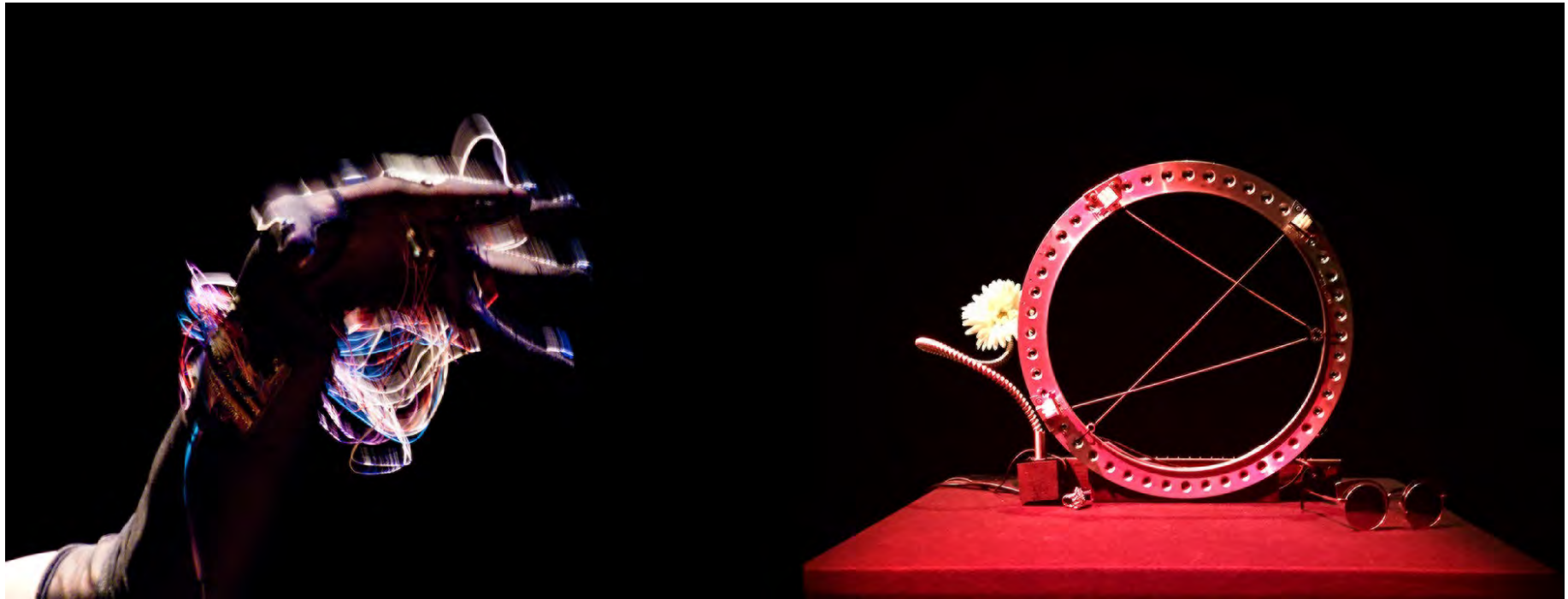


Laetitia Sonami

The disruptive Gesture



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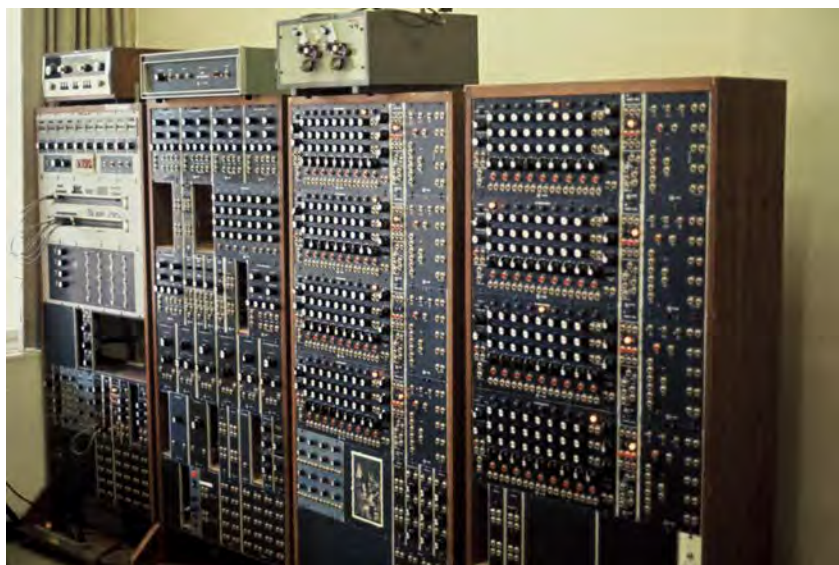


Eliane Radigue's Arp 2500-Paris, 1976

Pre-History



The Putney-Boston, 1975



SUNY-Albany Moog – Albany, 1977



Mills Center for Contemporary Music-Aries-Oakland, 1978

1991-2016 The *lady's glove*



Rethinking the feminine

An advertisement for the Power Glove for Nintendo, 1989. The image shows the white and black glove with various buttons and a joystick. The text "POWERPLAY." is prominently displayed in the center. Below the title, there are several columns of text describing the glove's features and how it enhances gameplay. The background is a dark, atmospheric scene with a blue and purple gradient.

POWERPLAY.

The Power Glove: You plug it in like any joystick. But the similarity stops there. Because now you don't just guide the action. You're in the action.

As soon as you put on the Power Glove, its 3-D sensors track the position of your hand in space. You enter the program code. Calibrate the glove. Center it. And feel the mechanical moves of a joystick give way to free-flying instant response. You actually knock out Mike Tyson. Grab the steering wheel of Rad Racer. Bank and fire your P-38 in 1943's *The Battle of Midway*. All simply by moving your hand.

The Power Glove has a unique programmable keypad that gives the best NES' players moves they've never had before—and never will have with a joystick. Twist your wrist for an immoderate head butt in *Double Dragon*. Bend a finger for "Thrash Mode"—your character turns and shoots in all possible directions. Bend another for "One-Shot

Turnaround": you automatically change direction and fire faster than you ever could with a joystick.

With new moves at your disposal, it makes your joystick games especially vertical scroll games, new. Different. More exciting. And that's only the beginning.

AYACI
Caplan
Meredith
Lippman
Lorenz
Gibson

Mattel's Power glove for Nintendo, 1989



~1991- lady's glove v.1



~1995- lady's glove v.2



~1998- lady's glove v.3



~2001- lady's glove v.4

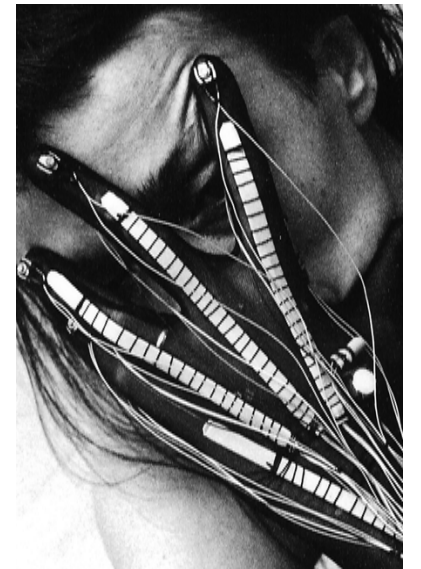


lady's glove
v.5 -2002 - 2013



Inputs:

- 3 flex sensors on fingers tapped in middle = 6 inputs
- 1 flex sensor on wrist
- 5 hal-fx at inside tip of fingers and inside palm
- 5 micro switch at tip top of fingers
- 1 mercury switch
- 1 scratch switch
- 3 accelerometers (1 on left hand, 2 on right hand)
- 2 ultra sounds (hand and foot)
- 1 light sensor in palm (sensor on right hand)
- 1 pressure sensor on index
- 1 mini mike on right ring finger





(film)

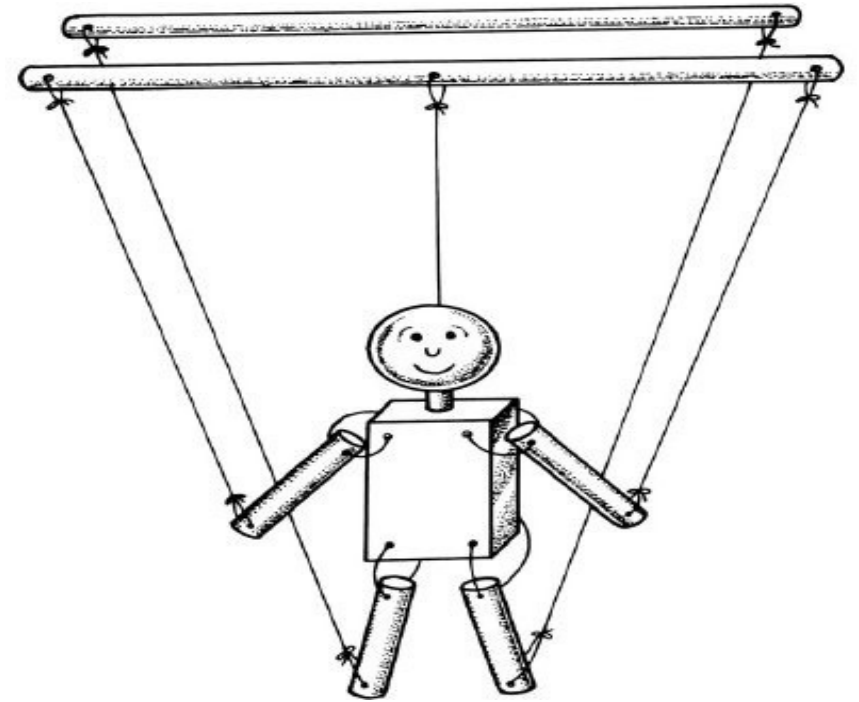
RETHINKING THE INSTRUMENT

(Implementing Machine Learning)

2013- 2023

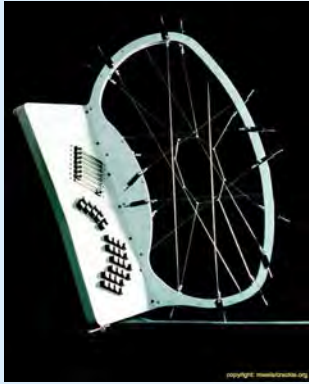
Machine Learning – Going back to not knowing – a different not knowing, another black hole.

IT HAD BEEN SO MANY YEARS, MY IMAGINATION WAS TIED TO the *LADY'S GLOVE*.. *Was I the hand's puppet?*



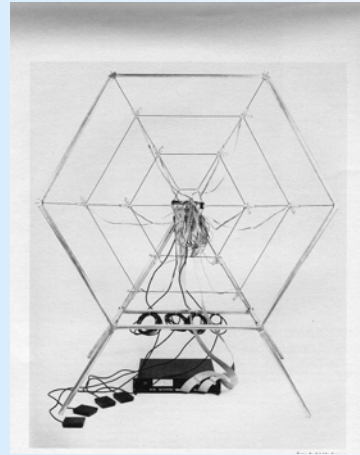
Instruments at that time

1. Interdependence / Predictability



STEIM INSTITUTE small WEB

2. PHYSICALITY / PLAY / SOCIAL INTERACTION



steim's large web

3. VIRTUOSITY?



MICHEL WAISVISZ 's HANDS

4. DANGER / MASTERY?



THE SENSORBAND -- 1996

5. The Extended Instrument



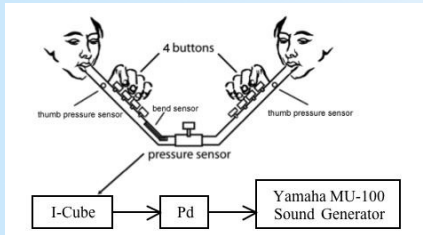
JON ROSE - VIOLIN



Nick COLLINS
Trombone Propelled Electronics

6. SHOWMANSHIP

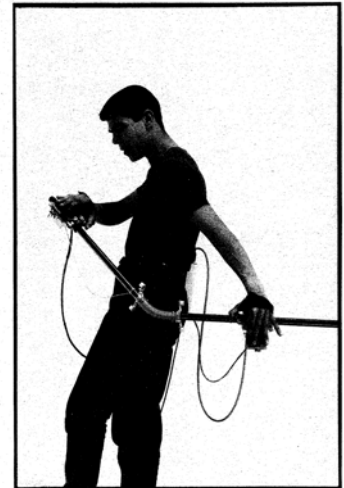
7. HYGIENE?!!



Sydney Fels: The TOOKA



Ray Edgar - Fear Andre Hockema



RAY EDGAR
Ray Edgar - Sweatstick

Should the instrument perform reliably like a circus dog,
or be built to reveal unimaginable spaces and connections?

The instrument demands
a change of behavior.



Instrument design: a gamble

Will it allow you to grow and discover new musical terrains...?

Will it imprison you (and then it will be hard to give up)

Will it give you the impression you are growing when actually you are confining yourself to its demands...?

Desires: Fluid and Intuitive Mapping

More complex input signals

More dynamic audio synthesis, Different gestures,
Improvisation

Following Attractions: Sound – Gesture - Object

Keep from the *lady's glove*:

The interdependence of inputs - "Leakages"

Notions of territories / templates / LIMITATIONS

Un-intentionality - - "Leakages" - Adaptation

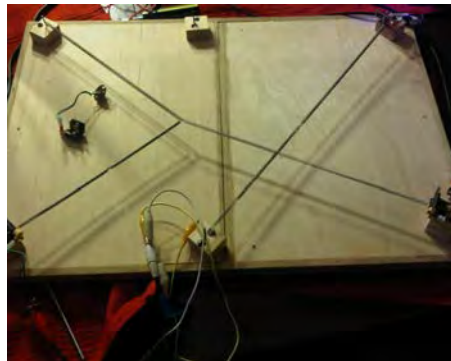
Some personal guidelines for interface design:

- Try not to know...
- Start simple
- Adaptability
- Inefficiency....?
- Unreliable?
- Cheap....
- Can be fixed by me...
- Portable and light...
- Has to pass airport screening without arrest ...

First Attempts



THE GAMETRAK CONTROLLER

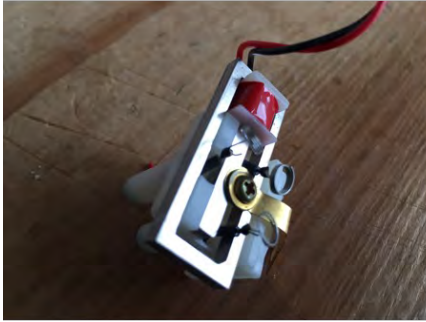


Home-made pick ups:
Nails and wires



THE SPRING SPYRE made with cheap, hacked and found parts

Inputs from springs attached to small audio pick-ups



The instrument needs to fit in a box
and adapt itself to any found object, or site

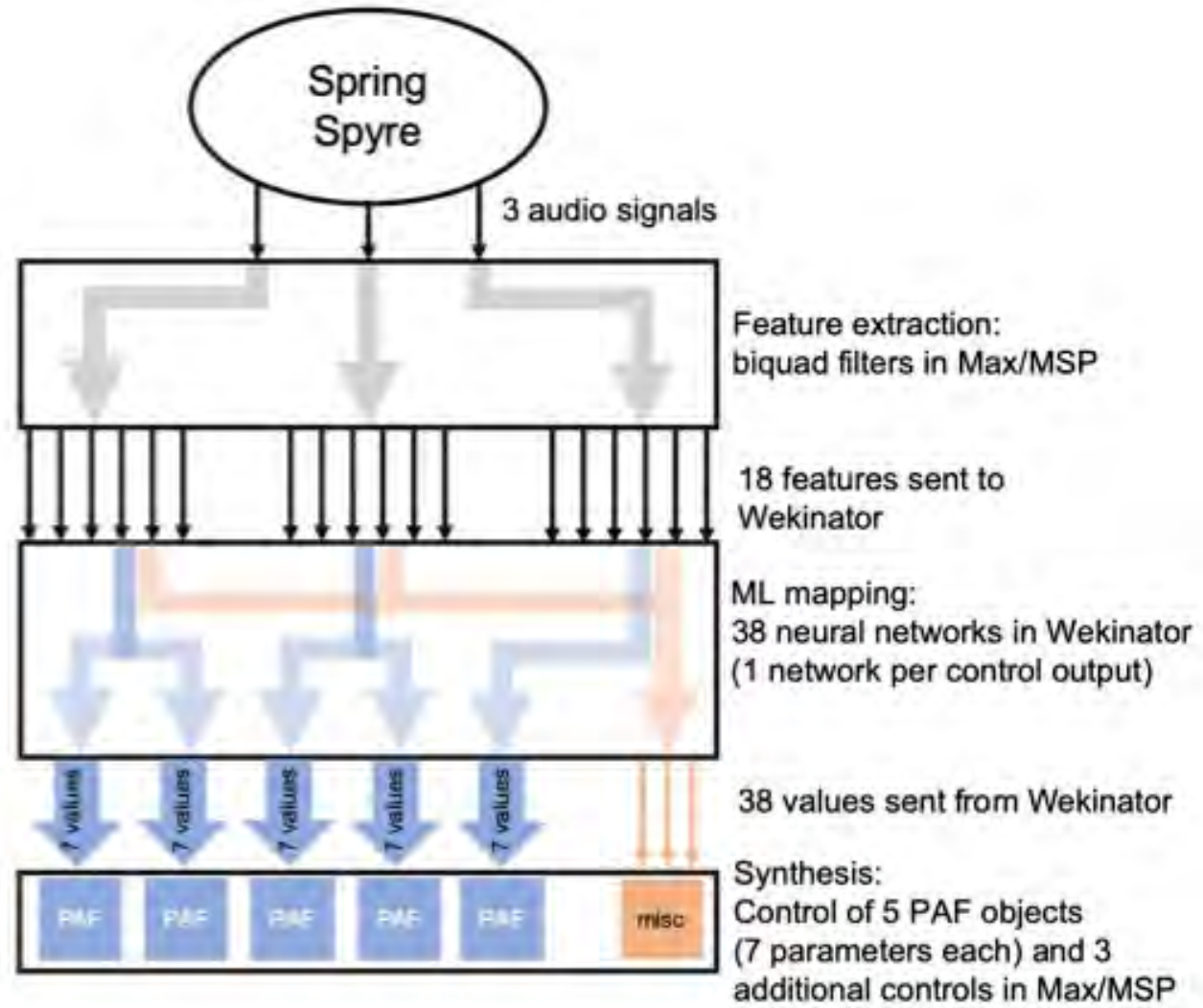


Working with Rebecca Fiebrink and
her Machine Learning software,
Wekinator -

Training untrainable systems



Current State
of
the Spring Spyre



MAPPING THE TERRAIN - TERRITORIES



Index of Predictability

Zooming – Catch & Release

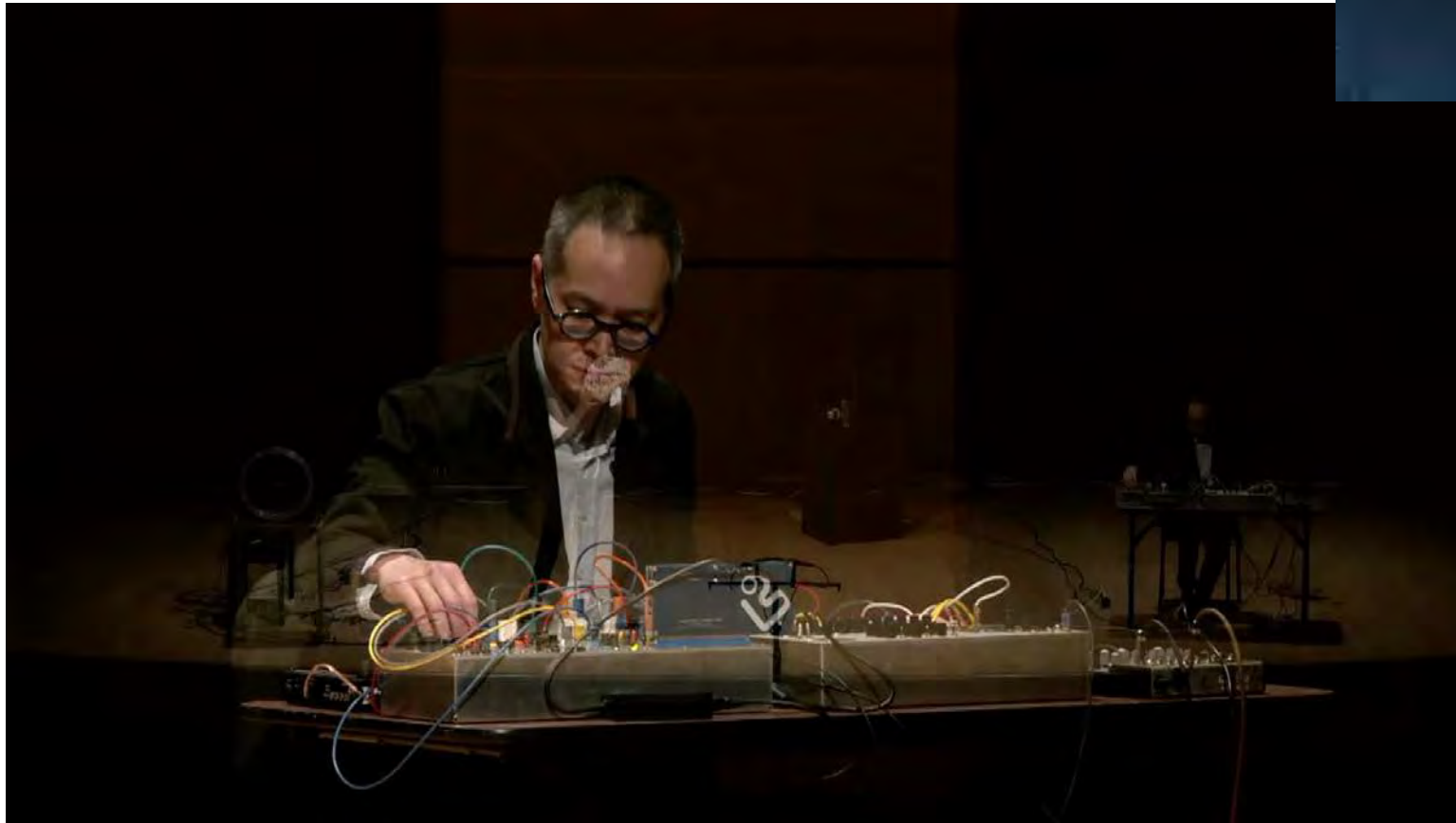
Some escapades:

The bellowtron

The lady's ball(s)

Lady's Ball(s)

Size of the Ball ..> resolution of gesture



Duo with
James Fei
(film)



THE BELLOWTRON *(circa 2000)*



Maximum effort
with very little impact

(film)



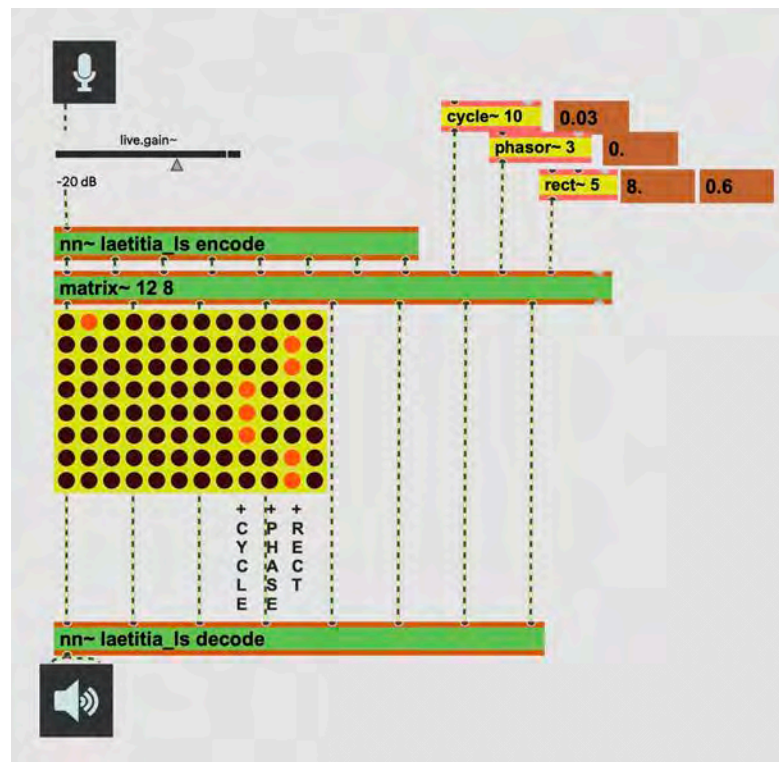
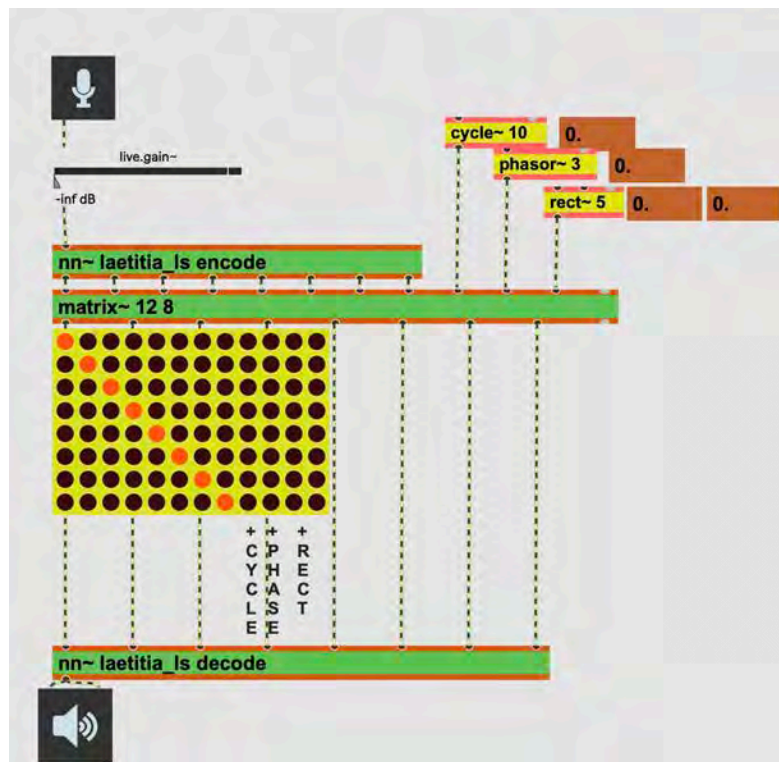
2023-now

Generative AI? A dysfunctional Narcissus?

Experiments with RAVE (Realtime Audio Variational autoencoder, an audio processing/generativity based on deep learning).



(audio)



My Max patch - Injecting signals

The future is uncertain.
Make a wig, scratch my head...?



Thank you...

info@sonami.net

Links

- <http://www.wekinator.org/>
- Kadenze Course: [Machine Learning for Musician and Artists](#)
- RAVE <https://github.com/acids-ircam/RAVE>
- RapidMax: <https://github.com/francesco-di-maggio/rapidmax>
- Rapidmax also here?: [@BBDMI](#)
- <https://www.flucoma.org/>
- ICMC2024 -keynote: Echo and Narcissus (*paper*)
- [Reflections on Eight Years of Instrument Creation with Machine Learning, Fiebrink and Sonami, NIME 2020](#) (*paper*)
- Presentation and performance with the [Lady's Glove at NIME 2014](#) (*video*)
- NIME 2014 Goldsmiths: [Artistic Keynote: Dreams of Control, Dreams of Chaos](#) (*paper*)
- [Requiem for the lady's glove](#) (*paper*)
- [1998 Lady's glove demo at Steim](#) (*video*)