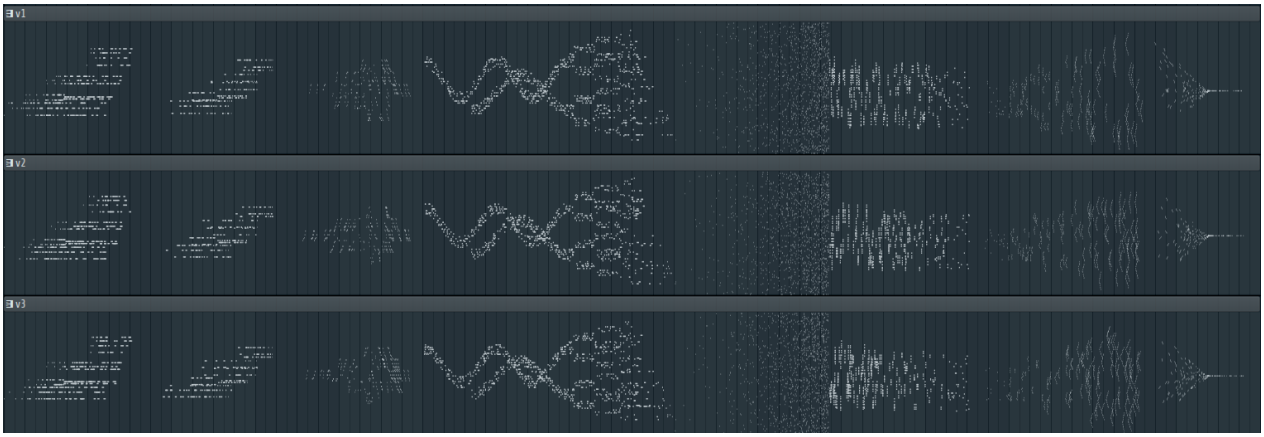
PARTICLES

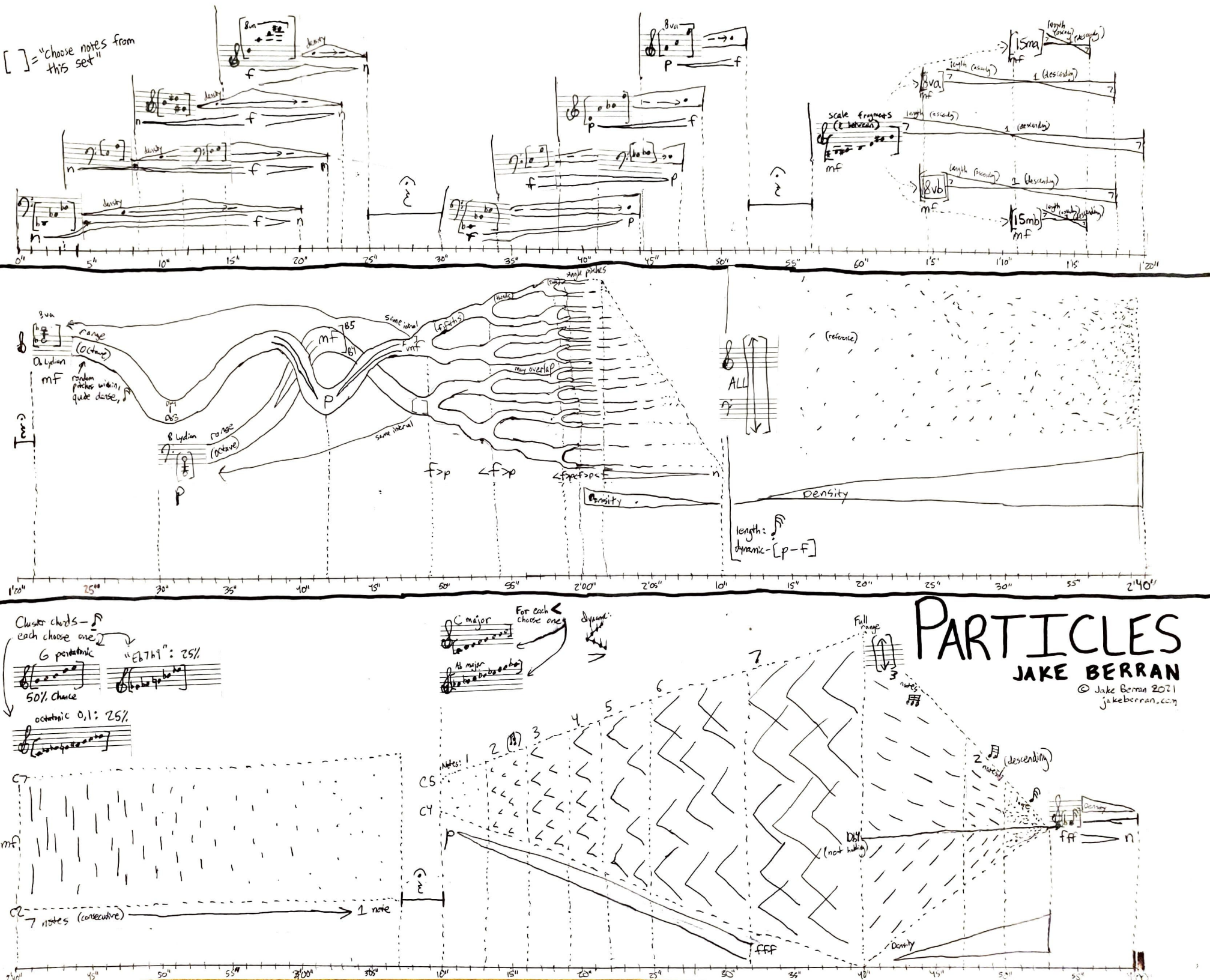
Jake Berran (2021)

Particles is an experiment in indeterminacy and graphic scoring. Generally, the controlled parameters are the start and end times of large-scale things, pitch classes (e.g. which scale), ranges, shapes of gestures, dynamics (sometimes), and note lengths (which are either short or shorter, hence the title). Exact placements and pitches of notes and gestures are always left up to chance. Thus, from a holistic viewpoint, renderings or performances look nearly identical, whereas if one were to zoom in, they would see lots of small-scale differences.



Three renderings of Particles

It may be possible to perform with an ensemble, though it would require lots of planning and coordination and the piece was not specifically designed for that. Instead, it became a coding exercise for me: to write a program that outputs MIDI performances. The general approach I used was to define templates ("functions") for each type of section; for example, those two wave-shaped gestures starting about a third of the way through the piece are the same code with different parameters. Each of these templates/functions work by generating a bunch of undefined notes or gestures, starting with their start time, and then calculating their other parameters (pitch, volume, and duration) from a range of possibilities based on the shape they are a part of. If you are interested in running the "performance" generator, or wish to make your own, please check out my PythonMusic library for Python with a demonstration file at https://replit.com/@jakeberran/PythonMusic. The MIDI file will then have to be realized in a DAW or similar program.


[ ] = "choose notes from this set"
density
8va
15ma
15mb
8vb
scale fragments (chromatic)
length (ascending)
length (descending)
0" 5" 10" 15" 20" 25" 30" 35" 40" 45" 50" 55" 60" 1'5" 1'10" 1'15" 1'20"
8va range (octave)
A Lydian
mf
random pitches within, quite dense,
B5
B Lydian range (octave)
same interval
rank pitches
(high)
(low)
(fifths)
slowly overlap
f>p <f>p <fp<f>p<f
Density
ALL
(reference)
length:
dynamic-[p-F]
1'10" 25" 30" 35" 40" 45" 50" 55" 2'00" 2'05" 10" 15" 20" 25" 30" 55" 2'40"
Cluster chords – each choose one
G pentatonic
"Eb7b9": 25%
50% chance
octatonic 0,1: 25%
C major
Ab major
For each choose one
dynamic
Full range
notes:
2 notes (descending)
Density
C7
C2
7 notes (consecutive)
1 note
C5
C4
Notes: 1
(not holding)
fff
PARTICLES
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