

Minerals

(2024)

Mathias Coppens

Commissioned by BRYGGEN Bruges Strings

Application developer: Menno Buggenhout
Live visuals: Klaas Verpoest

The first performance was given by BRYGGEN Bruges Strings with Maya Fridman on solo cello at deSingel Antwerp on April 26, 2024.

Duration: *c.* 75 minutes

Instrumentation

For string orchestra, solo cello, application, electronics (tape) and voice over (tape)

The Strings Orchestra should be at least: 4, 4, 4, 3, 1

Strings

Violin I divisi a2

Violin II divisi a2

Viola divisi a2

Cello divisi a3

Double bass

CONCERT SCORE

Performance notes

Audio guideline available upon request.

Square noteheads: use similar pitches in this ranges

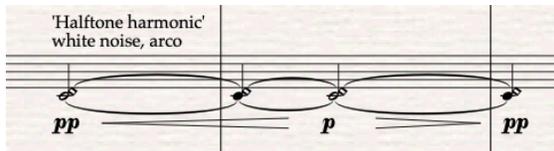
Staves without noteheads: continue the pattern in the same way

Repeat signs with lines: repeat the figure in the same way, doesn't need to be an exact repetition

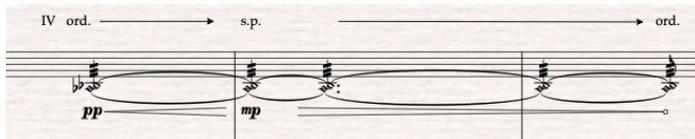
Repeat signs with wavy lines: repeat the figure in the same way, follow the range indicated going up or down

I. Aura

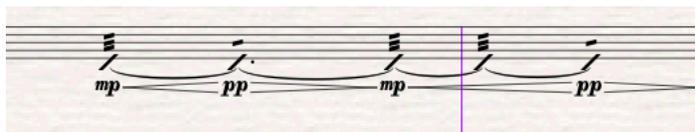
1. Halftone harmonic: stop the string completely with one finger and with the other depress it only slightly (harmonic) so the sound is muffled (white noise). The result includes the written pitch, but also harmonics.



2. Air (white noise), two light fingers one string (violin), almost no bow pressure, slow bow stroke



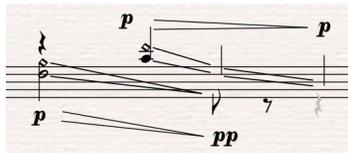
3. Muted strings tremolo: mute the strings, almost no bow pressure, random fast bow stroke between sul tasto and sul ponticello in a circular way



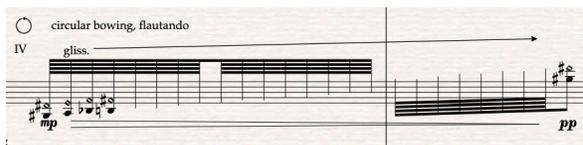
4. Timbral trill: use the same fingering, alternate between pitch and harmonic, use a lot of vibrato



5. Seagull effect: slide down without changing the position of the fingers



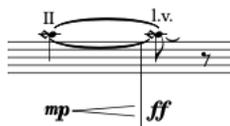
6. Fast harmonic gliss.: almost no bow pressure, random fast bow stroke between sul tasto and sul ponticello in a circular way



7. Gentle noisy harmonic movement: stay on IV and III, use two light fingers for, the result will be some random noisy harmonics coming out, move up and down alternating between the open strings and the harmonics



8. Harmonic crescendo, let ring

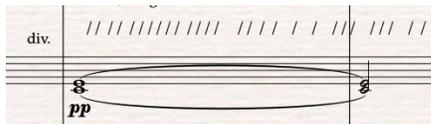


9. Vertical bounce at the tip with muted strings

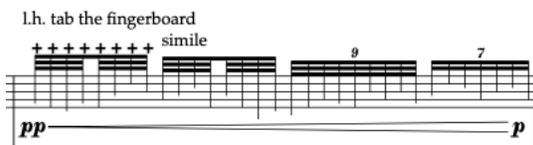


II. Micro-organisms

10. Stuttering bow: move the bow with a very slow bow movement so the sound is interrupted and stutters



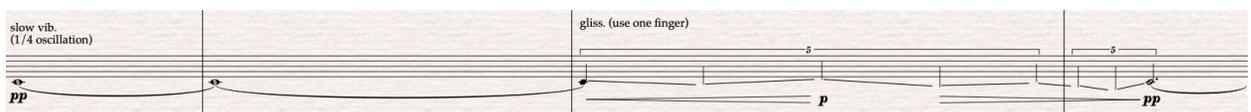
11. Tap with the left hand in an irregular way with a fast and light motion on the fingerboard



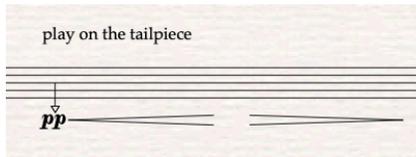
12. Muted string pizz. with the nail



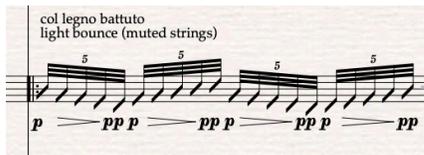
13. Slow bow oscillation and gliss. with one finger



14. Play on the tailpiece

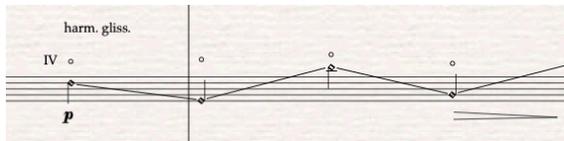


15. Col Legno Battuto muted strings, use all strings, light bounce with an irregular motion



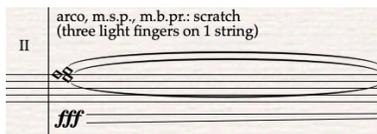
III. Ways of Water

16. Harmonic gliss.

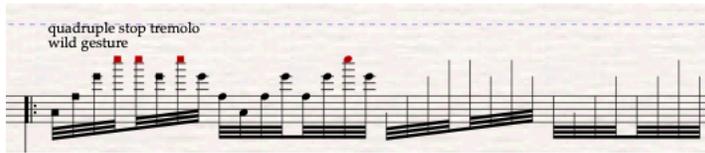


IV. Magma

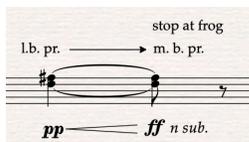
17. Scratch sound: use three fingers on one string, heavy bow pressure



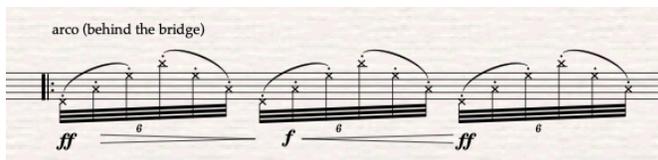
18. Quadruple stop tremolo: use all strings, tremolo and very wild



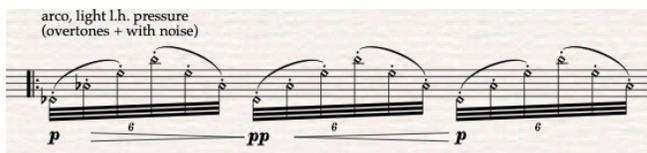
19. Increase the speed and the pressure of the bow towards the end, sudden stop at the frog



20. Play behind the bridge, fast arpeggio



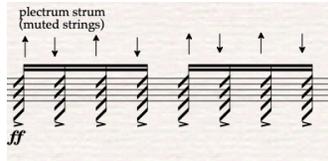
21. Arpeggio with light fingers, some harmonics will come out, some noise



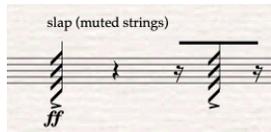
22. Ricochet with light fingers (noisy), the pitches are an indication



23. Plectrum strum with muted strings



24. Slap with muted strings



Program notes

Aura

About Crystals, Prisms and Light
Micro-Organisms
Ways of Water
Magma

Micro-Organisms

Bioturbation. About Worms, Insects and Roots.
How Bacteria Oxidize Iron and Sulfur
About Corals and Algae

Ways of Water

Hydrothermal Activities
Disposition from Solutions

Magma

Eruptions
Basaltic Magma
Final Formations

About Crystals, Prisms and Light

Mineralisations is een interactief concert dat zich ontvouwt als een langzaam, voortdurend veranderend proces. Net zoals mineralen over miljoenen jaren ontstaan door druk, tijd en toeval, groeit dit werk in het moment zelf. Muziek, beeld en publiek vormen samen één levend ecosysteem. De luisteraar is geen toeschouwer, maar een actieve kracht: via een smartphone-app beïnvloedt het publiek parameters als tempo (traag–snel), tessituur (laag–hoog) en dynamiek (zacht–luid). Die input wordt live verwerkt door de musici en vertaald naar klank en beeld; ook de geluiden van de smartphones zelf maken deel uit van het muzikale weefsel.

Aura fungeert als gids doorheen dit proces. Een stem die ons meeneemt door de verschillende stadia van minerale vorming en het oor richt op processen die normaal onhoorbaar blijven. In *Micro-Organisms* verschuift de focus naar het microscopische leven dat aan de basis ligt van mineraalvorming. *Ways of Water* brengt klinkt water als drager van verandering: tijd wordt hier vloeibaar en cyclisch. Met *Magma* bereikt het werk een stadium van spanning en energie: de gewelddadige kracht waarin hitte en druk onomkeerbare veranderingen veroorzaken, staat centraal. Het proces mondt uit in *About Crystals, Prisms and Light*. Hier is het mineraal gekristalliseerd. Structuur, helderheid en reflectie komen samen in een klankwereld waarin licht breekt en weerkaatst.

Mineralisations is an interactive concert that unfolds as a slow, continuously evolving process. Just as minerals are formed over millions of years through pressure, time, and chance, this work grows in the moment itself. Music, visuals, and audience together form a living ecosystem. The listener is not a passive observer but an active force: through a smartphone app, the audience influences parameters such as tempo (slow–fast), tessitura (low–high), and dynamics (soft–loud). This input is processed live by the musicians and translated into sound and image; the sounds produced by the smartphones themselves also become part of the musical fabric.

Aura functions as a guide throughout this process—a voice that leads us through the different stages of mineral formation and directs the ear toward processes that normally remain unheard. In *Micro-Organisms*, the focus shifts to the microscopic life at the basis of mineral formation. *Ways of Water* presents water as a carrier of change: here, time becomes fluid and cyclical. With *Magma*, the work reaches a stage of tension and energy, centered on the violent forces through which heat and pressure bring about irreversible transformations. The process culminates in *About Crystals, Prisms and Light*. Here, the mineral has crystallized. Structure, clarity, and reflection converge in a sound world in which light refracts and resonates.