

Thomas Gibbs

Cloud Engine

for solo tuba with live electronics



May 2019

Synopsis

By his great brass machine, the soloist breathes life into the air. The air—cleft open—unfolds, turns, grows, sings (in the *language of the birds*), and melts into itself.

Instructions

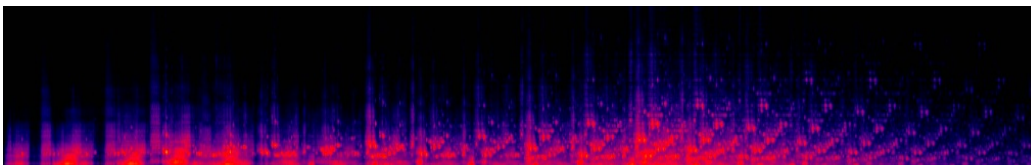
Cloud Engine is a product of experimentation with extremely gentle modes of tone production. By simply passing air through the instrument (without 'buzzing'), it is possible to activate the resonance of bands of harmonics, including distinct diads. These tones exist on an impossibly delicate threshold and pass in and out of being (with a dynamic life of their own), and special attention must be paid to ensuring that they never fully materialise. No effort should be made to disguise the air content of the sound. The harmonic spectra being explored are represented in the score by the valve combinations necessary to produce them (using an E \flat tuba). Given the unpredictability of the playing technique, breaths can be taken during what are notated in the score as a sustained notes, ad libitum.

The raw signal from the tuba, caught by a microphone attached to the bell, is treated with 3 basic operations: (heavy) amplification, reverb, and delay lines producing feedback loops. At rehearsal mark B, the input continues to be fed directly to the loudspeakers but is stopped from passing via the delay lines. At this point, the player is free to build on the notated material intuitively (i.e. with other valve combinations). This improvised portion of the solo part should be entirely in the manner of the notated portion (from rehearsal mark A), and should take harmonic inspiration from the evolving live output. Trusting intuition, the performance fades back into the silence it came from (see spectrogram below for example performance envelope).

The soloist should be situated centrally within the performance space, surrounded by the audience, in turn surrounded by loudspeakers (at least 4). During processing, signals are split into frequency bands which rotate around the space at different speeds.

Full technical details (and example sound files) can be requested from the composer via thomas.gibbs29@hotmail.com.

Cloud Engine was commissioned by Stuart Beard and was first performed by him at the Royal Academy of Music in London, 29th May 2019.



“O clouds unfold.”

— William Blake, preface to *Milton*

“Clouds are not spheres ... nor does lightning travel in a straight line.”

— Benoît Mandelbrot, *The Fractal Geometry of Nature*

“In the shape that chance and wind give the clouds, you are already intent on recognizing figures: a sailing ship, a hand ...”

— Italo Calvino, *Invisible Cities*

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*for Stuart***Cloud Engine**

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Tuba

♩ = c. 30

A T_T

etc.

B etc. ad lib.