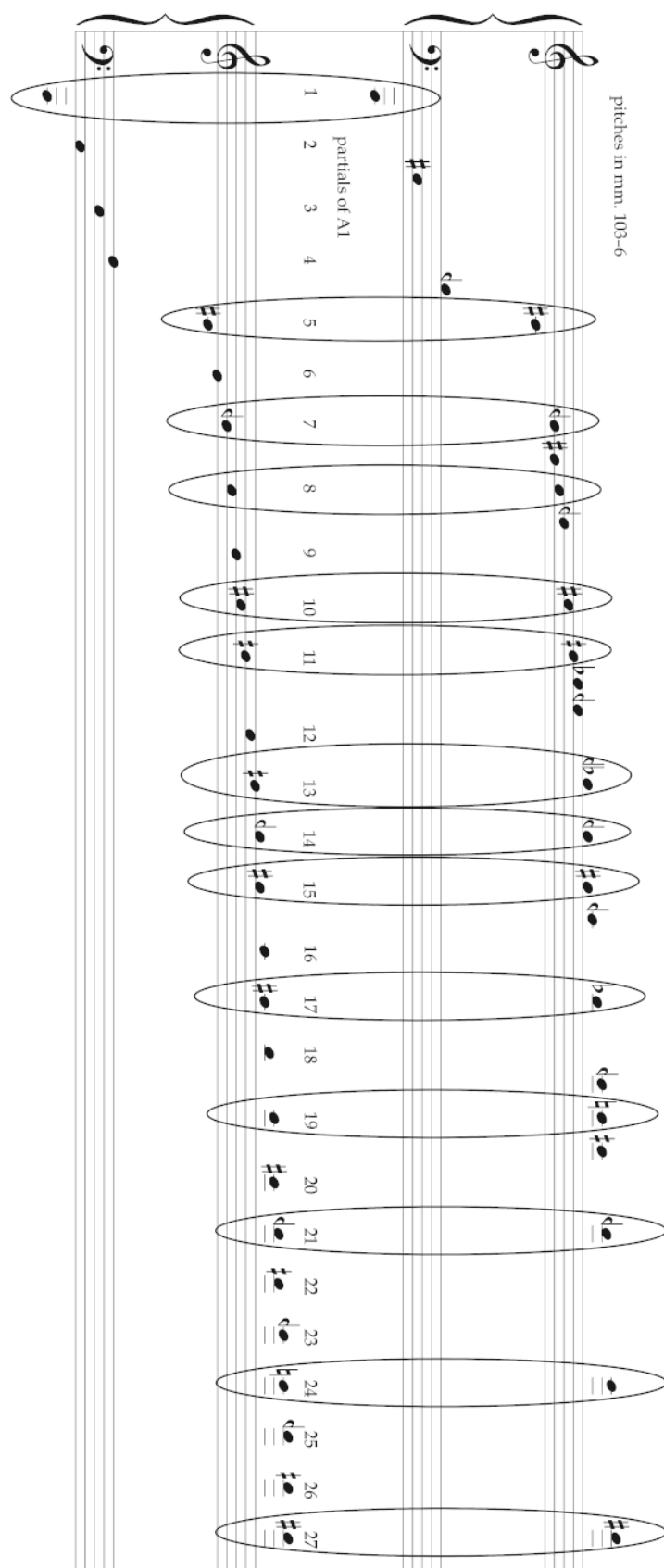
87 (winds, harp, keyboard, violins) winds, vibraphone, keyboard (D): 9, 10, 11, 12, 13 horns, trumpet G: 7, 8, 9, 10, 11 (solo viola) (G:) 7 8 7 9 8 10 9 7 9 7 6 7 6 7 6
mf semplice

92 winds, harp, keyboard, violins (octave transposition of 7, 9, 10) C: 11, 12, 14, 18, 20, 28 winds, vibraphone, keyboard A: 6, 7, 8, 9, 10 (horns, trumpet) (solo viola) D: 7 8 C: 9 11 12 11 12 A: 11 9 12 solo cello (senza vib., poco sul pont.) C: 7 *p*
mf semplice

98 (winds, vibraphone, keyboard) winds, trumpet, harp, keyboard C: 7, 9, 11, 12 6, 7, 9, 11, 12 (solo cello) (C:) 6 8 9 7 6 *p* *mf*

102 clarinets, vibraphone, keyboard partials of various fundamentals from this section (C, A, A, C, C, D) winds, vibraphone, keyboard, violins winds, trumpet, harp, keyboard, violins, violas solo viola (senza vib., poco sul pont.) A: 10 11 *pp* *mf* (solo cello) (C:) 8 7 11 8 7 harp, cellos, basses A: 2, 5 *p* *mf* *mp* *p* *mf*

Example 12. Pitch content of Anderson, *Eden*, mm. 103–6, compared with quartertone-approximated partials of A1



Example 13. Reduction and analysis of Anderson, *Eden*, mm. 174–82

174

horn, violins

violin

horn, violins

violin

clarinet, brass, strings
(individual instruments have different onsets)

flutes, vibraphone, keyboard
C: 9, 11, 14 (octave transposition of 7)

winds, perc.,
harp

178

rall. al fine

violin

clarinet A: 7

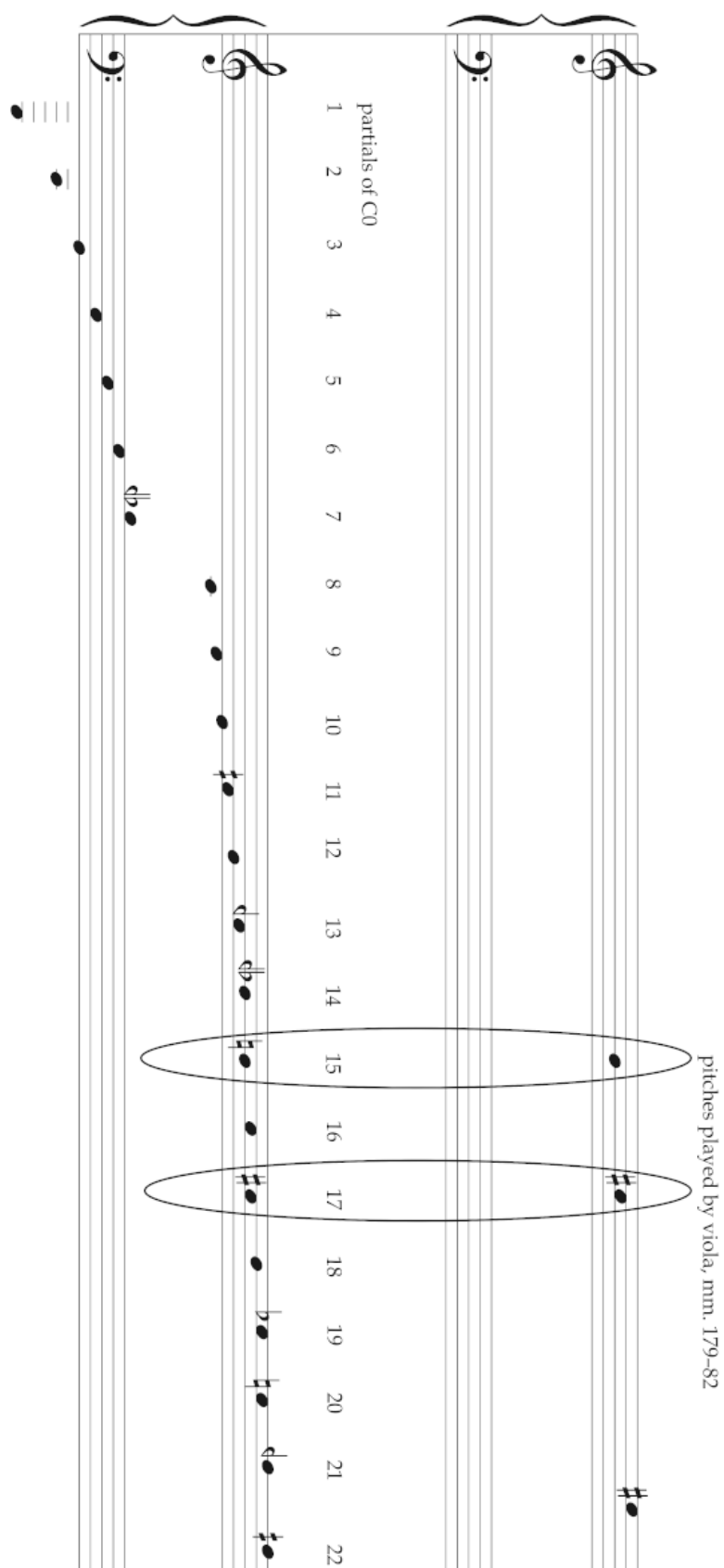
C: 11

horns, trombone
(octave transpositions of 7, 9)
E: 10, 11, 14, 18

winds, harp
A: 5, 8, 9, 22 (octave transposition of 11)

bassoon, harp, strings
C: 1, 2, 5, 6, 7, 9, 12

Example 14. Pitch content of Anderson, *Eden*, mm. 179–82 (viola only), compared with quartertone-approximated partials of C1



Example 15. Steiger, *Post-truth Lament*, mm. 1–11. Piano 2 sounds one quartertone lower than written

$\text{♩} = 113$

Piano 1

Piano 2
(sounds $\frac{1}{4}$ -tone lower)

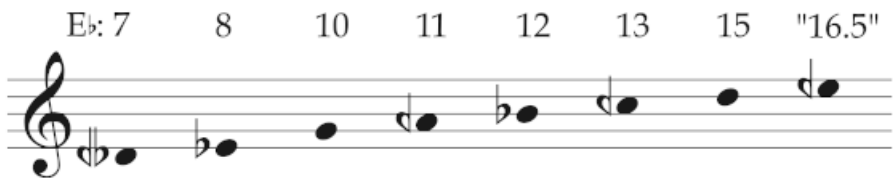
8

Piano 1

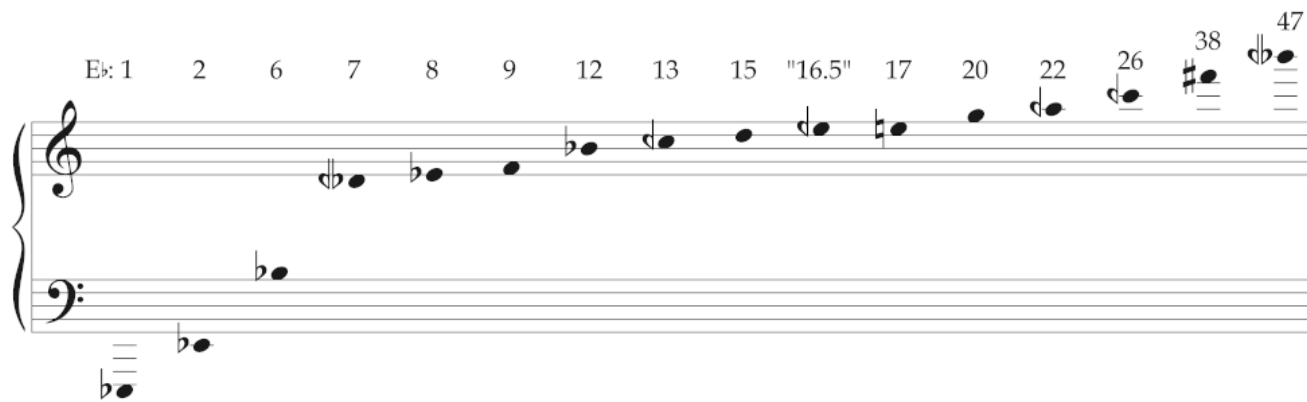
Piano 2

The musical score consists of two systems. The first system (measures 1-10) features a continuous sixteenth-note pattern in both Piano 1 and Piano 2. Piano 2 is written an octave below Piano 1, and the notation indicates it sounds a quartertone lower than written. The second system (measure 11) shows a final chord with a forte (ff) dynamic. The key signature has one flat (B-flat), and the tempo is marked as quarter note = 113. A circled measure number '8' is placed above the first system.

Example 16. Pitch content for the polyrhythmic unfurling of partials of E $\flat$ 1 in Steiger, *Post-truth Lament*, mm. 1–35



Example 17. Pitch content of Steiger, *Post-truth Lament*, m. 11



Example 18. Steiger, *Post-truth Lament*, m. 20. Piano 2 sounds one quartertone lower than written

20

Pno. 1

f

Pno. 2

f

The musical score for Example 18 shows measures 20 and 21. Both pianos, Pno. 1 and Pno. 2, are in 5/4 time. The first measure of each part contains a forte (*f*) dynamic marking. The notation for Pno. 1 and Pno. 2 is identical in the first measure, but in the second measure, Pno. 2's notes are written one quartertone lower than Pno. 1's notes, as indicated by the caption.

Example 19. Steiger, *Post-truth Lament*, mm. 44–45. Piano 2 sounds one quartertone lower than written

44

Pno. 1

mf

Pno. 2

mf

The musical score for Example 19 shows measures 44 and 45. Both pianos, Pno. 1 and Pno. 2, are in 3/4 time. The first measure of each part contains a mezzo-forte (*mf*) dynamic marking. The notation for Pno. 1 and Pno. 2 is identical in the first measure, but in the second measure, Pno. 2's notes are written one quartertone lower than Pno. 1's notes, as indicated by the caption.

Example 20. Steiger, *Post-truth Lament*, mm. 47–51. Piano 2 sounds one quartertone lower than written

Example 21. Analysis of Steiger, *Post-truth Lament*, m. 50. 12-TET pitch classes realized on the second piano (and therefore lowered in tuning by a quartertone) are labeled in quotation marks

background ostinato

foreground 5ths/octaves

included in foreground 5ths/octaves

included in background ostinato but not in foreground 5ths/octaves

C "C#" "D" Eb "E" F F# G "Ab" "A" Bb B

Example 22. Steiger, *Post-truth Lament*, mm. 55–64. Piano 2 sounds one quartertone lower than written

55

Pno. 1

mf

(hold pedal through 65)

Pno. 2

60

rit. poco a poco

$\text{♩} = 42$

Pno. 1

Pno. 2

55

Pno. 1

mf

(hold pedal through 65)

Pno. 2

60

rit. poco a poco

$\text{♩} = 42$

Pno. 1

Pno. 2

Example 23. Pitch content of Steiger, *Post-truth Lament*, mm. 55–64

F: 1 2 3 "3.5" 9 10 11 13 15 17 35 38 42 54 59

Notes: Treble staff (Measures 1, 2, 3, 9, 10, 11, 13, 15, 17, 35, 38, 42, 54, 59); Bass staff (Measures 1, 2, 3, 9, 10, 11, 13, 15, 17, 35, 38, 42, 54, 59).

Example 24. Steiger, *Post-truth Lament*, mm. 89–96. Piano 2 sounds one quartertone lower than written

♩ = 113

89

Pno. 1

Pno. 2

93

Pno. 1

Pno. 2

Example 25. Pitch content of Steiger, *Post-truth Lament*, mm. 93–101

"B" ——— "G $\flat$ " "D $\flat$ " E $\flat$ G "A" B $\flat$ "C" D "E" A $\flat$ F

E $\flat$: 7 8 10 11 12 13 15 "16.5" "26.5" 36

9 "11.5" 13 14? "15.5" 17 "19.5" "21.5" 28 47

B $\flat$: 1 2 6

Example 26. Steiger, *Post-truth Lament*, mm. 65–69. Piano 2 sounds one quartertone lower than written

Example 27. Analysis of the modulation between harmonies in Steiger, *Post-truth Lament*, mm. 55–64 and mm. 65–69

