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To Form a More Perfect Human

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To Form a More Perfect Human

By

Oren H. Boneh

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Music

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Edmund Campion, chair

Professor Myra Melford

Professor Carmine Emanuele Cella

Spring 2021

Abstract

To Form a More Perfect Human

by

Oren Boneh

Doctor of Philosophy in Music

University of California, Berkeley

Edmund Campion, Chair

To Form a More Perfect Human is a work composed between 2017 and 2021 for the Eco Ensemble in Berkeley, California. The instrumentation is as follows: clarinet, piano, violin, cello, double bass, two concealed musicians – trumpet and percussion – and a stagehand who appears on stage toward the end of the piece. The two concealed musicians perform on stage, but are hidden from the audience's view by a screen and are amplified. This piece explores issues of imperfection, identity, and the impact of withholding visual information from the listener.

The first part of the piece represents the contradictory ways in which we attempt to blend in and hide our imperfections, while simultaneously holding a deeper impulse to be genuine and honest. The amplified trumpet and percussion, hidden from view, portray this first impulse by performing fragile textures, rendering their identities unrecognizable. The rest of the ensemble eventually joins with similar cold and mechanical textures. Over time, the piece intensifies and becomes more colorful, the expressiveness attempting to emerge and make itself increasingly vulnerable. Ultimately the tension between these impulses builds to the stagehand's climactic scream, a culmination of repressed emotion and anguish finally releasing and resigning itself.

I explored this idea in my work *Behind the Forget-Me-Nots* (2016), for trombone and electronics, in which the trombone player is concealed behind a screen. The inspiration for hiding instruments from view also stems from the nature of the sounds themselves: they are both so intimate as to be inaudible without amplification, and unidentifiable when knowledge of the means of production is withheld. For example, imagine hearing a trumpeter blow air into the trumpet, periodically altering valve combinations to create starkly contrasted shades of white noise. We would not likely know that the sound was produced by a trumpet unless we could see the performer and their instrument.

Hiding the instruments in this way while producing unidentifiable sounds creates mystery in the listener's mind. This relates to Denis Smalley's notion of source bonding, "the natural tendency to relate sounds to supposed sources and causes" in acousmatic music. Lacking visual confirmation of the source of a sound, our imaginations work to fill in the missing information. Many of the textures used in this piece – both from the hidden instruments and from the visible ones – are fragile, intimate, imperfect, lacking control, without the refined sound quality of electronics. The result is more vulnerable and flawed, better reflecting the human experience.

Written for David Milnes and the Eco Ensemble

I would like to thank Edmund Campion and Franck Bedrossian for their endless support, guidance, mentorship, generosity, and wisdom, which they have both shared with me during the composition of this piece.

Many thanks to Myra Melford and Carmine Emanuele Cella for helping to solidify the ideas in this piece and for their support throughout the process.

Thank you to David Milnes and the musicians of the Eco Ensemble.

Performance Notes

The score is written in C, except for instruments that transpose at the octave (contrabass, crotales).

Duration: 15'30 – 16'

Accidentals carry until the next bar line.

Instrumentation (one instrument per part in all cases):

Concealed and Amplified Instruments (see notes on concealment and amplification below):

Trumpet in C

Percussion (see below for instrumentation and instructions)

Non-concealed instruments:

Clarinet in Bb

Prepared Piano (preparation explained below); (equipped with 2 siren whistles with balloon attached (see below); rubber bike tube – attached to a stick for practicality – a guitar bottleneck; and a credit card, plectrum or similar)

Violin

Violoncello (equipped with 2 siren whistles with balloon attached, see below)

Contrabass (equipped with 2 siren whistles with balloon attached, see below)

Stage Hand: Near the end of the piece (see p. 33, 34 of score), a stagehand or actor must appear on stage and briefly perform as instructed. The stagehand should not be dressed casually, but rather as a performer.

Percussion Instrumentation:

The percussion setup will be partially amplified. See below for instructions.

Percussion: Crotales (see below) – both bowed and struck, Suspended ride cymbal (with Vic Firth rutes or similar), hair comb (played with pencil or pen), threaded rod on wood or a hard surface, whistle, two different sized blocks of dense Styrofoam (fixed to a table such that they do not move when played), 2 electric toothbrushes, 1 drinking straw, 1 lenticular card (played with pencil or pen and fixed to a table), 2 wine glasses with a ping pong ball inside (see below), Flexatone, 2 siren whistles with balloons attached, small gong, kick drum

Crotales (sounding two octaves higher):



Piano Preparation:

Concealment of Trumpet and Percussion:

The trumpet and percussion should be on stage, but completely concealed from the view of every single audience member. The audience should not see the two performers come on stage. Preferably, use some sort of screen to conceal them. The performers must be able to see the conductor by using a monitor with a camera or by positioning them such that the conductor is in their view. The rest of the ensemble is on stage and visible to the audience.

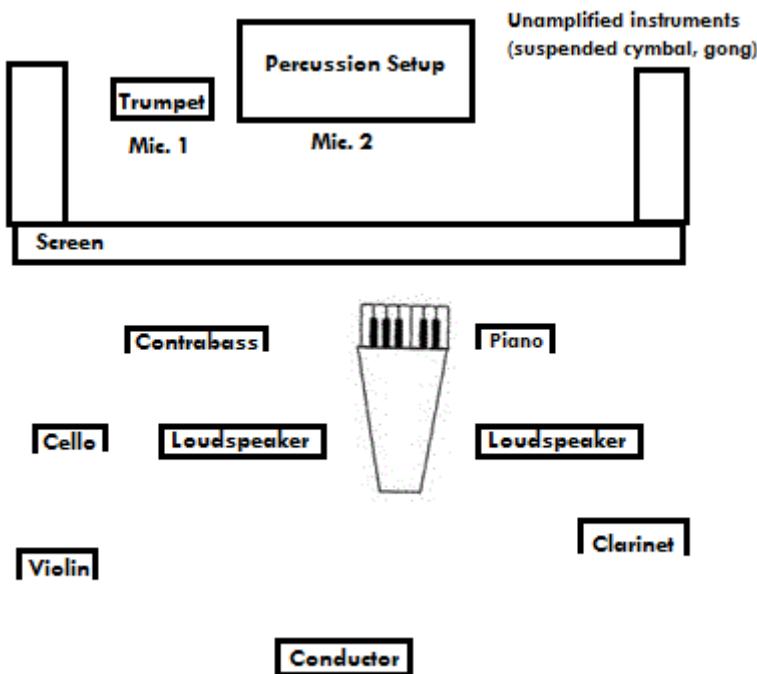
Amplification:

The trumpet and percussion should be amplified. The microphones should be on stands as opposed to being clipped on the instruments so that the performers have the flexibility to distance themselves when they play louder sounds. Given that the trumpeter often plays extremely quiet sounds, the amplification should be enough that these sounds are audible, but not any more than that. They should not overpower the rest of the ensemble and should sound organic. Slight reinforcement of the rest of the ensemble could also be used in order to mix the hidden duo with the other instruments.

Speaker placement:

In order to best mix the sound of the hidden duo and the rest of the ensemble, the speakers should be placed among the ensemble. Experiment with the speaker placement to find the best solution.

Possible Stage Setup: (Loudspeaker placement as well as stage setup should be experimented with to find the best way to mix the sound)



Performance Instructions per Instrument:

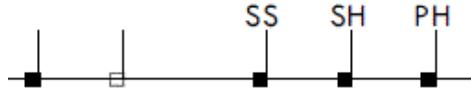
Microtonal Notation: $\frac{1}{4}$ flat: $\frac{1}{4}$ sharp:

Trumpet:

* For the entire piece, the trumpet's third valve slide should be removed so that when the third valve is depressed, the sound should be routed through the third valve slide.

“Distanced from mic.”: The amplification is provided is intended to allow weak sounds such as the airless tonguing and breath sounds to be heard very intimately. This means that strong sounds might be too loud when amplified using the same parameters. Therefore, the performer should distance the bell of the instrument from the microphone as needed.

- Fingerings for $\frac{1}{2}$ valve. For example, the top fingering indicates to depress the first two valves halfway down; the second fingering indicates to depress only the first valve halfway down.



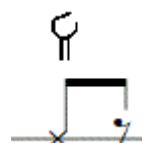
Blow air through the instrument. The letters written above: SS, SH, PH indicate sounds to be produced in the mouth. For instance, SS produces a hissing sound into the instrument. The indicated sound applies only to the note directly below it, not to the next one.



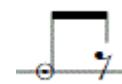
The dotted slur indicates to change fingering (from 23 to 13 in this case) without rearticulating.



Without blowing much air, lightly articulate using a “t” syllable.

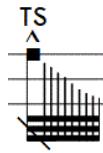


Slap the palm of the hand against the mouthpiece to produce a pop.



Slap tongue. Using a fast force of air, the tongue jams against the roof of the mouth and results in a gentle popping sound.

3-line staff: The 3-line staff is used to symbolize a spectrum of low to high. When a notehead is high on the staff, produce higher frequencies using the indicated technique (if blowing air, raising the tongue to constrict the passage of air). If a notehead is low on the staff, produce lower frequencies or hollow sounds by lowering the tongue (see m. 186 of score for example).



During the given time, articulate while blowing air as quickly as possible. Begin with the tongue raised against the roof of the mouth and finish with the tongue as low as possible (moving from a high constricted sound to a hollow one). "TS" indicates to articulate just the first note with a sharp "ts" sound as in "pizza."

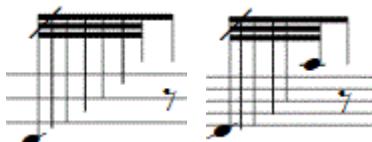
Plunger ad lib.: Quickly vary the position of the plunger on the bell. The result should be a "wa-ka-wa-ka" effect but should be quite irregular.



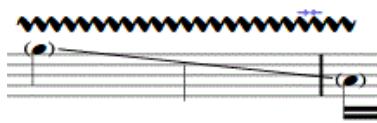
With the mouth formed to say "ts," constrict the passage of air with the tongue (raise the tongue to the roof of the mouth) and blow intensely. There should be extremely high pressure and should result in a somewhat white-noise sound. The sound should be struggling and forced.



Low pedal tones.



With the third valve fully depressed, articulate as quickly as possible and produce normal trumpet tone (as opposed to the air sound). As the third valve slide is removed, the sound will be routed through the third valve slide instead of the bell. In the first image on the left, it is up to the performer to choose the ending pitch. In the second image, the performer should land on the given ending pitch.



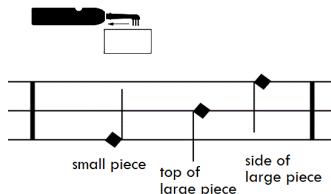
Remove the mouthpiece from the instrument. Holding the mouthpiece in one hand and the harmon mute in the other, place the end of the mouthpiece inside the harmon (the part that normally goes inside the trumpet bell). Playing into the muted mouthpiece, perform the glissando as instructed. Using the hand on the harmon stem, produce a wa-wa effect in addition to mouth vibrato.

Percussion:

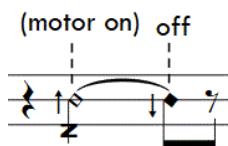
Percussion Setup: The percussionist should use a small table or stand on which several small objects will rest. The table must be close enough to the microphone such that all of the objects on this table are amplified. The objects and instruments that should not be amplified (suspended

cymbal, gong, crotale, siren whistles and flexatone) can be part of a second small setup that is distanced from the microphone.

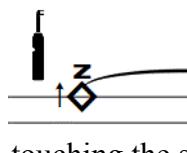
“Distanced from mic.”: The amplification is intended to allow weak sounds such as the styrofoam and electric toothbrushes to be heard very intimately. This means that strong sounds might be too loud when amplified using the same parameters. Therefore, the performer should distance themselves from the microphone as needed.



The percussion setup should include two differently sized dense pieces of Styrofoam. They should be fastened to the table such that they do not move when performed. Gently glide the electric toothbrush along the surface of the blocks. Each of the three noteheads given on the left should result in three distinctive sounds.



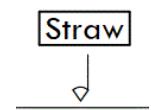
With the brush touching the given piece of styrofoam, switch on the electric brush. The up arrow indicates to turn on the brush. The down arrow indicates to turn it off.



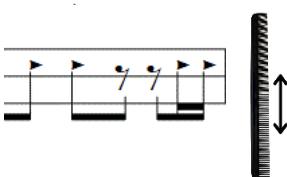
Up and down arrows again indicate to turn on and off the brush. However, this notehead indicates to use the sound of the brush motor on its own without touching the styrofoam.



Grind a threaded rod along a hard surface to create a rough and jagged sound.



Making sure to be within range of the microphone, gently blow air through a drinking straw.

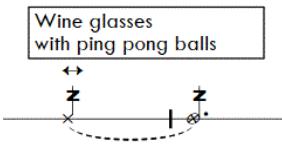


Stroke the bristles of a hair comb with a pencil, pen or similar – like a guiro.



The lenticular card should be fastened to the table. Swipe very rapidly on the textured side of the card with a mechanical pencil or similar to create an extremely high sound. When performing as fast as possible as in the given example, make sure to lift the pencil from the card after each swipe so that we hear a series of extremely short high glissandi as opposed to a continuous tremolo.

 Whistle. When the indication “covered by hand” is given: partially cover the opening of the whistle with the hand. Do not cover it so much that nothing is heard, but such that the sound is a bit more subtle and airy.



Wine glasses with ping pong ball: Take two wine glasses of slightly different sizes such that the opening of one of the wine glasses will be able to slightly fit into the opening of the other. Place a table tennis ball into one of the glasses. With the ball inside, tape the mouths of the glasses together – the bottoms of the glasses should be pointing in opposite directions. Holding the conjoined wine glasses, shake them back and forth such that the ball inside creates a subtle rattling noise. Do not perform a consistent tremolo, but rather an irregular aleatoric sound.



Siren whistles with balloons: Take a siren whistle in each hand and blow in order to fill the balloon in the given time and produce a quick upward glissando. After removing the mouth from the whistle, there will be a second glissando produced by the balloon deflating. For this instrument, a two line staff is used – the top line for the right-hand whistle and the bottom line for the left-hand whistle.

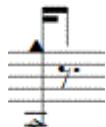
Clarinet:



Slap tongue.



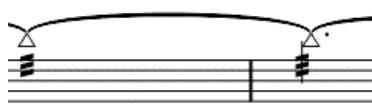
Blow air through the instrument. In order to produce a louder sound, allow the air to leak, by blowing slightly outside the mouthpiece



Overblow to the highest possible note on the given fundamental to achieve a sudden squeaky high pitch.



Airy sound. Pitch should still be perceptible, but the sound should be very airy.

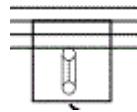


Teeth on reed (In the given example, flutter-tonguing at the same time).

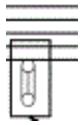


Teeth on reed while rapidly playing the keys to produce an obnoxiously high and chaotic sound.

Piano:



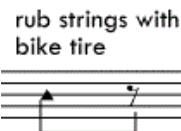
Box around notes: The box around notes indicates to play inside the piano.



In the given range, strike the strings with palm of the hand.



Glissando across the strings with the credit card, plectrum, or similar.



Rub the strings of the given pitch with the rubber bike tube fragment.

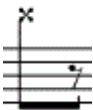


Siren whistles with balloons: Take a siren whistle in each hand and blow in order to fill the balloon in the given time and produce a quick upward glissando. After removing the mouth from the whistle, there will be a second glissando produced by the balloon deflating. For this instrument, a two line staff is used – the top line for the right-hand whistle and the bottom line for the left-hand whistle.

Strings:



Pitch of extreme height beyond the fingerboard on the highest. When a glissando is indicated (as in the image to the left), play the gliss. as high as possible while maintaining the bow ordinario. All of the glissandi are extremely short.



Overpressure while fingering the highest note possible **on the fingerboard** of the highest string and bowing no more than one centimeter away from the finger. This produces a high and thin scratchy sound.



Siren whistles with balloons: Take a siren whistle in each hand and blow in order to fill the balloon in the given time and produce a quick upward glissando. After removing the mouth from the whistle, there will be a second glissando produced by the balloon deflating. For this instrument, a two line staff is used – the top line for the right-hand whistle and the bottom line for the left-hand whistle.

To form a more perfect human

Full Score in C

for septet and stagehand

Oren Boneh
2017

Amplified Trumpet in C (behind screen, third valve slide removed)

Amplified Percussion (behind screen)
Straw Styrofoam Threaded Rod

Clarinet in B \flat

Piano

Violin

Violoncello

Contrabass

Amplified Trumpet in C (behind screen, third valve slide removed)

Amplified Percussion (behind screen)
Straw Styrofoam Threaded Rod

Clarinet in B \flat

Piano

Violin

Violoncello

Contrabass

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

16 3 2 4 4
Tpt. ss ss 4
Perc. p p mf pp
Cl. trb trb pppp pppp
Pno.
Vln. 3 4 2 4 4 2 4 4
Vc.
Cb. simile sim. p

23 4 4
Tpt. into microphone: blowing air (half-valve); motionless, static (in one breath) ppp mf
Perc. (take second brush in LH) (pp) to threaded rod
Cl. (air - outside the mouthpiece) (flutter) f ff
Pno. f (cluster)
f (Box indicates to play inside the piano)
Vln. 4 sul tasto (bow touching finger - poco s.t.), very airy - little pitch is heard non vibrato 3 4 4
Vc. 4 sul tasto (bow touching finger - poco s.t.), very airy - little pitch is heard non vibrato
Cb. f (no dim.) sul tasto (bow touching finger - poco s.t.), very airy - little pitch is heard non vibrato
f (no dim.)

31

Tpt. 5 4 3 4 4 4 2 4 4 ad lib. fingerings (1/2 valve) SS TS f ppp mf

Perc. 3 (threaded rod) p (air) take second brush

Cl. f f

Pno. Box: inside the piano

Vln. 5 4 3 4 4 2 4 pizz. 4 arco l simile f f

Vc. molto sul pont. (no vib.) 3 f

Cb. p

39

Tpt. 3 4 4 SH

Perc. ppp mf p (straw) mf p ppp to threaded rod

Cl.

Pno.

Vln. 3 4 4 poco s.t. bow at the tip airy, little pitch mf

Vc.

Cb.

Tpt. (half-valve fingerings) 3 4 4 4 2 4 4 5

Perc. move gradually away from mic. for diminuendo (motor on) off to bowed crotales

Cl. pp

Pno. f

Vln. 3 4 (poco s.t.) 4 4 (poco s.t.) simile sempre arco 2 4 4 5

Vc. poco s.t. bow at the tip airy, little pitch mf simile sempre as high as possible molto sul pont. ff gliss.

Cb. molto sul pont. ff ff mf

55

Tpt. 5 4 4 3 4 (breath accent) ss 3 4 4 sub ppp f ppp mf (turn on motor, hold the brush still) (motor off)

Perc. Bowed Crotales (bowed) L.V. to styro and brush to threaded rod Styro and brush p threaded rod p pp

Cl.

Pno. f f pp

Vln. 5 4 4 3 4 4 pizz. 3 4 poco s.t. arco 4 4 mf ff molto sul pont. gliss. molto sul pont. gliss.

Vc. f poco s.t. simile sempre mf molto sul pont. ff molto sul pont. gliss.

Cb. mf p ff

63

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

69

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

Tpt. SH PH SS ff f mf f mf 2/4 (slap tongue) 3/4 SS SH
 Perc. to bowed crotales L.V. to threaded rod to styrofoam sharply
 Cl. f f p
 Pno. quickly & gliss. Glissando across the strings with the credit card, plectrum, or similar
 Vln. (masking tape) f
 Vc. arco poco s.t. sul pont., icy 2/4 3/4 c.l.b. arco poco s.t.
 Cb. arco poco s.t. sul pont. sul pont., icy c.l.b. arco
 Vln. arco poco s.t. sul pont. sul pont., icy c.l.b. arco
 Vc. arco poco s.t. sul pont. sul pont., icy c.l.b. arco
 Cb. arco poco s.t. sul pont. sul pont., icy c.l.b. arco ff
 Tpt. 4 SH SS ff 3/4 ad lib. fingerings (1/2 valve) 4
 Perc. ff mf L.V. (air) p
 Cl. f
 Pno. (blu-tack) f
 Vln. 4 4 f p poco s.t. 3/4 4
 Vc. f pizz. f poco s.t. f (non vib.) molto sul pont.
 Cb. f mf f p

Tpt. 4 4 87 **$\text{♩}=92$** 3 4 4
 Perc. **ff** gradually move towards mic.
 Cl. teeth on reed (as stable as possible) **ppp**
 Pno. **pp** (bottleneck) (cluster) **mf**
 8th 8th 8th
 Vln. 4 4 3 4 4
 Vc.
 Cb.

Tpt. 95 3 4
 Perc. gradually distance from mic. simile
 Cl. staccato (mostly air, very little pitch) **pp**
 Pno. 8th **pppp** 3 4
 Vln.
 Vc.
 Cb.

a tempo
($\text{♩}=108$)

99 no air, just articulation 4/4 3x 5/4 3/4 4/4

Tpt. p

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

a tempo
($\text{♩}=108$)

4/4 3x 5/4 3/4 poco s.t. 4/4

Vln.

Vc.

Cb.

103

4/4 5/4 4/4 5/4 4/4

Tpt. ppp mf (straw) stable and consistent p

Perc. p

Cl.

Pno.

Vln. IV, at end of fingerboard, dampen the string.
Create a very airy sound.
poco sul tasto simile

Vc. IV, at end of fingerboard, dampen the string.
Create a very airy sound.
poco sul tasto

Cb. IV, at end of fingerboard, dampen the string.
Create a very airy sound.
poco sul tasto

111

Tpt. SS ff ppp mf

Perc. to gong Gong ppp L.V.

Cl. f pppp

Pno. f pp

Vln. f

Vc. f

Cb. poco s.t. f ppp

$\text{♩} = 120$, with motion

118

Tpt. SH 3 4 SS 4 4 3 4 4 4 ss 2 4 mf

Perc. to crotales with stick (with beater) Crotales L.V. ff

Cl. (pppp) pp

Pno. ff 8va gliss. 3 8va 3

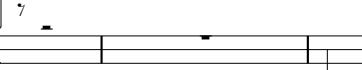
Vln. 3 4 4 4 3 4 4 4 sul pont., icy 2 4

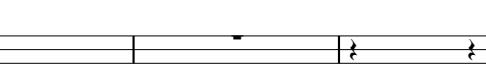
Vc. 3 4 4 4 3 4 4 4

Cb. (ppp) pp pp

$\text{♩} = 120$, with motion

132

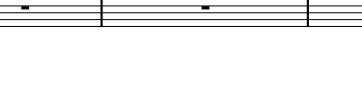
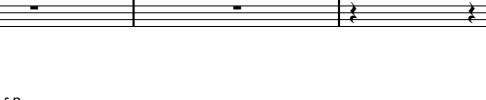
Tpt. 

Perc. 

Cl. 

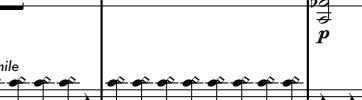
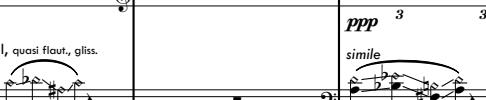
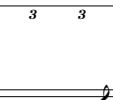
Pno. 



Vln. 






Vc. 



Cb. 



2
4
4
4

138

Tpt. 4/4 ss 5/4 ss 4/4 f **Bowed Crotales** L.V. mf

Perc. p

Cl. tr. p

Pno. f

Vln. 4/4 pizz. 8va 5/4 f arco s.p. 8va ppp

Vc. poco sul tasto 3 3 3 sul pont. f f s.p.

Cb. ppp simile (h) f f ppp sul pont. f ppp

142

Tpt. 5/4 ss 4/4 pp ff **Bowed Crotales** to card with pencil L.V.

Perc. mf

Cl. tr. ppp

Pno. f take bicycle tire rub strings with bike tire mf

Vln. 5/4 pizz. 8va f 4/4 mf singing II, quasi flaut., gliss.

Vc. f simile f 4/4 mf

Cb. f

2 4 4 5 4 4
 148

Tpt. -
 Perc. - Lenticular card with pencil
 (teeth on reed)
 Cl. - *pp*
 Pno. - *f* - *pp*
 Vln. -
 Vc. -
 Cb. - *simile* (l) *gliss.* <*ff*

4 4 3 4 5 4 4 4
 154 ss ss
 Tpt. - *mf*
 Perc. - *mf*
 Cl. -
 Pno. - *mf*
 Vln. - *mf*
 Vc. - *mf*
 Cb. - *sim.* <*ff* >*f*

158

Tpt. $\frac{5}{4}$ SS SS

Perc. $\frac{3}{4}$ SS SS $\frac{4}{4}$

(card) to both toothbrushes

Cl.

Pno.

Vln. $\frac{5}{4}$

Vc. $\frac{3}{4}$

Cb. $\frac{4}{4}$

ff f II, quasi flaut., gliss.

$\frac{3}{4}$ $\frac{4}{4}$

164

Tpt. p

Perc. to comb with pencil

p

Cl. ppp

Pno. mf

8th Red.

$\frac{3}{4}$ $\frac{4}{4}$

Vln.

Vc.

Cb.

$\frac{3}{4}$ $\frac{4}{4}$

Tpt. 170 **3**
Perc. **4**
Cl. **4**
Pno. **staccato**
Vln. **3**
Vc. **8**
Cb. **4** **=112, quicker**

f
Comb stroke downwards like guiro,
from small bristles to large
f
pp
f pppp

Tpt. 174 **3**
Perc. **4**
Cl. **4**
Pno. **8**
Vln. **3**
Vc. **8**
Cb. **4**

p
ss
f p
f p mf
to card with pencil
*continue changing
½ fingerings ad lib.*
f pp f
f pppp f

177

Tpt. $\text{SS} \begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ $\text{SS} \begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$

Perc.

Cl. $\text{pp} \begin{smallmatrix} f \\ f \end{smallmatrix} \text{pp}$ $f \text{ pp} \begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ $f \text{ pp} f \text{ pp}$ $f \text{ pp} \begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$ $f \text{ pp} \begin{smallmatrix} \nearrow \\ \searrow \end{smallmatrix}$

Pno. (8) $\text{pppp} \begin{smallmatrix} f \\ f \end{smallmatrix} \text{pppp}$ $\text{pppp} \begin{smallmatrix} f \\ f \end{smallmatrix} \text{pppp}$ $f \text{pppp} \begin{smallmatrix} f \\ f \end{smallmatrix} \text{pppp}$ $f \text{pppp} \begin{smallmatrix} f \\ f \end{smallmatrix} \text{pppp}$

Vln. $\begin{smallmatrix} 3 \\ 4 \end{smallmatrix}$

Vc. $\begin{smallmatrix} 4 \\ 4 \end{smallmatrix}$

Cb.

Tpt. 180 TS *f*

Perc.

Cl.

Pno. *f* *p*

Vln. *molto sul pont.* *IV jeté* *...* *ff* *sul pont.* *mf*

Vc. *ff* *mf*

Cb. *ff* *mf*

183

Tpt. $\frac{5}{4}$ $\frac{4}{4}$ TS take plunger
p *f*

Perc.

Cl. *staccato* *pp*

Pno. *f* *pppp* *mf*

Vln. *(8)* *molto sul pont.* *IV jeté*
ff *molto sul pont.* *jeté* *IV*
ff *molto sul pont.* *jeté* *IV* *ff*

Vc. *mf* *ff*

Cb. *ff*

$\frac{5}{4}$ $\frac{4}{4}$ *molto sul pont.* *IV jeté*
ff *molto sul pont.* *jeté* *IV* *ff*

$\frac{5}{4}$ $\frac{4}{4}$

187

Tpt. *Card with pencil* *f*

Perc. *overblow on the given fundamental* *p*

Cl. *p*

Pno. *p*

Vln. *ord.* *mf*

Vc. *p* *f p f p f p* *mf*

Cb. *p* *f p f p f p*

$\frac{5}{4}$ $\frac{4}{4}$

4
4

190

Tpt.

Perc.

Bowed Crotales L.V.
(overblow) *mf* L.V. to threaded rod (threaded rod)

Cl.

Pno.

(8)

Vln.

Vc.

Cb.

ppp

f *ppp*

s.p. *ord.* *non vib.* *molto sul pont.* *ppp* *s.p.* *ord.*

≡

2 7 3 4
4 8 8 4

195

Tpt.

Perc.

Cl.

Pno.

(stroke the bristles
of the comb with
a small stick or similar)

p

to comb with pencil

p

ff

(muted
with hand)

(8)

2 7 3 4
4 8 8 4

Vln.

Vc.

Cb.

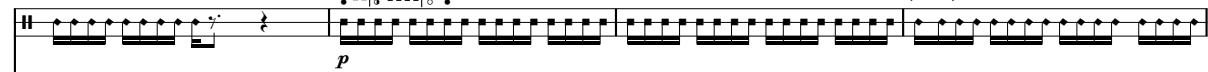
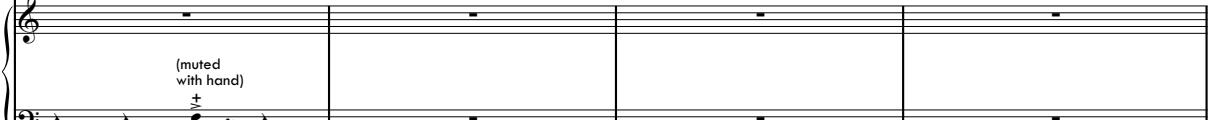
s.p.

f *sul pont.* *f* *ff*

f *sul pont.* *f* *ff*

SS - PH - SH - TS - SS, continue changing
mouth shapes ad lib.
plunger, ad lib.

200

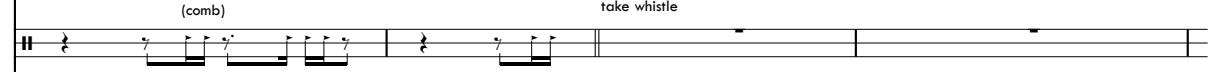
Tpt. 
Perc. 
Cl. 
Pno. 
Vln. 
Vc. 
Cb. 

=

2 3 ***=144*** 4 3

4 4 4 4

204

Tpt. 
Perc. 
take whistle

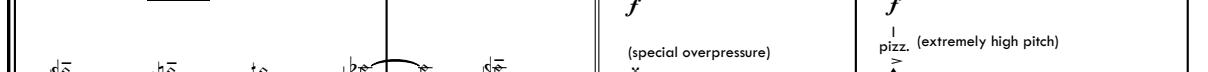
Cl. 
Pno. 

=144

2 3 4 4 3

4 4 (special overpressure) 4 (extremely high pitch)
4 (special overpressure) 4 pizz. 4 (extremely high pitch)

(special overpressure) f f f

Vln. 
Vc. 
Cb. 

208

Tpt. 3
4 (plunger, ad lib.) 4
2 4 4 (high pressure squeak) TS
Perc. Whistle (covered by hand)
Cl.
Pno. f
Vln. f
Vc. f
Cb. II, quasi flaut., gliss. f

214

Tpt. 3
4 4 f subp
Perc. (comb) p
Cl.
Pno. f p
Vln. 3
4 jeté f poco s.t. 3
4 jeté f poco s.t. 4 ord.
Vc. f f f f mf
Cb. II, quasi flaut., gliss. f sul pont. 3 pp

220

Tpt. 5 8 4 open 3 4 plunger 4 3 4

Perc.

Cl. tr^b 3 p 3 3 (muted with blu-tack)

Pno. f f f p

Vln. 5 8 4 4 3 4 4 4 3 4

Vc. II, quasi flaut., gliss. f 3 3 f

Cb. 3 f

(gradually lower tongue position)

230

Tpt. TS *p*

Perc.

Cl. tr 3 *p*

Pno. *f*

Vln. 3 4 *f*

Vc. *f*
II, quasi flaut., gliss.

Cb. 3 3 3 *f*

This musical score page contains seven staves. The first staff (Tpt.) shows six measures of eighth-note patterns with 'TS' markings above each measure, followed by a measure of sixteenth-note patterns. The second staff (Perc.) has a single note per measure. The third staff (Cl.) features melodic lines with grace notes and slurs, with dynamics 'p' and 'tr 3' indicated. The fourth staff (Pno.) has two measures of rests followed by a dynamic 'f'. The fifth staff (Vln.) has three measures of rests followed by a dynamic 'f'. The sixth staff (Vc.) has three measures of rests followed by a dynamic 'f' and a note labeled 'II, quasi flaut., gliss.'. The seventh staff (Cb.) has three measures of rests followed by a dynamic 'f' and a note labeled '3 3 3'.

239

Tpt. $\frac{3}{4}$ TS TS $\frac{2}{4}$ TS TS $\frac{3}{4}$

Perc. f dissipate to crotales

Cl. f $\frac{tr}{3}$ f ff 8^{th}

Pno. f ff muted with LH f

Vln. $\frac{2}{4}$ $\frac{3}{4}$ ord.

Vc. ff II, quasi flute, gliss.
ord. f
(special overpressure)

Cb. ff f

244

Tpt. 4 4 TS TS TS TS 2 4 TS TS 4 =92 2 4 4

Perc. Crotales with beater L.V. to toothbrushes ff

Cl. ppp pp

(8) take card

Pno. ff 8va gliss. ff 8va 3 ppp

Vln. 4 2 4 =92 2 4 4

Vc. ff pppp pp

Cb. ff ppp s.p.

251

2 4 4

J=72

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

to crotales with beater tongue clicks (unpitched)

p *mf* *p*

ppp *f* *mf* *ff*

mf *f* *mf* *ff*

mf *f* *mf* *ff*

ord. *s.p.*

pizz. *arco*

ff

256

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

to styro with brush

mf (crot. - dampen immediately)

pp

f

pizz. *ppp*

f

pizz. *ppp*

f

pp

molto sul pont.

mf

259

5
8

Tpt.

Perc.

Cl.

(8)

Pno.

Vln.

Vc.

(m.s.p.)

Cb.

$\begin{smallmatrix} 3 \\ \downarrow \end{smallmatrix}$ = \downarrow ($\text{d}=108$)

$\begin{smallmatrix} 3 \\ \downarrow \end{smallmatrix}$ = \downarrow ($\text{d}=108$)

$\begin{smallmatrix} 5 \\ 8 \end{smallmatrix}$

$\begin{smallmatrix} 5 \\ 8 \end{smallmatrix}$ $\begin{smallmatrix} 4 \\ 4 \end{smallmatrix}$ $\text{d}=120$

263

Tpt.

Perc.

Cl.

Pno.

p

to comb

p

have card ready

ppp

pp

f

f

$\begin{smallmatrix} 5 \\ 8 \end{smallmatrix}$ $\begin{smallmatrix} 4 \\ 4 \end{smallmatrix}$ $\text{d}=120$

Vln.

Vc.

Cb.

267

2 4 4

Tpt. TS TS

Perc. Lenticular card with pencil (*subtle*)
have toothbrush ready dissipate
ppp

Cl. *p*

Pno. *f*

Vln. 2 4 4

Vc. *p*
II, quasi flaut, gliss.

Cb. *f*

274

2 4 4

Tpt. *ss* *p*
 Perc. *p* (very quick scrape)

Cl. *pp*
8va *3* *8va* *3*

Pno. *pp* (bike tire) *f*

Vln. *f*
 Vc. *ord.* *pp*
 Cb. *f* II, quasi flaut., gliss.

278

SH PH SS

Tpt. *pp*
 Perc. *pp*
 Cl. *pp*
 Pno. *pp*
 Vln. *pp*
 Vc. *pp*
 Cb. *pp*

2
4

282

Tpt. PH SH SH PH

Perc.

Cl. 3 3 3 3 3 3 pp

Pno.

Vln. 3 3 3 3 3 3 pp glissando pp

Vc. 3 3 3 3 3

Cb.

2
4

286

2 4 4 4 SS PH SH SH SH

Tpt. ppp

Perc.

Cl. 3 3 3 3 3 3

Pno.

Vln. f 3 3 3 3 3 3

Vc. IV, gliss. III (follow contour of harmonics within the given range - written pitches only represent contour)

Cb. II, quasi flaut, gliss. III (follow contour of harmonics within the given range) f f

290 PH

Tpt. $\frac{3}{4}$ ss $\frac{4}{4}$

Perc. to crot. with beater

Cl. $\frac{3}{4}$ f $\frac{4}{4}$

Pno. ff $\frac{3}{4}$ ff $\frac{4}{4}$

Vln. $\frac{3}{4}$ sul tasto $\frac{4}{4}$ pp

Vc. ord. $\frac{3}{4}$ f $\frac{4}{4}$

Cb. $\frac{3}{4}$ fff $\frac{4}{4}$ f

$\frac{4}{4}$

294 TS

Tpt. p f

Perc.

Cl. $\frac{3}{4}$ pp $\frac{4}{4}$

Pno. f $\frac{3}{4}$ pp $\frac{4}{4}$

Vln. $\frac{3}{4}$ f $\frac{4}{4}$

Vc. flaut. $\frac{3}{4}$ gliss. $\frac{4}{4}$

Cb. f pppp flaut. $\frac{3}{4}$ gliss. $\frac{4}{4}$

2
4

4

297

Tpt. TS TS TS TS TS f

Crot. Crotales with beater (dampen) sim.

p

Cl. 3 3 3

Pno. 15^{ma} as quickly as possible, perform a run without sounding chromatic lightly pppp

Vln. 3 3 molto sul pont. IV leté sim. ff ff

Vc. IV, gliss. f

Cb. II, flaut., gliss. f f

4
4

301

Tpt. slightly distanced from mic. (third valve)

Crot. to comb Comb (stroke upwards, like guiro) pp

p

Cl. 3 3 pp

Pno. 15^{ma} (all pitches muted with blu-tack or similar) swiftly, as quickly as possible p

Vln. 3 3 pp

Vc. (p)

Cb. (p)

304

Tpt. - | : | *pp* TS 3
Perc. - | : | *f* to card 4

Cl. - | : | 3 3 3 3

Pno. - | : | *p* take bike tire 3
f *mf* 4

Vln. - | : | 3 3 3 3
molto sul pont.
IV jeté 3
ff 4

Vc. - | : | 3 3 3 3
molto sul pont.
jeté IV 3
ff 4

Cb. - | : | 3 3 3 3
molto sul pont.
IV jeté 3
ff

2

4 ♩ =80 **4**

Tpt. 307

Perc.

Cl.

Pno. (8)

4 ♩ =80 **4**

Vln. gliss.

Vc.

Cb. pp ord.

5 4

pp

Card

sharply

pp

f

3

3

pp

gliss.

tr.

(pp)

3

6

> ppp

5
4

309

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

f

to kick drum

put down tire

(8)

5
4

4

f

311

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

pp

(end on an E while holding down the third valve)

f

p

2 4

3 4 **=120**

4 4

pp

sul pont. jeté

ord.

f

sul pont. jeté

2 4

3 4 **=120**

4 4

319

Tpt. 4 4
Perc. (crot.) L.V.
Cl. f
Pno. pp
Vln. 4 4
Vc. flaut. pppp
Cb. II, quasi flaut., gliss.
f

4 4 5 4

322 Tpt. pp pp mf (plunger completely sealed)
 Perc. kick drum f f
 Cl. f 15ma f pp
 Pno. p ff p ff gliss. 15ma p
 Vln. fff fff f squeaky
 Vc. fff fff f squeaky
 Cb. fff fff f

4 4 3 4 4

326 open first valve (plunger completely sealed) (third valve) open L.V.
 Tpt. mf mf pp
 Perc. f f f
 Cl. f (no cresc.) 15ma f pp
 Pno. ff p ff p ff p
 Vln. fff fff f (harmonics) p fp
 Vc. fff fff f (harmonics) p fp
 Cb. fff fff f II, quasi flaut., gliss.

4
4

331

Tpt. - *pp*
Perc. - *f* kick drum *f*
Cl. - *ppp*
Pno. - *p* *ff* *p* *ff*
15^{mo}-1 *gliss.* *15^{mo}-1* *gliss.*

4
4

Vln. - *ff* *ff* *ff*
Vc. - *f* (*f*) *ff* *ff* *ff*
Cb. - *ff* *ff* *ff*

=

(plunger completely sealed)
first valve

2 4 4 2 4

334 +

Tpt. - *mf* *mf* *pp* to harmon mute
Perc. - bowed crot. to comb and card with pencil
Cl. - *ppp* *15^{mo}-1* *ppp* *f*
Pno. - *p* *ff* *p* *ff* *ff* *ff*
15^{mo}-1 *ff* *ff* *ff* *ff* *ff*
ff *ff* *ff* *ff* *ff*

Vln. - *ff* *ff* *ff* *ff* *ff*
Vc. - *ff* *ff* *ff* *ff* *ff*
Cb. - *ff* *ff* *ff* *ff* *ff*

2 4 4 2 4

squeaky *gliss.* *ff* *ff*

341

Tpt. 5 4

Perc. 4 4

Cl.

Pno. 8va - *mf* arp. 8va - *pp*

Vln. slight overpressure
E behind the bridge
squeaky and scratchy 4 4

Vc. *jeté*
p

Cb. *ff*

ff

344

Tpt. - - - - - **2** **4** **4** to plunger
 Perc. - - - - - **ppp** ↑ ↑ to wine glasses
 Cl. - - - - -
 Pno. (8) - - - - - **mf** - - - - - **pp**
 Vln. slight overpressure **E** **4** (behind the bridge) squeaky and scratchy **2** **4** jeté
 Vc. - - - - - **mf** - - - - - **p**
 Cb. - - - - -
 open
 ad lib., no air, articulate continuously as fast
 as possible while varying half-valve fingerings

*trumpet and percussion are background in this section - they should not overbear the cello and contrabass

*trumpet and percussion are background in this section - they should not overbear the cello and contrabass

(plunger ad lib.)

352 TS TS 1 plunger ad lib. 3 4 4
 add occasional pedal tones (very short, like pecks)
 (ppppp) gradually increase activity

Tpt. Perc. Cl. Pno. Vln. Vc. Cb.

breath as necessary instead of pedal tones, add C's (very short, like pecks). These C's should sound struggling and weak; they are not C's produced with traditional beautiful trumpet tone.
 Over time, add more and more C's.

355 4 4 constant rapid articulation plunger ad lib. (ppppp)

Tpt. Perc. Cl. Pno. Vln. Vc. Cb.

358

(plunger ad lib.)

Tpt.

Perc.

Cl.

Pno.

3 4

to suspended cymbal with rutes

Vln.

Vc.

Cb.

3 4

f

4 4

remove mouthpiece and take harmon mute

Tpt. (1/2 valve) open

pppp

Sus. Ride cymbal with rutes or similar
distanced from the mic. to avoid amplification

not too overpowering

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

This musical score page contains two systems of music. The first system, starting at measure 358, includes parts for Tpt., Perc., Cl., Pno., Vln., Vc., and Cb. It features a mix of eighth-note patterns and sustained notes. The second system, starting at measure 362, includes parts for Tpt., Perc., Cl., Pno., Vln., Vc., and Cb. It includes dynamic markings like *pppp*, *fff*, and *mf*, and performance instructions such as "Sus. Ride cymbal with rutes or similar distanced from the mic. to avoid amplification" and "not too overpowering". Measure numbers 3, 4, and 4 are indicated above the staves.

365

Tpt.

Perc. continue with one hand and take flexatone with the other

Cl.

Pno. 8va
mf
fff
f

Vln.

Vc.
fff

Cb.
fff

371

Tpt.

Perc.

Cl.

(8)

Pno.

(8)

m.g. gliss. f ff f = f = f =

Vln.

Vc.

Cb.

sul pont. ord. sul pont. ord.

374

Tpt.

Perc.

Cl.

Pno.

ff f = ff f f f = ff

Vln.

Vc.

Cb.

f fff s.p. fff

E

3
4

3
4

377

Tpt. 3 4 (to siren whistles) 4 4 Siren whistles (one in each hand, completely out of microphone's reach)

Perc. RH LH ff

Cl. tr. gliss. mf

Pno. gliss. m.g. gliss. m.g. gliss. m.g. gliss. f ff f ff f ff f fff

Vln. 3 4 8vb sul pont. 4 4 ord.

Vc. ord. sul pont.

Cb. ord.

380 = 132

Tpt. 4 4 (bends downward on its own) 3 4 4 4

Perc. ff

Cl. tr. mf

Pno. fff f fff ff 3

Vln. 4 4 3 4 = 132 4 4

Vc. sul pont. ord. 3 fff

Cb. sul pont. ord. 3 fff

385

Tpt.

Perc.

Cl. (tr.)

Pno.

Vln.

Vc.

Cb. sul pont.

388

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

4 5
4 4

391 Tpt. 

Perc. 

Cl. 

Pno. 

4 5
4 4

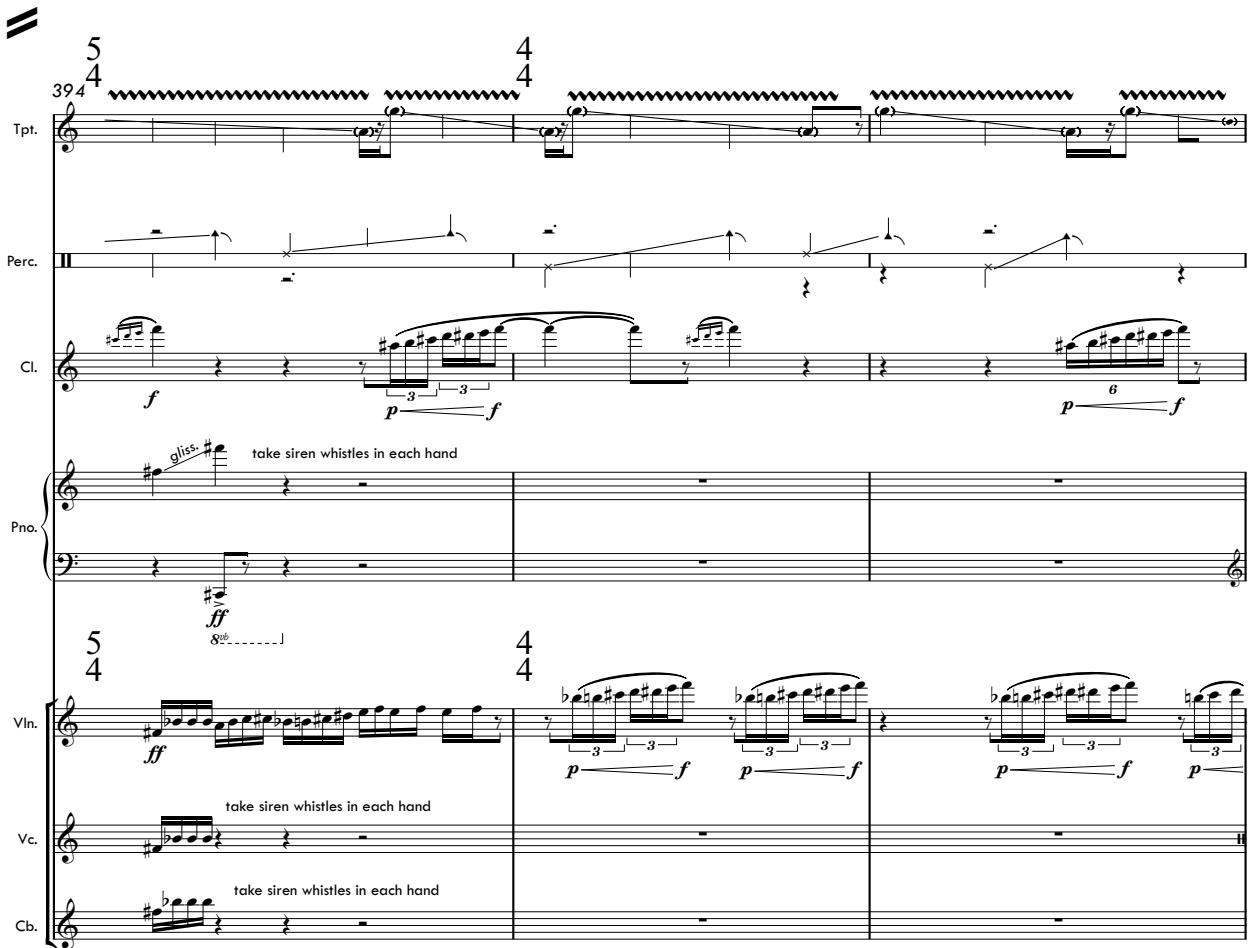
Vln. 

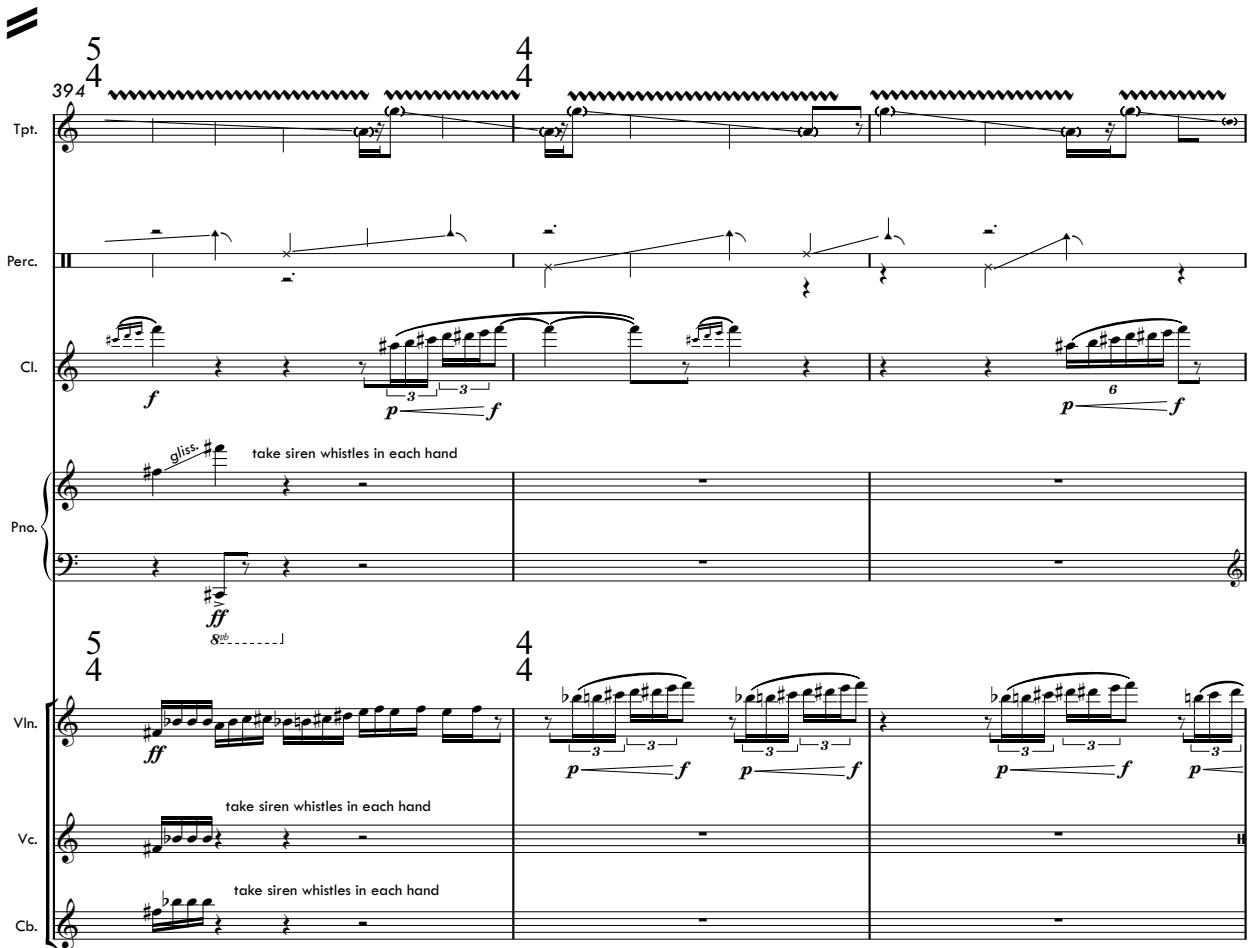
Vc. 

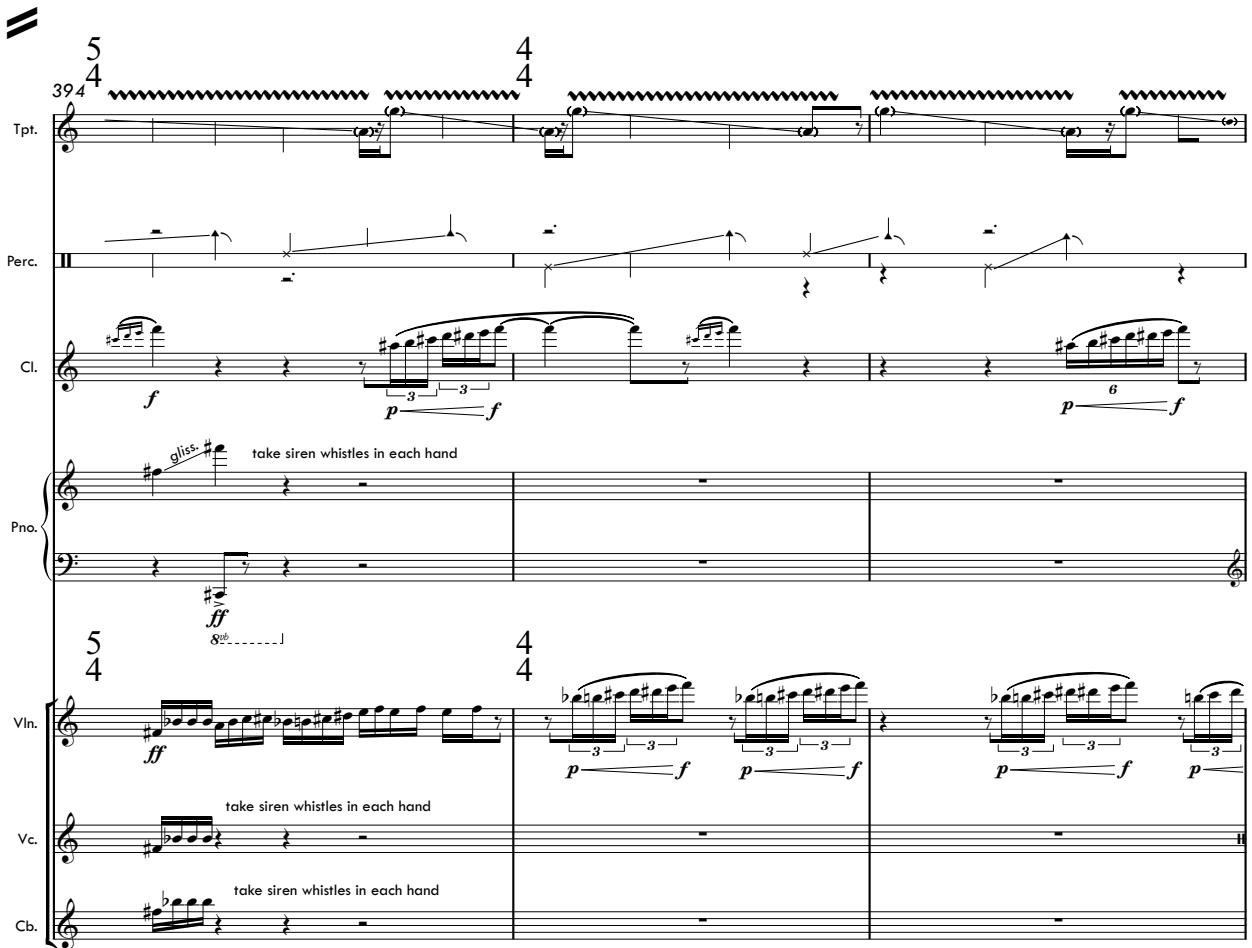
Cb. 

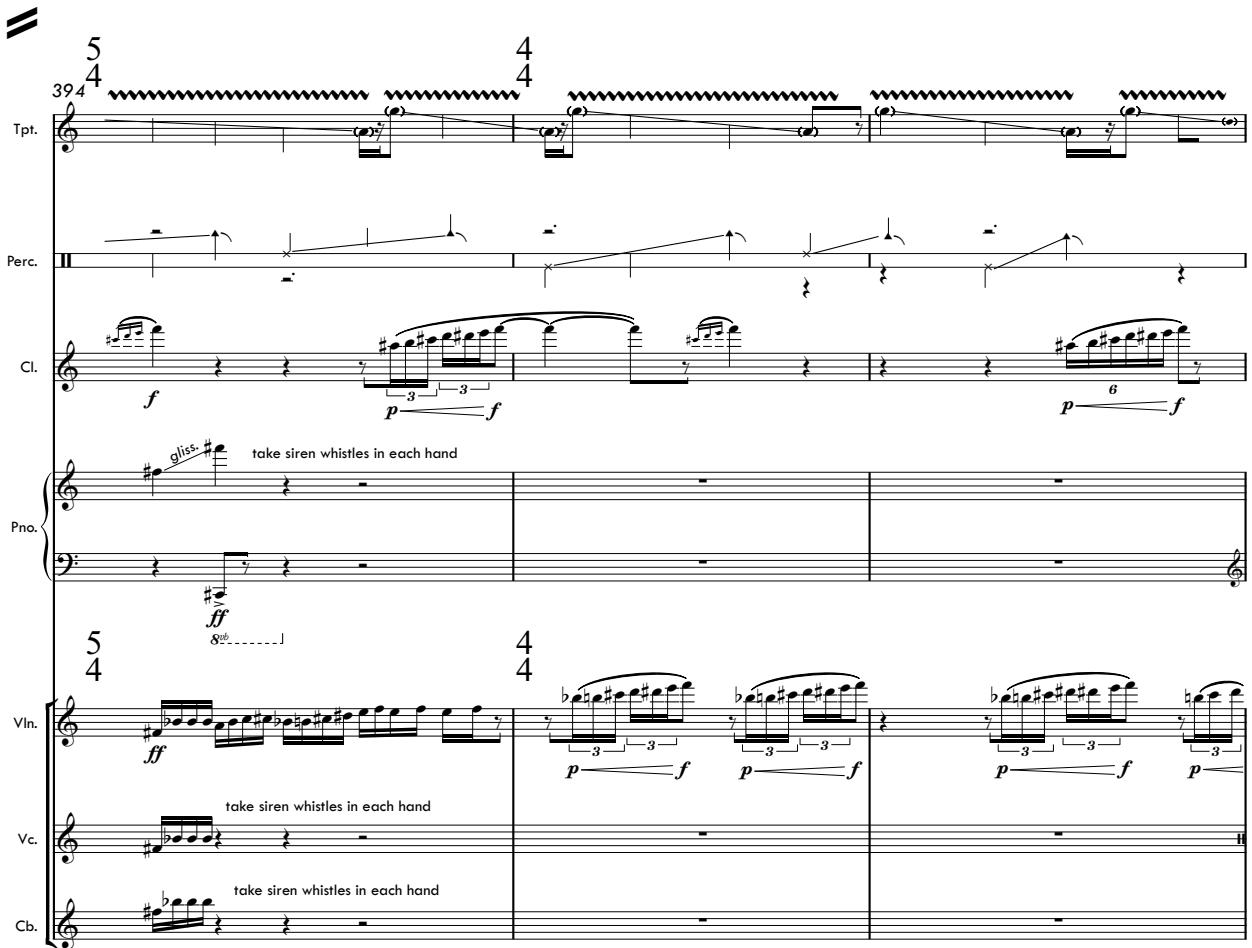
\equiv

5 4 4

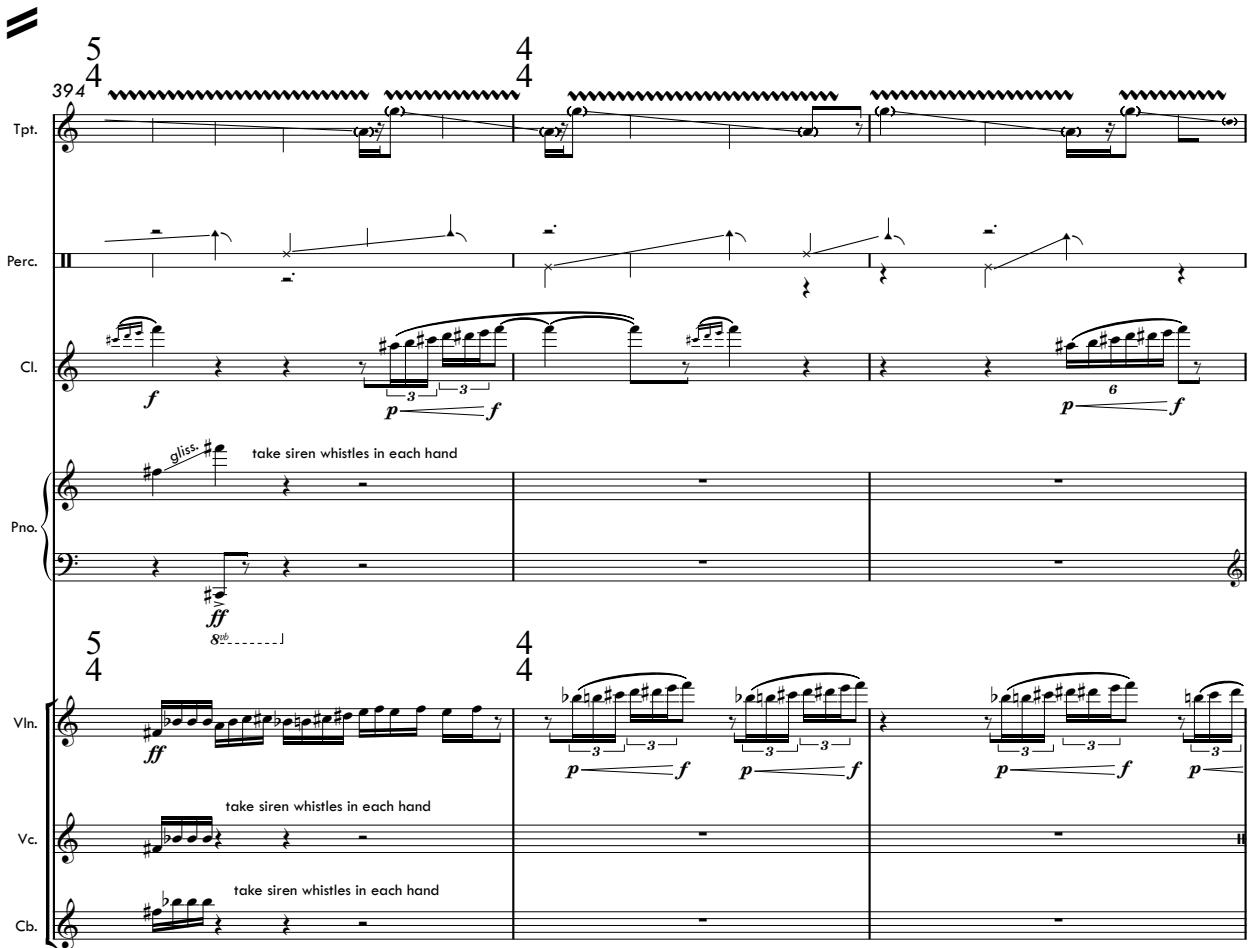
394 Tpt. 

Perc. 

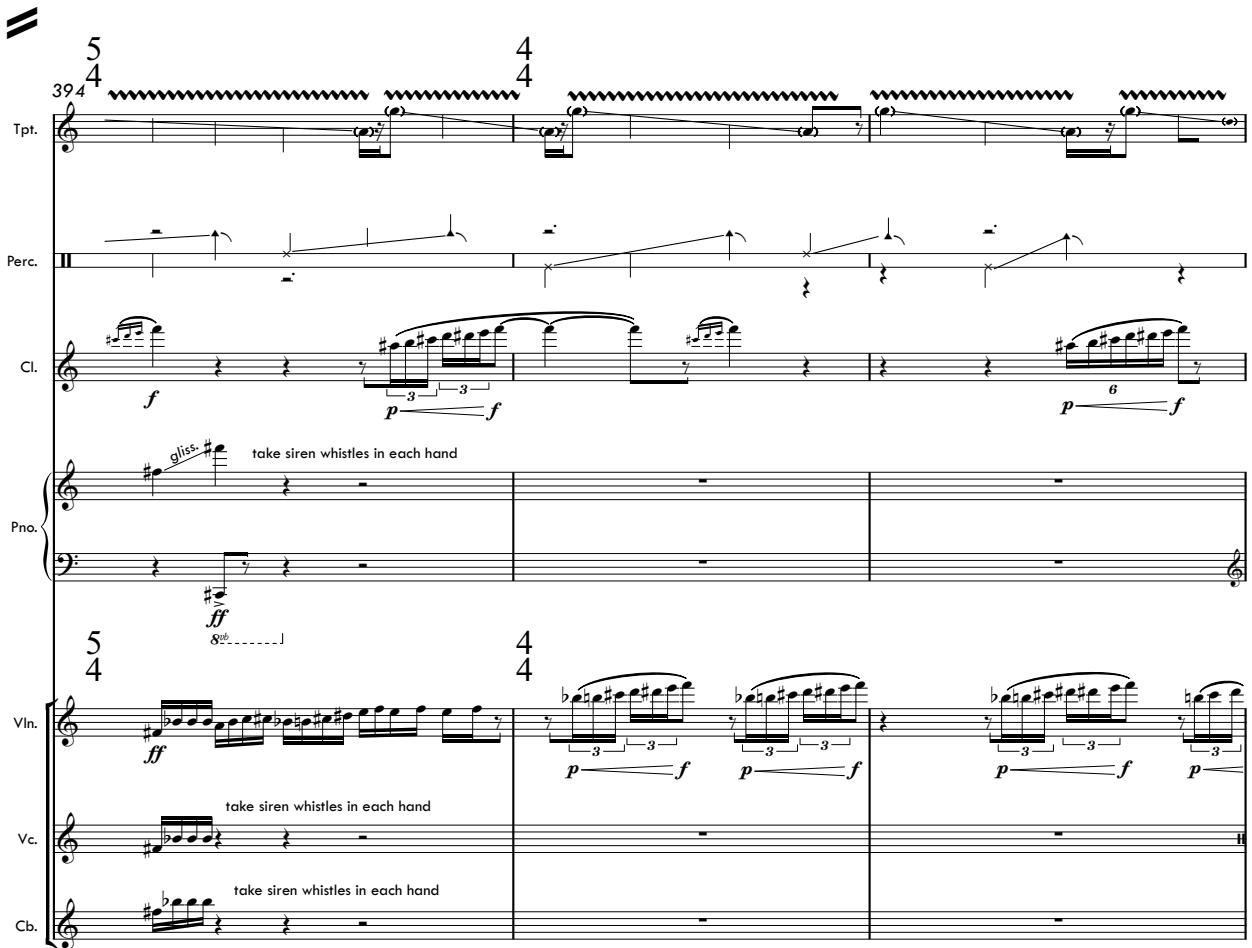
Cl. 

Pno. 

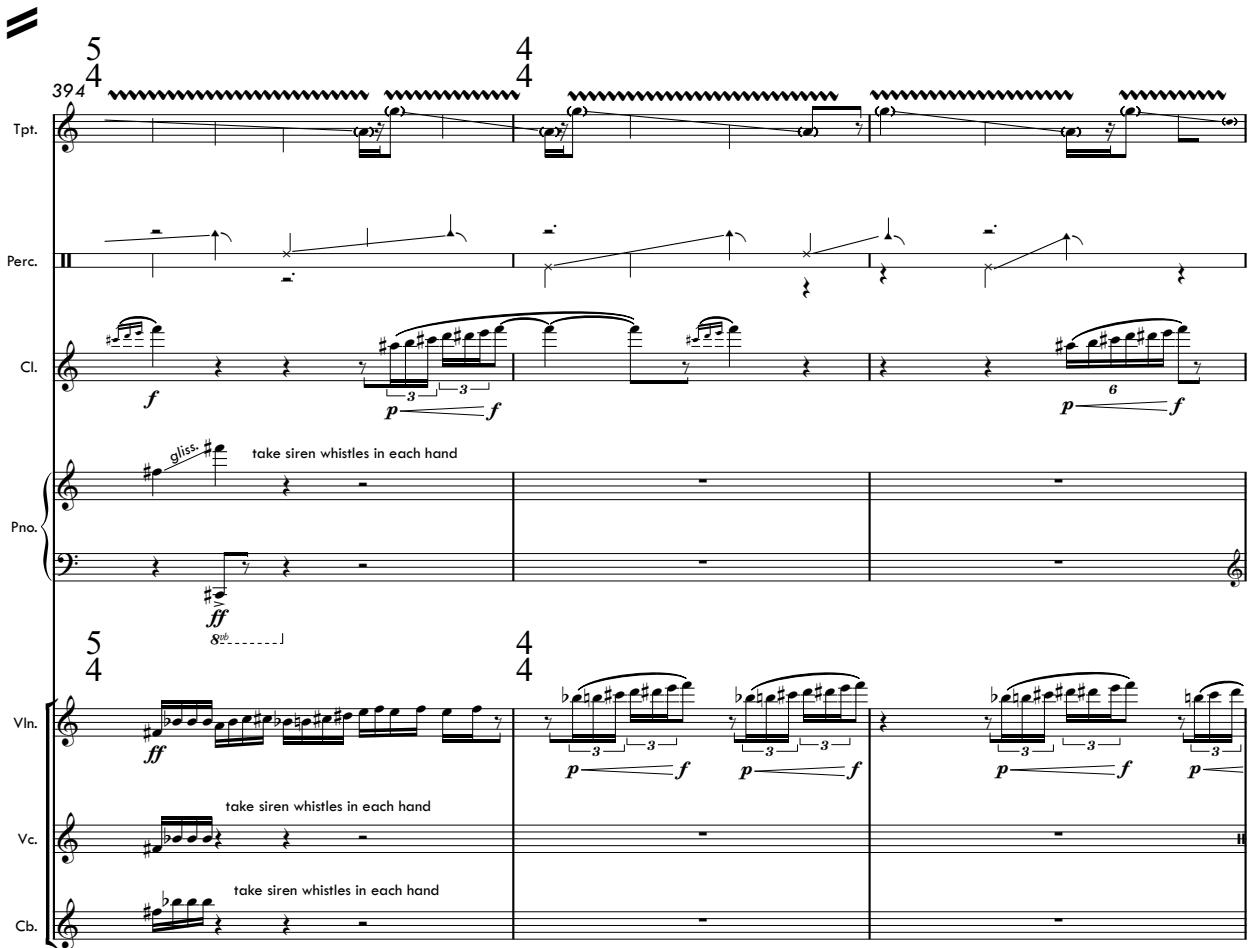
5 4 4

Vln. 

take siren whistles in each hand

Vc. 

take siren whistles in each hand

Cb. 

397

Tpt.

Perc.

Cl.

C. 3 3
p → f

Siren whistles
(one in each hand, completely out of microphone's reach)

(bends downward on its own)

Pno. ff

Vln. 3 f

Siren whistles
(one in each hand, completely out of microphone's reach)

Vc. RH LH

Cb. LH

p → f p → f

(bends downward on its own)

(bends downward on its own)

Stagehand (see performance notes) begins to walk briskly onto the stage towards the screen looking disgruntled (but not melodramatic) with hands over ears



Stagehand arrives at the screen, visible to the audience and glares at the musicians behind the screen (waits approx. one measure)



Glaring at the musicians behind the screen, the stagehand screams in annoyance at the noise. The scream should feel organic, but should not be too short. The musicians stop playing during the scream. The violin and clarinet begin immediately. Once the scream is finished, the stagehand should disappear behind the screen and remain there until the end of the piece.

If more time is needed before the scream, continue this music ad lib.

401

Tpt.

Perc.

Cl. (bends)
p → f

Pno. (bends)
to instrument

Vln. (bends)
p → f

Vc. (bends)
p → f

Cb. (bends)
to instrument

to kick drum, wine glasses, and card with pencil

begin during the scream before the other musicians stop.

sul tasto

pppp to instrument

begin during the scream before the other musicians stop.

sul tasto

pppp to instrument

to instrument

407

Tpt. 2 4 4 =120 (away from mic.) (mouthpiece in harmon) 

Perc. Kick Drum ff Wine glasses with ping pong balls mf Card with pencil ff ff f ff

Cl. ff ppp ff

Pno. ff (cluster) f ff ff f ff have bike tire ready

Vln. 2 4 4 =120 (special overpressure) f ff f ff f ff

Vc. Violoncello tr. ff (special overpressure) f f f f

Cb. Contrabass sul pont. mf

414

Tpt. harmon completely sealed by hand mf

Perc. ff have whistle ready ff ff (shriek loudly, not covered by hand) Whistle

Cl. (tire) pp ppp ff

Pno. ff f f ff

Vln. 4 4 5 4 4 4 3 4 4

Vc. tr. f sul pont. f ff f

Cb. II, quasi flaut., gliss. f mf sul pont. f

420

Tpt. 4 4 3 4 4 4

Perc. f mf f f

Cl. pp

Pno. have tire ready p f

Vln. tr. f f

Vc. sul pont. ord. f p f

Cb. sul pont. sul pont. ord. f f f f

426

Tpt. 2 4 4 3 4 4

Perc. ff ff f

Cl. ff f pppp

Pno. take tire ff

Vln. ff f f

Vc. ff f f f

Cb. ff f f f

2 4 4 3 4 4

4
4

432

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

take electric toothbrush

5 4 4

436

Tpt.

Perc.

Cl.

Pno.

Vln.

Vc.

Cb.

Electric Toothbrush

(whistle)

ff take fire

ord.

sul pont.

443

Tpt. *mf*
Perc. *to card*
Cl. *pppp*
Pno. *f*
Vln. *f*
Vc. *mf*
Cb. *mf*

2 4 4 *insert mouthpiece back into instrument*

Vln. *sul pont.*
Vc. *p*
Cb. *f*

2 4 4
Vln. *ff*
Vc. *p*
Cb. *p*

2 4 4
Vln. *f*
Vc. *p*
Cb. *f*

449

Tpt. *mf*
Perc. *f*
Cl. *ff*
Pno. *f*
Vln. *f*
Vc. *f*
Cb. *f*

2 4 4 *(whistle)* *ss* *mf* *take cymbal mallet in free hand* *mf*

Perc. *ff* *to toothbrush* *f* *p*

Cl. *ffff* *pppp*

Pno. *ff* *(tire)* *f* *p* *mf*

2 4 4 *f* *2 4 4*

Vln. *col legno battuto jeté* *f*
Vc. *col legno battuto jeté*
Cb. *col legno battuto jeté*

2 4 4 *ord.* *2 4 4*

Vln. *3 3 f*
Vc. *3 3*
Cb. *3 3 3*

2 4 4 *ord.* *2 4 4*

Vln. *ll, quasi flaut., gliss.*
Vc.
Cb. *p*

$\text{d}=92$

456

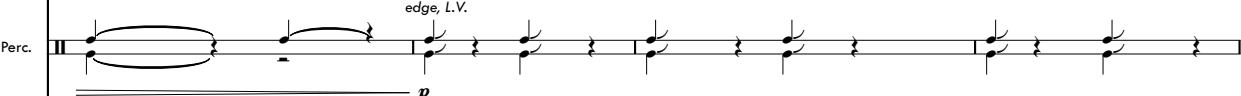
Tpt. $\frac{2}{4}$ $\frac{4}{4}$ SH ss
 Perc. f $\frac{4}{4}$ to suspended cymbal and gong
 Cl. ppp ff pppp
 Pno. f ff (muted with blu-tack) ff ss
 Vln. $\frac{2}{4}$ $\frac{4}{4}$ f
 Vc. f sul pont. f 5
 Cb. mf mf f

461

Tpt. SH SH
 Perc. Sus. Cymbal with rule L.V. strike cymbal at a different place each time (edge, bell, etc.), ad lib. Gong L.V.
 Cl. ff pppp pppp
 Pno. (8) f p # ppp ss
 Vln. ff f mf f 5
 Vc. ff sul pont. f 5 p
 Cb. mf f p ppp s.p. ord.

467

Tpt. 

Perc. 

Cl.

Pno. 

(8) 

Vln.

Vc.

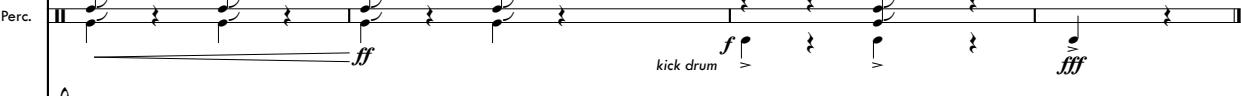
Cb. 

rit.

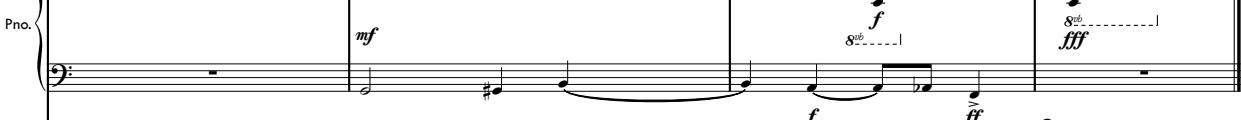
2
4

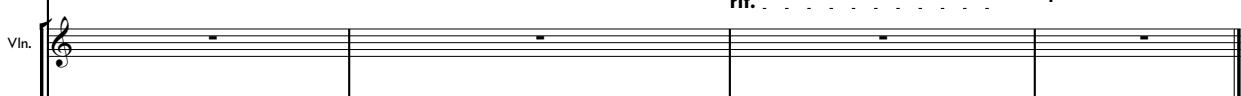
471

Tpt. 

Perc. 

Cl.

Pno. 

8th 

rit.

2
4

Vln.

Vc.

Cb. 