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Title

The Potbelly Hill

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Author

Dülger, Onur

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The Potbelly Hill

for violin, cello, bass clarinet in B \flat and prepared piano

*Onur Dülger
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PERFORMANCE NOTES

PIANO



This symbol is used to show the location of the hand movement inside the piano.

Staffs: 4 or 5 staves are used where the top staff stands for voice of the player. Each hand has two ordinary staff and one additional staff for the actions inside the piano. Most of the time the extra staff for the left hand is not there since the left hand usually plays on the keyboard.

Visualisation: There are three different kind of visualisations on the score, which are action, location and results.

Multiphonics:

The right hand finger touches the node which lies at the given percent of the string (top staff), then lifts after playing the given note in the left hand (bottom staff) so that overtones occurs (middle staff). This technique should be performed like a gutiar harmonic playing technique.

Pluck on the string:

The right hand holds the plectrum and plucks the string (top staff) on the given string (middle staff). At the bottom staff the note is an ordinary note which is played on the keyboard.

Plectrum granulation:

The right hand holds the plectrum and makes a horizontal glissando (top staff) on the given string (bottom staff) which causes granulation (bottom staff).

Tube Rubing:

Rub the given strings (bottom staff) inside the piano (top bottom).

Plectrum granulation:

The right hand holds the plectrum and makes a glissando (top staff) on the treble bridge string.

Glass glissando & dampened:

A glass or a glass bottle, which should be so long to cover a tritone interval, which should be placed on the given strings (bottom staff). The glass should be moved then horizontally. Occasionally the glass can be moved also vertically as it can be seen on the left (bottom staff). While right hand is acting inside the piano, the left hand plays the given notes (bottom staff) with cross note-heads.

Auxiliary Objects



Book dampened:

A Book (on the top staff) with the size of A4 paper is placed on the given strings (middle staff). Then a cluster or notes are played on the keyboard (bottom staff) with cross note-heads.

Superball Rubing:

A superball (top staff) is played on the given strings (bottom staff).

Cluster:

A chromatic cluster is played on the keyboard.

Horizontal Glissando

All chromatic tones should be played between the given notes with a plectrum inside the piano towards the given direction.

List of piano multiphonics

How to Play the Multiphonics

- 1) A light and small object (a node-obstacle) such as a plectrum is put on a mono- chord string, to rest on a slot of the copper winding. (kept in the right hand)
- 2) The corresponding key is hit quite loudly and held pressed. (left hand)
- 3) The plectrum is soon released upwards away from the string (right hand)
- 4) The key is released at latest after the sound has faded completely, or earlier (left hand). Also, the pedal can be used, in which case the decay can be regulated more.

For more information about playing the multiphonics on the piano visit the following page to download the thesis regarding the multiphonics:

http://ethesis.siba.fi/files/vesikkala_thesis_2016_fulltext.pdf

STRINGS

Quarter tones

- ♯ one quarter tone higher
- ♭ one quarter tone lower
- ♯ semi tone higher
- ♭ semi tone lower
- ♯ three quarter tone higher
- ♭ three quarter tone lower

Cello Positions

- tp : tail piece
- ws : wrapped strings
- bb : behind the bridge
- msp: molto sul ponticello
- sp : sul ponticello
- ord : ordinario
- st : sul tasto
- mst : molto sul tasto

Violin Positions

- mst : molto sul tasto
- st : sul tasto
- ord : ordinario
- sp : sul ponticello
- msp: molto sul ponticello
- bb : behind the bridge
- ws : wrapped strings
- tp : tail piece

Bow pressure levels

- : under pressure
- : ordinary pressure
- : partially over pressure, halfway between "ordinary" and "over pressure"
- : over pressure
- : noise symbol for over pressure

List of cello multiphonics used in this piece

Pure Multiphonics

In general, to perform a multiphonic, I play with light left-hand finger pressure and a medium-slow, fairly heavy bow stroke, further from the bridge than for normal harmonic playing. These conditions are relative to the 'usual' playing technique for the highest harmonic that contributes to the multiphonic, so they vary from multiphonic to multiphonic: the bow stroke will be lighter, faster and closer to the bridge if the multiphonic contains high components (e.g., 12th, 13th harmonics) than for multiphonics with only mid-range harmonics.

http://www.cellomap.com/index/the-string/multiphonics-and-other-multiple-sounds.html

Controlling Loudness and Overtone Content

The scope for varying bow pressure, bow speed and point of contact in multiphonics is limited compared to normal playing, and even compared to performing harmonics. In general, these factors control the loudness and noisiness of a multiphonic. However, they also influence which harmonics take part in a multiphonic and can block high/low components. Therefore, when trying to change the loudness or colour of a multiphonic, it is very easy to 'break up' the multiphonic and find yourself playing a single harmonic. A balance between flexibility of colour/loudness and reliability of multiphonics is difficult to achieve. In summary:

-Increasing bow pressure increases loudness and encourages a distortion-like sound. High bow pressure favours the lower harmonics, making them loudest in the mix of harmonic components. It also encourages the open string ('first harmonic') to contribute to the sound and can restrict high harmonics.

-Decreasing bow pressure makes a multiphonic sound quieter and 'purer'. Low bow pressure can restrict the lower harmonics in a multiphonic.

-Increasing bow speed increases loudness and encourages higher harmonics, eventually cutting out lower harmonic components.

-Decreasing bow speed decreases loudness and encourages lower harmonics, eventually cutting out higher harmonic components.

-Contact points quite close to the bridge encourage noisiness and favour low components, sometimes restricting high harmonics and allowing the open string to sound.

-Contact points very close to the bridge produce a 'purer' sound and favour high components, sometimes restricting low harmonics.

Pizzicato Multiphonics

The open string is much more present in the sound than for bowed multiphonics. The mid-high harmonics are weak; harmonics above the 10th seem to be inaudible. The multiphonic effect is notably more pronounced on the lower strings.

Artificial Multiphonics

These function in a same way as pure multiphonics but they are produced as stop multiphonics. The principle is the same.

Artificial Multiphonic Glissando

The same artificial multiphonics are played with glissandi. It is difficult to sustain a consistent multiphonic effect, but reliability improves with practice.

Double Stopped Multiphonics

In general, it is quite problematic to play multiphonics simultaneously on two strings. This is because the bow position and speed are very specific in the case of multiphonics; slight alterations cause them to 'break up' into single harmonics. The most reliable way of double stopping multiphonics is to chose two multiphonics that are in parallel positions on two strings. The sound is distorted and difficult to sustain consistently.

Sub Harmonics

Undertones (or subharmonics) are pitches below the fundamental frequency of a string. The pitch is usually a minor seventh below the fundamental but can vary. Several different pitches might be possible. Undertones require high bow pressure and a very consistent bow speed at the lower end of 'normal' playing. In general they are easier to produce when the point of contact is not very close to the bridge.

Winding Granulation

It is played with the winding metal (top staff) of the bow on the given (bottom staff) open string. It causes rattling sound.

Wrapped Strings' Sound

It is played on the wrapped part of the string behind the bridge. If you move the bow vertically towards the fine tuning screws, the sound gets higher and brighter.

Bowing Directions and Pressure

The bow moves vertically on the string and in this particular left hand makes also large glissando while partially over pressure to full over pressure of the bow is applied. There should be rattling sound.

Pizzicato on Two Strings

Pizzicati are applied on the given strings by using two fingers, one finger on each string while making a glissando.

Chewing the Bow Hair

Turn the backside of the instrument. Bow the back plate of the instrument and pressing down on the hair of the bow, making rotation motions. If the middle part of the bow is used, the sound quality will be bright. If the frog part used, the sound will be darker.

Trill with growing interval

Trilling finger goes further away from the lower finger while the overalls glissando.

Seagull effect

The effect is performed so that the left hand interval should be kept fix between the stopped and harmonic fingers while making the glissando. As a result broken upwards glissandi are heard.

Double stop harmonics

Two different harmonics on the neighbour strings are played simultaneously.

Double stop glissado

Two different harmonics on the neighbour strings make glissando simultaneously.

Double stop trill

Two different harmonics on the neighbour strings are played simultaneously, but one of them make trill with another harmonic of the same string.

Double stop tremolo

Two different harmonics are played on different strings one after another with the given bow change.

For more information about playing techniques for strings visit the following page:

http://www.cellomap.com

BASS CLARINET

Carton Preparation

This preparation is a sheet of card. It's fixed to the bass clarinet's bell opening with a bulldog clip (the bass clarinet can be protected by gluing felt to the metal edges of the clip or by using bluetack). It's actually not so easy to find the right balance of the carton, so having a few different thicknesses to try is probably not a bad idea. When you make a crescendo on the lowest note "C" at some point it begins to make a clattering noise. These can be combined with singing, flutter tongue and overblown spectral multiphonics. For more information and how to produce them visit:

<https://heatherroche.net/2014/03/24/on-bass-clarinet-preparations/>

List of clarinet multiphonics

Please find these multiphonics on the Harry Sparnaay's book called the bass clarinet with the number below them!!!

Beginning with the page of PDF is 104

List of clarinet dyads

Please find these dyads on the Heather Roche's webpage with the numbers below them!!!

<https://heatherroche.net/2014/08/08/on-close-dyad-multiphonics-for-bass-clarinet/>

Overblown Spectral Multiphonics

These sounds are produced on the lowest register of the instrument. These are basically the overtone series of the instrument. These effect can be combined with other effects like singing, flutter tongue, etc. For more information and how to produce them visit:

<https://heatherroche.net/2016/09/26/spectral-multiphonics-bb-and-bass/>

Slap tongue & Multiphonic

The slap tongue sounds emanates from a vacuum created between the reed and the mouthpiece. We create and release this vacuum by pressing the tongue to the reed, creating a suction, moving the reed back from the mouthpiece facing and then releasing our tongue. This snapping back to the mouthpiece creates that fantastic slap sound. if you slap tongue on a multiphonic fingering, you get a chord. For more information and how to produce them and also see the video of it, visit:

<https://heatherroche.net/2014/04/04/on-clarinet-articulation/>

<https://heatherroche.net/2014/08/25/how-to-slap-tongue/>

Reed Tapping Granulation

This technique involves flicking or tapping the reed with the right hand while holding down different keys with the left hand, producing short articulated pizz-style sounds. For more information and how to produce them and also see the video of it, visit:

<https://heatherroche.net/2017/01/08/reed-tapping-articulation/>

For more information about playing techniques for strings visit the following page:

<https://heatherroche.net>

VOICE

Closed Mouth

The given note should be sang while mouth is closed by saying "hmm". Black circle on the top of the note indicates that mouth should be closed.

Mouth Closed to Open

The given note should be sang while mouth is closed the on the given beat it begins to open. When it becomes fully open, a vowel is indicated. Black circle on the top of the note goes yo open circle means it gets open.

Airly Whistle

Don't be too loud and be carefull not dominate the other sounds. The quality of the whistle should be airy. It can be combined with glissando or trill.

Whistle Trill

Don't be too loud and be carefull not dominate the other sounds. The quality of the whistle should be airy. The interval of the trill is an minor 2nd.

Changing Vowels

The vowels are changing rapidly when the moth becomes open.

Vocal Fry Granulation

Vocal Fry is the lowest vocal register and is produced through a loose glottal closure which will permit air to bubble through slowly with a popping or rattling sound of a very low frequency.

For more information about the techniques please see the book called "The Techniques of Singing" by Nicholas Isherwood.

If you have question, please do not hesitate to write me. My e-mail adres is

dulger@bu.edu

1'17" 1'23" 1'29" 1'34" 1'39" 1'43" 1'48" 1'53" 1'55" 2'00"

17 18 19 20 21 22 23 24 25 26

3

Voice

Vc.

mst
st
ord
sp
msp
bb
ws
tp

sub harmonic: slow bow

hm

ORD

bow speed: increase decrease
granulation: very slow bow

mp < f > mp f mf ff PPP

PPP

PPP

pp < mp

Voice

tp
ws
bb
msp
sp
ord
st
mst

hm

ORD

ORD

f > mp f mp f mf ff

PPP

pp < mp

Vc.

IV (sul C) II (sul D)

[5+9+13+4]

II (sul D) F# +55e

Voice

B. Cl.

f > mp f > mp ff

ppp

pp

Voice

granulation

hm

touch the node

%23,1

mp < f > mp < f > mf ff

PPP < p > PPP < p > PPP

Pno. L.H.

15^{mb}

[9+13+4]

Pno. R.H.

15^{mb}

8^{mb}

F# +55e

M 8^{mb}

p Red. mf Red. Red. Red. ff

pp mp p Red.

Score for Voice, Violin, Piano, and Clarinet. The page is divided into systems for Voice, Vln., mst (military instruments), Vc., B. Cl., and Pno. (Piano).

Voice: Four vocal staves with lyrics: hm, hm, a, hm, uouoai, a, uouoai. Dynamics range from *ppp* to *ff*.

Vln.: Violin part with dynamics from *f* to *pp*. Includes *arco* and *tr* markings.

mst: Military instruments including st (snare), ord (order), sp (soprano), msp (middle soprano), bb (bass), ws (woodwind), and tp (trumpet).

Vc.: Violoncello part with dynamics from *f* to *mf*. Includes *arco* and *M* (marcato) markings. Fingerings like [5+9+13+4] and [6+11+5] are indicated.

B. Cl.: Bass Clarinet part with dynamics from *ppp* to *f*. Includes *overblow* and *flutter* markings.

Pno.: Piano part with L.H. (Left Hand) and R.H. (Right Hand) staves. Dynamics range from *f* to *pp*. Includes *Ped.* (pedal) markings and *15th* (15th fingering) markings.

Rehearsal marks are indicated by dots above the staves at measures 54, 55, 56, 57, 58, 59, and 60.

65 66 67 68 69 70

Voice

Vln.

mst
st
ord
sp
msp
bb
ws
tp

Vc.

tp
ws
bb
msp
sp
ord
st
mst

B. Cl.

Pno. L.H.

Pno. R.H.

f *p* *f* *fff* *p* *f*

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

p *f* *p* *mf*

f *mf* *fff*

f *mf* *fff*

III-IV III-IV

ORD

arco

IV (sul C) Eb +55e I (sul A) Eb +37e

overblow

%23,1 %30,8

[10+13+3]

M Eb +55e M Eb +37e

pp *mpp* *mf* *mp*

ff *mf* *fff*

f *mf* *fff*

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

15mb

Lead. Lead. Lead. Lead. Lead. Lead.

85 86 87 88 89

Voice

Vln.

mst
st
ord
sp
msp
bb
ws
tp

mp

mf

fff

mp

p

pp

vocal fry granulation: imitate the violin

granulation: very slow bow

winding granulation

ORD

Vc.

pizz.

8va

[5+9+13+4]

[6+11+5]

[5+9+13+4]

[7+10+13+3]

arco

IV (sul C) E \sharp +55e

III (sul G) B \flat +47e

II (sul D) F \sharp +55e

I (sul A) E \flat +37e

f

ff

mp

p

Voice

tp
ws
bb
msp
sp
ord
st
mst

winding granulation

ORD

mp

p

Voice

B. Cl.

p

mf

f

ff

reed tapping granulation: imitate the violin

p

mp

p

mp

Voice

ppp

mf

fff

p

plectrum granulation on the treble bridge

Pno. L.H.

mp

Pno. R.H.

f

ff

fff

15mb

2ed.

7'42"

7'47"

7'51"

7'56"

90 91 92 93

mp p mf p mf p mf p

Voice

Vln.

mst
st
ord
sp
msp
bb
ws
tp

mp p mp p mp p mp p

Voice

mp p mp p mp p mp p

tp
ws
bb
msp
sp
ord
st
mst

mp p mp p mp p mp p

Vc.

Voice

vocal fry granulation: imitate the violin

p mp p mp p mp p

B. Cl.

p mp p mp p mp p

Voice

vocal fry granulation: imitate the violin

mp p mp p mp p mp p

Pno.
R.H.

(15).....

COVENANT

8'01" 8'03" 8'06" 8'10" 8'13" 8'17" 8'20" 8'24" 8'31" 8'35"

94 95 96 97 98 99 100 101 102 103

Voice: *mf* *p* *mf* *p* *mp* *pppp* *f*

Vln.: *mp* *ppp* *mf* *ppp* *ff*

mst: *mp* *ppp* *mf* *ppp* *ff*

st ord sp msp bb ws tp

granulation: very slow bow

[g#6, a6] (#-o-o) [a#6, b6]

ORD

Voice: *mp* *p*

tp ws bb msp sp ord st mst: *mp* *p* *mp* *ppp* *mf* *ppp* *fff*

Vc.: [6+11+5] M III (sul G) Bb +47c

slow bow on wrapped strings

Voice: *p* *mp* *p* *mp* *p*

B. Cl.: *p* *mp* *pp* *mf* *pp* *fff* *p* *mf*

flutter

Voice: *mp* *p* *mp* *p* *mp* *pppp* *f*

Pno. L.H.: *mp* *p* *mp* *p* *mp* *ppp* *fff*

Pno. R.H.: *mp* *mf* *mp* *mf* *fff*

pluck

granulation

(location)

15^{mb}

[6+11+5] Bb +47c M Eb +55c M Bb +47c

8^{sb} Ped.

104 105 106 107 108 109 110 111 112

Voice

Vln.

mst
st
ord
sp
msp
bb
ws
tp

mp p

press & rotate bow hair

back plate
mid bright
frog dark

f p mf

seagull effect

ORD

p ff

Voice

tp
ws
bb
msp
sp
ord
st
mst

mp pp

press & rotate bow hair

back plate
mid bright
frog dark

p f p mf

ORD

p ff

Vc.

[6+11+5]
8^{oct}
(f) (e)
(b) (g)
M III (sul G)B₂+47f

Voice

B. Cl.

flutter

p mf p mp p mf

Voice

Pno. L.H.

%30,8 %23,1

[10+13+3] [9+13+4]

granulation

Brutally, but slowly and equally

M E_b+37e M E_b+55e

(location)

15^{mb}

f ff

Red. Red. Red.