

Music for Piano & Computer

by Cort Lippe

1996

for Yoshiko Shibuya

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Program Notes

Music for Piano and Computer (1996) was commissioned by the Japanese pianist Yoshiko Shibuya and premiered by her in Tokyo in October of 1996. The electronic part was created at the Hiller Computer Music Studios of the University at Buffalo, New York using the IRCAM Signal Processing Workstation, (a real-time digital signal processor), and the program *Max* which was developed by Miller Puckette and whose technical support helped make this piece possible.

Technically, the computer tracks parameters of the piano, such as pitch, amplitude, spectrum, density, rests, articulation, tempi, etc., and uses this information to trigger specific electronic events, and to continuously control all the computer sound output by directly controlling the digital synthesis algorithms. Thus, the performer is expected to “interact” with the computer triggering and continuously shaping all of the computer output.

Some of the sounds in the electronic part come directly from the composed piano part, so that certain aspects of the musical and sound material for the instrumental and electronic parts are one and the same. Sound material other than the piano is also manipulated in the time domain via time-stretching and granular sampling. Frequency domain FFT-based cross-synthesis and analysis/resynthesis using an oscillator bank, as well as more standard signal processing such as harmonizing, frequency shifting, phasing, spatialization, etc. are all employed. The instrument/machine relationship moves constantly on a continuum between the poles of an “extended” solo and a duo. Musically, the computer part is, at times, not separate from the piano part, but serves rather to “amplify” the piano in many dimensions and directions; while at the other extreme of the continuum, the computer part has its own independent “voice”.

This piece has five sections, and is dedicated to my son Dimitrios, who kindly waited until the piece was completed to be born...

Duration: 16 minutes.

♩ ≈ 120-126

(Event 1 is computer sound only for approximately 2 minutes and 10 seconds, at which time the piano enters)

Section I 2

Piano

Event

f *mp*

Ped ** Ped*

7

mp

** Ped* Ped ***

15 3

mp

Ped ***

22

mp

Ped ***

26 5

mp *mf* *mp*

Ped ** Ped * Ped **

30 6

mf *mp* *mf* *mp*

Ped ***

[Ped non molto to sustain during rests]

35 7

39

43 8

46 9

50 10

54

95 2

mp *mf*

98 3

(mf)

101 4

mf

104 5

mf *f*

107 6

f *accel. un poco ...* *ff* *sub.f* *rit. un poco ...*

110 7

f *a tempo* *mf*

113 *mf* *f*

116 *f* *ff* *rit. poco a poco...*

119 *sempre poco rit...* *a tempo* *accel poco a poco...*

9 10

mf *f*

122 *accel poco a poco...* *rit. poco a poco*

11

124 *sempre rit. poco a poco...* *rit. molto* *a tempo*

12

pp *f*

electronics fade *Ped*

128 *mf* *fff* *f* *fff*

13 14

Ped *Ped*

132

(fff) f fff f fff

Ped *

135

(fff) f ff f (fff)

138

(fff) f (f)

140

(f) mf f (f)

143

*rit. poco a poco...
cresc. poco a poco...*

(f) fff mf fff mf

Ped *

147

mf f mf f mf

→ 149 150 20

152 153 154

*cresc. poco a poco ...
accel poco a poco ...*

→ 154 155 21

*sempre cresc.
sempre accel.* *poco a poco sempre cresc. et accel.*

157 158 159 22 23

15 159 160 161 162

deves. poco a poco et rit. poco a poco ... rit. molto ...

15 162 24 2

section III 1 2

(loco)

≈ 10"

(electronics fade, then cresc. molto)

171 3

(ff)

176 *accel. un poco*

(ff)

181 4 5

(ff)

186

(ff)

191 3

(ff)

197 6 3 3

(f)

rit. poco a poco...

201

pp
lunga

205

section IV

(In Section 4, events 1 through 16, advance the events just after the notes are played in order to capture and freeze the sound.)

$\text{♩} \approx 100$

(pp) p pp

211

$\text{♩} \approx 104$

mf

217

rit. poco a tempo

(mf) mf f

221

8↑

(f) p f mp

226

(loco)

mp mf ff (mf)

14

230 *mf*

15

16

17 *rit. poco a poco ... a tempo giocoso*

233 *p*

234

18 *(normale) accel*

237 *f*

19 *rit. accel*

20 *rit. poco a poco ...*

21 *tempo*

241 *(p) mf*

22

23 *giocoso (luc)*

24 *f*

25 *rit. poco a tempo accel. poco*

249 *p f mf p f*

ff

rit. molto poco a poco... accel. poco

252 (non stacc.) (stacc.) legato a tempo

255 (f) a tempo

rit. poco (loco)

259 (mf) a tempo

rit. molto poco a poco...

262 (mf) a tempo

(loco)

267 (f) a tempo

(electronics al niente)

270 (mf) a tempo

(loco)

38 39

273

mf ff

3

3

f

Detailed description: This system contains measures 273, 274, and 275. Measure 273 starts with a treble clef and a key signature of one flat. It features a melody in the right hand with a dynamic of *mf* and a triplet of eighth notes. The bass line has a dynamic of *ff* and consists of eighth notes. Measure 274 continues the melody with a dynamic of *ff* and includes a triplet of eighth notes. Measure 275 concludes the system with a dynamic of *f* and a triplet of eighth notes. The system ends with a fermata over the final note.

275 276 40 41

rit. molto poco a poco

(f) mp f

3

3

3

(al niente)

Detailed description: This system contains measures 275 through 283. Measure 275 begins with a treble clef and a key signature of one flat. The right hand has a dynamic of *(f)* and features a triplet of eighth notes. The bass line has a dynamic of *mp*. Measure 276 continues with a dynamic of *mp* and a triplet of eighth notes. Measure 277 has a dynamic of *f* and a triplet of eighth notes. Measure 278 has a dynamic of *f* and a triplet of eighth notes. Measure 279 has a dynamic of *f* and a triplet of eighth notes. Measure 280 has a dynamic of *f* and a triplet of eighth notes. Measure 281 has a dynamic of *f* and a triplet of eighth notes. Measure 282 has a dynamic of *f* and a triplet of eighth notes. Measure 283 concludes the system with a dynamic of *f* and a triplet of eighth notes. The system ends with a fermata over the final note and the instruction *(al niente)*.

section V

279 1

mf

112-116

Detailed description: This system contains measures 279 through 283. Measure 279 starts with a treble clef and a key signature of one flat. It features a melody in the right hand with a dynamic of *mf* and a triplet of eighth notes. The bass line has a dynamic of *mf* and consists of eighth notes. Measure 280 continues the melody with a dynamic of *mf* and a triplet of eighth notes. Measure 281 has a dynamic of *mf* and a triplet of eighth notes. Measure 282 has a dynamic of *mf* and a triplet of eighth notes. Measure 283 concludes the system with a dynamic of *mf* and a triplet of eighth notes. The system ends with a fermata over the final note.

284

(mf) f mf f

3

Detailed description: This system contains measures 284 through 287. Measure 284 starts with a treble clef and a key signature of one flat. It features a melody in the right hand with a dynamic of *(mf)* and a triplet of eighth notes. The bass line has a dynamic of *(mf)* and consists of eighth notes. Measure 285 continues the melody with a dynamic of *f* and a triplet of eighth notes. Measure 286 has a dynamic of *mf* and a triplet of eighth notes. Measure 287 concludes the system with a dynamic of *f* and a triplet of eighth notes. The system ends with a fermata over the final note.

288

(f) mf f

Detailed description: This system contains measures 288 through 290. Measure 288 starts with a treble clef and a key signature of one flat. It features a melody in the right hand with a dynamic of *(f)* and a triplet of eighth notes. The bass line has a dynamic of *(f)* and consists of eighth notes. Measure 289 continues the melody with a dynamic of *mf* and a triplet of eighth notes. Measure 290 concludes the system with a dynamic of *f* and a triplet of eighth notes. The system ends with a fermata over the final note.

291

(f) mf f mf

Detailed description: This system contains measures 291 through 293. Measure 291 starts with a treble clef and a key signature of one flat. It features a melody in the right hand with a dynamic of *(f)* and a triplet of eighth notes. The bass line has a dynamic of *(f)* and consists of eighth notes. Measure 292 continues the melody with a dynamic of *mf* and a triplet of eighth notes. Measure 293 concludes the system with a dynamic of *mf* and a triplet of eighth notes. The system ends with a fermata over the final note.

294

Musical score for measures 294-296. The piece is in G major. Measure 294 starts with a piano (mf) dynamic. Measure 295 features a forte (f) dynamic and a triplet of eighth notes. Measure 296 contains a second ending bracket labeled '2' and a key signature change to F major (one flat).

297

Musical score for measures 297-299. Measure 297 begins with a forte (f) dynamic. Measure 298 has a mezzo-forte (mf) dynamic. Measure 299 is marked with a piano (mf) dynamic and includes a first ending bracket labeled '15' and a 'loco' instruction.

299

Musical score for measures 299-301. Measure 299 starts with a mezzo-forte (mf) dynamic. Measure 300 is marked with a forte (f) dynamic and includes a first ending bracket labeled '15' and a 'loco' instruction. Measure 301 continues with a forte (f) dynamic.

302

Musical score for measures 302-304. Measure 302 begins with a forte (f) dynamic. Measure 303 includes a first ending bracket labeled '3'. Measure 304 features a forte (f) dynamic and a first ending bracket labeled '3'.

305

Musical score for measures 305-307. Measure 305 starts with a forte (f) dynamic. Measure 306 has a fortissimo (ff) dynamic. Measure 307 continues with a fortissimo (ff) dynamic.

307

Musical score for measures 307-310. Measure 307 begins with a fortissimo (ff) dynamic. Measure 308 has a forte (f) dynamic. Measure 309 is marked with a fortissimo (ff) dynamic. Measure 310 starts with a mezzo-forte (mf) dynamic, includes a first ending bracket labeled '3', and ends with a mezzo-forte (mf) dynamic.

15 ↑

310

(mf)

3

ff

f

ff

f

(loco)

313

5

ff

f

ff

f

ff

316

6

(ff)

f

ff

f

ff

mf

318

319

mf

f

8 ↑

(loco)

8 ↑

(loco)

322

7

f

(loco)

mf

8 ↑

3

Ped *

324

9

mf

3

332

(mf)

336

cres. poco a poco ...

(mf)

339

sempre cres. poco a poco...

10

f

341

342

sempre cres. poco a poco...

11

(f)

344

8↑

ff

ff

347

12

8↑

(ff)

8 ↑

(351) *(ff)*

8 ↑

(354) *(ff)*

13

8 ↑

(357) *(ff)*

8 ↑

→ (359) (360) *(ff)*

8 ↑ *decres. poco a poco...* (362) (363) *(loco)* 14 *f*

(366) *(f)*

369

372

accel un cresc. 15 poco a tempo acc. un poco cresc.

375

a tempo Ped

mp f ff mp f mp mp

accel. poco a poco... 3

378

f mp mf 3 ff mp f

Sempre accel. poco a poco

Ped *

381

p f p f pp mf f

poco rit.

Ped *

384

molto rit. 16 Lunga 17

ff $\approx 15''$ fff

Cort Lippe
Archanes Crete
August, 1996 - for Dimitrios