

# *Diabolus*

For percussion, soprano,  
live sound transformation and electroacoustic material

Duration 11'20

Natasha Barrett 1999



**NB**  
noter

*This music is copyright protected*

# Diabolus

For Soprano, percussion, live sound transformation and electroacoustic material.  
(Note: Three performers)

## General Information

To execute the live sound transformation a performer in addition to the instrumentalists is required (for details of live sound transformation see technical set-up). This performer should rehearse with the instrumentalists and feel together in the ensemble.

The third performer has been chosen to execute the live sound transformation so that less demand is placed on the instrumental performers, who are nevertheless responsible for the timing and synchronisation of the electroacoustic material.

## Programme notes

The causes behind periods of ‘diabolical havoc’ often go unexplained and fall into the realm of superstition and hearsay. Inspired by two sources: the work of the Russian author Mikhail Bulgakov, which is a collection of fiction combining satire, irony, and humour; and dynamic solar activity which, although factual, we know little about, I designed the materials and structure of Diabolus to capture these periods of unexplained ‘havoc’.

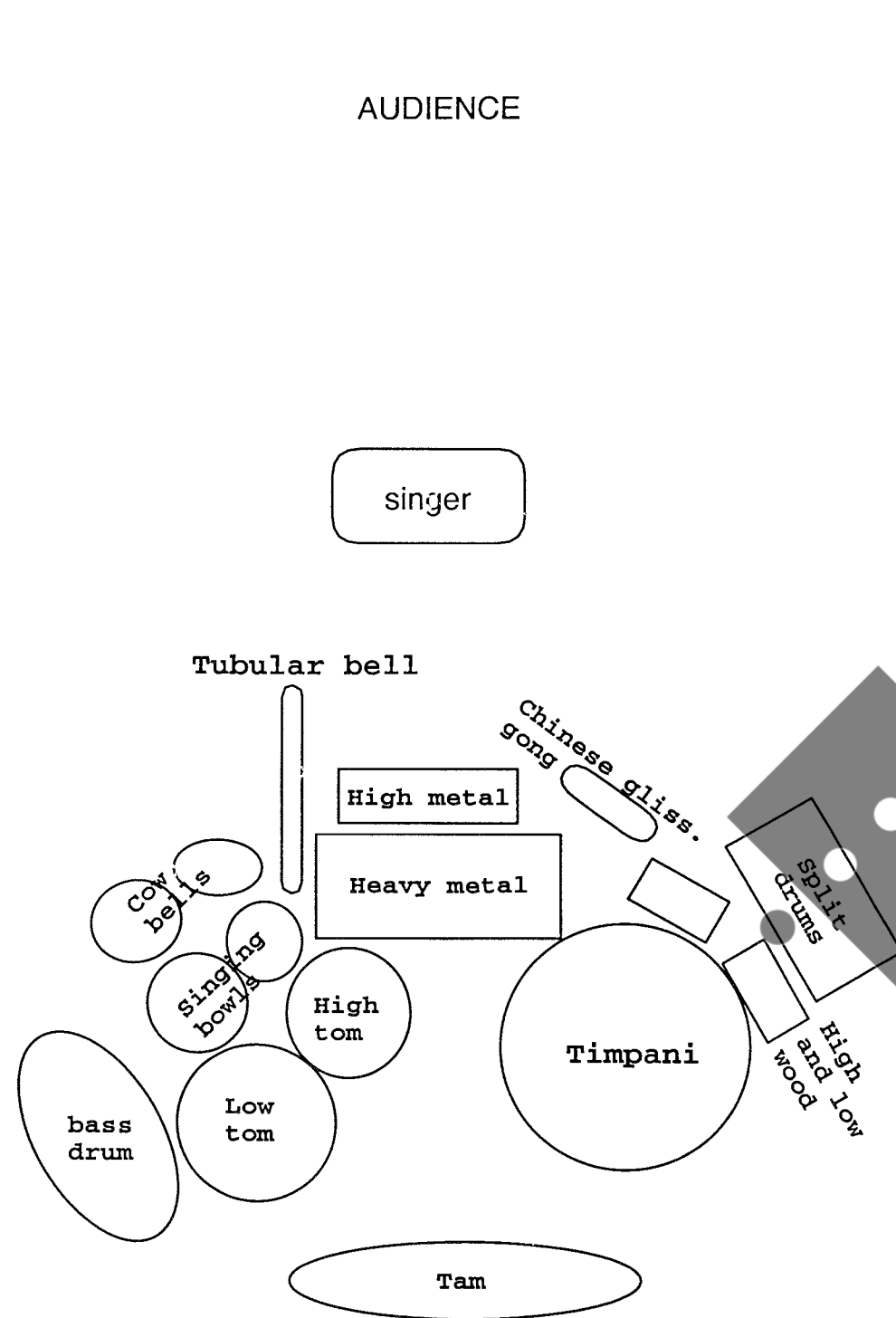
Our lives depend on the sun as a source of light and heat. However, the sun is also the source of the solar wind, which is a flow of gases buffeting the earth’s magnetic field resulting in, among other effects, power surges and the destruction of electrical equipment over expansive areas. The production of solar winds is closely related to sunspot activity, and during periods of high sunspot activity there can be seen an increased havoc in society on Earth. Both the macro and micro structure of Diabolus is derived from this activity: the duration and contour of the sunspot cycle, the time it takes the sun to fully rotate, the relationship between magnetic fields, the pairing and speeds of solar winds and their arrival at Earth.

The text of Diabolus is taken from key phrases remaining in my memory from the Bulgakov text “The Master and Margarita”, combined with snapshots from Goethe’s Faust (German original). These two literary sources seemed to be appropriately coupled; both dealing with interactions between the Devil and the soul. Much of the time the text in Diabolus is fragmented and recombined through the use of permutations, such that the grammatical structure is destroyed. In contrast, key points in the structure are marked by linguistically clear articulations.

## Performance Instructions

1. The conventional tape part is divided into 26 separate sound files, triggered live by the *singer* as she performs the material in the score. This is designed to assist the performers in playing together with the acousmatic material and allow them more freedom in timing and live phrasing.
2. The sound files vary in length and are designed such that they overlap from between two to 50 seconds. However, the performers should exercise only subtle timing freedom - as if the trigger points are flexible joints. In this way, the pre-prepared material is controlled by the composer, while the ‘joints’, which occur at points of low structural importance or where rubato would normally be inhibited by an inflexible tape part, allow the performers to achieve significant timing freedom effective on a global structural level. Where the material requires only general synchronisation, the performers can achieve further freedom, knowing that the next ‘duration’ of material will begin when they decide. This method of arranging the acousmatic material should also simplify the learning process: the vague anticipation of events, indecision over the timing of quiet ‘tape’ entries, and ambiguities over the high point of a climatic surge, are reduced by the performers’ more accurate judgement over the current location in the score.
3. Despite this triggering method, it is nevertheless vital for the performers to learn the acousmatic material such that they are not only able to anticipate the next articulation, but to also interact musically with the highly gestural nature and dynamic range of the composition as a whole.
4. Live sound transformations are used to transform the live material in a dramatic manner. A third performer reads from the score points to activate the various MSP patches. The instrumental performers should also be aware of this live part. In the score, brief indications as to the type of transformation are given.
5. The singer triggers all sound files. She must give cues to the percussionist at points where he should synchronise with her ‘trigger’ (e.g. page 5, T5), and she also cues the computer performer at points where exact timing is required (e.g. page 6 sampling). The percussionist should be able to visually see the singer pressing the foot pedal.
6. The graphic score provides a visual guide to the acousmatic material. It is however only one interpretation and performers will find it useful to add their own memory aids.
7. A CD is provided for rehearsal purposes. It contains a version of the complete electroacoustic part on which are recorded fragments of live vocal and percussion material to initially assist in score following. The next 26 tracks are the individual sound files triggered in performance. This CD is not for final performance. A CDr of materials is available from the composer.

## Diabolus: performance and instrument set up



## Notation

Voice:

Spoken or whispered *(or shouted)*



Half voiced sound



Slow vibrato increasing in modulation width



Glissandi down / up from note



The singer should practice microphone techniques: moving close to the microphone during whispered or intimate material, moving back from microphone during loud passages.

The singer triggers all sound files. She must give cues to the percussionist at points where he should synchronise with her 'trigger' (e.g. page 5, T5), and she also cues the computer performer at points where exact timing is required (e.g. page 6 sampling). The percussionist should be able to visually see the singer pressing the foot pedal.

Percussion:

See score insert for instrumentation.

Brushes

Soft sticks

Hard sticks

“Swishing” with brushes

Glissandi to any pitch up / down

Rim

Dead stroke

General:

Percussion instrumentation

*High metal* = nine very high resonant metal instruments (e.g. chimes, Indian bells, small triangle).

*Heavy metal* = six heavy or rusty, dead sounding metal objects.

*Cow bells* = two almglocken cowbells, pitches low: A, high: F. **BUFFALO BELLS**

*Bowls* = singing bowls, pitches low: B, high: E.

*Tubular bell* = a large tubular bell

*Timpani + cymbal* = large cymbal resting on skin of timpani with pitch range ~ B - E. (On page 6 the B bowl is briefly substituted for the cymbal).

*Drums* = low tom and high tom.

*Bass drum + misc.* = small bass drum (to give a low but not over resonant sound), plus extra instruments: medium tam and shouting gong. (Chinese gliss gong), Indian chime or Linger bell.

*Cabassa* = cabassa

*Split drums* = large and medium split drums.

*High wood blocks* = three high wood blocks.

*Low wood blocks* = three low wood blocks.

wooden stick or end of beater.

metal stick - as text.

HIT RIM OF DRUM

EXACT SYNCHRONISATION BETWEEN PERFORMERS & ELECTROACOUSTIC PART

TRIGGER POINT

GRAPHIC ELECTROACOUSTIC PART

TIME LINE IN SECONDS

PP

clearly articulated whispered, close mic.

0'05

PP

Heavy metal

Tubular bell

LIVE SOUND TRANSFORMATION: EXECUTE AS INSTRUCTION. (SEE LIVE SET-UP AND EXECUTION).

Live transformations

MSP 1. ON (sampled segments delayed and panned)

Percussion = left input; voice = right input

Balance volume with performers

INDICATION OF TYPE OF TRANSFORMATION

POINT WHERE LIVE TRANSFORMATION IS ACTIVATED TO CAPTURE OR TRANSFORM A SPECIFIC NOTE.

high metal

heavy metal

cow bells

bells

tubular bell

timpani + cymbal

drums

bass drum + misc.

cabassa

split drums

high wood blocks

low wood blocks

## Diabolus : Text

Pages 1 - 4

Deser-ted pitiless sun deser over ted his head pitiless and filled his sun deser ted ears pitiless sun pitiless catch him! Pitiless sun deser fire ted pitiless o sun deser ver his ted pitiless head and sun deser filled his ted ears with in fire deser over catch his pitiless sun deser head and filled his ears ted with fire sun over his scorched head and filled pitiless his ears with sun storm of dust fire pitiless sun in the over his head and pitiless sun morning rang out.

Pages 6 - 8

Waren die dunkein  
Wolk en  
Sternelein  
Funkeln  
Mildere sonnen  
Melting there was a silence

Pages 9 - 12

Opaque purple wave swam before  
Strange water swayed  
Within it float  
Away some where  
Moonlight seethed  
Sun

Pages 13 - 19

Everything become jumbles and suddenly  
Fire air condensed and spun into a  
Deserted sun, who calls  
His ears catch with sun fire o sun hear me with head and unable to understand what had frightened him o filled his ears with fire over catch his he has appeared! Catch him! At once!  
Diaboli, who calles me?

Hear me  
Unable to understand what had frightened him  
He has appeared, catch him, unable to he understand has what had appeared fright catch him he has appeared understand catch him he has fright appeared unable catch him he to has understand appeared catch had him he has appeared fright unable catch him he to understand has  
Hear me, one and all, he has appeared, catch him at once, or he will work untold disasters.

Hear hear me, one and all, catch,  
Schwindet ihr dunkeln,  
Wolbungen droben,  
Reizender schaue,  
Freundich der blaue

Panic stricken but when he opened his eyes everything had dissolved

Pages 20 - 21

Am I, again, deluded, dreamt I, some mere illusion, before my eyes, melting, there was a silence.

Spirit, bending, wavering, hover.



Percussion enlargement for rehearsal pages 12&13

55

heavycrb.

55

bowls

55

t.b.

55

timp.

55

drums

55

b.d.+

*mf*

*f*

57

heavycrb.

57

bowls

57

t.b.

57

timp.

57

drums

57

b.d.+

*sfz*

*sfz*

*sfz*

*sfz*

*sfz*



**NB**  
noter

*This music is copyright protected*



# Diabolus

*(pp)*

**T1**

$\text{♩} = 124$

0'05 0'10 0'15 0'20

clearly articulated  
whispered, close mic.

*pp* *pp* *gliss* *p*

deser ted pitiless sun deser over ted his head pitiless and his sun deser ted ears pi\_ti\_less su u n pi\_ti\_less

metal stick

Heavy metal *mp*

Tubular bell *sfz*

MAX/MSP MSP 1. ON (sampled segments delayed and panned)  
Percussion = left input; voice = right input  
Balance volume with performers

**T2** (sung vocal type)

0'25 0'30 0'35 0'40

*sfz* *sfz* *p* *gliss*

catch! him! with pi\_ti\_less sun deser fire ted pi\_ti\_less o sun de\_ser ver his ted piti le ss head and sun

heavy m.

t.b. *sfz*

MAX/MSP MSP 1. cont.

*This music is copyright protected*

Handwritten musical notation at the top of the page, including a wavy line and a box labeled "T4" with a downward arrow. Below this, a timeline with time markers: 0'45, 0'50, 0'55, and 1'00. The notation is partially obscured by a label "(half submerged by tape material)".

voice

de\_ser filled his ted ears with i\_n fire de\_ser ov\_er catch his pi\_ti\_less s\_un de\_ser head and filled ted ears with fire sun ov\_er his sco\_orched head and filled pi\_ti\_less his ears with sun

high m.

heavy m.

t.b.

*sfz* *mp* *mp* *p* *sfz*

MSP 1. cont.

Keep levels low in balance with performers

MAXMSP

voice

st\_orm of dust fire pi\_tiless sun in the over his head pitiless sun mor\_ning ra ng out

high m.

heavy m.

t.b.

1'05 1'10 1'15 1'20 1'25

*f* *subito ff* *pp* *f*

MSP 1. cont

MSP 2. (ringing FFT).

MAX/MSP

Right input (voice) only. Routed automatically in MSP.

voice

high m.

heavy m.

c.b.

bowls

timp.

b.d.+

MSP 3. (glissandi)

Left input = percussion; right input = percussion.  
Balance levels with percussion.

1'30 1'35 1'40 1'45

T5

5 sfz

3 3

on cymbal

on skin

on cymbal arco

with hands on skin

mp

gliss

mp

with hands

with hands on skin

MAX/MSP

(pp) 1'50 T6 1'55 T7 2'00 2'05

voice *pp* *gliss* Wa ren die dunk eln wol k en *p* *p*

c.b. 21

bowls 21

t.b. 21

timp. 21 bowl on timp

drums 21

b.d.+ 21

(ring mod. result: b flat above, c# below)

(ring mod. result: b above, g below)

MSP 4. (ring modulation, panning and reverb.)  
 Activate MSP timing to sync with voice.

2'10 2'15 2'20 2'25

T8 T9

mf

sternelein

c.b.

bowls

t.b.

timp.

drums

b.d.+

MSP 4. cont

Live tr.

(ring mod. result:  
~e# above, d# below)

This music is copyright protected

Natasha Barrett 1999



Handwritten musical score for a piece titled "Silence". The score includes a vocal line and several percussion lines. The vocal line features lyrics in German and English, with dynamic markings *p* and *mf*. The percussion lines include a high m. (metal stick), timp. (replace cymbal), b.d.+ (bass drum), and cbs. (cymbal). The score is marked with time stamps 2'30, 2'35, 2'40, and 2'45. A box labeled "T10" is present above the vocal line. The score is marked with "MAX/MSP" and "MSP 4. OFF".

Handwritten musical score for a piece titled "Silence". The score includes a vocal line and several percussion lines. The vocal line features lyrics in German and English, with dynamic markings *p* and *mf*. The percussion lines include a high m. (metal stick), timp. (replace cymbal), b.d.+ (bass drum), and cbs. (cymbal). The score is marked with time stamps 2'30, 2'35, 2'40, and 2'45. A box labeled "T10" is present above the vocal line. The score is marked with "MAX/MSP" and "MSP 4. OFF".

MAX/MSP

MSP 4. cont

(ring mod. result: ~ c# above; f# below.)

(ring mod. result: ~ b flat above; c# below.)

MSP 4. OFF

MSP 4b. ON (light glissandi with reverb.)

Left input = percussion only. Routed automatically in MSP. Balance quieter than live percussion.



(silence)

2'55 3'00 3'05 3'10 3'15 3'20 3'25

voice *mp* no vibrato *mf* molto vibrato no vibrato *p*

o\_paque p\_ur\_ple wa\_ve sw-am be\_fore str\_ange wa\_ter swayed with\_in it float

high m.

cbs. *p*

sp.dr.

h.w. *p*

l.w. *p*

MSP 4b. cont

(SILENCE)

voice 37 *molto vibrato* *mf* 3'30 3'35 3'40 *mp* 3'45 3'50 3'55 *mf*  
 a way some

h.w. 37

↓ (sample 1) ↑ (Sample 2, playback sample 1.) ↑ (Sample 3, playback samples 1 and 2.)

MSP 4b cont  
 MSP 5. ON (sample and trigger play back with reverb.  
 right input = voice only  
 routed automatically in MSP.)  
 MSP 4b. OFF

(SILENCE)

voice 40 T11 4'00 4'05 4'10 4'15 T12 4'20 4'25 T13 4'30  
 p *mp* *mp*  
 where moon light

high m. 41 *mf*

h.w. 41 *mp* *f* *p*

Live tr. MSP 5. cont ↑ (Sample 4, playback samples 1, 2, 3.) ↑ (Sample 5, playback 1,2,3,4.) ↑ (Sample 6, playback 2,3,4,5.)

Handwritten musical notation at the top of the page includes various notes, rests, and dynamic markings. Time stamps are present: 4'35, 4'40, 4'45, 4'50, 4'55, 5'00, 5'05. Two boxed labels, T14 and T15, are connected to the notation by arrows. The main musical score consists of four staves: voice, sp.dr, h.w, and l.w. The voice staff includes lyrics: "see", "thed", "su", and "N". Dynamic markings include *mp* and *f*. Performance instructions include "crisp and exact" and "Live tr.". At the bottom, two boxes are labeled "MSP 6. ON" and "MSP 6. OFF", with arrows pointing to specific measures in the score.

Natasha Barrett 1999



Handwritten musical notation at the top of the page includes a wavy line with the word "mezzo" written above it, and another wavy line with the phrase "(who calls..me....)" written above it. Below these are two boxes labeled "T16" and "T17" with arrows pointing down to the vocal staff.

voice 49 *molto stac.*  
eve\_ry thing be\_came j\_um\_bled and su\_dden\_ly  
fire air con\_densed and spun into a deser\_ ted sun  
who call\_s\_s his ears  
*mf* *f* *mp*

heavy m. 49  
keep this clear *mp* *ff* *mp*

c.b. 49

bowls 49

t.b. 49

cbs. 49 *sfz* *p* *ff*  
Chinese gong

MAX/MSP

MSP7. ON (sampled segments delayed and panned)  
Percussion = left input  
Voice = right input  
Balance volume with performers

Handwritten musical notation at the top of the page, including a complex staff with various notes and markings, and three boxed labels: T18, T19, and T20.

5'40 5'45 5'50 5'55 6'00 6'05 6'10

voice 53 *mf* catch with sun fire o\_sun hear me! with head and 3 unable to understand what had *ff* *sfz* gliss fri\_tened him *f* o-

heavy m. 53 *mp* *f* *mp* *f* *mf* *f*

c.b. 53

bowls 53

t.b. 53

timp. 53 *sfz*

drums 53 *sfz*

MSP 7. cont

Live tr.

Natasha Barrett 1999

Handwritten musical sketch at the top of the page shows a melodic line with various ornaments and a large, dense, cross-hatched section. Time markers 6'15, 6'20, 6'25, 6'30, 6'35, 6'40, and 6'45 are indicated along the sketch.

**voice**  
 57 filled his ears with fire over catch his he has appeared! catch him! at once! Di a a  
 forcefull and clear *f* *f*

**heavy m.**  
 57

**c.b.**  
 57

**bowls**  
 57

**t.b.**  
 57

**timp.**  
 57 any pitch *sfz*

**drums**  
 57 *sfz*

**b.d.+**  
 57 *sfz* bass drum and medium tam (ls)

Live tr. Plus percussion sample and transpose via trigger.

MSP 7. cont (Sample and transpose. Be quick!) (Sample and transpose. Be quick!) (Sample and transpose. Be quick!) MSP 7. OFF

**T21**

*This music is copyright protected*



(BIG TEXTURE)

6'50 T22 6'55 7'00 7'05 7'10 7'15

voice 61  
bo\_li who calls me hear me! *ff* hear me! unable to understand what had frigh\_tened him he has appeared catch him to he under stand has what had appeared catch him

c.b. 61

bowls 61

t.b. 61

timp. 61

drums 61

sp.dr 61

h.w 61

l.w 61

*ff* *ff*

MSP 8a+b. ON  
(a = glissandi  
b = shuffling)  
Level of 8b begins at 0

Bang level  
input for 8b

STOP  
patch8a

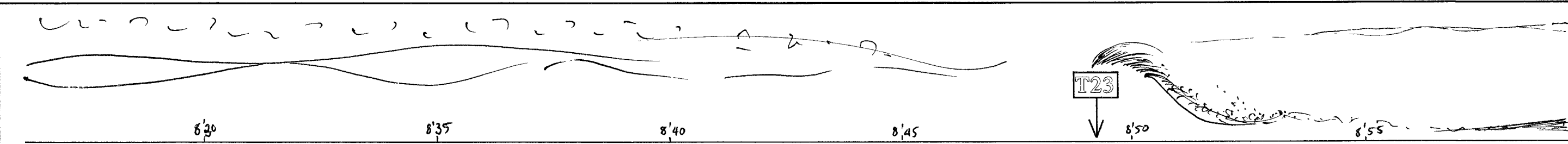
Live tr.

Natasha Barrett 1999









8'30 8'35 8'40 8'45 8'50 8'55

voice

heavy m.

timp.

sp.dr

h.w

l.w

Live tr.

73

73

73

73

73

73

73

mf accel.

gliss

panic stricken but when he opened his eyes everything had dissolved

pp

ls

MSP 9 (panning delay with reverb on percussion, sample and playback on voice)  
Left input = percussion  
Right input = voice

Natasha Barrett 1999

9'00 9'05 9'10 9'15 9'20 9'25 9'30

(silence)

T24

voice 770 *p* am I a\_gain\_n de\_lu\_ded dr\_eamt I some mere i\_llusion be\_fore my eyes mel\_ting

timp. 77 *arco* \* *slow and full - lead into tape* \*

MSP 9 cont. (sample 1) (sample 2) (sample 3, play 2) (sample 4) (sample 5, play 4) (sample 6, play 1)

MAX/MSP

9'35 9'40 9'45 9'50 9'55

(sung voice)

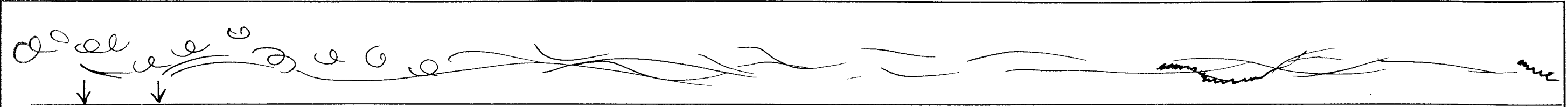
voice 810 *pp* there was a si\_lence spi\_rit ben\_ding wa\_ve\_ring ho\_ver *p* NO TEXT *mf* *molto vibrato* *s*

high m. 81 metal sticks 3 5

b.d.+ 81 with hands

MSP 9. OFF

MSP 10. ON (increasing vibrato).  
Right input = voice only. Routed automatically via MSP.  
Take care to balance live voice and MSP



voice 85

drums 85

sp.dr 85


MAX/MSP

MSP 11. ON  
(sample, ring mod. and reverb)  
(Right input = voice only. Routed automatically via MSP)

with hands *p*

(ring mod: ~ c# above, b below Sample 1)

(ring mod: ~ c above, b below Sample b, f)



voice 89

high m. 89

sp.dr 89

MAX/MSP

MSP 11. cont  
(ring mod: ~g# above, f# below, sample3, play 1 + 2)

metal stick *pp*

with hands *pp*

(ring mod:tremolo. Play samples 3 +4)

Fade effects level to zero

Sound cont. to 11'20