

In honor of Lou Harrison

BY THE NUMBERS

for violin, clarinet/bass clarinet, and retuned piano

by

Evan Ziporyn

- 1) Discordion
- 2) Concordia

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BY THE NUMBERS

for violin, clarinet/bass clarinet in B-flat, and retuned piano
by Evan Ziporyn

Total length: 14 minutes

Two movements: *Discordion* (6:30); *Concordia* (7:00)

PROGRAM NOTES by the composer

I had ample opportunity to get to know Lou Harrison, and I blew it. I moved to the Bay Area in 1984, ostensibly to go to graduate school, but really to play Balinese gamelan. New music communities are always small, and the American gamelan scene in the 1980s even smaller: Lou was still active at Mills College, friends of mine were his students, he showed up at numerous events, and he was a famously open and vivacious person. He was hard to miss, and it would have been easy to introduce myself, but I didn't. Part of this was shyness, but beyond that was the fact is that I simply wasn't ready for the elegant clarity of Lou's music, or the example of his life in art.

There was a lot I could have learned: by that time Lou was far along on a musical journey that was very similar to the one I was trying to undertake. While I agonized about how to find my own musical voice between cultures, and wondering whether it was even possible, Lou was living proof that it was possible, building his own gamelans (with William Colvig) and composing for them, with and without western instruments.

By 1992 I was living in Cambridge, composing my own pieces for western instruments and gamelan, and starting my own ensemble, Gamelan Galak Tika. A recording of Lou's *Concerto for Piano With Javanese Gamelan* came out that fall, in a special edition of the *Leonardo Music Journal*, curated by Jody Diamond. It opened the door to Lou's music for me, though it wasn't until 25 years later, on Lou's centennial and on his instruments, with Galak Tika and with Jody – that I was able to put together a performance of the piece, for two performances at ICA Boston and the Cleveland Museum of Art, with Sarah Cahill as piano soloist. Those performances also featured Lou's equally luminous *Suite for Violin & American Gamelan*, with soloist Johnny Gandelsman.

By The Numbers, by design, walks in Lou's footsteps. His piano tuning for the concerto is unique not just to the piece but to the occasion: it needs to be adjusted based on the exact tuning of the gamelan instruments. It also takes weeks of dedicated work by a master tuner, to adjust and re-adjust until the instrument settles in the new temperament. I decided my tribute to Lou should use this singular tuning and feature the two soloists. I wrote a clarinet part so I'd be able to go along for the ride. The radical tuning of the piano presents delights and challenges: deeper consonances and weirder dissonances. For *By The Numbers* I approach these as a dialectic: the first movement, *Discordion*, delights in the dissonances; the second, *Concordia*, revels in the consonances.

PERFORMANCE/TUNING NOTES

By The Numbers calls for a complete (88-key) retuning of the piano, based on the implied tuning necessary to perform Lou Harrison's *Concerto for Piano With Javanese Gamelan* with the Si Betty instruments for which he composed it. As follows:

| PIANO KEY | HERTZ | CENTS | RELATIONSHIP |
|-----------|--------------|--------------|------------------------------|
| D | 270.9 | C#-39 | just 5th below A key |
| D# | 293.3 | D-2 | just 5th below A# key |
| E | 304.8 | D#-35 | just 4th below A key |
| F | 317.8 | D#+37 | |
| F# | 342.2 | F-35 | just fifth below C# |
| G | 371.5 | F#+7 | just 4th below C key |
| G# | 415.55 | G#+1 | |
| A | 406.4 | G#-37 | just 5th above D key |
| A# | 440 | A | 440! |
| B | 464.4 | A#-6 | |
| C | 495.3 | B+5 | just 4th above G key |
| C# | 513.3 | C-33 | Just 5th above F# |

For this reason, written pitches will not correspond with sounding pitches.

Violin & clarinet play as written, adjusting to taste to make consonances and dissonances more delicious and/or pungent, as desired.

By the Numbers was premiered at ICA Boston, October 12, 2017, as part of the "Mr. Harrison's Gamelans" concert in honor of Lou Harrison's centennial. Johnny Gandelsman, violin; Evan Ziporyn, clarinet/bass clarinet; Sarah Cahill, piano

Transposed Score

in honor of Lou Harrison

By The Numbers

1) Discordion

Evan Ziporyn

♩=120

Violin

Bass Clarinet in Bb

Retuned Piano

Vln.

B. Cl.

Pno

Vln.

B. Cl.

Pno

10

Vln.

B. Cl.

Pno

This system contains measures 10, 11, and 12. The Violin part (Vln.) is in a treble clef with a key signature of one flat and a 4/4 time signature, playing a melodic line with eighth and sixteenth notes. The Bass Clarinet part (B. Cl.) is in a treble clef with a key signature of one flat, playing a similar melodic line. The Piano part (Pno) is in a grand staff (treble and bass clefs) with a key signature of one flat, providing a harmonic accompaniment with chords and moving lines.

13

Vln.

B. Cl.

Pno

This system contains measures 13, 14, and 15. The Violin part (Vln.) continues its melodic line. The Bass Clarinet part (B. Cl.) also continues its melodic line. The Piano part (Pno) continues its accompaniment. The notation is consistent with the previous system.

16

Vln.

B. Cl.

Pno

This system contains measures 16, 17, and 18. The Violin part (Vln.) features a 4/4 time signature change and includes triplet markings (indicated by a '3' over the notes) in measures 17 and 18. The Bass Clarinet part (B. Cl.) also includes triplet markings in measures 17 and 18. The Piano part (Pno) continues its accompaniment and includes triplet markings in measures 17 and 18.