

Q1

# Standard Deviation

for three jazz combos

Q2

Q3

2010

/ Nolan Lem

# / instrumentation: three jazz combos\*

## about the piece...

Standard Deviation explores the presence of simultaneous tempo within a “jazz” format. In the first section, 3 different tempos are introduced with the temporal ratio of  $1 : \pi : e$ . The use of irrational tempos makes the periodicity of the tempos infinite—that is, the tempos never converge to fall on the same starting beat after some duration of time. Technically, this would involve the use of infinitely precise metronomes and given that such devices do not exist, the metronome cues are approximations of these irrational numbers ( $\pi$  and  $e$ ).

Constrained against a reference tempo, the creation of a confluent pulse during improvisation contrives some “felt” presence of simultaneous tempo. The idea of “swing”—playing “behind” the beat or “ahead” of the beat—imply that the presence of time in jazz improvisation is elastic, subject to the cognitive processing of the listener. In effect, Standard Deviation explores similar techniques by veiling the presence of time in different ways. In each section, the use of time is deconstructed in some fashion—either by convoluting a reference tempo with the introduction of other, competing tempos (as in the first section), or by the rhythmic deconcatenation of beats (as in the second section).

### Q1

- 1 FLUTE
- 1 B<sup>b</sup> CLARINET
- 1 TENOR SAX
- 1 GUITAR WITH DISTORTION  
(WITH OTHER APPROPRIATE EFFECTS / PEDALS)
- 1 “OUT-OF-TUNE” PIANO  
(WITH DISTORTION APPLIED IF POSSIBLE)
- 1 ACOUSTIC BASS
- 1 DRUM SET

### Q2

- 1 FLUTE
- 1 B<sup>b</sup> CLARINET
- 1 TENOR SAX
- 1 GUITAR WITH DISTORTION
- 1 PIANO
- 1 ACOUSTIC BASS
- 1 DRUM SET

### Q3

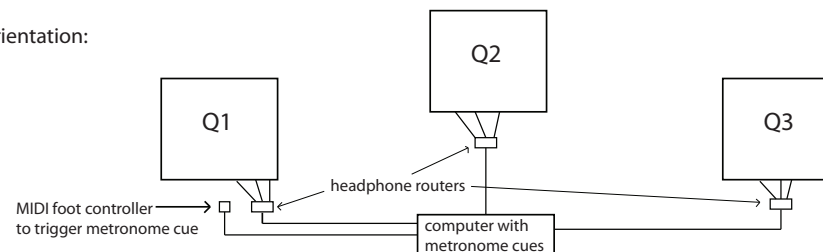
- 1 TENOR SAXOPHONE
- 1 PIANO
- 1 BASS
- 1 DRUM SET
- +1 AUXILIARY PERCUSSION PLAYER  
GLOCKENSPIEL OR VIBRAPHONE,  
XYLOPHONE, WOODBLOCK
- + ANY NUMBER OF  
ADDITIONAL HORNS\*

### Live performance suggestions:

To accommodate for the “convergence” sections in some of the sections, the combos should trigger (via pedal) an external “click track” (set to their designated tempo) to play on headphones at the designated measures. This can be downloaded as max/msp patch at [www.nolanlem.com](http://www.nolanlem.com)

\* Other instruments can be added to the instrumentations specified for the jazz combos. The pitches they play can be taken from the cluster chords located at the start of the second section.

### orientation:



# I. (convolution study)

Nolan Lem

d= approx. 1.5 minutes

drums play "hits" on rim of  
smallest cymbal:  
cutoff any add't sustain with hand

**variable**  
on downbeat, set respective metronomes with foot pedal

quartet 1  
BPM 144

quartet 2  
BPM 152

combo 3  
BPM 164.7

*f deliberately*

sim.

(tacit 1st 4x) To Perc.

arbitrarily choose a pitch  
every for every repeat  
after 1st time (5th repeat)  
(within one octave)

(last time)

after 4th repeat:  
arbitrarily choose a pitch for  
each following repeat  
(within one octave of f)  $\approx 9x$

after 5th repeat:  
arbitrarily choose a pitch for  
each following repeat  
(within one octave of f)  $\approx 10x$

$\approx 10.5x$   
To Pno.

woodblocks continue  
>at relative rates

woodblocks continue  
at relative rates

woodblocks continue  
>at relative rates

segmentCUED

FULL SCORE (reduced\*)

Standard Deviation

Nolan Lem

II.

♩ = 140 ① drums: cut off any delay from hits  
--play near the cup of smallest cymbal  
see individual parts for information regarding changes to pitch and articulations

Quartet 1

fl  
2 cl.  
elec. gtr. w dist.  
2 ts  
bass

Quartet 2+3

pno

Piano 1

ff

Wood Blocks/dr.

♩ = 140 ① dr. play hits (cymbal+snare combinations-sparse)

tacit 1x

mf

\*see harmonic elements score for available  
ff pitch content

\*see harmonic elements score for available  
ff pitch content

6 **2**

Q1

Q2

Pno.

W.B. **2**

10 **3** **4x** **4X** **4** **4x**

Q1 Quartet 1

Q2 *to tempo change (external metronome reference)*

Pno.

Xyl. **3** enter wood blocks

W.B.

5 tempo ratio (16:15) of relative bpm (1 beat elapses approx 18.5 s)

6

Q1 *start click track for second quartet (Q2)*

Q2 *free, loud and aggressive* 8x **BPM 150** **BPM 140**

Pno. *free, loud and aggressive* 7x *with guitar* *mf* 2 cl.

Xyl. *Glockenspiel/vibraphone (or gtr.)* *mf*

7 drums mark time

23

Q1 *guitar improvise textures* *p*

Q2

Pno. *f*

Glock. *f*

33

Q1

Q2

Pno.

Glock.

8



45

Q1

Q2

Pno.

Glock.

gtr/clarinete

3

9





HORNS/WINDS

harmonic elements for part. 2

Nolan Lem

♩ = 140 ①

voice 1

voice 2

*ff*

6 ②

10 ③

4x

4x

14 ④

4x

4x

5

7x

*p*

2

Piano 1

with guitar

19 **6**

mf

Musical staff 19-24: Treble clef, 4/4 time signature. Measure 19 starts with a circled '6'. The staff contains six measures of music, primarily consisting of sustained chords with long horizontal lines above them, indicating a slow attack and sustain. The dynamics are marked 'mf'.

25 **7**

f

Musical staff 25-32: Treble clef, 4/4 time signature. Measure 25 starts with a circled '7'. The staff contains eight measures of music, continuing with sustained chords and long horizontal lines. The dynamics are marked 'f'.

33 **8**

Musical staff 33-40: Treble clef, 3/4 time signature. Measure 33 starts with a circled '8'. The staff contains eight measures of music, featuring sustained chords and long horizontal lines. The time signature changes from 4/4 to 3/4 at measure 35.

41 **9**

Musical staff 41-48: Treble clef, 3/4 time signature. Measure 41 starts with a circled '9'. The staff contains eight measures of music, featuring eighth-note triplets and quarter notes. The time signature remains 3/4.

49 **10**

improvise out of time  
"freak out"

Musical staff 49-56: Treble clef, 3/4 time signature. Measure 49 starts with a circled '10'. The staff contains eight measures of music, featuring eighth-note triplets and quarter notes. The final two measures (55 and 56) are marked with diagonal slashes and a repeat sign, indicating an improvisation section.