

Roberto Doati

1992

Donna che si copre le orecchie per proteggersi

dal rumore del tuono

per suoni di flauto e suoni sintetici

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"Donna che si copre le orecchie per proteggersi dal rumore del tuono"

(1992)

per suoni di flauto e suoni sintetici
for flute sounds and synthetic sounds

Presentazione

L'opera, commissionata da SpaziomusicaRicerca (Cagliari, 1992) è concettualmente divisa in tre parti.

La prima ha un carattere "primordiale". Attraverso modalità esecutive che privilegiano il rumore (slap, jet whistles, ruggiti, tongue ram), emergono le componenti base della macchina flauto (strumento + esecutore): il tubo sonoro, il soffio, il respiro, ecc. Il computer viene usato per modificare, senza snaturare, i suoni del flauto, in particolare con dilatazioni/compressioni temporali e trasposizioni di altezza. Le due nature, suoni di flauto e suoni sintetici, evolvono nella seconda parte seguendo un percorso "culturale" che gli è proprio: il flauto esegue dapprima segmenti microtonali, poi trilli timbrici su più ampi intervalli melodici e infine suoni multifonici. I suoni sintetici, timbricamente sempre più complessi, evidenziano le differenze, soprattutto prosodiche, con lo strumento acustico.

Infine la terza parte (una forma aperta?) vede l'apparizione di nuove "nature" sorte dall'incontro dei due mondi sonori: l'acustico e l'elettronico. Con una sorta di Live Electronics simulato (tutti i suoni del computer sono trattamenti in tempo differito dei suoni che il flauto produce dal vivo) la composizione si conclude in una "atemporalità" articolata con grandi pause.

Nell'anno delle celebrazioni della "scoperta" dell'America, la donna del titolo è una donna india che si difende da quello che crede essere solo l'annuncio di un temporale: è invece lo spietato avanzare degli "dei bianchi" scandito dal tuono dei loro cannoni.

Roberto Doati

Presentation notes

This work, commissioned by Spaziomusica Ricerca (Cagliari, 1992) is conceptually divided into three parts.

First part has a primordial character. Through the use of playing techniques which give rise to noisy sounds (slaps, jet whistles, roaring, tongue rams), I tried to outline the basic components of the "flute machine" (instrument + player): the pipe, the blowing, the breath, etc. Here the computer is used to modify, while not altering the original sound nature, the flute sounds through temporal stretching/compression and pitch transposition.

Flute and synthetic sounds follow, in the second part, a "cultural" trajectory. First the flute produces microtonal sequences, then timbral trills on larger melodic intervals and finally multiphonic sounds on single sustained tones. The synthetic sounds become timbrally more and more complex, pointing out, above all, the prosodic differences with the acoustic instrument.

New "natures" (a cross fertilization between acoustic and electronic worlds) are travelling in the third and last part (open form?). Through a simulation of Live Electronics (all the computer sounds in the third part are deep transformations of the tones played by the flute on stage), the work reaches a no-development stage. Each new cross-sound is presented isolated, so the listener can appreciate its inner formal richness.

In the year of America's "discovery" celebrations, the woman of the title ("Woman who covers her ears to shut out the noise of the thunder") is an Indian woman who protects herself from what she believes to be a storm coming. But it is the unmerciful advance of the "white gods" scanned by the thunder of their guns.

NOTE TECNICHE

L'opera è stata realizzata su personal computer con il programma di sintesi e trattamento del suono Music 5 nelle versioni del C.S.C., Università di Padova (Alessandro Colavizza) e L.M.A., CNRS di Marsiglia (Daniel Arfib). Tutti i suoni di flauto trattati sono eseguiti da Riccardo Ghiani. Il computer è stato utilizzato anche per la produzione della parte per flauto attraverso l'uso di programmi di aiuto alla composizione (che generano partiture grafiche) scritti dal compositore.

Per l'esecuzione è necessario un personal computer MS-DOS (almeno un 386 a 33 MHz) e due schede Audiologic (AudioBoard Plus) fornite dal compositore. Qualora le apparecchiature indicate non fossero disponibili, è possibile prevedere una esecuzione con nastro DAT. Il flauto è amplificato, e, in funzione della sala da concerto, dovrebbe essere sovrapposto a se stesso con un leggero ritardo (20 ms circa) avvalendosi di una semplice linea di ritardo per conferire maggiore profondità e presenza al suono senza modificarlo timbricamente.

Per l'esecuzione contattare il compositore al seguente indirizzo:
Roberto Doati, via Giorgione 66, 35020 Albignasego (PD)
Tel./fax: 049.8801120

TECHNICAL NOTES

The work has been realized on a personal computer with the sound synthesis and processing program Music 5 in the PC version of C.S.C., University of Padova (Alessandro Colavizza) and L.M.A., CNRS of Marseille (Daniel Arfib). All the flute sound processed are played by Riccardo Ghiani. The computer has also been used for the flute score production through compositional software written by the composer. This software generates graphic scores which have been partly transcribed into "conventional" notation, partly used for the synthesis of complex events.

The requirements for the performance are a personal computer (MS-DOS; at least CPU 80386, clock 33 MHz) and two ADCs Audiologic (AudioBoard Plus) owned by the author. Whenever the technical requirements cannot be satisfied, a flute + DAT performance could be considered. The flute is amplified and, according to the concert space, should be doubled with a little delay (20 ms ca.) in order to give more presence to the acoustic sounds without altering the timbre. So a simple delay machine is necessary.

For the performance of this work please contact the composer at the following address:

Roberto Doati, via Giorgione 66, 35020 Albignasego (PD) - I
Tel./fax: 0039.49.8801120

PARTE PER FLAUTO

FLUTE SCORE

Segni usati
Key to signs used

-  respiri presi senza interrompere il suono
breaths without breaking the sound
-  jet whistles senza variazione d'altezza
jet whistles not varying the pitch
-  jet whistles con glissando ascendente e discendente
jet whistles with upward and downward glissando
-  tongue ram (foro dell'imboccatura fra le labbra, occlusione veloce con la lingua)
tongue ram (hole of the mouthpiece between lips, quick blocking the opening with the tongue)
-  tongue ram (lingua nel foro, ritrazione rapida)
tongue ram (tongue in the hole, quick withdrawing)
-  durate libere
free durations
-  foro dell'imboccatura coperto
lips covering the hole of the mouthpiece
-  apertura delle labbra: ampia
lips opening: large
-  apertura delle labbra: stretta
lips opening: small

-  filtraggio con lingua (a gola chiusa): aperto
filtering with the tongue (closed throat): large
-  filtraggio con lingua (a gola chiusa): chiuso
filtering with the tongue (closed throat): small
-  durata della nota (riferimento: asse temporale in s)
note duration (rif.: temporal axis in s)
-  numero diteggiatura indicata al di sotto del pentagramma
number of fingering below the staff
-  colpo di chiave
key stroke
-  pizzicato (slap)
slap (tongued pizzicato)
-  suoni sussurrati (whistles tones). La lunghezza delle linee verticali indica approssimativamente l'altezza dei suoni
whistles tones. The length of vertical lines suggests the pitch of the different harmonics.

Le alterazioni valgono per una sola nota.
Alterations stand for one single note.

Donna che si copre le orecchie per proteggersi
dal rumore del tuono

per suoni di flauto e suoni sintetici

Roberto Doati (1992)

con Riccardo Ghiani

Respirazione circolare "irregolare"

[5]

[5]

#0
==



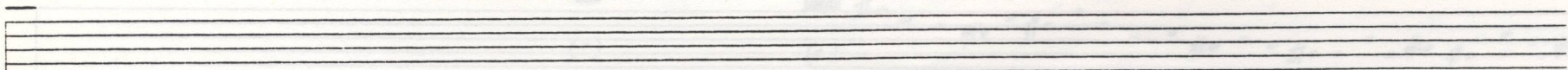
flauto

0 1" 2" 3" 4" 5" 6" 7" 8" 9" 10" 11" 12"

t

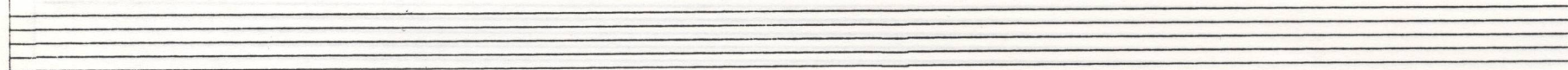
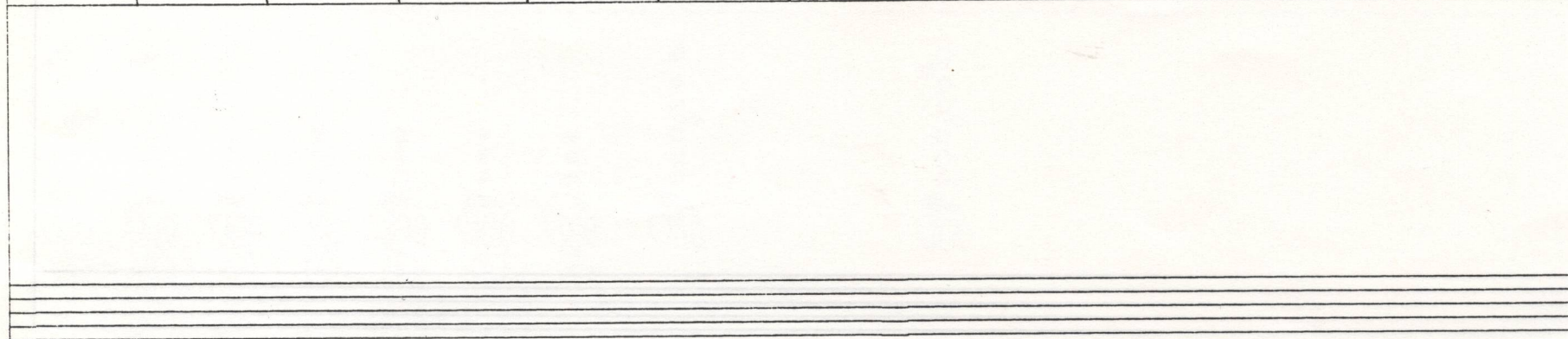
[3] [3] Soffio (note interne) con ruggine e con [3] d'ore //

(#0)



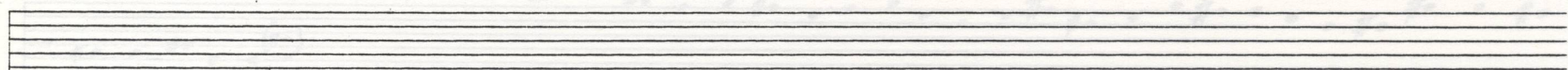
Calmo (primitivo)

12" 18" 24"



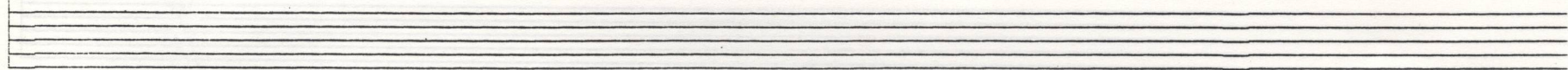
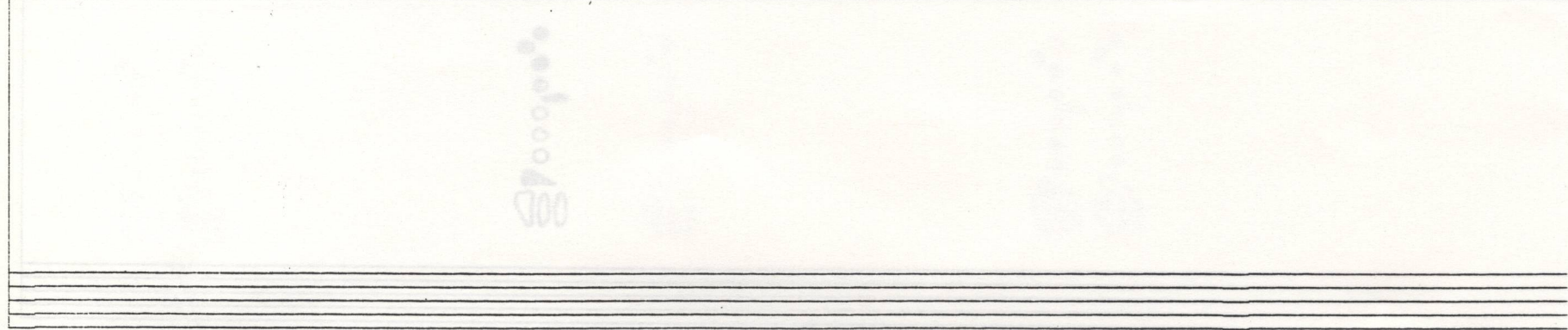
[3] [3] [3] Modalità [3] [3] [3] //

(#0)



Calmo

24" 30" 36"



[3] *Soffio (senza intonare) con ruggito e con un po' di voce*

calmo (primitivo)

36" 42" 48"

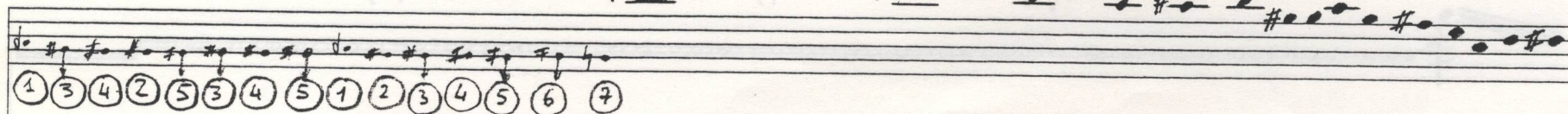
[Modalità precedente]

calmo

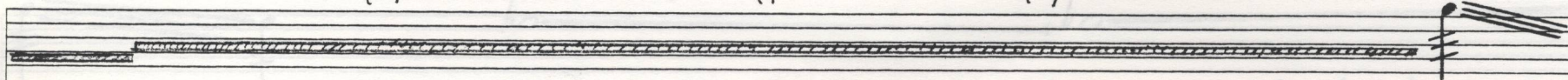
48" 54" 1'

[Modalità precedente]

[Modalità precedente]



[s] più sibilante
()



1'24"

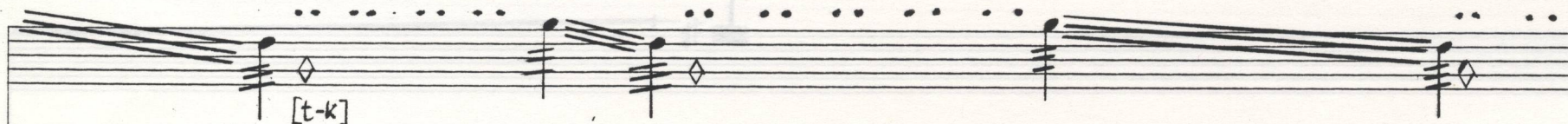
1'30"

1'36"



[Trillano
scoprire]

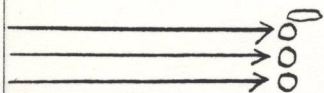
Senza fiato



1'36"

1'42"

1'48"



gradualmente
i fori]

Base $\subset$ alliscando

U. L.

ff

1' 54"

2'

2'

2'06"

2' 12"

Slap sull'espiazione

Bene articolato (a piacere)

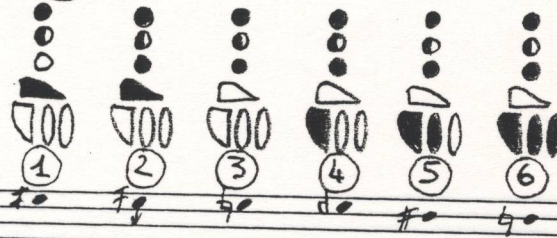
ff

2'12"

2'18"

2'24"

Modificazione continua dell'apparato fonatorio
secondo le vocali indicate



glissando

2'24"

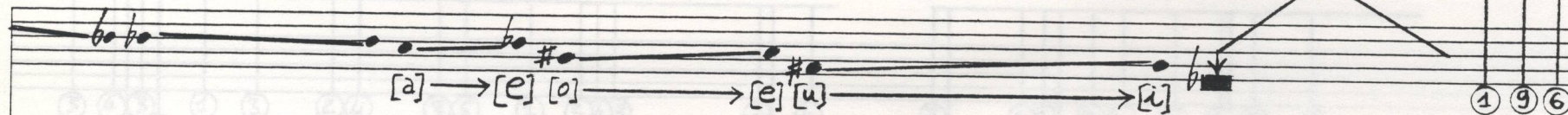
2'30"

2'36"

con ruggito

ruggito sempre più arrabbiato

● (con frullato di
lingua (senza suono))

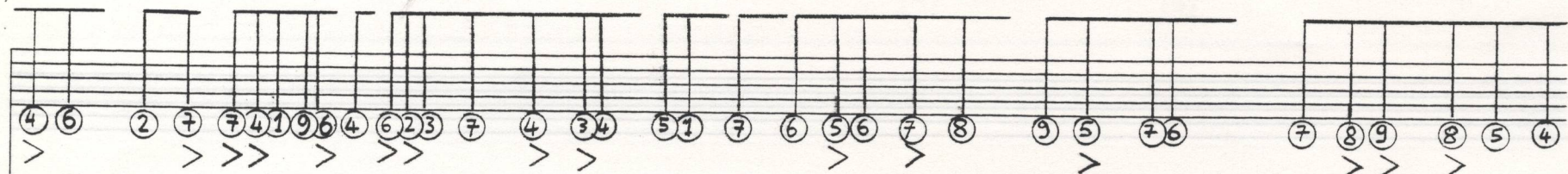


2'36"

2'42"

2'48"

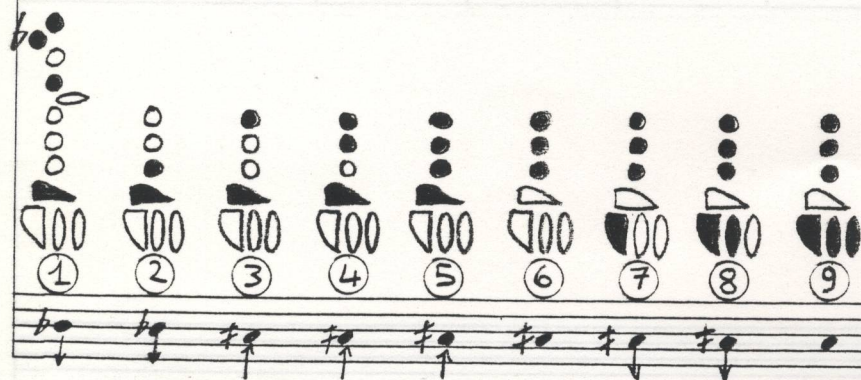
Modificazione continua dell'apparato fonatorio
secondo le vocali indicate



2'48"

2'54"

3'

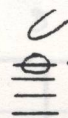


Respirazione circolare irregolare

Handwritten musical notation on a five-line staff. The notation consists of vertical stems with circled numbers below them, indicating fingerings. The sequence of numbers is: 3, 4, 3, 1, 3, 2, 4, 3, 5, 1, 2, 4, 3, 2, 4, 1, 7, 5, 6, 1, 2, 3, 4, 5, 6, 8, 9. There are also some symbols like '>' and '<' below some numbers. Below the staff, there is a horizontal timeline with tick marks. The time markers are: 3', 3' 06", and 3' 12".

Handwritten musical notation on a five-line staff. The notation consists of vertical stems with circled numbers below them, indicating fingerings. The sequence of numbers is: 3, 4, 3, 1, 3, 2, 4, 3, 5, 1, 2, 4, 3, 2, 4, 1, 7, 5, 6, 1, 2, 3, 4, 5, 6, 8, 9. There are also some symbols like '>' and '<' below some numbers. Below the staff, there is a horizontal timeline with tick marks. The time markers are: 3' 12", 3' 18", and 3' 24".

Respirazione circolare irregolare



3'24"

3'30"

3'36"

[2]

[3]

[5]

3'36"

3'42"

3'48"

[5]

Emissione regolare

A musical staff showing a sequence of notes. The notes are numbered 1 through 6, with some numbers repeated. A slur is drawn over the notes, with the text "come un lamento" written below it. The staff is divided into two sections by a vertical line. The first section is labeled "3'48''". The second section is labeled "3'54''". The staff ends with a double bar line and the label "4'".

A musical staff showing a sequence of notes. The notes are numbered 1 through 6, with some numbers repeated. A slur is drawn over the notes, with the text "come un lamento" written below it. The staff is divided into two sections by a vertical line. The first section is labeled "3'48''". The second section is labeled "3'54''". The staff ends with a double bar line and the label "4'".

A musical staff showing a sequence of notes. The notes are numbered 1 through 6, with some numbers repeated. A slur is drawn over the notes, with the text "come un lamento" written below it. The staff is divided into two sections by a vertical line. The first section is labeled "3'48''". The second section is labeled "3'54''". The staff ends with a double bar line and the label "4'".

A musical staff showing a sequence of notes. The notes are numbered 1 through 6, with some numbers repeated. A slur is drawn over the notes, with the text "come un lamento" written below it. The staff is divided into two sections by a vertical line. The first section is labeled "3'48''". The second section is labeled "3'54''". The staff ends with a double bar line and the label "4'".

, Dinamica ad libitum ma molto differenziata, come un parlato

The musical score is written on a grand staff with two systems. The first system covers the time range from 4'12" to 4'24", and the second system covers 4'24" to 4'36".

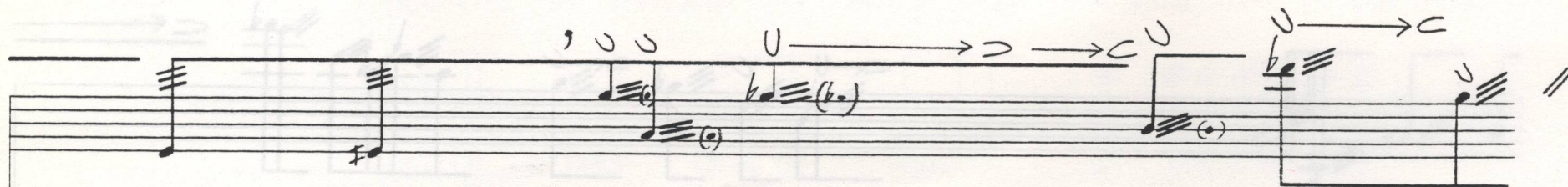
First System (4'12" - 4'24"):

- Staff 1 (Top):** Contains fingerings for various notes. Fingerings include (1 2 4 2 4 6), (5 4 6 1 3), (2 7 6), (8 10 9), (5 3 4), (1 3), (2 4), and (1 2). A slur is placed over the first two measures.
- Staff 2 (Middle):** Features a series of slurs over groups of notes, with fingerings (1) through (10) indicated below.
- Staff 3 (Bottom):** Contains a sequence of notes with a slur spanning measures 4'18" to 4'24", labeled "8^{va}".

Second System (4'24" - 4'36"):

- Staff 1 (Top):** Continues the fingering sequence with (3), (3 5 4), (1), (3 4 3 2 4), (5 6 7 8), and (10 9). A double bar line is present at 4'30".
- Staff 2 (Middle):** Shows slurs over groups of notes with fingerings (3), (4), (5), (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), and (11).
- Staff 3 (Bottom):** Continues the note sequence with a slur from 4'24" to 4'30".

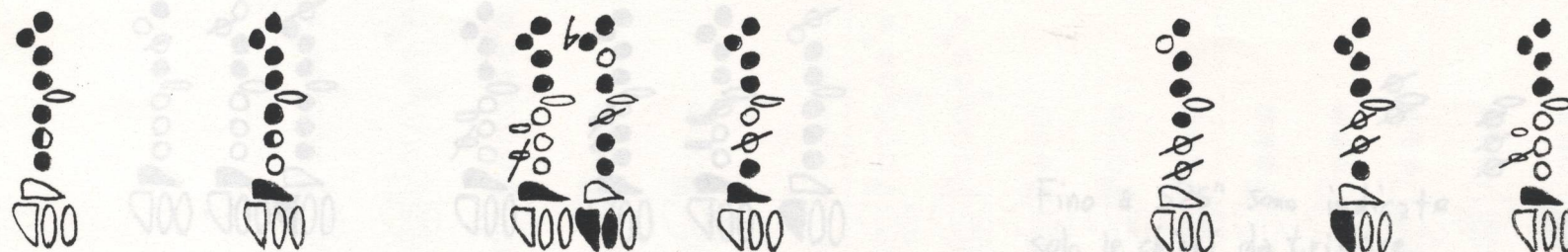
Dynamic markings include "Dinamica ad libitum ma molto differenziata, come un parlato" at the top and "Con soffio" in the second system.



4'36"

4'42"

4'48"

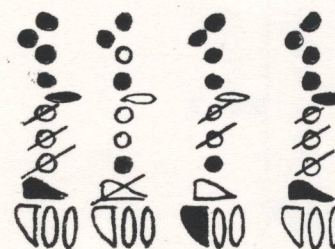
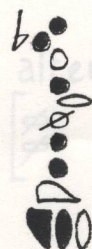
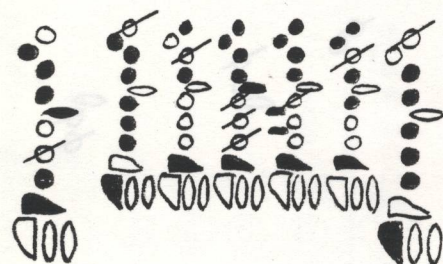


Con soffio

4'48"

4'54"

5'



Dinamica ad libitum ma molto differenziata, come un parlato

5' 5'06" 5'12" *mf*

Fino a 5'25" sono indicate
solo le chiavi da trillare

5'12" 5'18" 5'24" *p* *ff* *pp*

5'12" 5'18" 5'24" *alternate*

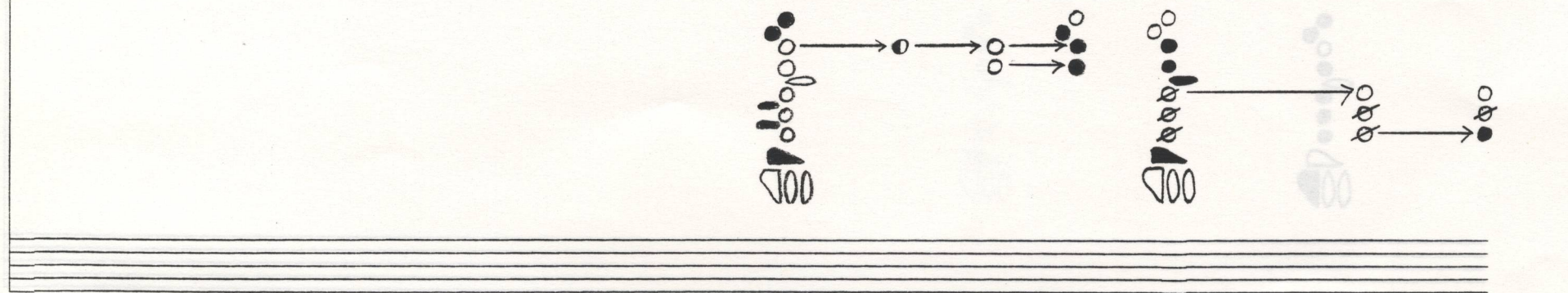
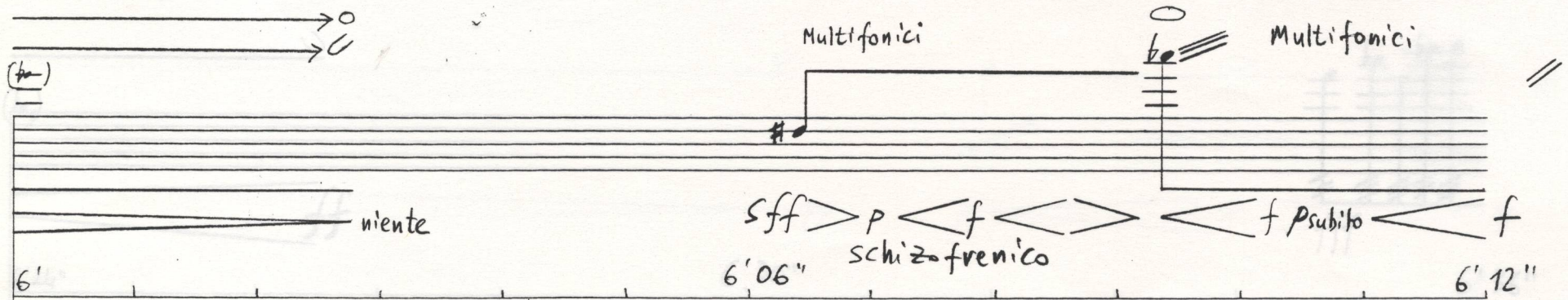
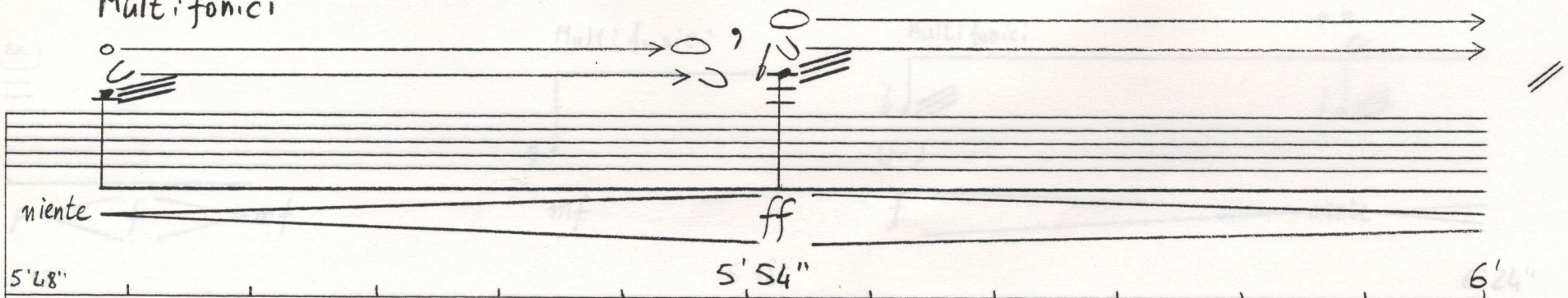
Multifonici

Dinamica ad libitum ma molto differenziata, come un parlato

Handwritten musical score for the first system. The top staff (treble clef) contains notes with fingerings: (1)3(2)3(4)3(5), (3)4(5), (1)2(3), (4)5(8)6(10)8(9)7. The middle staff shows fingerings (1) through (5) and (1) through (10) with articulation marks. The bottom staff (bass clef) contains notes with a bracket labeled 8^{va} . Time markers are 5'24'', 5'30'', and 5'36''.

Handwritten musical score for the second system. The top staff (treble clef) contains notes with fingerings: (2)4(1)3(5)6, (1)2(3)4, (5)6(2)7(3)4(5)6. The middle staff shows fingerings (1) through (6) and (1) through (7) with articulation marks. The bottom staff (bass clef) contains notes with a bracket labeled 8^{va} . The text "Evidenziare multifonici" is written above the final measure. Dynamic markings p , f , pp , and f are present. Time markers are 5'36'', 5'42'', and 5'48''.

Multifonici



(b.)

Multi fonici (premere molto la labbra)

Multi fonici

Multi fonici

30

$P \triangleleft f \triangleright mf$

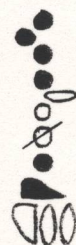
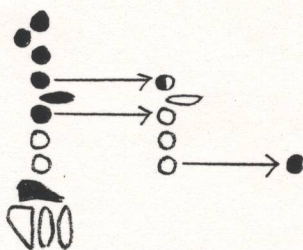
mf

$f \triangleright niente$

6'12"

6'18"

6'24"



(b.)

ff



6'24"

6'30"

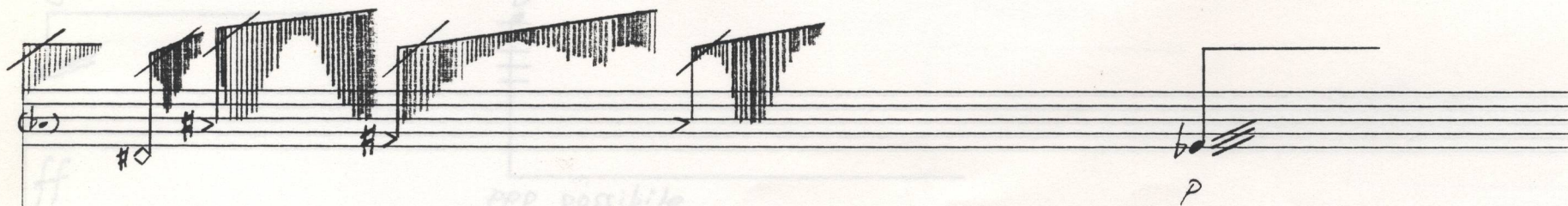
6'36"



Multifonici (premere molto le labbra)

Handwritten musical notation on a five-line staff. Above the staff, there are two 'C' symbols. The notation includes a series of slanted lines representing dynamics: p (piano), ff (fortissimo), pp (pianissimo), and ff (fortissimo). Below the staff, there are three time markers: $6'36''$, $6'42''$, and $6'48''$. To the left of the staff, there is a vertical sequence of notes and rests, with a double bar line at the end.

Handwritten musical notation on a five-line staff. Above the staff, there is a 'C' symbol. The notation includes a series of slanted lines representing dynamics: ppp (pianississimo), p (piano), f (forte), and pp (pianissimo). Below the staff, there are three time markers: $6'48''$, $6'54''$, and $7'00''$. To the left of the staff, there is a vertical sequence of notes and rests, with a double bar line at the end.



7'12" 7'06" 7'12"

alternare in modo irregolare

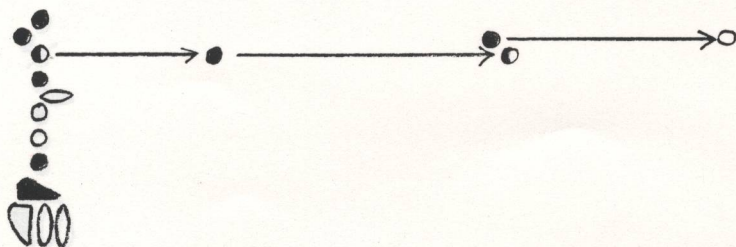


Interrompere il suono per: colpo di chiave

Multifonici
(battimenti)

mf

7'12" 7'18" 7'24"



Handwritten musical notation on a five-line staff. The first measure contains a whole note with a fermata, marked *ff* and 7'24". The second measure contains a whole note with a fermata, marked *ppp possibile* and 7'30". The third measure contains a whole note with a fermata, marked 7'36".

Handwritten musical notation on a five-line staff. The first measure contains a whole note with a fermata, marked *ff* and 7'24". The second measure contains a whole note with a fermata, marked *ppp possibile* and 7'30". The third measure contains a whole note with a fermata, marked 7'36".

Interrompere il suono
per i colpi di chiave

Multifonici

Handwritten musical notation on a five-line staff. The first measure contains a whole note with a fermata, marked *f* and 7'36". The second measure contains a whole note with a fermata, marked *ff* and 7'42". The third measure contains a whole note with a fermata, marked *mf* and 7'48".

Handwritten musical notation on a five-line staff. The first measure contains a whole note with a fermata, marked *f* and 7'36". The second measure contains a whole note with a fermata, marked *ff* and 7'42". The third measure contains a whole note with a fermata, marked *mf* and 7'48".

Multi fonici

(b_o)

ff

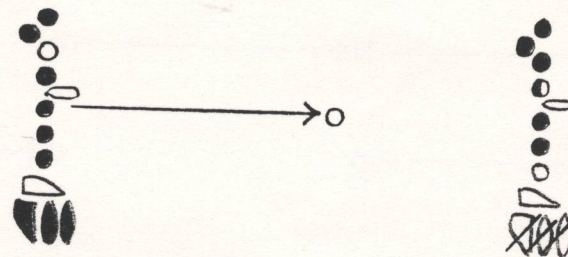
(evidenziare)

pp

7'48"

7'54"

8'



(#)

p

f

mf

8'

8'06"

8'12"



8^{va}

8'12" 8'18" 8'24"

pp mp fff

(#2)

8'24" 8'30" 8'36"

p f p

Multifonici (evidenziare la "melodia")

[illegible]

Multi fonici

Handwritten musical score for 'Multi fonici'. The score is written on a five-line staff. At the top, there is a treble clef with a sharp sign (#) on the first line. A horizontal line with an arrow pointing right is drawn above the staff. The main melody consists of a series of notes with dynamic markings: *f*, *p*, *f*, *pp*, *f*, *p*, *ff*, and *pp*. The notes are connected by slurs. A vertical line of dots is drawn to the left of the staff, with the word 'D' written below it. The time signature is 9/12. The tempo is marked as 9' 06" and 9' 12".

Interrompere il suono per i colpi di chiave

Handwritten musical score for 'Interrompere il suono per i colpi di chiave'. The score is written on a five-line staff. At the top, there is a treble clef with a sharp sign (#) on the first line. A horizontal line with an arrow pointing right is drawn above the staff. The main melody consists of a series of notes with dynamic markings: *ppp* possibile, *ff*, and *pp*. The notes are connected by slurs. A vertical line of dots is drawn to the left of the staff, with the word 'D' written below it. The time signature is 9/12. The tempo is marked as 9' 12", 9' 18", and 9' 24".

Handwritten musical notation on a five-line staff. The notation includes a treble clef with a sharp sign (#) and a common time signature (C). The first measure is marked with a double bar line and the text "PPP possibile". The second measure is marked with a double bar line and the text "9'24\"". The third measure is marked with a double bar line and the text "9'30\"". The staff is otherwise empty.

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R. A. Dent - August 1892