Vinícius Cesar de Oliveira

Eutrópia III

(2025)

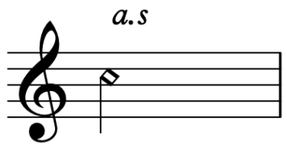
for flute and live-electronics

Eutrópia

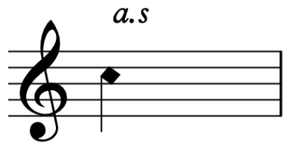
When he enters the territory of which Eutropia is the capital, the traveler sees not one city but many, of equal size and not unlike one another, scattered over a vast, rolling plateau. Eutropia is not one, but all these cities together; only one is inhabited at a time, the others are empty; and this process is carried out in rotation. Now I shall tell you how. On the day when Eutropia's inhabitants feel the grip of weariness and no one can bear any longer his job, his relatives, his house and his life, debts, the people he must greet or who greet him, then the whole citizenry decides to move to the next city, which is there waiting for them, empty and good as new; there each will take up a new job, a different wife, will see another landscape on opening his window, and will spend his time with different pastimes, friends, gossip. So their life is renewed from move to move, among cities whose exposure or declivity or streams or winds make each site somehow different from the others. Since their society is ordered without great distinctions of wealth or authority, the passage from one function to another takes place almost without jolts; variety is guaranteed by the multiple assignments, so that in the span of a lifetime a man rarely returns to a job that has already been his. Thus the city repeats its life, identical, shifting up and down on its empty chessboard. The inhabitants repeat the same scenes, with the actors changed; they repeat the same speeches with variously combined accents; they open alternate mouths in identical yawns. Alone, among all the cities of the empire, Eutropia remains always the same. Mercury, god ofthe fickle, to whom the city is sacred, worked this ambiguous miracle.

Italo Calvino, The invisible cities

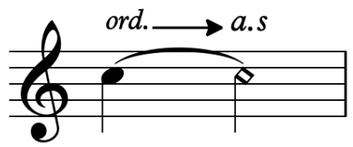
Notes for performance



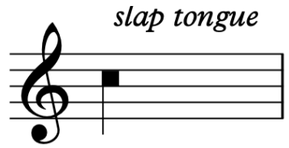
(a) Aeolian sound with a lot of air noise.



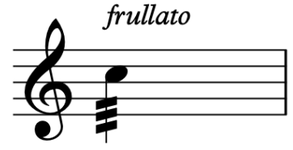
(b) Aeolian sound with little air noise: almost regular sound.



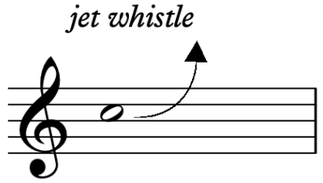
(c) Gradual change from regular to aeolian sound with a lot of air noise.



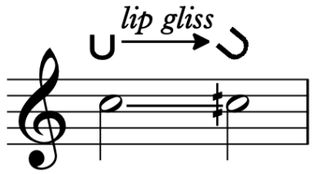
(d) *Pizzicato* or slap tongue: short percusive sound.



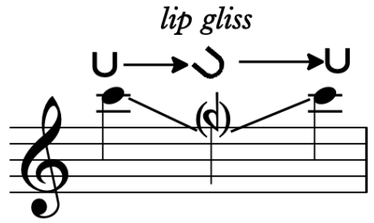
(e) *Frullato.*



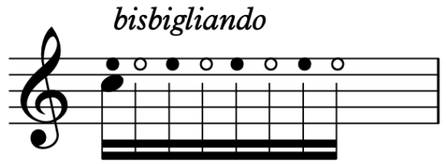
(f) Jet Whistle: forcefull and loud attack of air.



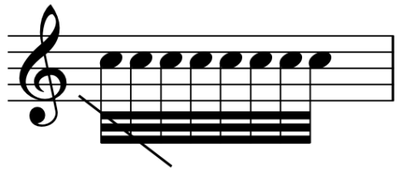
(g) *Glissando* with lips to a specific pitch.



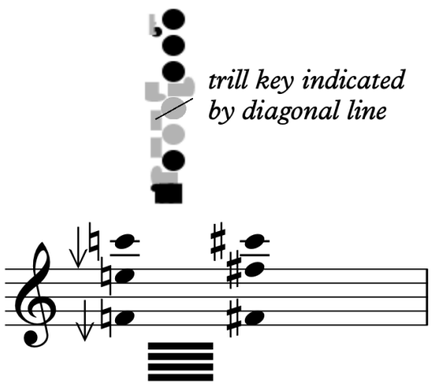
(h) *Glissando* with lips to a non-specific pitch.



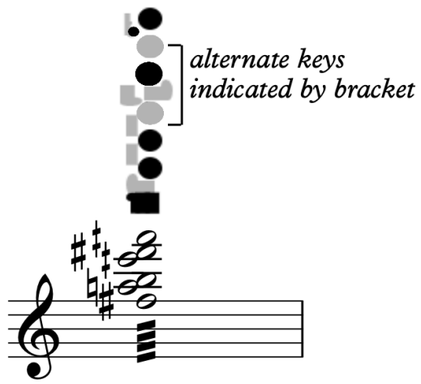
(i) *Bisbigliando*: alternation of different fingerings for the same pitch.



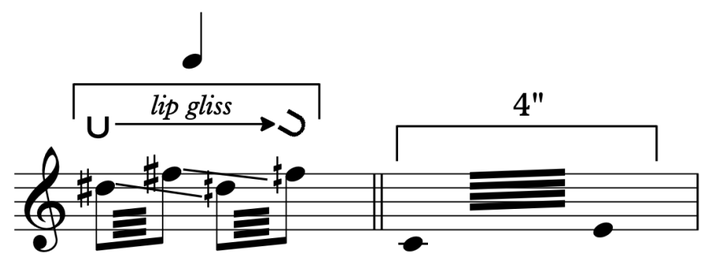
(j) Play the gesture as fast as possible.



(k) Multiphonic trill: trill key indicated by diagonal line.



(l) Multiphonic tremolo: alternate keys indicated by bracket.



(m) Non-measured events must respect the approximate duration indicated above (rhythmic duration or seconds).

Live Electronics

- Sampler **S** : recording, processing, and playing back sounds in real time. There are two instances of the sampler, which are indicated by the number inside the box (e.g., **S1** for Sampler 1, **S2** for Sampler 2).
- **3F** : sound synthesis algorithm producing harmonic and inharmonic sounds. Two 3F instances are used. In the score, they are indicated as **3F1** and **3F2** (synthesis processing created by Miller Puckette).
- **HARM** : harmonizer for real time pitch shifting and harmonization.
- **REVERSE** : recording and playing back sounds in reverse in real time.
- **PQMF** : pseudo quadrature mirror filter bank, to split the sound signal into multiple frequency bands for processing and spatialization.
- **TCVAE** : transformer-based variational autoencoder for controlling textures and gestures in real time.
- **GAITA** : computer modeling of the colombian gaita, allowing real time synthesis sounds (processing created by Juan Felipe).
- spatialization **SPAT** : a long short term memory (LSTM) neural network controlls the spatialization and creates spatial trajectories in real time:
  the specific position of the sound source is indicated by the following icons:

   : front left  : front right

   : back right  : back left

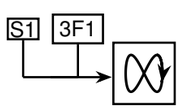
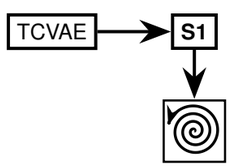
  the spatial movements are noted as follows:

   : closed spiral counterclockwise

   : circle clockwise

   : lissajous

   : arc movement (not closed)

- **1**, **2**, **3**, etc.: indicates the electronics events that must be triggered manually in the Pure Data patch. These numbers indicate the order in which they should be triggered (the patch loads the electronics score automatically).
-  : lissajous trajectory apply for sampler and 3F synthesis.
-  : transformer based variational autoencoder **TCVAE** connected to Sampler 1 **S1** and spatialized with spiral trajectory.

Eutrópia III

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IA

♩ = 46

frullato

Flute

HARM

1 2 3 4 5 6

IB

♩ = 66

3F1 S1 S2

accel. *rall.* *non measured* *ord.* *a.s*

7 8 9

17

S2 REVERSE

non measured

c.a. 8"

3F1

accel. *rall.* *accel.* *lip gliss*

10 11

23

lip gliss *a.s* REVERSE *lip gliss* *lip gliss* *non measured* *lip gliss*

12 13

Ic

3F1 PQMF

♩ = 50

34

REVERSE

lip gliss *bisbigliando*

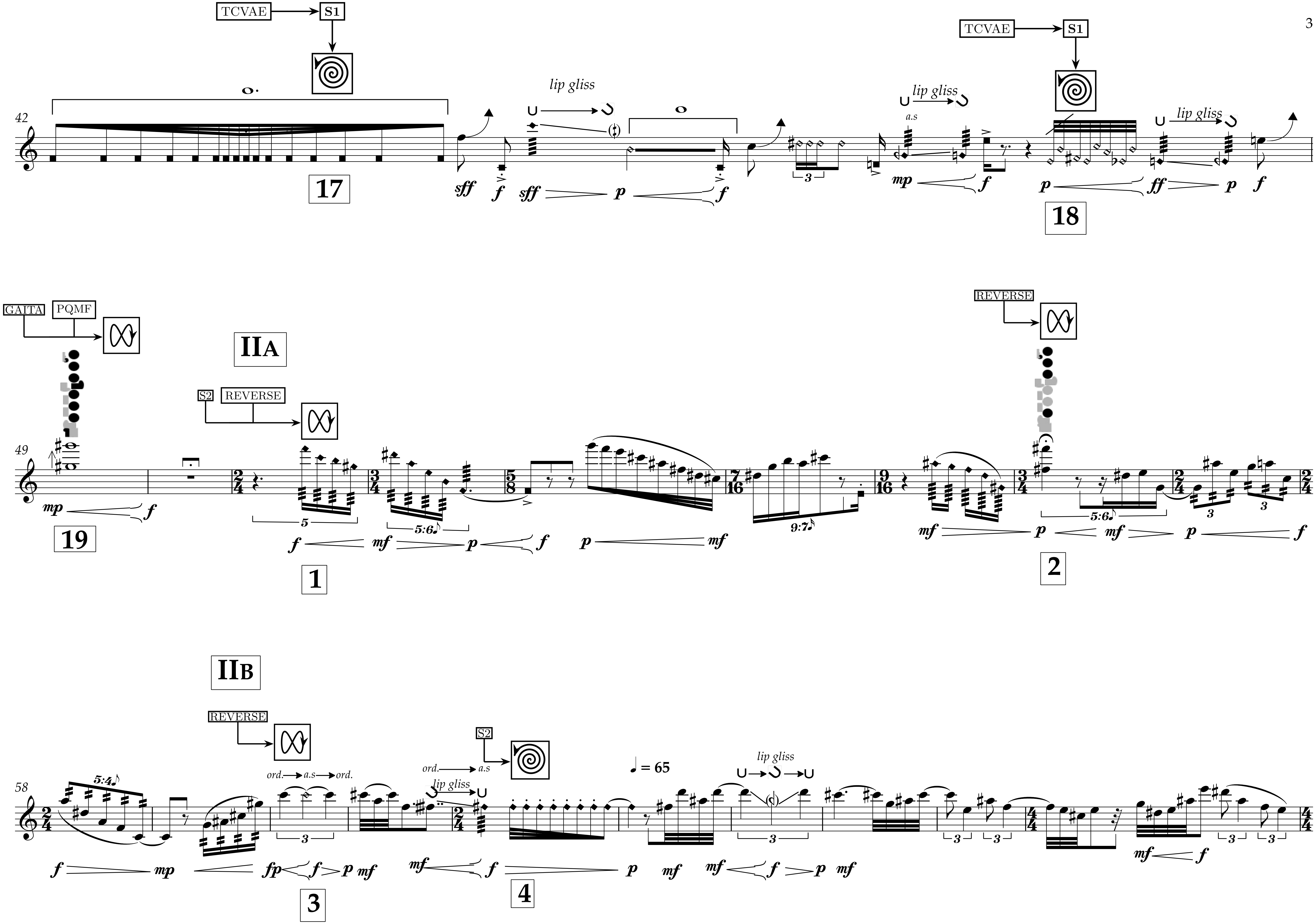
14

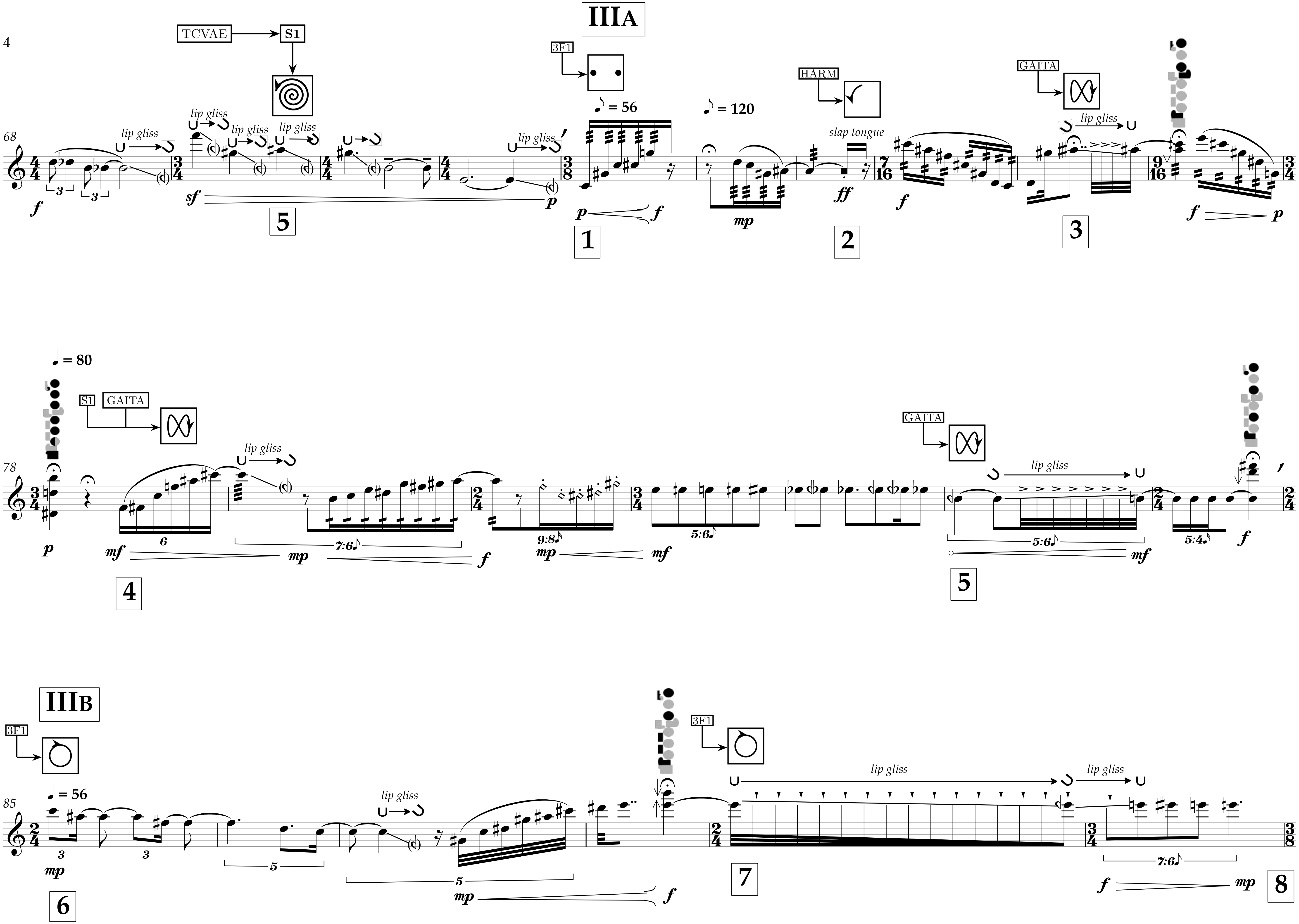
Id

3F1 PQMF

a.s

15


TCVAE
S1
lip gliss
a.s
17
TCVAE
S1
18
GAITA
PQMF
IIA
S2
REVERSE
REVERSE
19
1
2
IIB
REVERSE
S2
ord. a.s ord.
ord. a.s
lip gliss
♩ = 65
3
4


IIIA
TCVAE
S1
3F1
HARM
GAITA
lip gliss
slap tongue
♪ = 56
♪ = 120
♩ = 80
IIIB
♩ = 56
f
sf
p
mp
ff
mf
7:6♪
9:8♪
5:6♪
5:4♪
1
2
3
4
5
6
7
8

IIIc

TCVAE → S1

HARM

♪ = 120

91

mp mf | p f | p f | p ff | p ff

9 10 11 12 13 14

c.a. 8"

3F2

♪ = 130

IVa

3F2

non measured

lip gliss

a.s

PQMF

HARM

♩ = 55

101

7:6 | 5:6

f | f p | sffz | mp p f | p mp sffz mp p sffz | f mp

15 16 1 2 3

TCVAE → S1

ord. → a.s

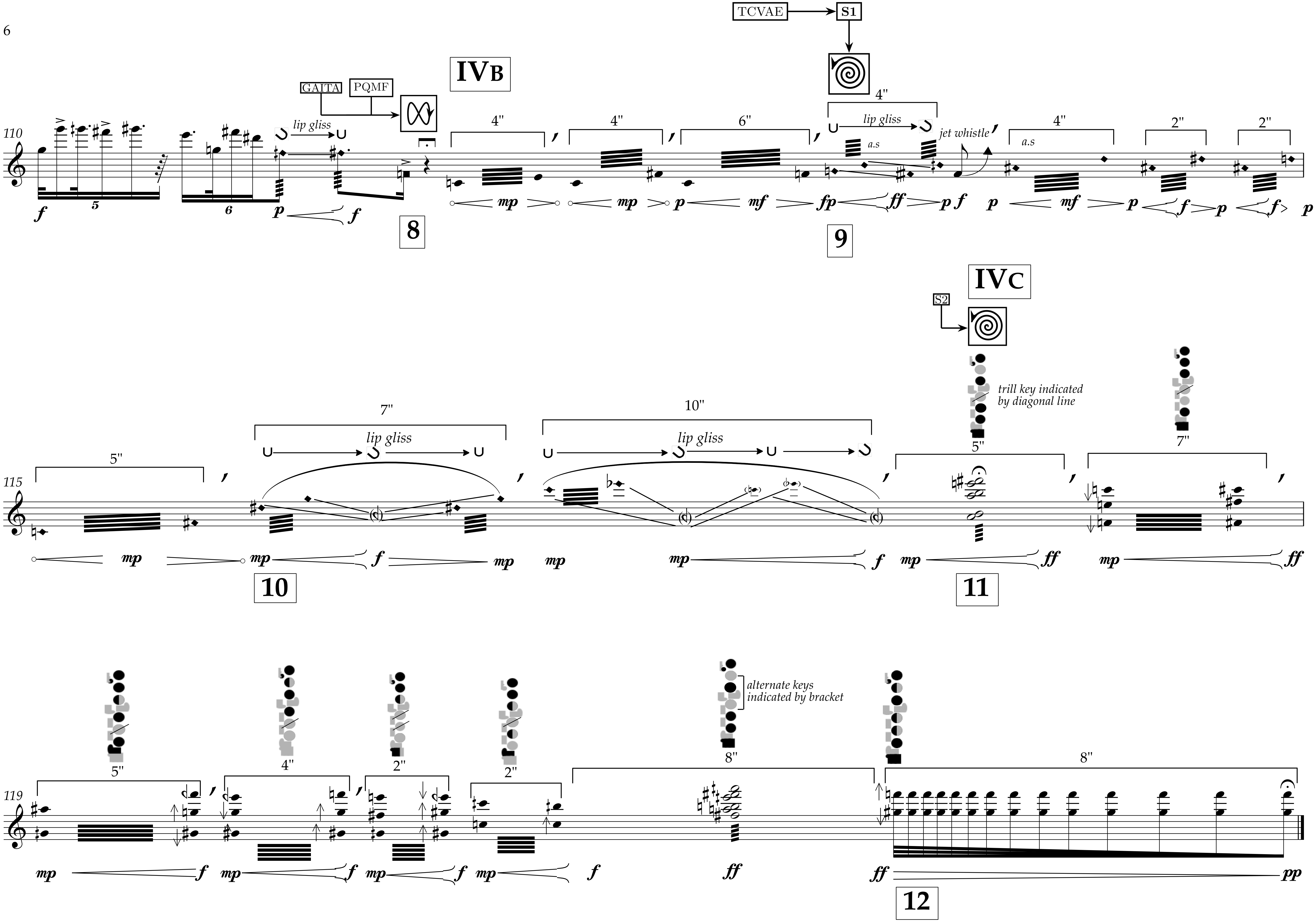
aeolian sound

bisbigliando

106

mf | mp f | p ff | mp f | fp ff | f

4 5 6 7


TCVAE
S1
IVB
GAITA
PQMF
lip gliss
a.s
jet whistle
8
9
IVC
S2
trill key indicated
by diagonal line
10
11
alternate keys
indicated by bracket
12