

# Whispering Galleries

for thumb piano

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## Notation: Sounds

The scores are sequences of numbers which indicate how many events should be produced. Unless specified otherwise, an event is a single lamella plucked. Everything is read left to right. For example, consider the following sequence:

2 5 0<sup>3</sup> 0 0 1<sub>4</sub>

It instructs you to play a two-note melody, followed by a separate five-note melody. Let the sounds ring for a while during the small break (indicated by a zero), then produce a three-note melody which is wholly, or for the most part composed of high notes. After that, there is a longer pause (two zeros), a single note, and a four-note melody, mostly low notes. Any melody may have pauses itself, e.g. a 5 may be understood as 2 0 1 0 1, etc.

There are three types of events other than a single lamella being plucked:

- 5 indicates a five-note melody in which **one** of the notes is muted by gently blocking the top of the lamella while plucking it using your other hand. Extraneous sound events that happen when this motion causes problems (e.g. when it is difficult to quickly mute just one lamella) are part of the piece.
- 5<sup>↑</sup> indicates a four-note melody with a single somewhat rapid upwards arpeggio inserted, preferably one produced by a sweeping motion, rather than note by note – if the instrument allows that. Naturally, 5<sup>↓</sup> indicates the same, only the arpeggio is going downwards.
- 5\* indicates a four-note melody with a single hit inserted. A hit is produced by forcefully hitting a group of lammellae with the underside of a finger, while keeping the finger relaxed – this light bouncing motion results in a comparatively soft cluster-like chord.

Should any of these indications appear with a zero, mimic the necessary movements, but do not actually pluck or hit the lamellae – this should result in tiny, possibly imperceptible sounds that are part of the piece; mute the instrument with the other hand if you need to. Should any of these indications appear together, do not mix them – a 5<sup>↑</sup> indicates three simple notes, a muted note, and an arpeggio. None of these events are affected by high/low note prevalence: a 4<sup>↓</sup> indicates three high notes and an arpeggio that may include any pitches.

You may want to perform the following exercise to familiarize yourself with the sounds described, and the effects produced:

1<sup>↑</sup> 0\* 1\* 1 0 0 4<sup>↓</sup> 1 1 0<sup>↑</sup>

## Notation: Form

Repeats are indicated by brackets, as shown in the following example:

$$\underline{5} 0 ( 3^2 4 ) 7 = \underline{5} 0 3^2 4 3^2 4 7$$

Obviously, a repeat affects both the structure and the pitch content of a given passage. Nested repeats are performed as follows (letters used in this example to facilitate understanding):

$$( A B [ C D ) E F G H ] I J K = A B C D, A B C D, E F G H, C D E F G H, I J K$$

$$( A B [ C \{ D \} E F ] G H ] I J K = A B C D, A B C D, E F, D E F G H, C D E F G H, I J K$$

$$( A B [ C D ) E F \{ G \} H ] I J K = A B C D, A B C D, E F G, G, H, C D E F G, G, H, I J K$$

Occasionally, nested brackets will be marked with the letter “a”:  $\{ G \}^a$  – this indicates that the G segment is only repeated once during the repeat of the larger loop. For example:

$$( A B C \{ D E \}^a F ) = A B C D E D E F, A B C D E F, \text{ or}$$

$$( A B C \{ D E \}^a F ) = A B C D E F, A B C D E D E F$$

An X mark indicates a point where the performer may end the piece. Where there are multiple X marks, select just one and ignore the others. If an X mark appears inside a repeat, you may end the piece either the first time the repeated passage is played, *or* during the repeat:

$$2 1 ( 3 X 2 5 ) = 2 1 3 2 5 3, \text{ or}$$

$$2 1 ( 3 X 2 5 ) = 2 1 3$$

Grey color indicates optional passages: a grey 2 may be ignored, or read as a 0, or as a normal 2. Grey brackets indicate optional repeats. Other colors indicate thematic relationships, or simply identical notes. A passage may be repeated in such cases with the new phrasing and events, if any (e.g.  $5_3$  repeated in  $1 2^*$  would result in only the first two notes of the first sequence with a hit placed between them or after them). Occasionally a bracket or an X mark will be colored along with some numbers, which simply indicates that the numbers form one passage, not two (as an uncolored bracket between two sequences of colored numbers would have led one to believe).

All aspects of the performance not covered above are left for the performer to decide upon, including tempi and dynamics.

## Gallery #1

$$\begin{array}{r}
 \underline{2} \quad 0 \quad 7 \quad 1^\uparrow \\
 ( \quad \underline{4} \quad 0 \quad 3^* \quad \{ \quad 3^\downarrow \}^a \quad 0 \quad 1 \quad 2^* \quad [ \quad 5^\uparrow \quad \underline{1} \quad ) \\
 \hspace{20em} 0 \quad 2 \quad 0 \quad 0 \quad 7^* \quad ] \\
 0^* \quad 1 \quad 1 \quad \underline{3} \quad 2 \quad 0 \\
 ( \quad 3 \quad \underline{0} \quad 5^\downarrow \quad \{ \quad 4^\downarrow \quad 0 \quad [ \quad 3 \quad \} \quad \underline{2} \quad 6^* \quad ] \quad \mathbf{X} \\
 \hspace{20em} 0 \quad 5^* \quad [ \quad 5^\uparrow \quad \underline{1} \quad ) \\
 6 \quad 1^\downarrow \quad 0 \quad 3 \quad \underline{1} \quad \mathbf{X} \\
 2^\uparrow \quad 0 \quad 1 \quad 0 \quad 0^* \quad \underline{2}^* \quad 8^\uparrow \quad 1 \quad \underline{3}^* \quad 1 \quad ]
 \end{array}$$

After a short introduction, seed material is performed: two passages, both evolved from an X Y Z scheme where  $Y < X$  and  $Y < Z$ . This material is developed into larger fragments with the same structure, connected using loops. These, in turn, give birth to a third realization of the same scheme, but one that is free of internal loops. Other relationships are included. Tempo suggestion: fast for the introduction (first four numbers), moderate for everything else.

## Gallery #2A

( { 2 }<sup>a</sup> 0 0 1 0 1 { 1 }<sup>a</sup> 0 0 0 1\* )

( 1 0 0 7 1 1\* 0 { 1 }<sup>a</sup> 0 0 5<sup>↑</sup> ) **X**

0 0 0 1

( { 0 1 0 0 0 }<sup>a</sup> )

5\* 7<sup>↑</sup> 0 0 0 1 0

( 0 3<sup>↑</sup> 0 0 { 1 }<sup>a</sup> 1 0 0 )

0 0 0 1\* 0 0 1 1 0 **X**

0 1 5<sup>↓</sup> 1 0\* 0 0 1 **X**

0 0 0 1 0 ( 0 { 1 }<sup>a</sup> 0 0 )

0\* 0<sup>↑</sup> 1 1<sup>↑</sup> 0 0 1 0 2 0 4

Several types of material floating in space. Some particles have two stages (orange), some only one; some are territorial (red), others are not (blue). Slow tempi with many different dynamic values, particularly suited for instruments that can produce loud *and* very loud, distorted sounds; mix those with normal, quiet, and very quiet sounds.

## Gallery #2B

( { 2 }<sup>a</sup> 0 0 1 0 1 { 1 }<sup>a</sup> 0 0 0 1\* )

( <sub>1</sub> 0 0 7 1 1\* 0 { 1 }<sup>a</sup> 0 0 5<sup>↑</sup> ) **X**

0 0 0 1

( { 0 <sub>1</sub> 0 0 0 }<sup>a</sup> )

5\* 7<sup>↑</sup> 0 0 0 1 0

( 0 3<sup>↑</sup> 0 0 { 1 }<sup>a</sup> 1 0 0 )

0 0 0 1\* 0 0 <sub>1</sub> 1 0 **X**

0 1 5<sup>↓</sup> 1 0\* 0 0 1 **X**

0 0 0 1 0 ( 0 { 1 }<sup>a</sup> 0 0 )

0\* 0<sup>↑</sup> 1 <sub>1</sub><sup>↑</sup> 0 0 1 0 <sup>2</sup> 0 4

Moderate to fast tempo, quiet sounds for most of the time. Emphasis on the first statement of the “theme”, second statement *piano* amid *pianissimo* environment.

### Gallery #3

$$\begin{aligned}
 & [ ( \{ 2 \ 0 \} ) \ ^1 \ 4^\uparrow \ 2 \ 0 \ 0 ] \ ^3 \ 0 \ 0 \ 0 \\
 & \quad ( \{ 3 \ 1 \} ) \ 2^\uparrow \ 0 \ 1^* \ 3 \ 0 \\
 & ( 0 \ 0 \ ^1 \ \mathbf{X} \ { 2 \ 1 \ 0 \} \\
 & \quad \quad \quad \{ \ ^3 \ }^a \ 3^\downarrow \ 2 \ 0 \ 0 \ ^1 \ { 2 \ } \ 0^\uparrow \ ) \ \mathbf{X} \\
 & \quad \quad \quad 2 \ 0 \ 2 \ 0 \ 1 \ 0 \ 2 \\
 & [ ( \{ 2 \ 0 \} ) \ ^1 \ 4^\uparrow \ 2 \ 0 \ 0 ] \ ^3 \ 0 \ 0 \ 0 \\
 & [ ( \{ 2 \ \underline{2} \ 0 \ ^1 \} ) \ 2^\downarrow \ 0 \ 1^* \ 4 \ 1 ] \\
 & \quad ( \{ 2 \ 0 \ 2 \ \mathbf{X} \ 0 \} ) \ 2
 \end{aligned}$$

An endless line of seeds (2 0 X, where X is optional) in various stages of development. Tempo suggestion: without strong contrasts between sections.

## Gallery #4

$$\begin{bmatrix}
 3 & 1 & 0 & \underline{1} & \underline{2} & 1 & 1^* & \underline{0} & \underline{4} & 1^\uparrow & 2 & 5 & 1^\downarrow & 6^* & 0 & 2 \\
 2 & 0 & 2^* & \underline{0} & 0 & 1 & 5^* & 0 & 1^\downarrow & \underline{3} & ( & 3 & 0 & 1 & 1 & 4^* & \underline{7}^\uparrow & ) & 1 \\
 3 & 1 & 0 & \underline{2}^* & \underline{2} & 0 & 1^* & \underline{0} & \underline{4} & 1^\uparrow & 2 & 4 & 1^\downarrow & 5^* & 0 & 2 \\
 2 & 0 & 2^* & 0 & \underline{0} & \underline{1} & 5^* & 0 & 1^\downarrow & 2 & ( & 3 & 0 & 1 & 1 & 4^* & \underline{7}^\uparrow & ) & 1 & ]
 \end{bmatrix}$$

A closed system with three stages of material: (a) solitary arpeggio, (b) juvenile form, and (c) mature form. Lines 3 and 4 may be replaced with these during the repeat:

$$\begin{bmatrix}
 3 & 1 & 0 & \underline{2}^* & \underline{2} & 0 & 1^* & \underline{0} & \underline{4} & 1^\uparrow & 2 & 4 & 1^\downarrow & 5^* & 0 & 2 \\
 2 & 0 & 2^* & 0 & \underline{0} & \underline{3} & 5^* & 0 & 1^\downarrow & 2 & ( & 3 & 0 & 1 & 1 & 4^* & \underline{7}^\uparrow & ) & 1 \\
 ( & \{ & 1 & 0 & \} & 2 & ) & ]
 \end{bmatrix}$$

## Gallery #5

$\underline{1}$  ( 1 0 1 0  $1^1$  0 1 0 )  $\underline{1}$  0  $1^\uparrow$  0 <sub>1</sub>  
 $6$  ( {  $1^1$  0  $1^1$  } ) 4  $1^\downarrow$   $1^\uparrow$  0  $1^\uparrow$  ( 0 1 0 1 1 0 )  
 $\underline{5}$  ( 2 ) ( 1 0 0 1  $1^1$  0 0 0 1 0 0 1 ) **X**  
 $2^\uparrow$   $\underline{1}$  0  $1^\uparrow$  0 0 1 0 1 0 ( 1 0 { 1 }<sup>a</sup> 0 )  
 $0$  0  $1^\uparrow$   $1^\downarrow$   $1^\uparrow$   $1^\downarrow$  0  $1^\downarrow$  <sup>1</sup> ( 1 0 ) 1  $1^\uparrow$  1 <sup>1</sup> **X**  
  
 CODA ( <sub>1</sub> 0 { 1 }<sup>a</sup> 0 1 0 0 0 ) **X**  
 $\underline{2}$   $\underline{1}$   $1^\uparrow$  0 <sup>1</sup> ( 0 1  $1^1$  ) 0 0 <sub>1</sub>  $1^\downarrow$   $1^\downarrow$  0 4 1

Two entities influencing each other, or co-existing. Rhythm enforced in loops. Thematic relationships indicated by colors are optional. Tempo suggestion: coda very slow, or moderate speed if the rest is played slow.



## Supplementary Materials

For Gallery #1: The process is: ( 4 0 1 ) [ 5 2 7 ] into ( 4 0 0 2 [ 5 1 ) 0 2 0 0 7 ) into ( 4 { 3<sup>↓</sup> }<sup>a</sup> 0 0 2\* [ 5<sup>↑</sup> 1 ) 0 2<sup>↑</sup> 0 0 7\* ] into the final version. The 7\* at the end becomes a second introduction, leading into the second line, similarly developed. The juxtaposition of the two X Y Z themes may be indicated by timbre change, or with this transcription for two performers using two instruments with different timbral characteristics:

BOTH 2 0 7 1<sup>↑</sup>

PL. 1 ( 4 0 3\* { 3<sup>↓</sup> }<sup>a</sup> 0 2\* [ 1 )

PL. 2 ( 1 1 [ 5<sup>↑</sup> ) 0 2 0 0 7\* ]

PL. 2 0\* 1 1 3 2 0

PL. 1 ( 3 0 5<sup>↓</sup> { 4<sup>↓</sup> 0 [ } 6\* ] **X**

PL. 2 ( { [ 3 } 2 1\* ] 0 5\* [ 5<sup>↑</sup> 1 )

BOTH or PL. 2 6 1<sup>↓</sup> 0 3 1 **X**

BOTH 2<sup>↑</sup> 0 1 0 0\* 2\* 8<sup>↑</sup> 1 3 1 ]

For Gallery #2B: a transcription for two performers using two instruments with different timbral characteristics follows.

$$\text{PL. 1 } \left( \left\{ \begin{array}{c} 2 \\ \end{array} \right\}^a 0 0 1 0 \underline{1} \left\{ \begin{array}{c} 1 \\ \end{array} \right\}^a \quad 1^* \right)$$

$$\text{PL. 2 } \left( \left\{ \begin{array}{c} 1 \\ 1 \\ 1 \\ \end{array} \right\}^a \quad 2 \quad \underline{1} 1 0 \right)$$

$$\text{PL. 1 } \left( \begin{array}{c} 1 \\ 0 \\ 0 \end{array} \right)$$

$$\text{BOTH } \left( \begin{array}{c} \underline{7} \\ 1 \\ 1^* \\ 0 \end{array} \left\{ \begin{array}{c} 1 \\ \end{array} \right\}^a 0 0 5^\uparrow \right) 0 0 \underline{0} 1 \mathbf{X}$$

$$\text{PL. 1 } \left( \left\{ \begin{array}{c} 0 \\ 1 \\ 0 \\ 0 \\ 0 \end{array} \right\}^a \right)$$

$$\text{PL. 2 } \left( \left\{ \begin{array}{c} 1 \\ 0 \\ \underline{2} \\ 1 \end{array} \right\}^a \right) 5^* 7^\uparrow 0 0 0 1 0$$

$$\text{PL. 1 or PL. 2 } \left( 0 \underline{3}^\uparrow 0 0 \left\{ \begin{array}{c} 1 \\ \end{array} \right\}^a 1 0 0 \right) 0 0 0 1^* 0 0 1$$

BOTH 1 0 0 1 5<sup>↓</sup> 1 0\* 0 0 1 0 0 0 1 0

BOTH ( 0 { 1 }<sup>a</sup> 0 0 )

PL. 1 0\* 0<sup>↑</sup> 1 1<sup>↑</sup> 0 0 1 0 2 0 4

PL. 2 2 1 1

For Gallery #5: inside rhythmic loops, i.e. those modelled after ( 1 0 1 0 ), it is possible to read every zero as a full stop, and mute the sound, thus creating a more pronounced rhythm. With free material, e.g. the “6” that begins the second line, it is possible to mold it after the rhythmic loops; but care should be taken to avoid both repercussion and monotone staccato melodies.

For Gallery #6: the section after the red “2”, and up to the loop, may be separated and made into a very slow interlude. All processes stop, and then begin again, some with greater levels of activity than the others. Thus there’s a double coda: one a compressed recapitulation, the other a beginning of another thematic process, the development of which is not heard.