HyperCello Guide

HyperCello is a crowd-composing workshop for **audience**, **cellist**, and two auxiliary performers: **operator** and **moderator**. The work explores how voting may be used to facilitate collective creativity.

In *HyperCello*, an audience is invited to make a series of decisions, which leads to the gradual construction, note by note, of new musical materials. In Section 1, the audience votes to create a 2-bar rhythmic pattern. In Section 2, the audience composes a 2-bar bassline. These are performed, recorded, and looped by the cellist. Finally, in Section 3, the audience determines three rules to govern an improvisation by the cellist. This is performed over the looping materials.

This document acts as an instruction manual for performing *HyperCello*. The technical details of the work are listed first, and then its system is described in detail.

Materials in performance pack

- HyperCello PPT (TurningPoint)

This is a *Microsoft PowerPoint* file that presents multiple-choice questions. These questions guide the workshop's creative process.

This is intended to be used in conjunction with the Audience Response System *TurningPoint*.

- HyperCello PPT (blank)

This is a version of the above PPT file without *TurningPoint* integration, and may be used with alternative voting systems.

- HyperCello score

This is a *Sibelius* file and is used by the **operator**. It acts as a 'live score' in the workshop, displaying the crowd-composed materials as they develop.

- HyperCello loops

This *Ableton Live* file may be used by the **cellist** to record and loop the crowd-composed materials. However, alternative programs with similar functionality would suffice.

Roles

- Audience

The **audience** answer the multiple-choice questions displayed on 'HyperCello PPT'.

- Cellist

The **cellist** plays the developing materials as they are constructed. Materials are recorded once completed, and then continue to loop as the workshop progresses.

- Operator

The **operator** implements the audience's decisions into the 'HyperCello score'.

- Moderator

The **moderator** leads the workshop, acting as a conduit between the **audience**, **cellist**, and **operator**. The **moderator's** main function is to administer 'HyperCello PPT'.

Staging and equipment

Staging and equipment will vary depending on the logistics of particular performances, and most aspects of this work are flexible. With that in mind, a suggested stage plan is presented below:
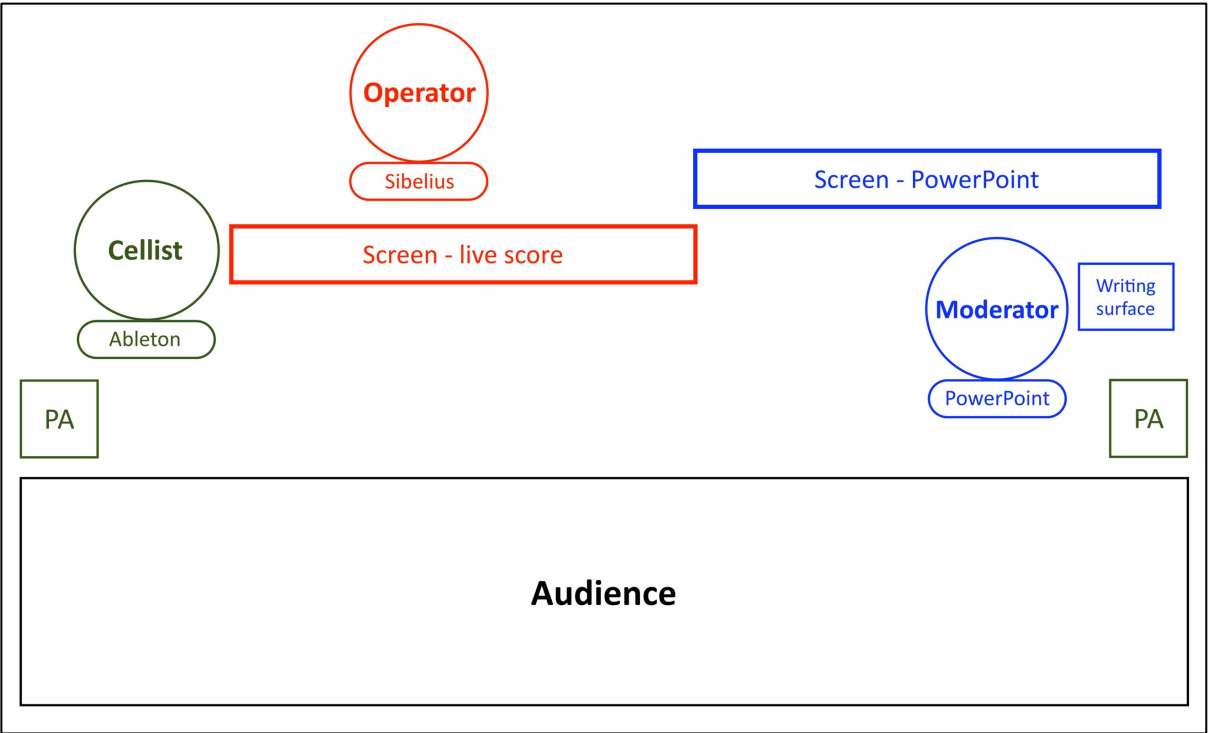
This plan would comprise the following equipment list:

Audience
TurningPoint voting remotes, if applicable.

Cellist
Computer – *Ableton Live.*
Microphone – recording cello.
Headphones – click track in *Ableton Live.*
PA (or other sound system) – playing the recording materials.

Operator
Computer – *Sibelius.*
Screen (such as a projector screen, computer monitor, or TV) – displaying the 'HyperCello score' to <u>both</u> the cellist and audience (two screens may be required).

Moderator
Computer – *Microsoft PowerPoint* (and *TurningPoint*, if applicable)*.*
Screen – displaying 'HyperCello PPT'.
Microphone – for projecting voice, if necessary.
Writing surface (such as a flipboard or whiteboard) – noting audience contributions in Section 3.
Die – used to resolve dual majorities.

In total, this would require:

- Voting remotes
- Computer x3
- Microphone x2
- Headphones
- PA
- Screen x3
- Writing surface
- Die

Important information

A few important notes are worth bearing in mind before moving forward.

Moderator

1. Collective decision-making in *HyperCello* utilises a 'majority vote' rule.

This means that the option with the most votes will be selected. Once each poll closes, the votes will be displayed on PPT as percentages on a bar graph.

2. If two or more options receive an equal majority vote, this is considered a 'dual majority'.

If a dual majority occurs, the **moderator** is encouraged to roll a dice to randomly select a winning option.

3. The **moderator** simply needs to click through the slides sequentially in order to traverse the PPT.

4. If using 'HyperCello PPT (TurningPoint)', Section 1 and Section 2 polls have a 10-second timer. Once this timer runs down, the poll will automatically close.

This is to ensure that the workshop does not overrun, as there are many successive decisions for the **audience** to make.

In Section 3, the **moderator** will need to manually close polls.

5. The score is in $\quarternote = 120$, and $7/8$ ($\quarternote + \quarternote + \dottedquarternote$)

6. Ensuring that the PPT is visible to the **operator**, so that they can materialise the **audience's** decisions without assistance, will make the crowd-composing process more fluid.

However, it is also acceptable for the **moderator** to inform the **operator** of the **audience's** decisions.

7. Either way, it is necessary for the **operator** to be experienced with *Sibelius* or an analogous program, as they will need to edit the score promptly.

Cellist

8. In Section 1 and Section 2, options should be showcased as frequently as possible.

As time constraints may mean that it is not possible to showcase between each poll, options should at the very least be showcased before voting begins, and half way through the section.

9. The **cellist** is encouraged to continually play the 2-bar materials as they are constructed

Therefore, for example, once the first note is determined, the **cellist** could play the following material on loop:
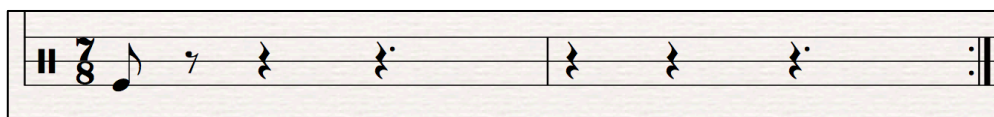
With a second note added, the **cellist** could loop the following:
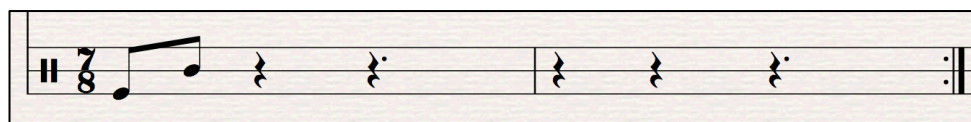
In this way, the **audience** continually hear the looped material as it develops. A click track would be useful for adhering to the $7/8$ metre. Once the 2-bar material is completed, it can then be recorded and looped through the PA.

10. Section 3 requires the **cellist** to improvise based on three rules that, because there is an invitation for **audience** contributions, could be almost anything.

It is important that the **cellist** be comfortable with both improvisation, and with a host of musical approaches. However, it is not required that this improvisation be technically demanding, or subjectively beautiful. What is important is that the governing rules are discernible, as the *HyperCello* 'aesthetic' is found in the **audience** hearing their creative decisions materialised

System guide

Test

The PPT begins with two slides that are intended to ensure that the voting mechanism is functioning, and to introduce voting to the **audience**.

The first slide asks the **audience** to select their favourite letter. The second slide asks the same, but this time with the 10-second timer that regulates Section 1 and Section 2.
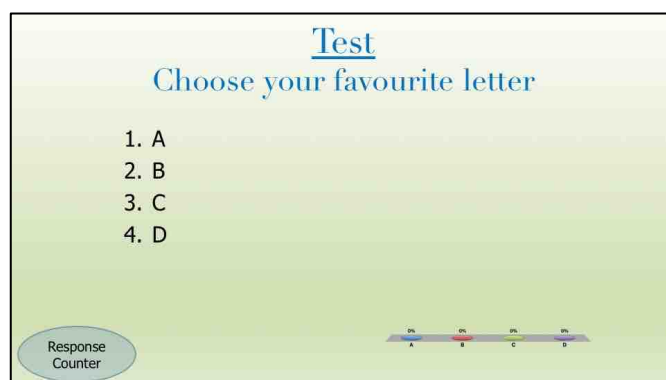

Section 1: rhythmic pattern

In Section 1, the **audience** votes to create a rhythmic pattern utilising percussive sounds on the cello, choosing between four options:

- Rest;
- Palm slap;
- Finger slap; and,
- Finger scrape.

These are, however, only a guide, and the **cellist** is free to interpret the instructions as best befitting them. They are intended to mimic the bass drum, snare drum and hi-hat of a drum kit.

The rhythmic pattern is constructed one quaver a time, 14 quavers in total.
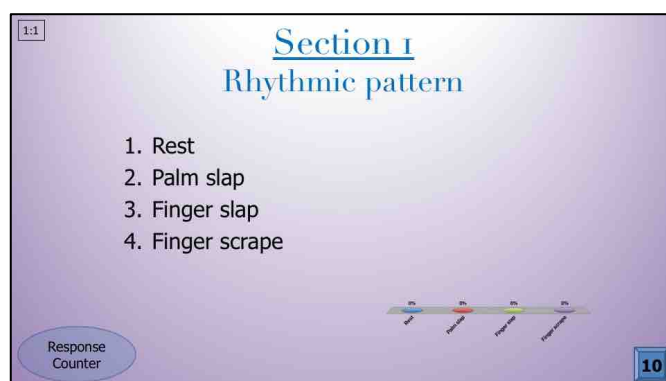
The strength of majority votes in each poll determines the dynamic of its resulting note. The difference between the leading majority vote and the second strongest option is calculated. This is the 'majority difference rule':

- Majority strength less than 10% - ghost note;
- Majority strength of 10-19% - *default;*
- Majority strength 20% or more - accented note.
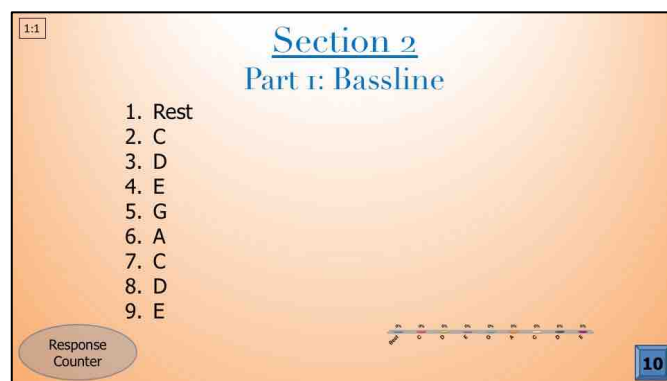
Section 2: bassline

Part 1

In Section 2, the **audience** votes to create a bassline, which is played *pizzicato* on the cello. Each poll presents 8 pitches from a pentatonic scale, and a rest:

- Rest
- C
- D
- E
- G
- A
- C
- D
- E

6 notes are determined, divided by the score's ♩ + ♩ + ♩. framework.

The same 'majority difference rule' applies.

Part 2

Once Part 1 is completed, the bassline will be revised in Part 2. For all but the first and last note, the **audience** vote to move each by a quaver on either side, or to leave the note in place:
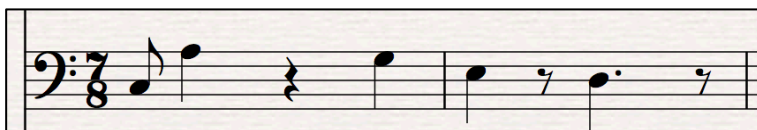
Below is an example of what could result from Step 1:

Through the revisions of Step 2, this example could then become:

Section 3: improvised material

Once the rhythmic pattern and bassline materials have been established, the **cellist** will then improvise a one to two-minute material. This will be governed by rules determined by the **audience**.

Each poll initially provides three options, and two more are contributed by the **audience**. The **moderator** should note these on their writing surface.

First, the 'character' is determined:

- Jolting;
- Graceful;
- Bold.

Second, the 'narrative' is determined:

- Quiet opening, climactic middle section, fade to nothing;
- Quiet until a fiery end;
- Oscillates between passive and aggressive three times.

Finally, the 'style' is determined:
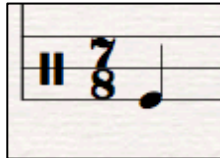
- Melodious;
- Irregular;
- Noisy.

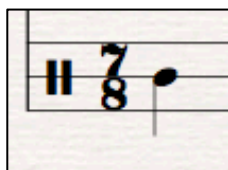With that, the **cellist** performs their improvisation and the workshop comes to a close.

Key

The following is provided to assist the **operator** and **cellist** in editing and performing the score.
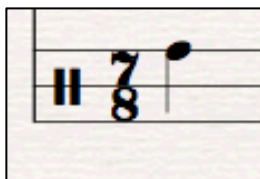
Rhythmic pattern

Notation
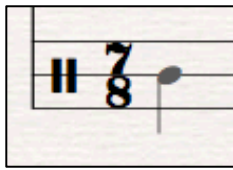

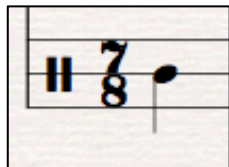Palm slap.

Finger slap.

Finger scrape.

Bassline

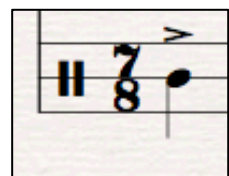## Majority difference rules

Ghost note (played quietly) – *less than 10% majority strength.*

Default – *10-19% majority strength.*

Accented note **–** *more than 20% majority strength.*

Rests are not affected by this rule.