

Carlo Tosato

HIBAKUJUMOKU

for amplified Flute & Percussion Ensemble

2021

Preface

Hibakujumoku is a Japanese term for a tree that survived to the atomic bombings of Hiroshima and Nagasaki in 1945. The heat emitted by the explosions in Hiroshima within the first three seconds at a distance of three kilometers from the hypocenter was about 40 times greater than that from the Sun. Plants however suffered damage only in the portions exposed above ground, while portions underground were not directly damaged. This allowed the survived trees (about 170) to grow again and miraculously gaining and giving life to the surrounding environment.

This amazing phenomenon was hugely inspirational for this composition, began in february 2021 after reading Richard Powers' *The Overstory* and an article titled *The Social Life of Forests* by Ferris Jab's published for New York Times Magazine about Suzanne Simard, a forestry pioneer who discovered the complex communication and exchange network system happening in old-growth forests.

In light of how far the climate change we are experiencing is going (the best explanatory example can be found reading the last IPCC's Sixth Assessment Report made in 2021), this composition aims to make the listener *perceive* how different Humans' rhythm is becoming compared to Nature's one. What I personally perceived as *different* was *too fast*, as the Earth Overshoot Days clearly shows as well as the greater amount of extreme climatic events happening in the last years.

The composition comprises 3 movements without breaks, the first of which is about 13 minutes, the second 5 minutes and the third 3 minutes long. The first movement shows different evolution stages of a plant or tree, picturing firstly three of the four elements (earth, wind and water), after which they are combined and brought to more complex levels. As main motifs for the whole composition there are three musical elements. The first one is played for example by the bass drums at the very beginning of the composition till the first tam-tam roll. It's strictly bound with earth representing the seeds underground. The second one is more like a rhythmic pattern based on Fibonacci's sequence, played in full length by marimbas from bar 78 till bar 82 and then repeated. The third motif is perhaps the most present one, which consists of many variations, transpositions and other techniques of this sequence:



Fibonacci's sequence is used in many other ways in the first movement, serving both building and disruptive purposes. Some numbers taken from different traditions and meaning are used as germinal compositional tools as well, specifically: 3,4,7, 9 and 12.

The second movement shows the overwhelming, organized and obsessively repeated rhythms of our modern society, at the end of which it collapses and fall over its ruins. It's based on number 5 and its multiples, and on complex irreversible rhythmic patterns. In particular, a picture that comprises 100 eight notes organized in different ways across each player is repeated over and over, over which the flute will freely play the main climax-contour. This picture is organized as follows (the numbers correspond to the eight notes amounts):

Player 1: 5 | 10 | 15 | 20 | 20 | 15 | 10 | 5
 Player 2: 20 | 15 | 10 | 5 | 5 | 10 | 15 | 20
 Player 3&4: 5 | 4 | 3 | 3 | 5 | 5 | 4 | 3 | 3 | 5 | 5 | 3 | 4 | 3 | 5 | 5 | 3 | 3 | 4 | 5 | 5 | 3 | 3 | 4 | 5

In the main section of this movement (from rehearsal mark **B** till **L**), an additive process following the outline of the compound interest equation has been used.

The third and last movement shows what remains of the first movement after the influence of the second movement. It resumes some of the most important elements of the first movement but in a distorted and depleted way.

General Indications

The first movement should be quite straightforward to read, even though I would suggest to practice this part with a pulse-based approach, especially starting from rehearsal mark **V**). From here, the time signature it's just a tool in order to let the players easily orientate through the score. **Pay attention to these key signatures** in the first movement when they appear:



The second movement needs more attention. Players 1&2 will eventually play the pattern here below (at **K**), but before this pattern will be presented only in few parts, increasingly adding the missing ones in order to achieve this final result. I suggest those two players to practice first the whole pattern and then play what is written in the main score.

The flute in the second movement plays in free meter, but everytime the 100 ♪ pattern starts again, it will be indicated in its part. This separation is indicated by a dotted barline and this is actually the flutist's main time frame in which he/she has to practice. Between two dotted barlines there's approximately 17 seconds, and the flutist is free to choose the best speed for each figure within that time frame. In order to be always together with the others during this movement, the flutist should know that players 3&4 play always a *p*—*f* the bar before the start of the new 100 ♪ pattern.

In the third movement, I would suggest that one player takes the role of keeping track of where everyone is and giving them the cues, by placing a silent stopwatch on his/her music stand.

Percussion Music Symbols

† : Bass Drum/Tam-Tam sticks

‡ : Timpani Sticks

Ƴ : Wire Brushes

‡ : Hot Rods

⌘ : Marimba/Vibraphone Mallets

⊙ : Rimshot

+ : Damp with Wire Brushes (Player 2: hit the triangle on the snare drum)

○ : Rub Wire Brushes around SD head

3 bows are needed, 2 for Player 3 and 1 for Player 4.

In the second movement, every percussionist except Player 4 should play with hard plastic mallets or wooden sticks.

Percussion Instrumentation

Player 1

Marimba (5 Oct)

Bass Drum



1. High Brake Drum
2. Metal Spring
3. Metal Plate
4. Mid Brake Drum
5. Metal Bin
6. Low Brake Drum
7. Bass Drum (the same one as before)

Player 2

Marimba (5 Oct)

Bass Drum

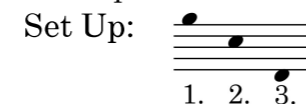


1. Snare Drum without snares and with a triangle placed on the head
2. High Resonant Metal
3. Metal Spring
4. Two Cymbals placed one on another and played as one
5. Mid Resonant Metal
6. Floor Tom with loose head
7. Low Resonant Metal
8. Bass Drum (the same one as before)
9. Small Tam-Tam

Player 3

Vibraphone with motor (III Mov: with thin metal strips on it)

Waterphone

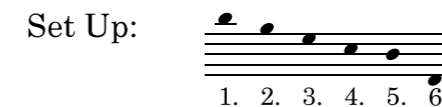
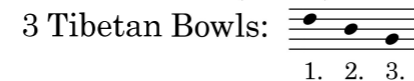


1. Wind Chimes
2. Snare Drum
3. Damped Small Bass Drum

Player 4

Crotales (2 Oct)

Tubular Bells (1 Oct)



1. Splash Cymbal
2. Crash Cymbal
3. Ride Cymbal
4. Snare Drum
5. Ceng-Ceng Ricik (or really small cymbals played with other small cymbals)
6. Tam Tam

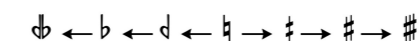
Flute

For this composition the flute needs amplification and glissando head joint. The amplification is made through the use of dedicated flute microphone.

For the main flute output a set of pedals is needed, in particular:

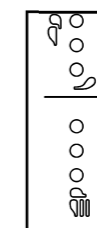
- Tube Amp
- Reverb Pedal
- Delay Pedal
- Interval Pedal (maj 9, high 8va and low 8va, maj 6)
- Distorsion Pedal
- Loop Pedal

Quarter tones are indicated as follows:



Some extended techniques are indicated by text items with a continuation line:

- Waterfall Effect
- Whistle Tones
- Key Clicks
- Flz = Flatterzunge
- Air Sound
- Slap Tongue



Fingering diagrams are used for timbral trills, multiphonics and bamboo tones.

Roar Sound (with ~)

Jet Whistle (with diagonal →)

Pitch Bends are indicate by straight or curvy lines.

Symbols

- = like air sound, but focus specifically on imitiating the human breath
- ◇ = together with head-gliss: follow the fingerings notated on the score

Disposition of the Ensemble

