

st178.1.59



sumtone

:

**michael edwards**



for piano, percussion and computer



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I Kill by Proxy

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st178.1.59  
(incorporating 185.1.63 and 186.1.62)

sumtone  
Neckarhalde 38  
D-72070 Tübingen  
Germany  
info@sumtone.com  
www.sumtone.com

contents

programme note .....	v
introduction / equipment .....	vii
instrument plan / microphones ...	xi
inside piano strike points .....	xiii
opening improvisation .....	1
<b>Part 1</b>	
(percussion and computer) .....	3
linking improvisation .....	15
<b>Part 2</b>	
(piano and computer) .....	17
linking improvisation .....	25
<b>Part 3</b>	
(piano, percussion, and computer)	27



## programme note

I read somewhere that when we elect a leader we are choosing the person to kill in our name. It's an idea that's easy to reject out of hand, but when you think about it, there's an awful lot of killing still being done today by large military organisations. The days of the wild west and the crusades may be over; the idea of war within a 'civilised' country's own borders may be unlikely; but still, some of those countries—my own included—spill a lot of blood in various parts of the world. The countries which do the killing are usually relatively wealthy; those who die, poor. It's not difficult to see the connection. As Balzac wrote: "The secret of great wealth with no obvious source is some forgotten crime, forgotten because it was done neatly."

Commissioned by the Center for Art and Media Technology (ZKM) Karlsruhe, Germany, *I Kill by Proxy* is a composition for piano, percussion, and computer lasting between 60 and 75 minutes. Mixing fully-composed and improvised musical structures, the considerable duration of this work is mitigated by a division into several sections, the major parts of which are a solo percussion piece, a solo piano piece, and a piano-percussion duo. Transitions between the pieces are improvised, creating a continuous work without breaks. Notwithstanding this design, the individual fully-composed sections can be performed separately, in a different context and programme.

As with almost all my compositional work since 2000, *I Kill by Proxy* was composed with my own algorithmic composition software. Object-oriented Common Lisp code was developed mainly at ZKM with the generous support of two Guest Artist stipends in the summers of 2000 and 2001. The software is continuously in development. For *I Kill by Proxy*, programming was focussed mainly upon new pitch-selection algorithms.

The computer part combines real-time sound processing techniques with playback of pre-mixed sound files. The sources for these sound files are mainly snippets of recordings of the instrumental parts of the piece, re-ordered and processed by the same algorithms that helped generate those parts.

Many thanks, as always, to Bill Schottstaedt of Stanford University for the CLM software with which the majority of the signal processing of sounds was made; and to the Camargo Foundation for a wonderful residency in Cassis, France, where most of the compositional work was done.





## introduction

*I Kill by Proxy* is a concert-length work comprising three composed pieces (percussion and computer; piano and computer; piano, percussion, and computer) preceded and linked by improvisations. Each piece moves seamlessly to the next via the improvisations (“sempre attacca”). So performed, the duration will be between 60 and 75 minutes, depending on the length of the improvisations.

Each of the three composed works may be performed independently, without improvisations, in a normal concert programme.

## percussion instruments / setup

For a complete performance the percussion should be set up around the audience as detailed on the “instrument plan / microphones” page below. To avoid microphone signal feedback the instruments should be placed outside (i.e. further away than) the loudspeakers.

In performances of individual pieces, placement of the percussion instruments around the audience is not necessary. *Part 1* (percussion and computer) would need the instruments at stations 1 and 2 (see instrument plan / microphones in the next pages). *Part 3* (piano, percussion, and computer) would need the instruments at stations 4–11.

## Almglocken

If absolutely necessary the number of Almglocken needed for the piece may be reduced to four: low, medium low, medium high, and high (i.e. undefined pitches, as determined by the player). Then, when a pitched Almglocke is encountered in *Part 1*, the player chooses the most appropriate one of the four available.

## performance requirements

Besides the two instrumentalists the following personnel will be necessary:

1. an improvising computer musician familiar with the Max/MSP environment created for the project (usually the composer himself)
2. a sound engineer responsible for setting up the loudspeakers, microphones etc., switching microphone routing between percussion stations as the percussionist changes instruments, and balancing levels during the performance
3. a further computer musician who follows the score and triggers sound files during the composed pieces (necessary to allow the improvising computer musician to reset programmes etc. before the next improvisation). See “sound file triggering” below for more details.

It is assumed that all three will sit at an optimal listening position within the audience. It may however be desirable for the improvising computer musician to be “onstage” (near the pianist).

## essential equipment

- the Max/MSP audio programming environment (version 4.5 or above) running on three suitable Macintosh or PC computers:
  1. percussion station routing (could perhaps be replaced by a mixing desk or other routing software)
  2. improvisation (2 channel input / 8 channel output sound card). Input 1 is a mono mix of the current percussion station, input 2 a mono mix of the piano.
  3. sound file playback/triggering (4 channel output sound card)
- the Max/MSP improvisation, sound file playback, and percussion routing patches supplied by the publisher on DVD-ROM (email [hire@sumtone.com](mailto:hire@sumtone.com), order online at <http://www.sumtone.com/performance-materials.php>, or write to the address at the front of this score)
- MIDI faders (16) plugged into the improvisation computer's sound card. These should send volume messages to Max/MSP on separate MIDI channels. If controller numbers must be sent instead of MIDI channels, then the "midi-faders" patcher in Max will have to be suitably reprogrammed.
- 21 suitable microphones for the piano and percussion (see "instrument plan / microphones" on the following pages for suggested distribution). N.B. This assumes only 2 microphones for the piano; more may be necessary or desirable.
- Sound system: The ZKM "Klangdom" was used for the first performance and a similar half-dome multi-speaker installation surrounding the audience (particularly from above) is preferred where possible. Where not, then 8 loudspeakers should suffice. They are to be placed around the audience as follows:
 

1	2
3	4
5	6
7	8

Performances with less loudspeakers are possible by combining two channels onto one speaker on the mixing desk or in software (the outputs of Max/MSP or the sound card configuration). In particular, performance of individual pieces may only require a 4-channel setup, depending on the size and acoustic of the performance space.

## sound file triggering

Two 4-channel sound file streams (each of varying duration) run simultaneously, overlapping and providing for considerable flexibility of tempo and timing in the instrumental parts.

Computer trigger points (sound files) are indicated in the score by a blue arrow (grey if not printed in colour). The number next to this indicates the sound file to be triggered and is provided for information only (e.g. 2.01 indicates the first sound file in the second stream).

The score must be followed during the performance and the sound files triggered at the appropriate times. This may require eye-to-eye coordination with the instrumentalists. The beginning of each piece will be indicated by the improvising computer musician or one of the instrumentalists as the transition from improvisation to composed piece is usually intentionally unclear.

## score directions

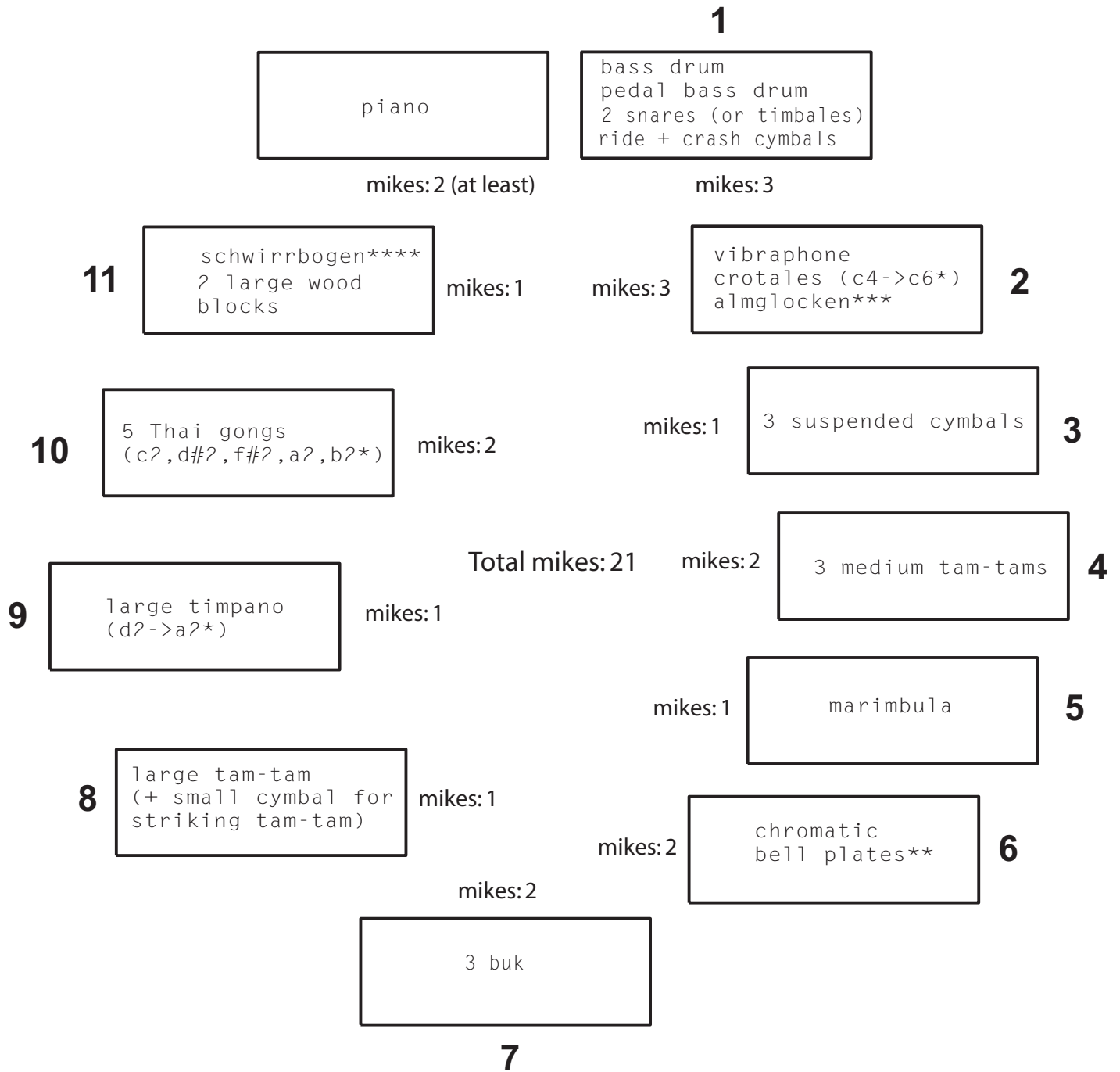
Accidentals carry throughout the bar but only apply to a single octave/staff, and are repeated for clarification as deemed necessary.

Except where otherwise indicated, meter changes necessitate rhythmic units to retain the same temporal duration, i.e., when changing from 2/4 to 5/8, an eighth note is equal in both meters.

For more details about the performance of this piece, please send email to [info@sumtone.com](mailto:info@sumtone.com) or write to the address at the front of the score.



instrument plan / microphones:



\* Octave designation: c4 = middle C

\*\*\*\* or Schwirrholz

\*\* Bell plate notes (ossia: all but G4 and Aflat4 could be replaced by lower octave crotales if absolutely necessary):



\*\*\* Almglocken notes (see "percussion instruments / setup" for discussion of how to reduce these):



The pianist will also need a small cymbal (or pan lid etc.) c. 21cm in diameter



## inside piano strike points:

The final piece calls for specific inside-piano effects that are referenced in the score by numbers which refer to the parts of the piano involved. These are shown below for reference.







# I Kill by Proxy

duration 30–75 mins.

michael edwards 2006–7

## opening improvisation

Before the performers come on stage a long looping sound is playing quietly. The performers walk in chatting, casually, not at all as if they were about to perform. (If the computer improviser will be “onstage” too then s/he should enter with the instrumentalists and take his/her place. It is however envisaged that s/he will already be in place next to the sound engineer and sound file triggerer before the performance begins.). The instrumentalists move towards the piano; they may acknowledge the audience if they like, of course. They start improvising inside the piano: plucking strings, tapping etc. all quite “busy” but not too loud.

The improvisation continues and the computer starts to process the sound quite radically (granulation, loops). The opening loop stops. Low rumbling loops enter from the computer. After a few minutes the percussionist moves towards station 1 where s/he begins softly playing drums etc., again, quite casually, almost as if warming up.

The percussion now becomes a little more penetrant with drum hits etc. At an unexpected point (but as the overall volume and energy level is quite high) the first composed piece starts (with the bass drum stroke), and the piano/computer improv dies down. By bar 11 (cymbals) only the percussion remains.



# Part 1

percussion & computer  
duration c. 13 mins.

wooden sticks hit together

crash cymbal  
ride cymbal  
high snare  
low snare

bass drum  
pedal bass drum

*ff* *f*

*larga* ♩ = 176

7 ♩ = ♩ (♩ = 132)

(rimshot)

(centre (cup) of cymbal)

*ff* > *p* < *ffp* < *ff* *mp* *mf* *p*

13

*pp*

21

*f* *pp*

28

cresc.

35 *poco meno mosso, accel.....piu mosso a tempo*

*mf* *p* *f* *ff* *f*

42

*pp* *pp* *mf* *pp*

49

*f* *pp*

56

*f* *ff*

62

*p*

70 **A** 3-5 times: dynamic, articulation, and even slight rhythmic variations encouraged

repeat this bar 7 times on last repeat of phrase

76 on the rim

3-5 times with gradual but uneven crescendo spread over the repetitions

84

Draw stick across drum face with high pressure, as if writing. Each attack may also be accompanied by a pedal bass drum note if desired.

93

$\text{♩} = \text{♩} = 176$   
erratic, jagged, crazed crash cymbal may be substituted here ad lib

3-5 times, crescendo each time but intensifying over repeats; dynamic, rhythmic, and articulation variations encouraged

100

$\text{♩} = \text{♩}$

optional on repeats

108

116

$\text{♩} = \text{♩} = 132$

**B** 127: 1.01 (computer trigger point)

122

Bass drum and lower snare may be substituted for two snares if desired

129

135

139

141

*pp sub* *sim*

ricochet roll (one hand)

5

Sim: bass drum and lower snare may be substituted for two snares if desired

145

150

*ff* *pp* *mp*

3 3 3 3

3

♩ = 108

Suddenly relaxed

155

senza cresc

Very long pause (c. 1:15)  
computer "solo"  
co-ordinate with  
computer performer:  
Letter C begins at 2:33  
of the current sound file

161

*pp* *mp*

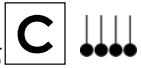
5

# Vibraphone

♩=132-144

- hard plastic
  - soft plastic
  - strike with handles
  - soft yarn
- \* indicates which beater changes

Quasi improvisando. A feeling of rhythmic freedom, lightness, playfulness, and spontaneity is essential. The player may deviate from the score considerably—especially rhythmically and in the length of rests—if so desired. This is especially true of the section around letter K where the player should attempt to blend the character of the piece into the Karl Berger quotation mixed in from the computer.



165 *mf*

**↑** 165: 2.01

172 *f* *p* *f* *mf*

179 *f* *p* *f* *mf* *f*

185 *p* *f* *p* *f* *p*

192 *f* *mf* *f*

198 *p* *f* *mp*



203 *pp* *pp cresc.* *f* *p*

208 *f* *p* *f* *p*

214 *cresc.* *f*

221 *f* *p* *cresc.*

227

234

240

245: 1.02

246

triangle noteheads = crotales:  
mallet heads only (i.e. not the handles)

253

261

268

cross noteheads = almglocken (see preface for discussion)

275

282

288

294 *f* *p* *p* *f*

299 *p* *f* *f* *p*

304 *f* *p* *f* *f*

309 *p* *p*

314 *f* *p* *f* *p* *mf*

317: 2.02 **F**

320 *f* *p* *f* *f*

326 *f* *p*

332 *p* *f* *p*

338 *f* *mp* *f*

343 *p*

347 *f* *p* *f*



352

*p*

357 **G** 357: 1.03

*f*

363

*f* *p*

368

*f* *p* *mf*

374 **H**

*p* *mf* *p senza cresc.* *f*

381

*p*

386

*f subito* *p* *f*

392

*f* *mf*

397

*p* *f*

403

*p* *mf* *p* *mf* *mp*

409

*f* *p*

411: 2.03

414 *mf* *f* *p*

420 *f* *p*

425 *p* *mf* *f* *p*

431 *mp* *p* *mf* *p* *f* *p*

437 *cresc.*

442 *mf* *f* *p* *cresc.*

448 *f* *p* *mf*

453 *p* *mf* *p* *f* *p* 456: 1.04

459 *mf* *p*

465 *mf*

471 *p* *mf*

477 *cresc.*

483 *f*

490 *mp*

497 **K** *mp* (blend into Karl Berger quotation) *mp*

504 *cresc.*

510 *mf*

515 *mp cresc.* *mf*

522 *p* **L**

528 *mf* *p*

534 *mf* *p* *mf* *p*

540 *mp* *pp* *mp* *mp*

547 *pp* *mp* *pp* *mp* *pp*

554 *p* *mf* *p* *mf*

561 *f* *p* *mf* *mp* *p*

569 *p*

577 **M** (piano may enter with improvisation at this point) *mf* *p* *mf* *p cresc.*

577: 2.04

585 (h)

593 *mf cresc.*

602

611 *f* *mp cresc.* *f*

618

*f* *p* *cresc.* *f*

626

*f* *p* *f* *mp* *f*

634

*mp* *f* *mp* *f* *ff* *mp cresc.* *accel poco a poco (to N)*

642

650

*ff* **N** ♩. = 192

repeat the following three passages many times, perhaps varying and improvising on the patterns ad lib

658

666

673

(lv)



## linking improvisation

The computer improviser begins processing before the end of the previous piece. This should be clearly audible before that piece ends; it continues into this improvisation before being replaced by processing of the new instrumental sounds.

Immediately at the end of the previous piece, the percussionist moves to station 3 (cymbals) and begins quiet but crescendoing rolls with various sticks (beginning with brushes). These continue throughout the following (sharp attacks etc. also ad lib) and break off abruptly as the next piece begins (but laissez vibrez).

The pianist has meanwhile intervened with a sharp “ta-ta ta-ta” (same rhythm/tempo as the opening of the following piece) using a metal block (or something similar) on the metal frame of the piano (with pedal, laissez vibrez). S/he then proceeds with an almost continuous and energetic improvisation using the fingers tapping on the lowest strings of the piano. This should be a fast repeated rhythm (perhaps straight semiquavers alternating hands/fingers). Attacks with the flat of the hand on the strings should be interspersed. Begin to move up towards the higher strings. When at the top strings, use the fingernail to pluck (perhaps erratically). Take up the metal block in the right-hand and start striking the higher strings and other parts of the inside of the piano (frame etc.). Start to move towards tapping the wood of the piano before taking a normal seating position. At this point continue tapping on the lid of the piano before launching seamlessly into the following piece.

The computer improviser heavily processes all of this ad lib. In particular the processing (perhaps loops) should provide a background texture that the instrumentalists can use to cover gaps as s/he changes playing techniques (especially the percussion move from station 2 to 3).





# Part 2

piano & computer  
duration c. 10:30

Freely but not lagging ♩ = 63-69

(computer 1.01  
trigger  
point)

7

11

\* If sost and uc pedal can't be depressed  
with one foot simulate uc but hold sost.

16

(8)

19 *mp* *pp* *ppp* *p* *mp*

*loco*

*pp*  
*uc*

*sost.*

↓ 25: 2.02

**A** \* nails of 1,2 pluck out  
2 strings simultaneously

25 *pizz.\** (*pizz.*)

25 *mf* (*ord*) *f* *p* *f*

*mf*  
(*Ped. sempre*)

↓ 33: 1.04

30 *p < ff* *gliss.*

30 *mp* *f* *mf* *p* *ff* *ff* (*loco*) *pp*

*mp* *sfz* *sfz*

36

*pp*

*Ped.*

*uc*

41

*f* *p* *sfffz* *pp* *ppp*  
*sfffz* *ppp*  
 Ped.  $\frac{1}{2}$  *uc*  $\frac{1}{2}$

46

*pp* *pp* *ppp* *ppp dim.* *ppp*  
*pp* *ppp* *ppp* *dim.* *ppp*  
 (pizz nail)  $\frac{1}{2}$  3 *uc* *8vb*

**B**

51

*pppppp* *mp* *pp* *p*  
*pppppp* *ppp* *ppp* *p*  
 ord (keys) (loco) *8va* *pppppp* *tc* *ppp* *p* *uc*

57

*p* *ppp*  
*p* *ppp*  
 rit.....  $\text{♩} = 44-50$  *8va* voice in sndfile 1.04: "aux 3" *8vb*

accel..... ♩=58-63

63

"spool 5"

*pp*

*mf*

*mp*

*pp*

67

*mp*

*p*

*mp*

*mp*

*ppp*

8<sup>va</sup>

8<sup>vb</sup>

**C**

70

70: 1.05

*martellato*

*ff subito*

*pp*

8<sup>va</sup>

*ms*

*md*

*tc*

Ped. →

Ped. →

73

74: 2.04

(8)

*pp*

*pp*

*p*

8<sup>vb</sup>

1/2 Ped. →

*(loco)*

*muted: place hand over full octave of strings: dull sound, not harmonics*

Tempo primo  
(♩=69-72) *8va-7* starting to press a little  
82: 1.06

78

*pp* (muted) *mp p mf* *Ped.* *Ped. ad lib* *pp* *mp p mf*

(8)-----

84

*ff mf* *f mp p* *Ped.* *uc*

**D** 87: 1.07

89

*pp p pp p mp p mp* *(uc) tc uc tc uc tc* *8va-7*

93

*pp ff pp* *uc tc uc P* 95: 2.05

97 relaxed

pp mp pp

tc uc 8vb (uc) pp

103 meno mosso

p mp p pp

tc uc 8vb-uc

109 ancora piu meno mosso

p pp mf f

(loco) tc mf Ped. 1/2

113 Expansive

mp pp mf p pp

8va 3 sost uc pp

112: 2.06

**E** pressing again

117 *p* *pp* *mf* *p*

*uc tc* *p* *(sost)* *p* *uc*

8<sup>va</sup>

121: 1.08

120 *mf* *p* *f* *ff* *sffz* *pp*

*tc* *mf* *ff* *sffz p* *pp* *uc*

8<sup>va</sup>

**F** =c.46

Computer solo c. 30secs  
Final accent starts bar 123

*ff* *8<sup>vb</sup>* *Red.*

124 *pp* *pppp* *pp* *pppp*

*pp* *pppp* *pp* *pppp*

*(md)* *8<sup>vb</sup>* *uc* *Q* *(al fine)*

8<sup>va</sup>

126: 2.07

=c.36

(8)

130 *pppp* *pppppp*





## linking improvisation

The percussionist is at station 4. Towards the end of the previous piece (not before bar 127), begin a very light continuous brushing of the highest tam-tam. Once the previous piece is over, this may rise in dynamic and start to include the kinds of textures/gestures found at the beginning of the next piece.

The piano meanwhile has slowly and quietly inserted the cymbal (or pan lid) onto the strings of the piano (as detailed at the beginning of the next piece) and begins some very quiet turns (some continuous, some isolated, sparse, sporadic) of this on the strings (pedal). Also introduce single notes within the cymbal range to generate quiet buzzes on the cymbal.

The instrumentalists (in combination with the computer improviser who is processing all of this beginning with the percussionist before the end of the previous piece) should aim to build up energy without increasing the dynamic beyond mezzo-piano. They should move seamlessly into the next piece, i.e. they should have reached the same dynamic and texture as at the opening. (The opening piano chord of the next piece should, however, be the first such chord—only gentle single notes in the improvisation.) The computer improvisation should die down as the sound files rise.



# Part 3

piano, percussion & computer  
duration c. 31 mins.

## 3 Medium Tam-Tams

triangle beater; tremolo with one brush/hand per tam-tam; changes in timbre encouraged when tremolo in each hand also a metal (triangle) beater—metal part of brush handle could substitute for this where required  
 ▲ : metal beater   ■ : hold metal beater very near face of tam-tam so that the vibrations make contact with the beater (if necessary restrike gently with fist to generate energy)  
 — : move beater laterally across face

Ⓢ = strike normal playing position of face

Percussion

\* always laterally until bar 17

With relaxed urgency (!); slowly paced but unhesitating ♩=66-72

1.01 ↓ (computer trigger point)

Place a small cymbal approx. diameter 21 cm onto the strings covering this range (could also be c# or d# of lower octave crotales)

Piano

*Red. ad lib:* notes/resonances to continue over rests unless otherwise directed



Ⓢ → Ⓡ = rim

10

13: 2.01 ↓ (C)

*mf mp*

*pp*

*f mp*

8va

16

normal tremolo  
(i.e. not laterally; from here on  
only laterally when indicated by line)

*pp mp pp < mp < f > mp*

*mp*

*sffz p*

*ppp*

Ped.  $\frac{1}{2}$

21

21: 1.02 ↓

*mf p mp pp*

*pp sffz*

*pp*

25 (l.v.) (damp) mp pp 8va<sup>---</sup> 3

29 (scrape full rhythmic length) l.v. pp (senza cresc) 8va<sup>---</sup> 3 Marimbula

34 p pp 36: 1.03 A f p 8vb<sup>-----</sup>

sosf → (through to letter B)

37

*pp*

*p*

*ppp*

*mp*

*mp*

*ppp*

*mp*

damped with finger near beginning of string

*tr*

Bracketed notes may be omitted if they would cause an impossible stretch.



40

*tr*

*mp*

*p*

*pp*

*poco meno mosso*

$\text{♩} = 63$

*ppp*

*mp*

*8va*

*poco*

*p*

*pp*

*pp*

*poco*

*8vb*

start as late as possible but reach high A at correct time

*Red.* →

44 (tr)

*tr*

*pp*

*pp*

*p*

*pp*

*8va*

*8vb*

48 (tr) *pp* *tr* *tr*

(8)-.1

52 *pp* *mp* *pp* *mp* *pp* *tr*

53: 1.04

*p* *8va* *pp* *mp* *pp* *Ped.*

56 (tr) *mp* *p* *mp*

56: 2.03

*mp* *p* *mp* *1/2* *8vb* *Ped.*

59

Bell Plates *lv sempre* *superball*

*ff* *pp* *(rub across surface)*

**B**

*mf* *pp* *ff*

*8va* *8vb*

half depress key before attack for a quiet, muted tone  $\frac{1}{2}$

*sost* → *Red.* →

64 (normal strike)

*pp* *p* *pp* *mp* *pp*

*8va*

*p* *pp* *(sost)* *Red.* →

68

*pp* *p* *pp*

*pp* *pp*

remove cymbal (may make grating noise)



73

*meno mosso*  
♩ = 56

*mp*

*pp*

*mp*

76

*pp*

*mp*

*p*

*ppp*

*pp*

78

*pp*

*mf*

*pp*

*f*

*pp*

*pp*

*mf*

*ppp*

*mf*

79: 1.05

81

*mp* *pp* *poco accel e cresc.....*

3  
8va  
(loco)

*pp*

85

*mp* *pp* *mf* *mf*

*..... ♩ = 72* *meno mosso ♩ = 63*

88

*pp* *mp* *pp* *ppp*

*damped more: further in, metallic*

*Red.* →

92

pp

pp

98

3 Buk

100: 2.04

timpani mallets

*mf* > *p*    *pp*    *mf* > *p*    *pp*    *mf* >

**C** *piu mosso* ♩=66-72

*pp*

*ff*

*mp*

damped more: further in, metallic

102

superball

*p* > *pp*    *ppp*

*meno mosso* ♩=63

*pppp*    *mp*    *pp*

UC

*mp*

*tc*

*Red.*

*Red.*

106: 2.05

"Write" on the drum head with the superball;  
normal writing pace;  
may be shorter than the indicated duration but not longer

106 "I sleep" "inno-"

*mf* > *pp* *pp*

*f* *pp* *sfz* *pp*

8va-1 UC # Ped. UC Ped.

109 "-cent" "fat" "fed" ricochet

*mp* > *pp* *pp* *pp*

*p* *pp* *pp*

tc sost Ped.

113 "in" "guilt" (sndfile 2.05 at 0:46) strong, expansive

*mp* > *pp* *sim* *pp* *f* *fp*

*pp* *p* *pp* *f*

ossia: if stretch too big 8va 3 8vb Ped. → (Ped. ad lib)

117

*f* *pf* *p* *mf* *> p* *sub* *pp*

*dim.* *mp* *p* *pp*

120: 1.06

8<sup>va</sup> Ped.

121

ricochet *p* *mp* *p* *mp* *p* *mp*

*ppp* *mp*

sost  
senza Ped

125

ricochet *p* *mp* *pp* *p* *ppp* *pp*

rit to speed meno mosso  
♩ = 56-60 8<sup>va</sup>

*pp* *mp* *pp* *pp*

Ped. (Ped. ad lib)

(not ricochet!)

128

*mf > p* *p* *f*

*p* *pp* *mf* *mp* *p* *f*

*mp*

accel ..... ♩=72

132

*p* *f* *p* *ff* *pp sub.*

*p* *f* *p* *ff* *pp sub.*

♩=63 accel ..... ♩=108 ♩=96 accel ..... ♩=120 ♩=56-60: calm

137

*f*

*f* *p* *ff* *mp*

*8va* *8va*

*Ped.* *Ped.* *sost*

*molto pesante piu mosso ♩=63*

Large Tam-Tam

struck with face of small cymbal  
(cymbal should sound also)

141

Musical staff for Large Tam-Tam, measures 141-144. Includes a blue arrow pointing to measure 144 with the text "144: 1.07 ff sempre".

144: 1.07 **ff** sempre  
piu mosso ♩=66-72

meno mosso

♩=52-56

**D** Strike cymbal lid on strings of lowest octave; + over note implies holding cymbal on strings after strike (dead stroke)--but lift again for LH notes; held notes imply lifting cymbal immediately after strike

Piano accompaniment for measures 141-144. Includes dynamic markings *pp sub*, *pp*, and *ff sempre*. Pedal markings include "(senza Ped)", "Ped.", and "(Ped. ad lib)".

(sost)

Ped.

(Ped. ad lib)

145

(soft beater)  
(cymbal)

Musical staff for Large Tam-Tam, measures 145-147. Includes dynamic markings *f* and *ff sempre*.

*f* *ff* sempre

Piano accompaniment for measures 145-147. Includes dynamic markings *f* and *ff sempre*.

148

(held cymbal dampens and changes timbre of notes)

Musical staff for Large Tam-Tam, measures 148-151. Includes dynamic marking *f*.

Piano accompaniment for measures 148-151. Includes dynamic marking *f*.

149

Musical score for measure 149. It features a grand staff with three staves. The top staff is a treble clef with a whole rest. The middle staff is a bass clef with a whole rest, two eighth notes with accents and a plus sign, and another eighth note with an accent. The bottom staff is a bass clef with a complex rhythmic pattern of eighth and sixteenth notes, including slurs and accents.

150

Musical score for measure 150. It features a grand staff with three staves. The top staff is a treble clef with a whole rest. The middle staff is a bass clef with a whole rest, two eighth notes with accents and a plus sign, and another eighth note with an accent. The bottom staff is a bass clef with a complex rhythmic pattern of eighth and sixteenth notes, including slurs and accents.

151

Musical score for measure 151. It features a grand staff with three staves. The top staff is a treble clef with a quarter rest, an eighth note with an accent, and a half note with an accent. The middle staff is a bass clef with a whole rest, three eighth notes with accents and a plus sign, and another eighth note with an accent. The bottom staff is a bass clef with a complex rhythmic pattern of eighth and sixteenth notes, including slurs and accents.

152

Musical score for measure 152. It features a grand staff with three staves. The top staff is a treble clef with a whole rest. The middle staff is a bass clef with a whole rest, an eighth note with an accent and a plus sign, and another eighth note with an accent. The bottom staff is a bass clef with a complex rhythmic pattern of eighth and sixteenth notes, including slurs and accents.



153



157



161

164

165: 2.06 vary normal strike positions ad lib

pp 8va 7 pp 3

pp p (loco) pp

ppp 8vb pp ppp 8vb 3

(Ped. ad lib)

168

169: 2.07

pp pp

pp p pp

sost tc ppp 8vb UC

171

mp pp mp pp

8va 3 3

p pp mp pp

3 3

pp 8vb

tc ppp UC

174

Musical score for measures 174-176. The score is in 4/4 time and consists of three systems. The first system (measures 174-175) features a piano part with triplets and an 8va marking, and a bass line. The second system (measure 176) features a piano part with triplets and an 8va marking, and a bass line. Dynamics include *pp* and *ppp*. A *ppp* dynamic is also indicated in the first system.

(8)----- tc UC tc



178

Musical score for measures 178-180. The score is in 4/4 time and consists of three systems. The first system (measures 178-179) features a piano part with triplets and an 8va marking, and a bass line. The second system (measure 180) features a piano part with triplets and an 8va marking, and a bass line. Dynamics include *pp* and *ppp*. A *rit. molto e dim.....* marking is present in the first system. The word *(loco)* is written in the bass line of the second system.

(8)-----

182

(8)

(8)



185

..... ♩=40 *ppppp* ♩=56

(8)

(8)

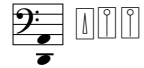
*mf*

*pp* *mf* *pp*

UC

Red. → ad lib

Large Timpano



188

8va

mp

(loco)

ppp

8vb

tc

uc

mp

pp

mp

tc

ppp

pp

192: 1.08

E

193

Stems down: soft sticks  
Stems up: snare drum sticks

pp

ppp

3

pp

p

pp

ppp

pp

8vb

uc

3

8vb

198

pppp

pp

p

ppp

p

pppp

pp

ppp

pp

pppp

pppp

8vb

3

8vb

201

*sim*  
*cresc e accel.....*

*sim* (keep dynamic relationships between notes/chords during cresc)

(8) | *8vb* 3 | *8vb* 3 | *8vb* 3

204

*mf* *p* *mp*  
..... ♩=66 *dim e rit .....*

*mp* *mf* *p* *mf*

*pp*

(8) | *8vb* 3 | *8vb* 3 | *8vb* 3

207

*pp* *p* *ppp* *pp* *pp*

..... ♩=56

*pp* *pp*

(8) | *8vb* 3 | *8vb* 3 | *8vb* 3

211

pp

meno mosso  
♩ = 48-52

8va 3

3

ppp

8vb

215

216: 1.09

ppp

pp

ppp

ppp

pp

8vb

Ped.

(Ped. ad lib)

218

pp

poco piu mosso  
♩ = 52-56

8va 3

3

ppp

pp

pp

pp

8vb

Ped.

(8) UC

tc

ppp

8vb

Ped.

(must be free from cymbal)

(ms)

222

Musical score for measures 222-225. The score is written for a grand piano with a double bass line and a right hand. The right hand features a melodic line with triplets and slurs. The left hand has a bass line with triplets and slurs. Dynamics include *pp* and *ppp*. A pedaling instruction *Ped.* is present with a bracket under the first two measures, and *(Ped. ad lib)* follows. An *8<sup>vb</sup>* marking is located below the first staff.

*Ped.* (Ped. ad lib)

226

Musical score for measures 226-229. The score is written for a grand piano with a double bass line and a right hand. The right hand features a melodic line with triplets and slurs. The left hand has a bass line with triplets and slurs. Dynamics include *pp*. A *rit e dim.....* instruction is present. A performance instruction *\* Place hand over all strings from A<sub>3</sub> to E<sub>4</sub>* is included, with *(loco)* written below it. An *8<sup>vb</sup>* marking is located below the first staff.

(8)

230

Musical score for measures 230-233. The score is written for a grand piano with a double bass line and a right hand. The right hand features a melodic line with triplets and slurs. The left hand has a bass line with triplets and slurs. Dynamics include *pp*. An *8<sup>vb</sup>* marking is located below the first staff.

(8)



233

*pppp* *pppp*

*piu mosso*

$\text{♩} = 42$   $\text{♩} = 54-58$

(loco)

(8)

237

Thai gongs

Tails up: metal beater  
Tails down: soft gong mallet

*sempre lv*

5 (metal object on metal body)

*ppp* *ppp* *pp* *ppp*

**F**

3

8<sup>vb</sup>

(8)

242

**(R)** (unless otherwise directed, always single attacks on rim and face)

(tails down: always normal striking position)

246: 2.08

*mp* *mp* *ppp* *ff*

*p* *mp* *ppp* *mp*

(metal object on metal body) **2**

*ppp*

247 *pp* < *f* <sup>around rim (lv)</sup> **C**

*mf* *p* *pp*

\* Strike string with metal object; choose different parts of the string so that the attack will create different pitches if object is held on string (create pitch patterns if desired). + means hold/leave object on string after attack: note will ring on however and removing the object may create an audible sound: both of these are acceptable.

turn cymbal on strings

turn (=T)

Red. →  
(down until the end)

*ppp*

252 **R** **C**

*ppp*

turn and lift (=T&L)

replace: put cymbal back on strings (R)

8vb.....|

256 **C** **R** **R** **C** **C** **R** **C** **C**

*ppp*

*pp*

poco accel ma non cresc.....

T&L

259

(R) (C) (C) (R) (C) (C) (C)

R T&L



263

(R) (C) (R) (R) (C) (C)

around rim

mp ppp

R T&L R T mp T&L pp



267

(C) (R) (C) (C)

..... ♩ = 66-72

pp

meno mosso ♩ = 52-56

R T pp

271

1 (metal strut)

*p*

T&L

*ppp*

8<sup>vb</sup>



276

Write "I kill by proxy" on face of gong

3 (metal plate)

(ord)

*pp*

*ppp*

R T

(flat of hand on strings of lowest octave, avoiding cymbal)



281

2 large wood blocks  
Schwirrbogen

283: 1.10

1 (metal object on metal strut)

G (metal plate)

3 4 (strings near nut)

*ppp*

*ppp*

286


Musical score for measures 286-291. The top staff is a single melodic line with dynamic markings *ppp* and *pp*. The bottom staff is a grand staff with treble and bass clefs, showing various time signatures: 6/4, 4/4, 3/4, and 4/4.

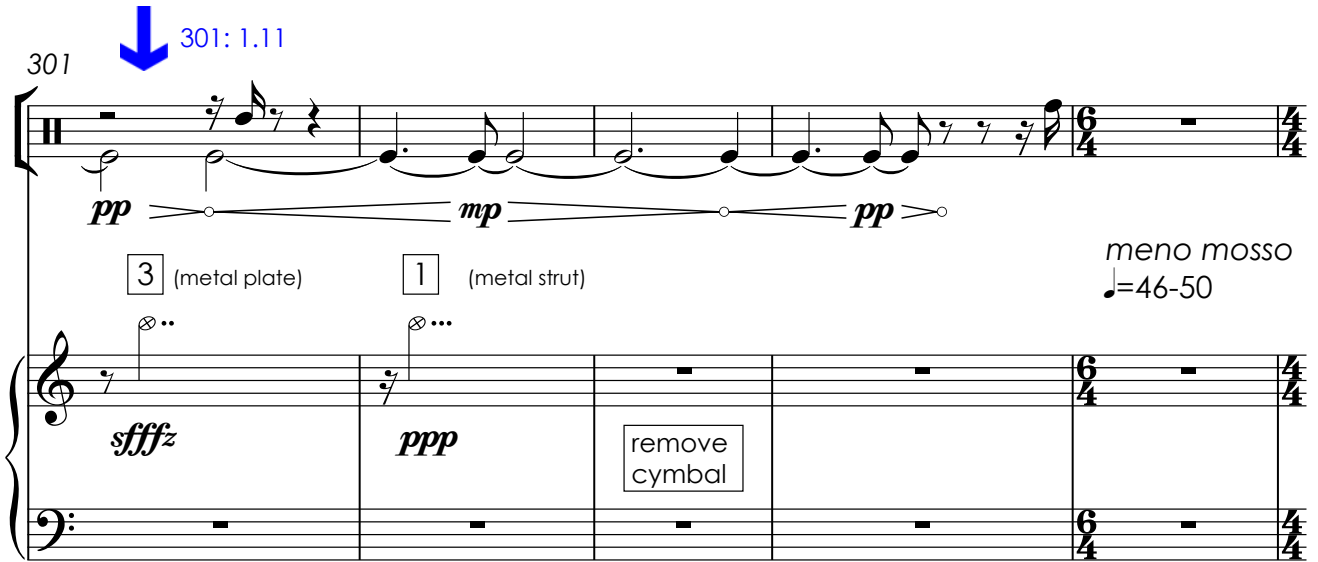
292

Musical score for measures 292-295. The top staff is a single melodic line. The bottom staff is a grand staff with treble and bass clefs. It includes performance instructions: "(ord)", "4 (strings near nut)", "knuckle rap on metal strut", "uc", "tc", "p", "mp", and "p".

296

Musical score for measures 296-301. The top staff is a single melodic line with dynamic markings *pp*. The bottom staff is a grand staff with treble and bass clefs, showing time signatures 3/4 and 4/4. It includes a boxed number "4" and a dynamic marking *pp*.

301  301: 1.11




*pp* *mp* *pp*

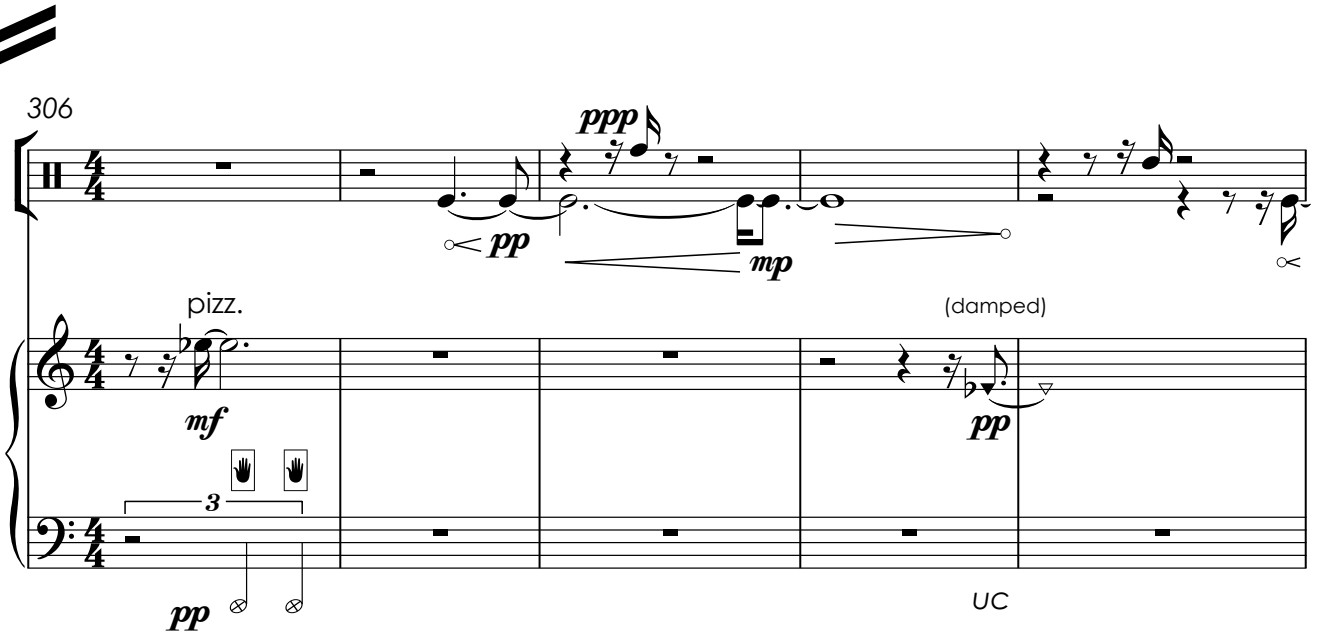
3 (metal plate) 1 (metal strut)

*sffz* *ppp* remove cymbal

meno mosso ♩ = 46-50



306





*pp* *mp* *ppp*

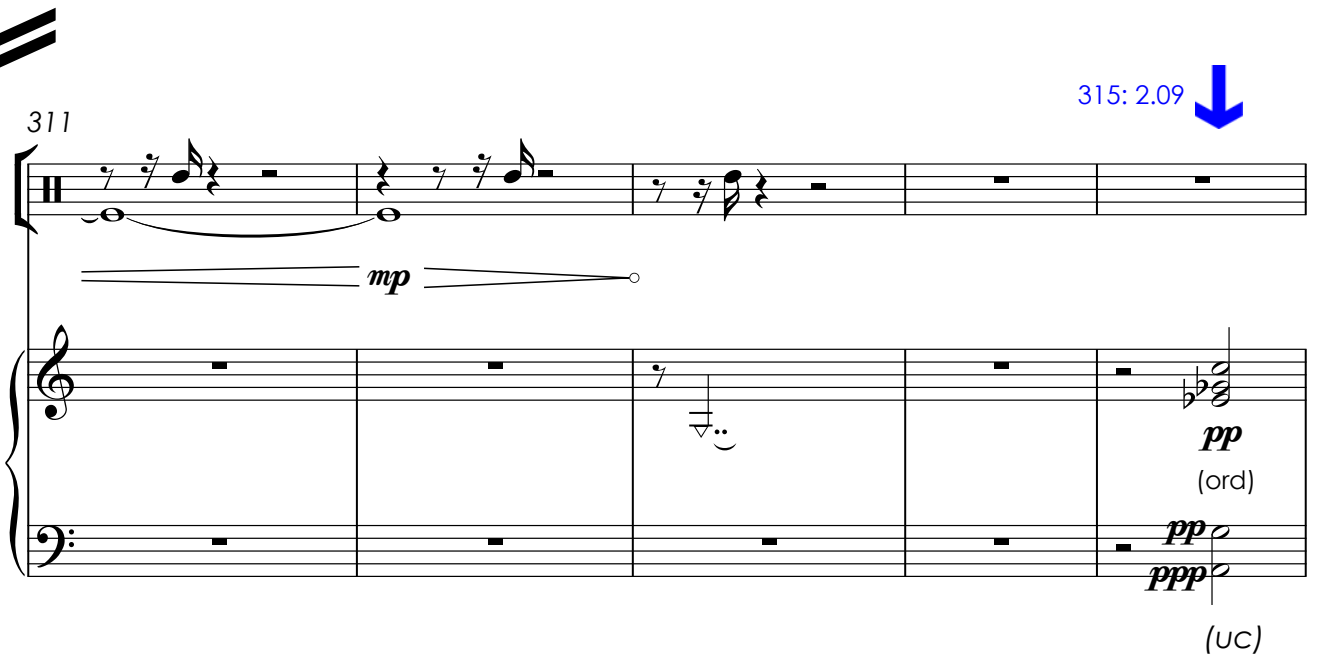
pizz. (damped)

*mf* *pp*

3 UC



311  315: 2.09



*mp*

*pp* (ord)

*ppp* (uc)

316

Musical score for measures 316-320. The top staff is a single melodic line with a *mp* dynamic. The bottom staff is a piano accompaniment with treble and bass clefs. It features a triplet in the treble clef and chords in the bass clef. Dynamics include *pppp* and *pp*. There are markings for *8va-1* and a fermata over the final measure.

321

Musical score for measures 321-323. The top staff has a melodic line with *ppp* and *p* dynamics. The bottom staff has piano accompaniment with a triplet in the treble clef and chords in the bass clef. Dynamics include *pppp*. There is a marking for *8va* and a fermata over the final measure.

324

Musical score for measures 324-327. The top staff has a melodic line with a tempo instruction: *rit to slowest possible tempo by end of piece*. The bottom staff has piano accompaniment with a triplet in the treble clef and chords in the bass clef. Dynamics include *pppp* and *mf*. There is a marking for *8va* and a fermata over the final measure.

329

(metal plate) 3 1 (metal strut)

*ppp*

*mp*

*pp*

*ppp*

(knuckle rap on metal strut)

*pp*

335

*ppp*

*pp*

4 (strings near nut)

*ppp*

*ppp*

340

*p*

(sndfiles: tam-tam rolls dying away)

*p*



346

Musical score for measures 346-349. The top staff is a single melodic line with a treble clef and a common time signature. It begins with a whole rest, followed by a quarter note G4, an eighth note F#4, and a quarter note E4. The bottom staff is a piano accompaniment with a grand staff (treble and bass clefs). It features a triplet of eighth notes in the bass clef, starting with a whole rest, followed by a quarter rest, and then a quarter note G2. A black dot is placed above the first note of the triplet, and an 'x' is placed below the first note. The piece concludes with a fermata over a whole note G4 in the top staff.



350

Musical score for measures 350-353. The top staff is a single melodic line with a treble clef and a common time signature. It begins with a whole rest, followed by a quarter note G4, a quarter note F#4, and a quarter note E4. A long slur covers the notes G4, F#4, E4, D4, C4, and B3. A piano dynamic marking 'p' is placed below the first note of the slur. The bottom staff is a piano accompaniment with a grand staff. It features a palm mute symbol in the bass clef, followed by a triplet of eighth notes starting with a whole rest, and then a quarter note G2. A black dot is placed above the first note of the triplet, and an 'x' is placed below the first note. The piece concludes with a fermata over a whole note G4 in the top staff.

If too early, improvise very spaciouly on these materials

(sndfiles: last attacks  
1:11 ends at 418 secs  
2.09 at 341 secs)

