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# Cautious Interference

For a Quartet of Strings

(2006/7)

# Cautious Interference

A composition as part of a portfolio submitted for the degree of Doctor of Philosophy

By

Nicholas Rayfield Peters

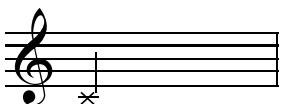
School of Arts, Brunel University

September 2009

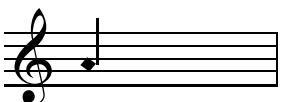
# Performance Notes

Duration: c.24minutes

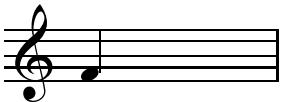
N	normale, arco or pizzicato on the normal position of the strings
s.t.	sul tasto, on the fingerboard
s.p.	sul pont, very near the bridge
vib.	vibrato
non vib.	no vibrato



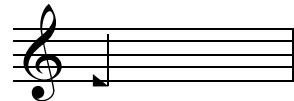
Flick bridge, flick your finger so that your fingernail strikes the side of the bridge making a knocking sound



A diamond notehead indicates a pitch that should be played using flautando bowing, producing a hollow and airy sound.



A black oval notehead indicates normal sounding pitches played in the conventional manner.



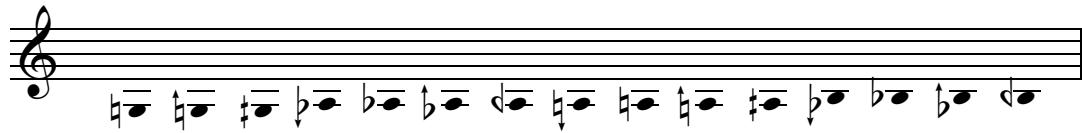
A triangular notehead (with a flat side as its base) indicates a deformed tone produced by increased bow pressure. This is combined with degrees of pressure outlined below:

H	High pressure (no pitch should sound, just bow pressure)
M	Medium pressure (pitch and increased bow pressure should sound equally)
L	Low pressure (pitch should be the prominent sound, with a slight hint of increased bow pressure)



Continuous transition (from one state to another)

Below is the ascending scale in eighth tone steps from G natural to B quarter flat. These are the only pitches used in the entire piece.



From page 1 – 31 the parts do not need to be co-ordinated vertically, the score is presented in its current form to illustrate the approximate vertical relationships between the parts. Instead, the priority in this section is that of the independent structure of durations for each part. At page 31 the performer that reaches the end of this section first should signal for the other performers to stop (regardless of where they are in their individual parts). After the 1 minute 36 second silence, the parts should be vertically co-ordinated for the remainder of the piece, as they share the same structure of durations.

Nicholas Peters, January 2007

### Programme Text

**Cautious Interference** can be performed in any combination of Violin, Viola and Violoncello. Additionally the piece is equally suitable for a soloist, with the other three parts multi-tracked onto a cd for simultaneous playback in performance. A small pitch range, utilising an eighth tone scale, combined with fixed block durations are explored throughout. Four independent parts are employed for the majority of the piece so that they appear to retread the same path as one another, yet in their own time and way.

# Cautious Interference

$\text{♩} = 86$  **rigorosamente**

Nicholas Peters

[Aa] **H** N non vib.  
 $\text{vib.}$   $\text{sffz}$   $\text{mp}$

[Bb] pizz. arco s.t. non vib.  
 $\text{sffz}$   $\text{mp}$

[Cc] con sord. arco s.p. non vib.  
[Flick Bridge]  $\text{4:3}$   $\text{3:2}$   $\text{3:2}$   
 $\text{mf}$   $\text{mp}$

[Dd] arco L  
 $\text{f}$

The score consists of four staves labeled [Aa] through [Dd]. Staff [Aa] starts with a dynamic **H**, followed by **N non vib.** with grace notes. It includes dynamics **sffz** and **mp**. Staff [Bb] shows **pizz.** and **arco s.t. non vib.** with dynamics **sffz** and **mp**. Staff [Cc] features a **Flick Bridge** technique with **con sord.**, **arco s.p.**, and **non vib.** dynamics **mf** and **mp**. Staff [Dd] uses **arco** and **L** with a dynamic **f**.

[Aa]  $\text{7:5}$   $\text{3:2}$   $\text{5:3}$   $\text{7:5}$

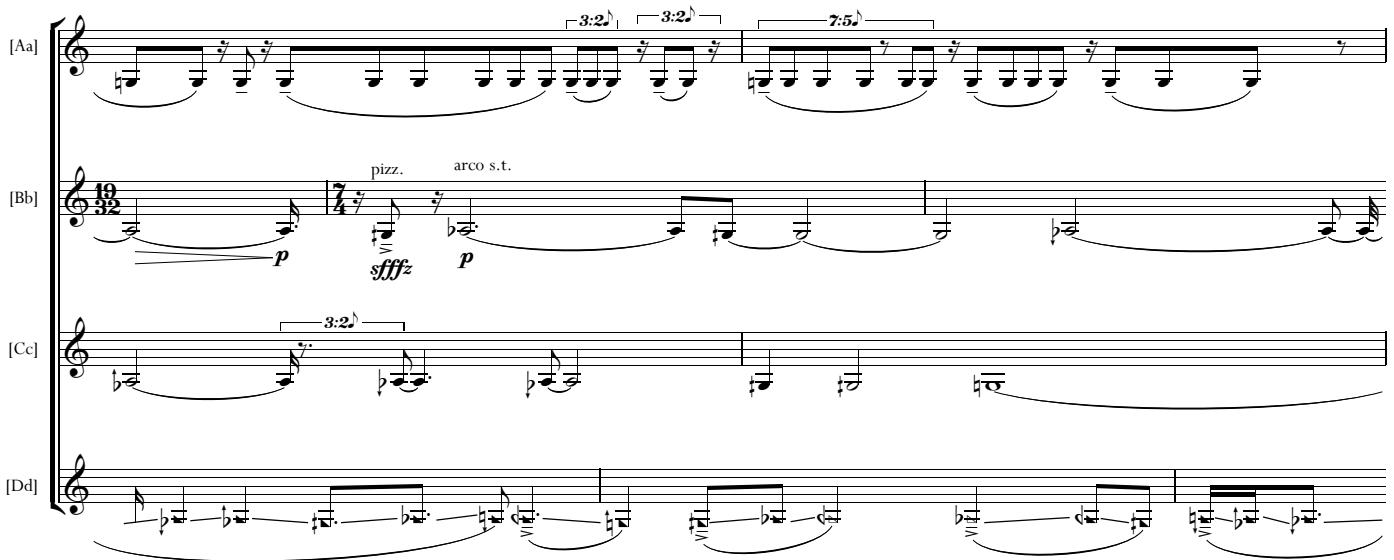
[Bb]  $\text{mp}$

[Cc]  $\text{4:3}$   $\text{3:2}$

[Dd]

The score continues from section [Aa] to [Dd]. Staff [Aa] contains measures with time signatures **7:5**, **3:2**, **5:3**, and **7:5**. Staff [Bb] has a dynamic **mp**. Staff [Cc] shows **4:3** and **3:2** measures. Staff [Dd] concludes the section.

[Aa] 

[Aa] 

[Aa] 

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb] pizz. arco s.t.  
sfz mf mp

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb] pizz. arco s.t.  
sfz p

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd] [Flick Bridge] con sord. 4:3

[Aa]

[Bb]

[Cc]

[Dd] 3:2 3:2

[Aa]

[Bb] pizz. arco s.t.

[Cc]

[Dd] sim. pp pp

[Aa]

[Bb]

pizz.  
arco s.t.

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

[Cc]

4:3

[Dd]

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

[Aa]

5:3

[Bb]

arco s.t.  
arco s.p.

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

[Cc]

3:2

[Dd]

*mf* *pp* *f* *mf*

[Aa]

3:2

3:2

4:3

7:5

[Bb]

L N  
*ff* *mp* *pp* *ff* *mf*

[Cc]

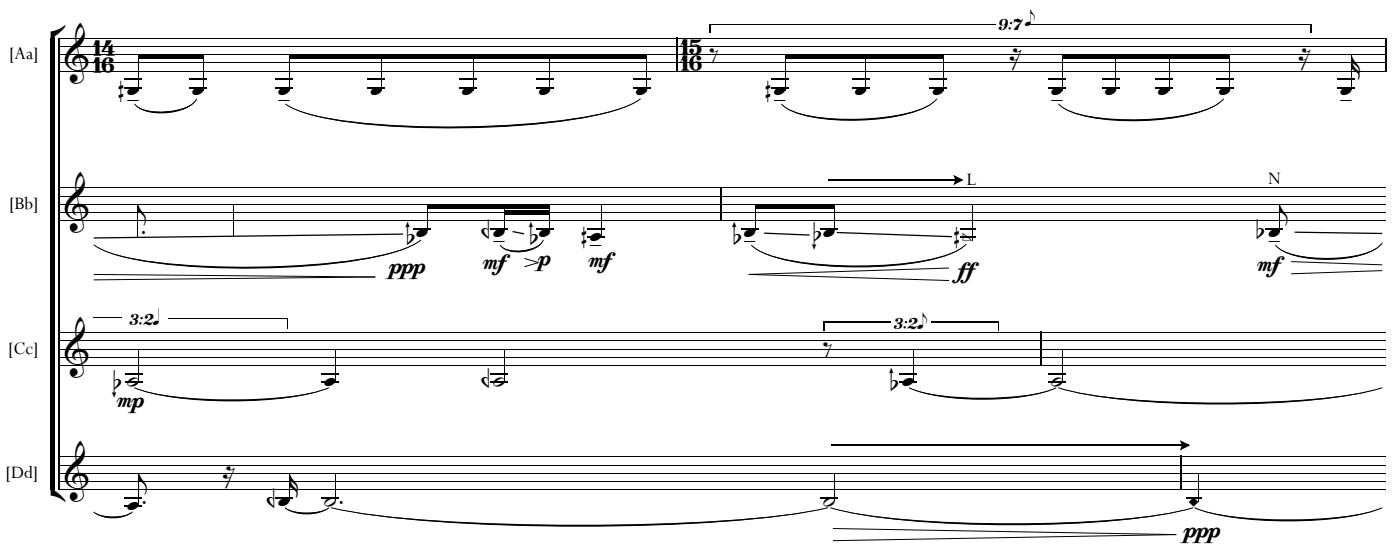
*mf*

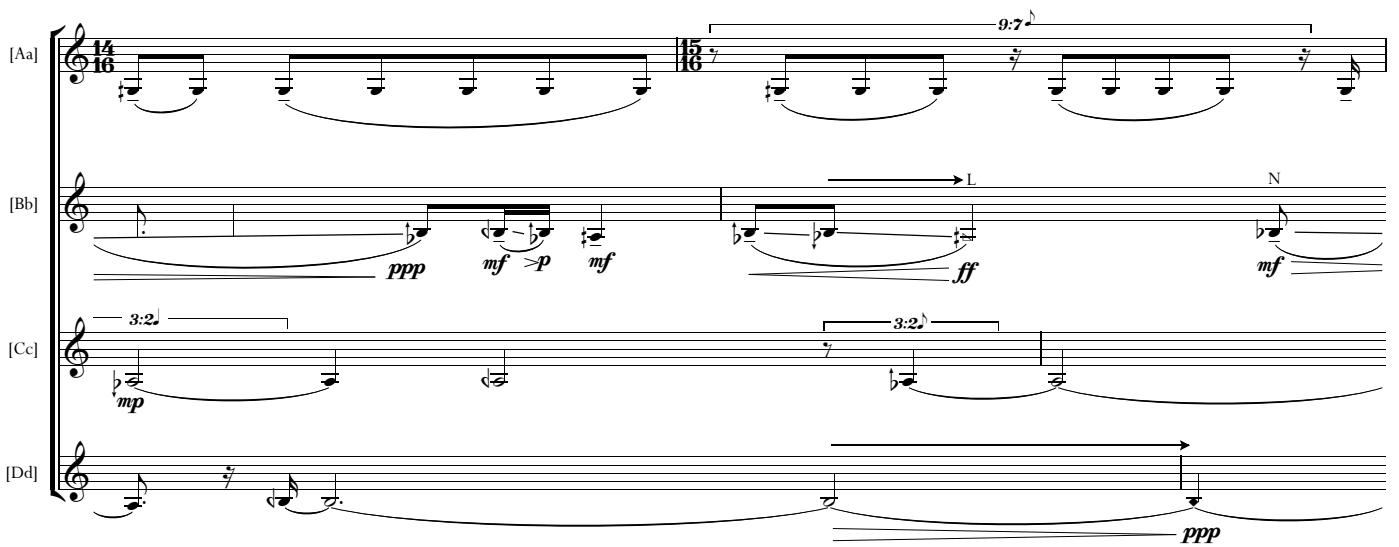
[Dd]

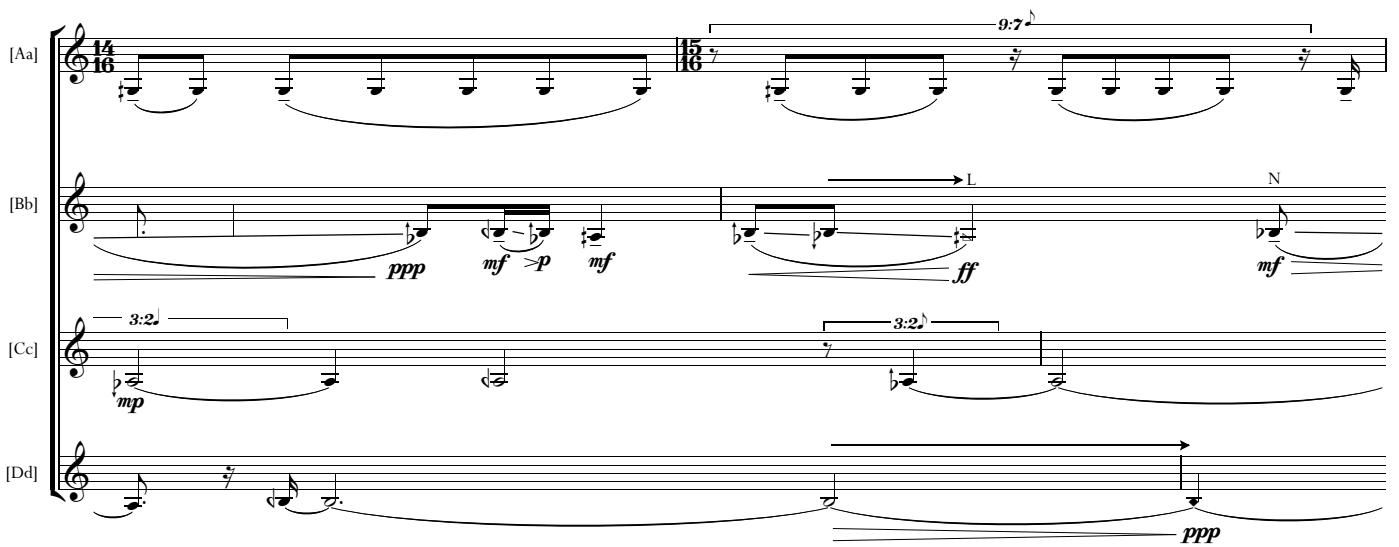
4:3

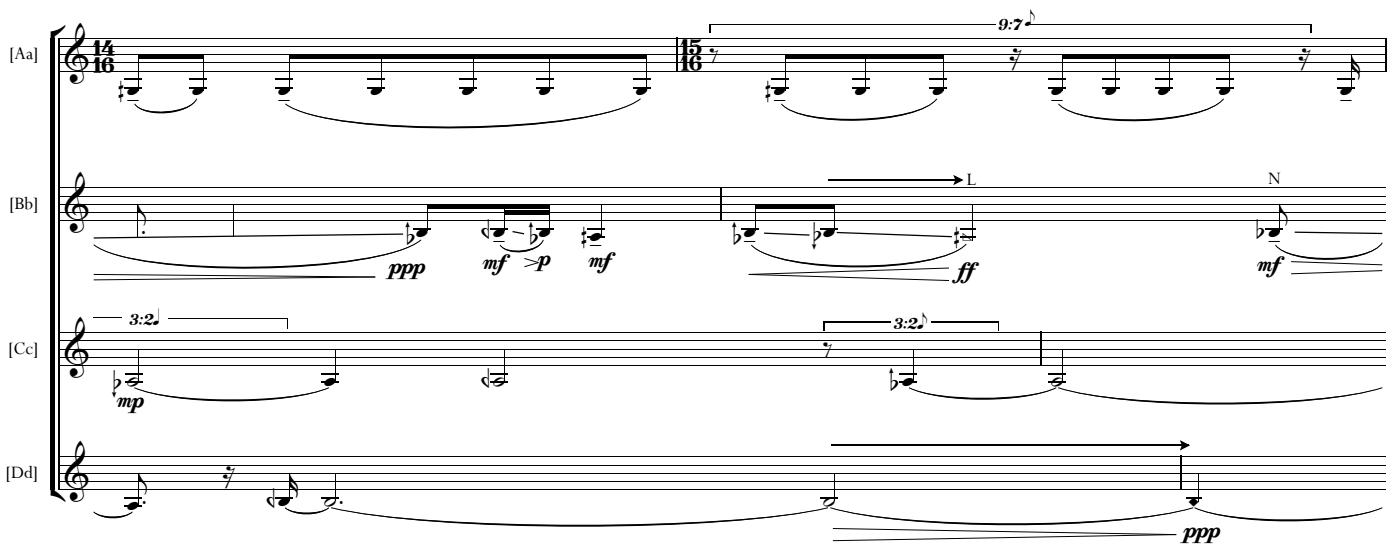
3:2

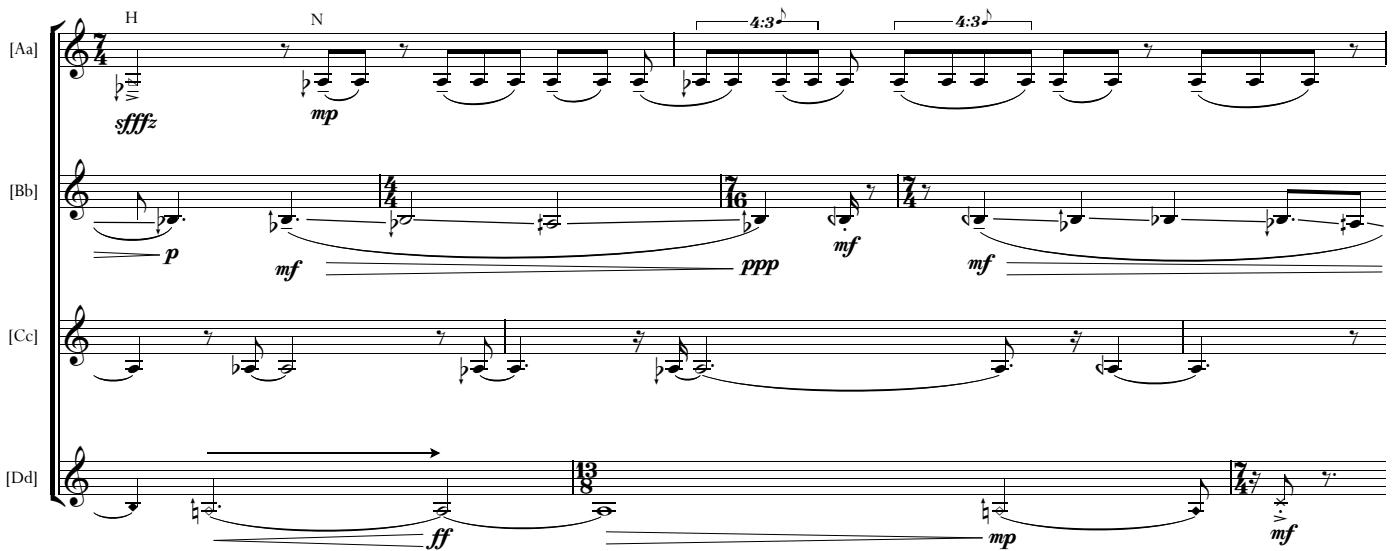
*mp* *mf* *pp* *p*

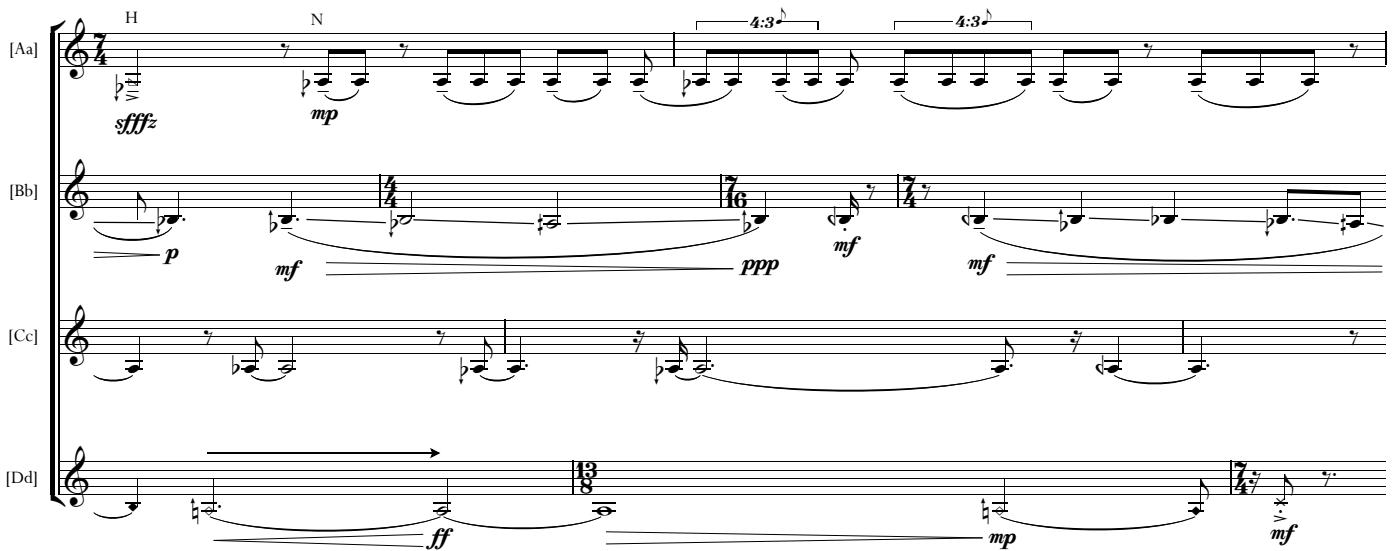
[Aa] 

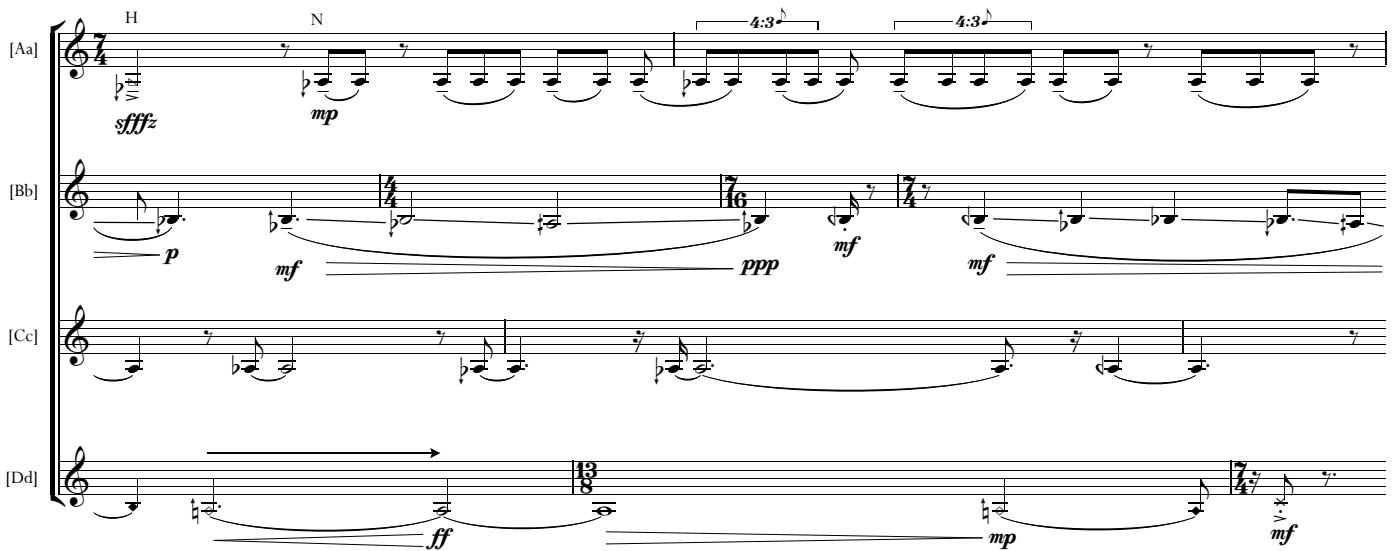
[Bb] 

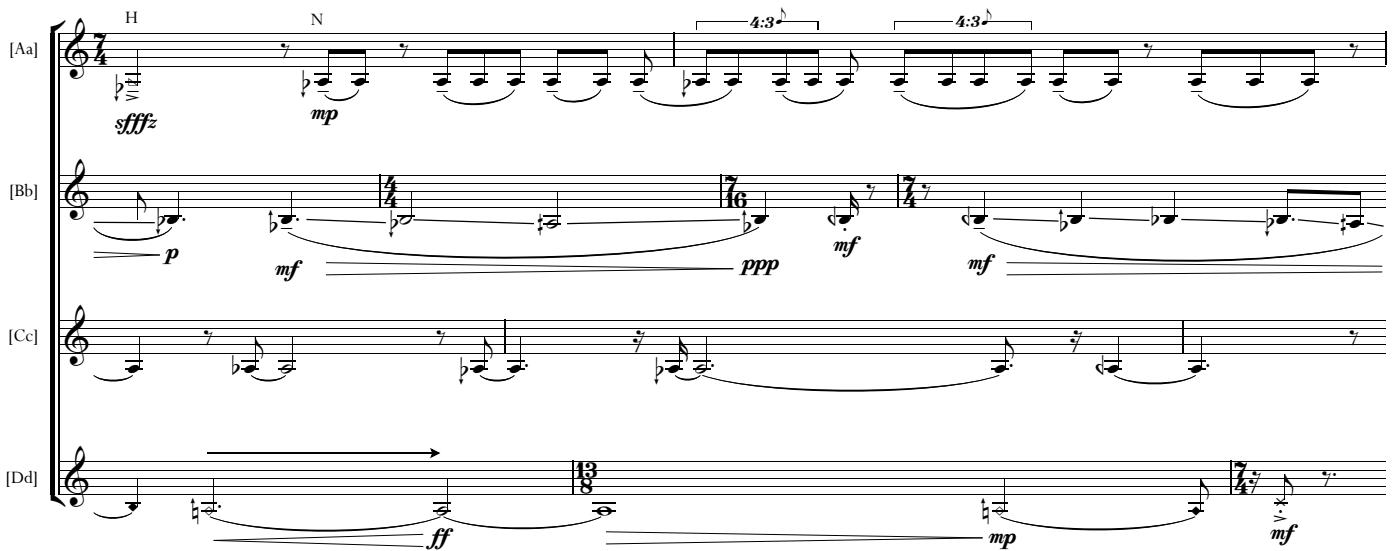
[Cc] 

[Dd] 

[Aa] 

[Bb] 

[Cc] 

[Dd] 

[Aa] 

[Bb] 

[Cc] 

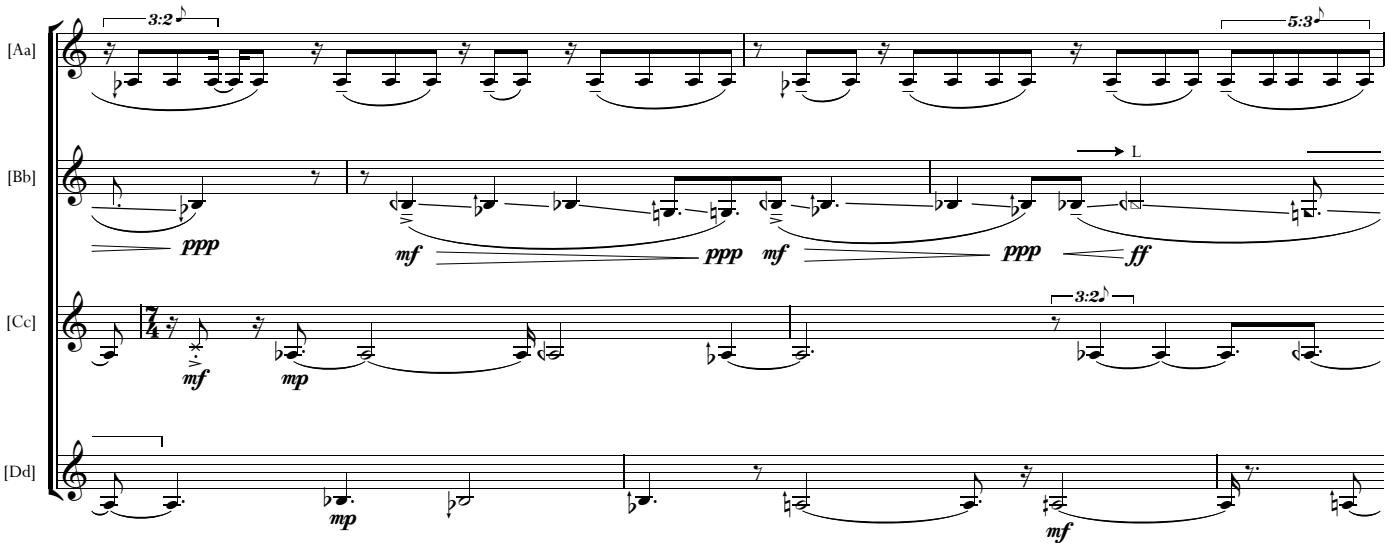
[Dd] 

[Aa] 

[Bb]

[Cc]

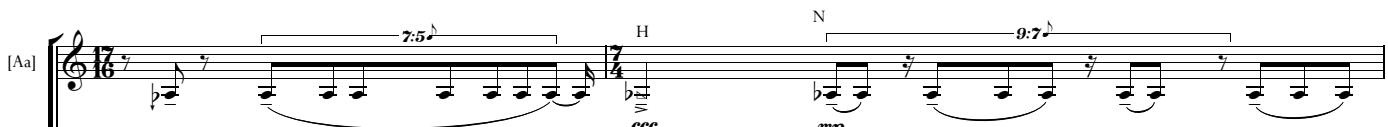
[Dd]

[Aa] 

[Bb]

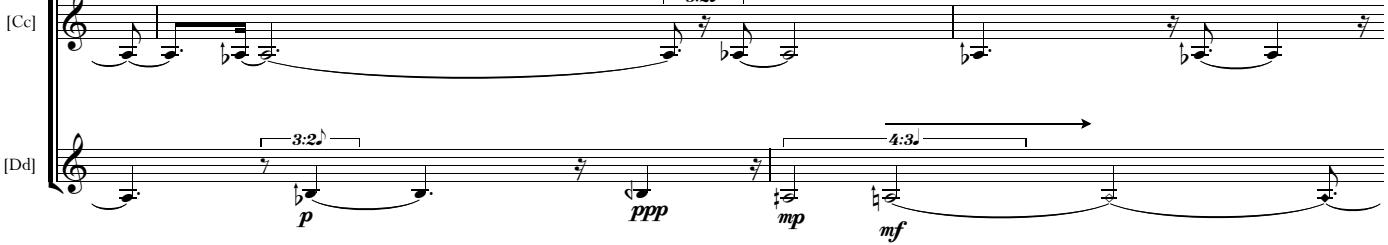
[Cc]

[Dd]

[Aa] 

[Bb]

[Cc]

[Dd] 

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa] H N 5:3 9:7

[Bb] L N

[Cc] 23 46

[Dd] 3:2 3:2 4:3

[Aa] 5:3 7:5 3:2 5:3 4:3

[Bb] → L N → L

[Cc] arco s.p.  
flautando N → L N → L N → L N → M N

[Dd] → p

[Aa] 5:3 4:3 9:7 9:7

[Bb] N M 4:3

[Cc] N → H N → L N → M N → H N → M N

[Dd] 3:2 3:2 p mf

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa] H N 4:3 ♩ 9:7 ♩ 7:5 ♩ sffz mp

[Bb] 7:5 ♩ L 5:3 ♩ M mf p mf f mp ppp ff f

[Cc] N → L N → H N → L N → M H N → L N → N mp mf mp ff mp mf f sffz mp mp mf mp

[Dd] → 3:2 ♩ → 3:2 ♩ ppp mp p mp mf mp

[Aa] 4:3 ♩ 4:3 ♩ 9:32

[Bb] L M p mp f

[Cc] → L N → M N mp mf mp f mp

[Dd] → f mp

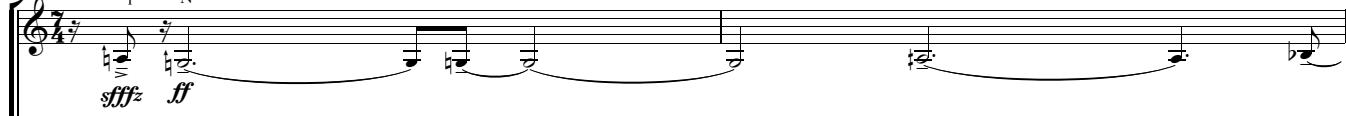
[Aa] H N 3:2 ♩ 9:7 ♩ 25:32 7:5 ♩ sffz mp

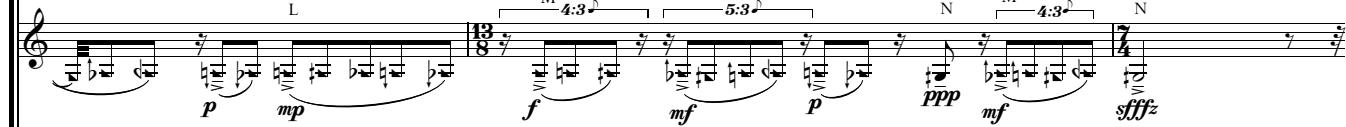
[Bb] 4:3 ♩ N M 5:3 ♩ p pp p f p mp

[Cc] → H N → L N → M N H N → M arco s.p. flautando ff mp mf mp f mp sffz mp f

[Dd] pp 5 7 mp mp p

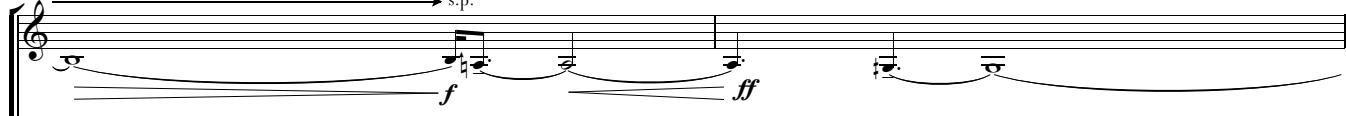
pizz. arco  
s.p. N

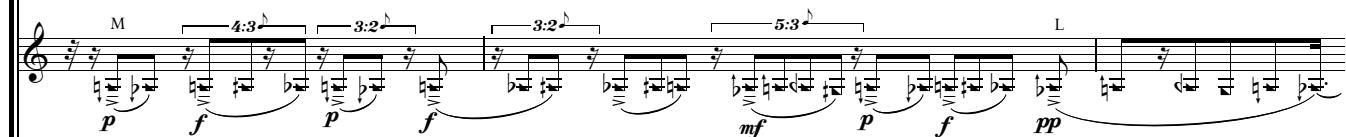
[Aa] 

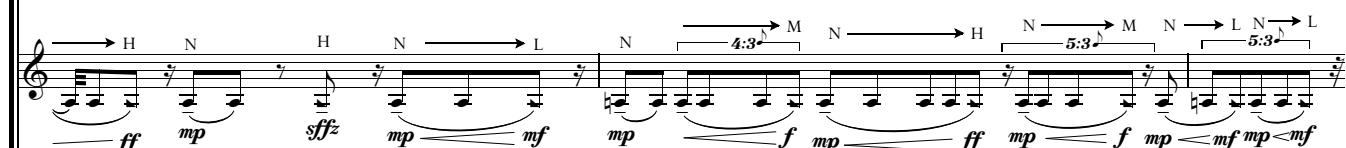
[Bb] 

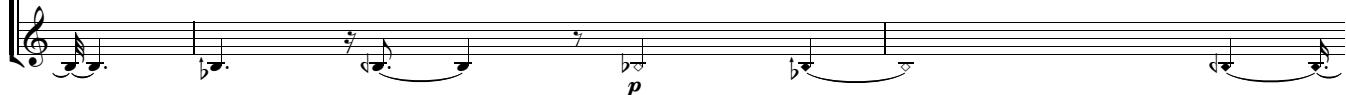
[Cc] 

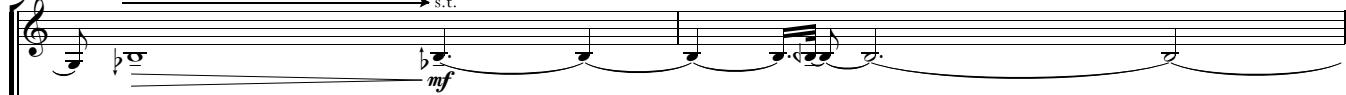
[Dd] 

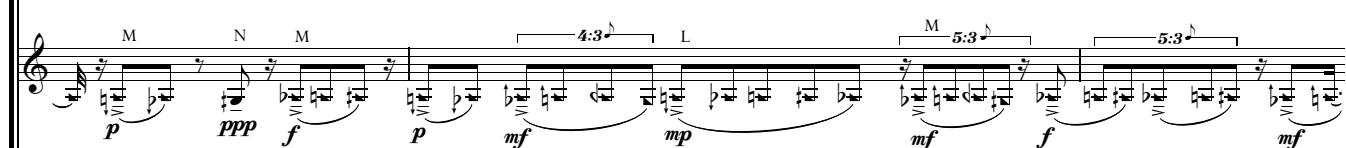
[Aa] 

[Bb] 

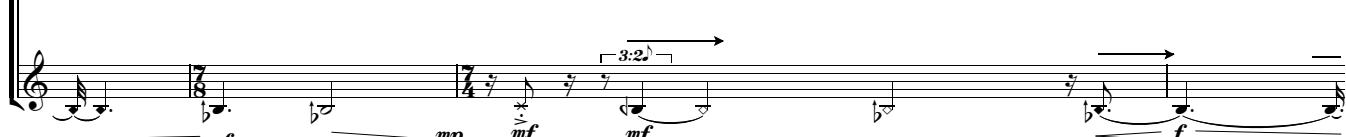
[Cc] 

[Dd] 

[Aa] 

[Bb] 

[Cc] 

[Dd] 

[Aa] 
 [Bb] 
 [Cc] 
 [Dd]

[Aa] 
 [Bb] 
 [Cc] 
 [Dd]

[Aa] 
 [Bb] 
 [Cc] 
 [Dd]

[Aa] pizz.  
s.p.

arco s.t.

*sffz* *pp*

[Bb]

4:3 ♩ N M 7:5 ♩

*mf* *ppp* *p* *f* *p*

[Cc]

5:3 ♩ L N 5:3 ♩ L N → L N → L

*mp* *mf* *mp* *mf* *mp* *mf* *mp* *mf*

[Dd]

[Aa] → N → s.p.

*mp* *f* *mp*

[Bb]

N M 5:3 ♩ 5:3 ♩ 5:3 ♩

*mf* *p* *sffz* *p* *f* *p* *f* *mf*

[Cc]

N → M N 3:2 ♩ 4:3 ♩ N → H N H 4:3 ♩ N → L N → M N

*mp* *f* *mp* < *mf* *mp* *ff* *mp* *sffz* *mp* < *mf* *mp* *f* *mp*

[Dd]

s.p. vib. N non vib.

*ff* *pppp*

[Aa]

*f* *mp* → N *pp*

[Bb]

3:2 ♩ 4:3 ♩ L 5:3 ♩ M N M 4:3 ♩

*p* *f* *pp* *p* *ppp* *f* *p* *mf*

[Cc]

→ H N → M N → L 3:2 ♩ N → L 7:5 ♩ N → L N

*ff* *mp* *f* *mp* < *mf* *mp* < *mf* *mp* *f* *mp* < *mf* *mp*

[Dd]

vib. *ffff*

pizz.  
s.p.

arco

[Aa]

[Bb]

L M H N → H 3:2 7:5 5:3

H N → H 4:3 7:5 3:2

H N → H 3:2 7:5 3:2

N → L N 7:5

[Cc]

5:3 H N → L H N → H 4:3 7:5 3:2

ff mp mf ff ff mp ff mp mp mf mp

[Dd]

pizz. arco  
non vib.

sffz pppp

[Aa]

→ N 15 8 → s.p.

mf mp ff mp

[Bb]

M N L 4:3 N L 7:5 M 3:2 7:5 3:2

f ppp mp pp f p mf p p mf

[Cc]

→ M N 3:2 M N → L N 7:5 → H H N → H N → L N

mp f mp mf mp ff sffz mp ff mp mf mp

[Dd]

pizz. arco  
N

→ s.t. → N

sffz p mf

[Bb]

3:2 L 4:3 7:5 N L M L

f mp ppp ff f p mp

[Cc]

→ H N → L N → M H arco s.p. flautando → L N

ff mp mf mp ff sffz f mp mp

[Dd]

vib. → s.p. pizz. arco  
N non vib.

sffz pppp

[Aa] s.p.

[Bb]

[Cc]

[Dd]

[Aa] pizz. s.p. arco s.t.

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa] 
 s.p.  
mf  
7:5 L 5:3 M 4:3 N L N L  
N → H N → L N → M N → M N → L  
mp ff mp mf mp f mp f mp mf  
non vib. N → s.p. vib.  
ppp fff

[Bb] 
 7:5 L 5:3 M 4:3 N L N L  
mf f p mp f ppp mp ppp pp

[Cc] 
 3:2 N → H N → L N → M N → M N → L  
mp ff mp mf mp f mp f mp mf

[Dd] 
 non vib. N → s.p. vib.  
ppp fff

[Aa] 
 s.t.  
mf  
9:8 sfffz mf ff  
M f p mf  
N → H H N → 7:5 → H arco s.p. flautando  
mp ff sffz mp ff f  
non vib. N →  
ppp

[Bb] 
 3:2 M f p mf  
N → H H N → 7:5 → H arco s.p. flautando  
f p mf

[Cc] 
 5:3 N → H H N → 7:5 → H arco s.p. flautando  
mp ff sffz mp ff f  
non vib. N →  
ppp

[Dd] 
 15:8 non vib. N → s.p. vib.  
ppp

[Aa] 
 arco flautando  
[flick bridge] 4:3 3:2 3:2  
mf mf ff

[Bb] 
 4:3 3:2 3:2 5:3 N 7:5 N  
p mf f mp ppp ff sfffz

[Cc] 
 9:7 N → L N → L N → M N → L N → H N  
mp mf mp mf mp f mp ff mp  
pizz. non vib. → s.t. vib.  
sffz ppp fff

[Dd] 
 pizz. non vib. → s.t. vib.  
sffz pppp fff

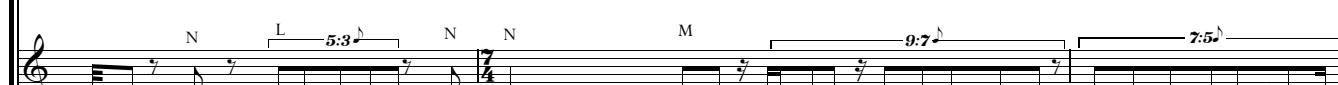
[Aa]

[Bb]

[Cc]

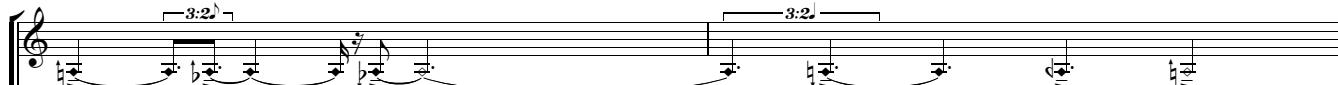
[Dd]

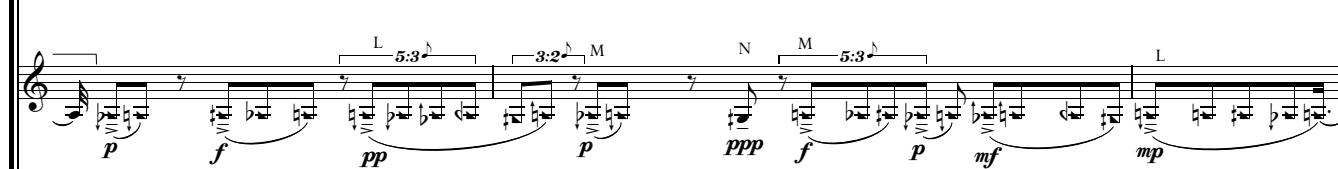
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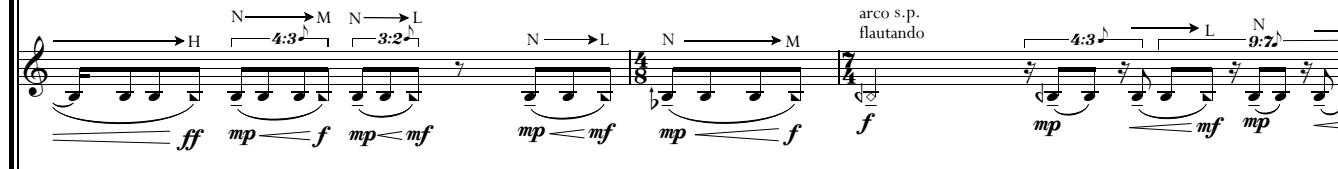
[Bb] 

[Cc] 

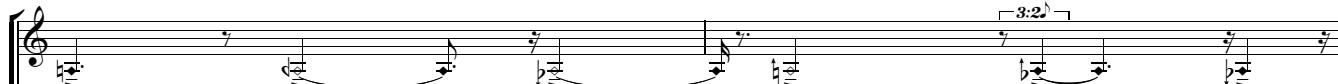
[Dd] 

[Aa] 

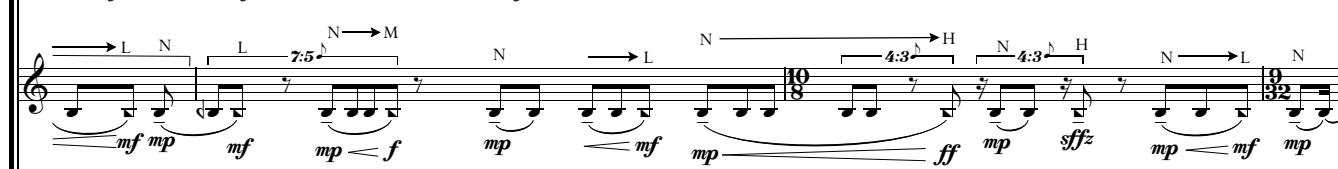
[Bb] 

[Cc] 

[Dd] 

[Aa] 

[Bb] 

[Cc] 

[Dd] 

[Aa]

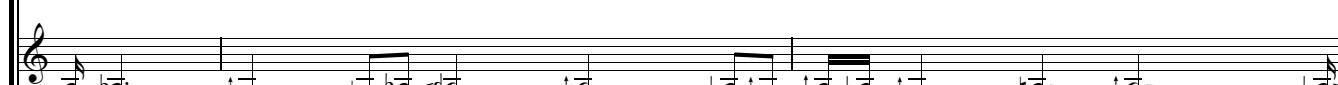
[Bb]

[Cc]

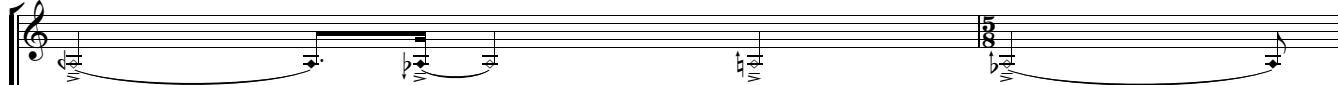
[Dd]

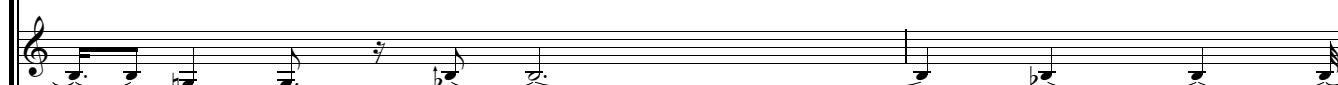
[Aa] 

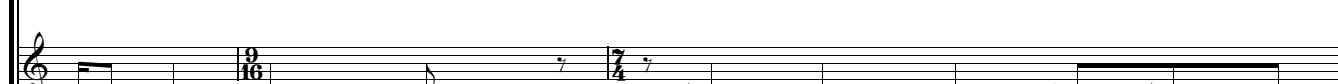
[Bb] 

[Cc] 

[Dd] 

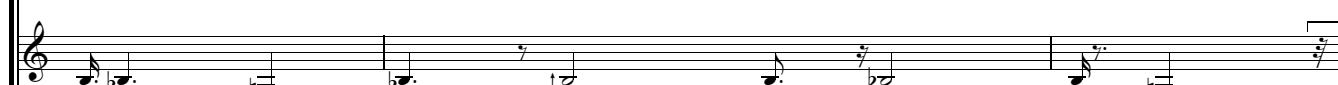
[Aa] 

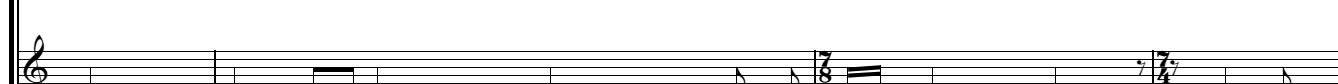
[Bb] 

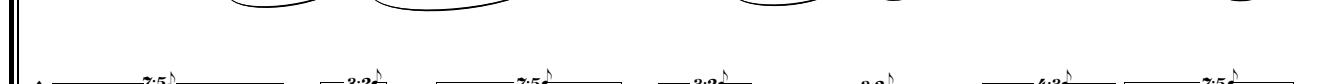
[Cc] 

[Dd] 

[Aa] 

[Bb] 

[Cc] 

[Dd] 

[Aa] 3:2

[Bb] 3:2

[Cc] 3:2

[Dd] 9:7

[Aa] 3:2

[Bb] 3:2

[Cc] pizz.  
s.p.  
arco  
L  
sfz  
ppp

[Dd] H  
N  
f  
4:3  
4:3

[Aa] 3:2

[Bb] 3:2

[Cc] 3:2

[Dd] 4:3  
3:2  
5:3  
6:5

[Aa]

[Bb]

[Cc]

[Dd]

4:3 ♩ 7:5 ♩ 5:3 ♩

[Aa]

[Bb]

[Cc]

pizz. s.p. arco M

[Dd]

4:3 ♩ 3:2 ♩ 4:3 ♩

con sord.  
arco  
N

[Aa]

fff

[Bb]

[Cc]

L M L

[Dd]

5:3 ♩ 7:5 ♩ H N

sffz f

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc] L

pizz.  
s.p.

arco  
M

sfz

[Dd]

7:5

4:3

H

N 5:3

f

9:7

[Aa]

[Bb]

3:2

[Cc]

[Dd]

5:3

7:5

3:2

5:3

4:3

[Aa]

[Bb]

5

7

mf

pp

3:2

[Cc] L

pizz.  
s.p.

arco  
H

sfz

mf

[Dd]

5:3

4:3

9:7

9:7

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Complete Silence for 1 minute and 36 Seconds]

Do not relax in any way - remain in playing position  
as if the pause button has been pressed upon the performance

[Cc]

[Dd]

[Aa] con sord.  
non vib. s.t.

[Bb] con sord.  
non vib. s.t.

[Cc] con sord.  
non vib. s.t.

[Dd] con sord.  
non vib. s.t.

[Aa]

[Bb]

[Cc]

[Flick Bridge]

vib.

[Dd]

vib.

non vib.

[Aa] vib.

[Bb]

[Cc] non vib.  
=p

[Dd] [Flick Bridge]  
mf

This musical score consists of four staves, each with a treble clef and four lines. Staff Aa has a sustained note with a grace note above it, followed by three groups of two sustained notes each, with grace notes above them. Staff Bb shows a similar pattern. Staff Cc includes a dynamic marking '=p' below the staff. Staff Dd concludes with a dynamic marking 'mf'.

[Aa] non vib.

[Bb] [Flick Bridge]  
mf

[Cc] vib.  
mp

[Dd] vib.  
p  
non vib.  
vib.

This musical score consists of four staves. Staff Aa has a sustained note with a grace note above it, followed by three groups of two sustained notes each, with grace notes above them. Staff Bb includes a dynamic marking 'mf'. Staff Cc features a dynamic marking 'mp'. Staff Dd includes dynamic markings 'p' and 'non vib.' followed by 'vib.'

[Aa] [Flick Bridge]  
vib.  
mf  
mp

[Bb] vib.  
mp

[Cc] non vib.  
=p

[Dd] non vib.

This musical score consists of four staves. Staff Aa includes dynamic markings '[Flick Bridge]' and 'vib.', followed by 'mf' and 'mp'. Staff Bb includes a dynamic marking 'mp'. Staff Cc includes a dynamic marking '=p'. Staff Dd includes a dynamic marking 'non vib.'

non vib.

[Aa] *pp*      *mf*      *mp*  
[Bb] *pp*      *mf*      *p*  
[Cc]      *vib.*  
[Dd]      *mf*      *mp*

*vib.*

[Aa] *mf*      *p*  
[Bb] *mp*  
[Cc]      *non vib.*  
[Dd]      *mf*      *p*

non vib.

[Aa] *mp*  
[Bb] *p*  
[Cc]      *vib.*      *f*  
[Dd]      *mp*      *pp*      *mp*

vib.

[Aa] *vib.*  
mf

[Bb]  
mp

[Cc] non vib.  
*f* mp pp

[Dd] vib.  
=pp mf

This section shows four staves labeled [Aa] through [Dd]. Staff [Aa] has a sustained note with a fermata and dynamic *mf*. Staff [Bb] has eighth-note patterns with dynamic *mp*. Staff [Cc] has eighth-note patterns with dynamics *f*, *mp*, and *pp*, with a label "non vib." above it. Staff [Dd] has eighth-note patterns with dynamics *=pp* and *mf*, with a label "vib." above it.

[Aa]

[Bb] vib. non vib.  
*f* mp pp

[Cc] mp pp

[Dd] non vib.  
mp

This section continues the vibraphone parts. Staff [Aa] has sustained notes. Staff [Bb] has eighth-note patterns with dynamics *f* and *mp*, followed by eighth-note patterns with *pp*. Staff [Cc] has eighth-note patterns with dynamics *mp* and *pp*. Staff [Dd] has sustained notes with a dynamic *mp*.

[Aa]

[Bb] vib. non vib.  
*f* mp

[Cc]

[Dd]

This section concludes the vibraphone parts. Staff [Aa] has sustained notes. Staff [Bb] has eighth-note patterns with dynamics *f* and *mp*, followed by eighth-note patterns with *pp*. Staff [Cc] has eighth-note patterns. Staff [Dd] has sustained notes.

[Aa]

[Bb]

[Cc]

[Dd]

vib.  
non vib.

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

f  
mp

[Aa]

[Bb]

[Cc]

[Dd]

This section consists of four staves labeled [Aa] through [Dd]. Each staff has a treble clef and a common time signature. The music features sustained notes (quarter and eighth notes) with grace notes. Staff [Aa] has a sustained quarter note with a grace note. Staff [Bb] has a sustained eighth note with a grace note. Staff [Cc] has a sustained eighth note with a grace note. Staff [Dd] has a sustained quarter note with a grace note.

[Aa]

[Bb]

[Cc]

[Dd]

This section consists of four staves labeled [Aa] through [Dd]. Each staff has a treble clef and a common time signature. The music features sustained notes with grace notes. Dynamics include *mf* (mezzo-forte) at the end of the first measure of [Aa] and [Dd], and *mf* (mezzo-forte) at the beginning of the second measure of [Dd].

[Aa]

[Bb]

senza sord.

[Cc]

*mf*

[Dd]

non vib.

*mf*

This section consists of four staves labeled [Aa] through [Dd]. Each staff has a treble clef and a common time signature. The music features sustained notes with grace notes. Dynamics include *mf* (mezzo-forte) at the beginning of the first measure of [Aa], [Bb], and [Cc], and *mf* (mezzo-forte) at the beginning of the second measure of [Bb]. The instruction "senza sord." (without mute) appears above staff [Bb]. The instruction "non vib." (no vibration) appears below staff [Dd].

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

senza sord.

f

f

f

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

[Aa]

[Bb]

[Cc]

[Dd]

This section shows four staves (Aa, Bb, Cc, Dd) in G major. The music consists of sustained notes with grace notes. Staff Aa has a grace note before each eighth note. Staff Bb has a grace note before the first eighth note. Staff Cc has a grace note before the second eighth note. Staff Dd has a grace note before the third eighth note.

[Aa]

[Bb] vib.

[Cc] vib.  
mp

[Dd]

This section shows four staves (Aa, Bb, Cc, Dd) in G major. The music consists of sustained notes with grace notes. Staff Aa has a grace note before each eighth note. Staff Bb has a grace note before the first eighth note. Staff Cc has a grace note before the second eighth note. Staff Dd has a grace note before the third eighth note. There are vibraphone entries in staff Bb and staff Cc.

[Aa]

[Bb]

[Cc]

[Dd]

This section shows four staves (Aa, Bb, Cc, Dd) in G major. The music consists of sustained notes with grace notes. Staff Aa has a grace note before each eighth note. Staff Bb has a grace note before the first eighth note. Staff Cc has a grace note before the second eighth note. Staff Dd has a grace note before the third eighth note.

x5

[Aa]

ffff  
non vib.

[Bb]

ffff

[Cc]

4:3 ↗ 5:4 ↗

ffff

[Dd]

non vib.

ffff

x4

[Aa]

[complete silence]

ffff  
non vib.

[Bb]

[complete silence]

ffff

[Cc]

4:3 ↗ 5:4 ↗

ffff

[Dd]

[complete silence]

non vib.

ffff

x3

[Aa]

[complete silence]

ffff  
non vib.

[Bb]

[complete silence]

ffff

[Cc]

x2

4:3 ↗ 5:4 ↗

ffff

[Dd]

[complete silence]

non vib.

ffff

**x3**

[Aa] [complete silence]

[Bb] [complete silence]

[Cc] [complete silence]

[Dd] [complete silence]

**x3**

non vib.

**ffff**

**x2**

**x3**

**ffff**

**4:3**

**5:4**

**x2**

**x3**

non vib.

**ffff**

**x2**

**x4**

[Aa] [complete silence]

[Bb] [complete silence]

[Cc] [complete silence]

[Dd] [complete silence]

**x4**

non vib.

**ffff**

**x4**

**ffff**

**4:3**

**5:4**

**x4**

non vib.

**ffff**

**x5**

[Aa] [complete silence]

**x5**

[Bb] [complete silence]

**x5**

[Cc] [complete silence]

**x5**

[Dd] [complete silence]