



Reimagining Hyperinstruments



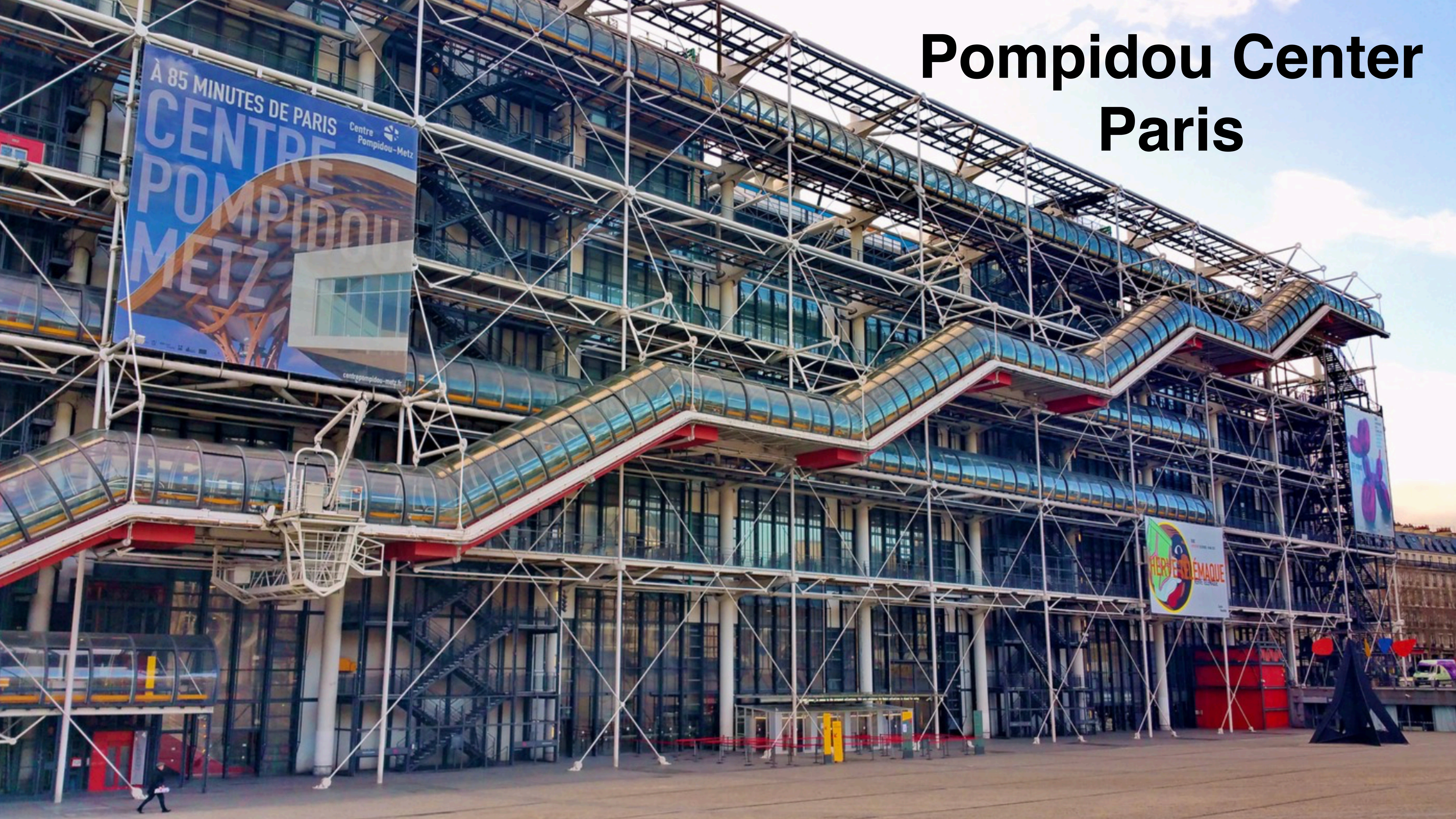
Reimagining Hyperinstruments

VALIS
with Joe Chung

IRCAM
Paris
ca. 1985



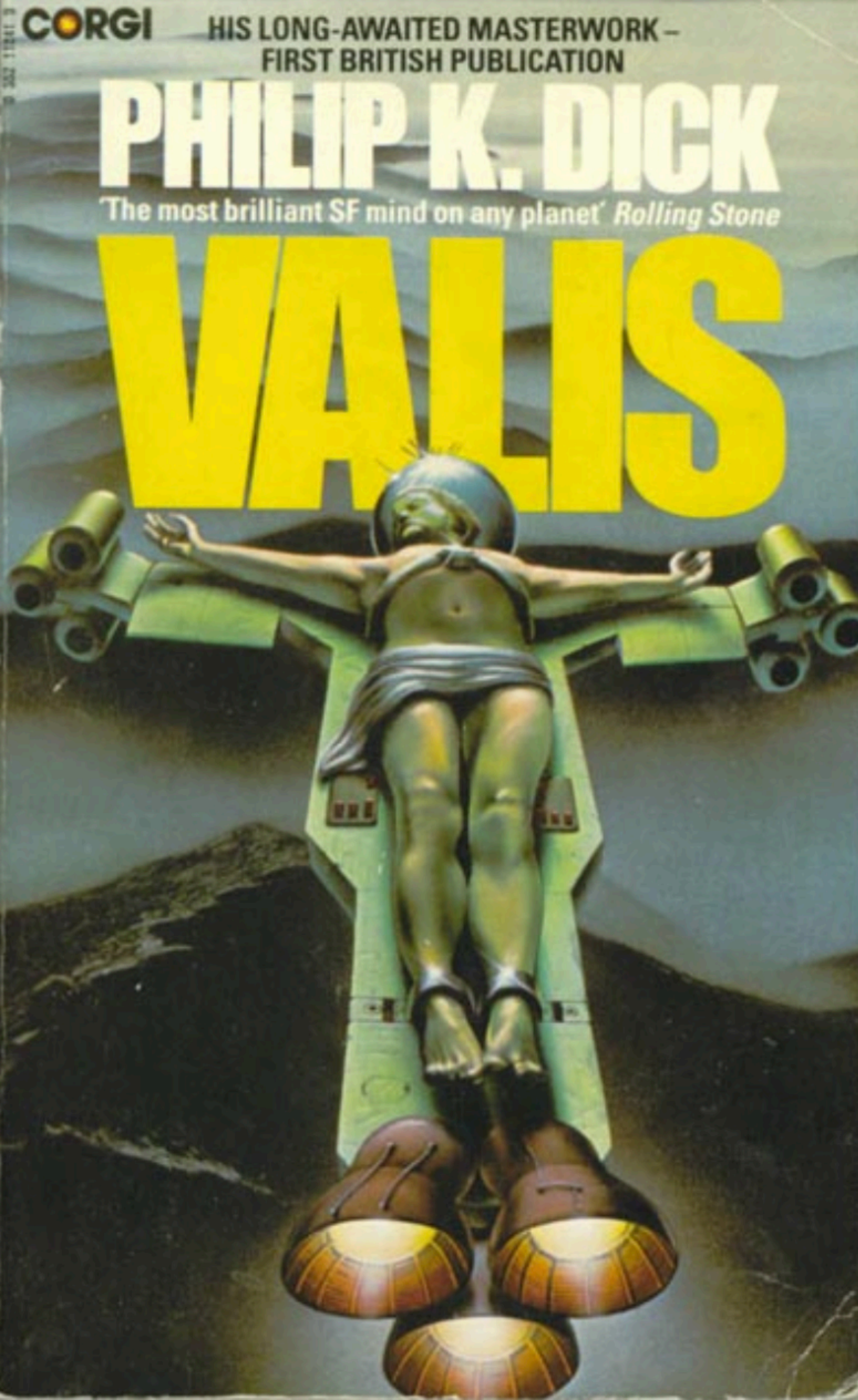
Pompidou Center Paris



Opera???

Opera???

New kind of story



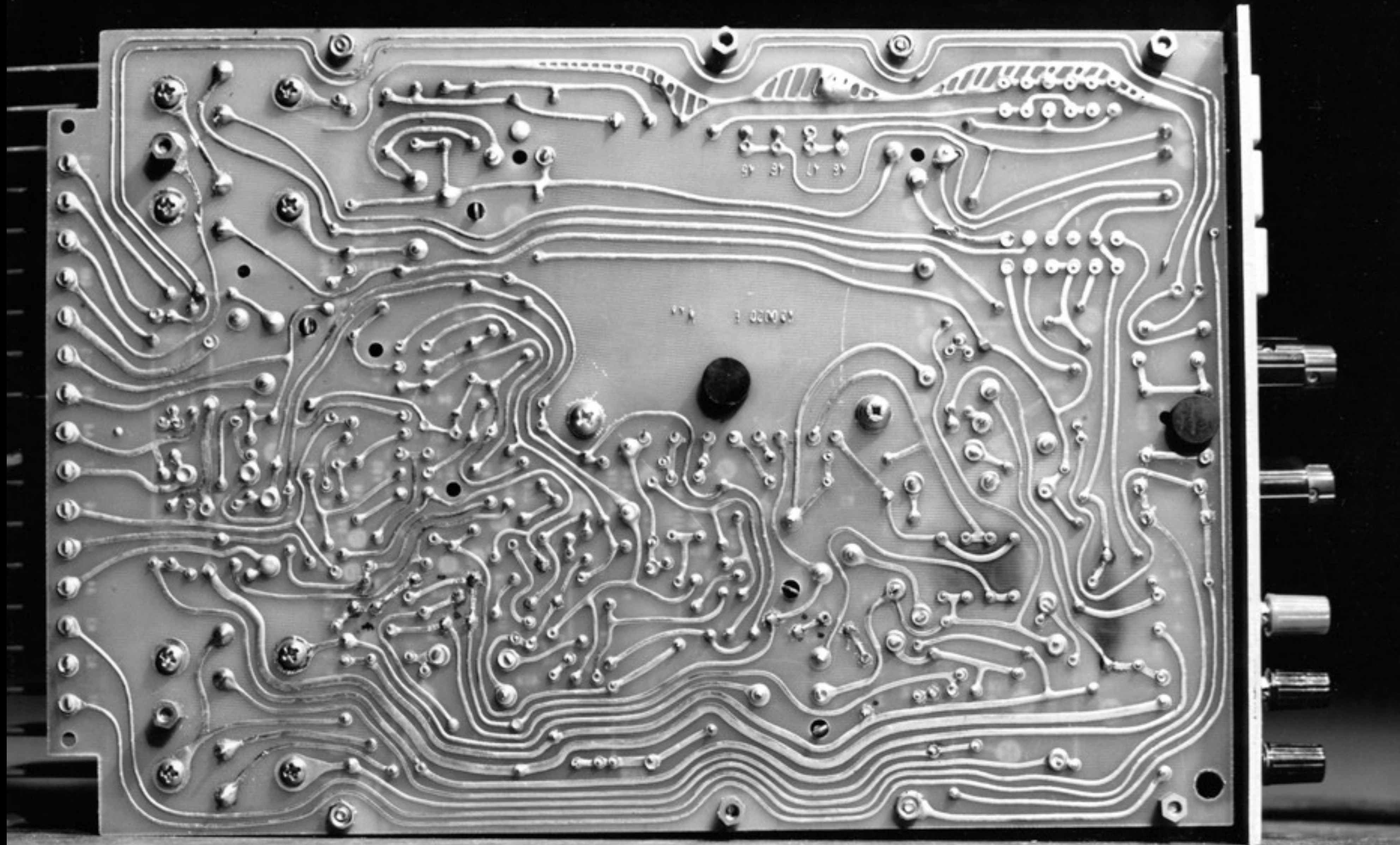
Opera???

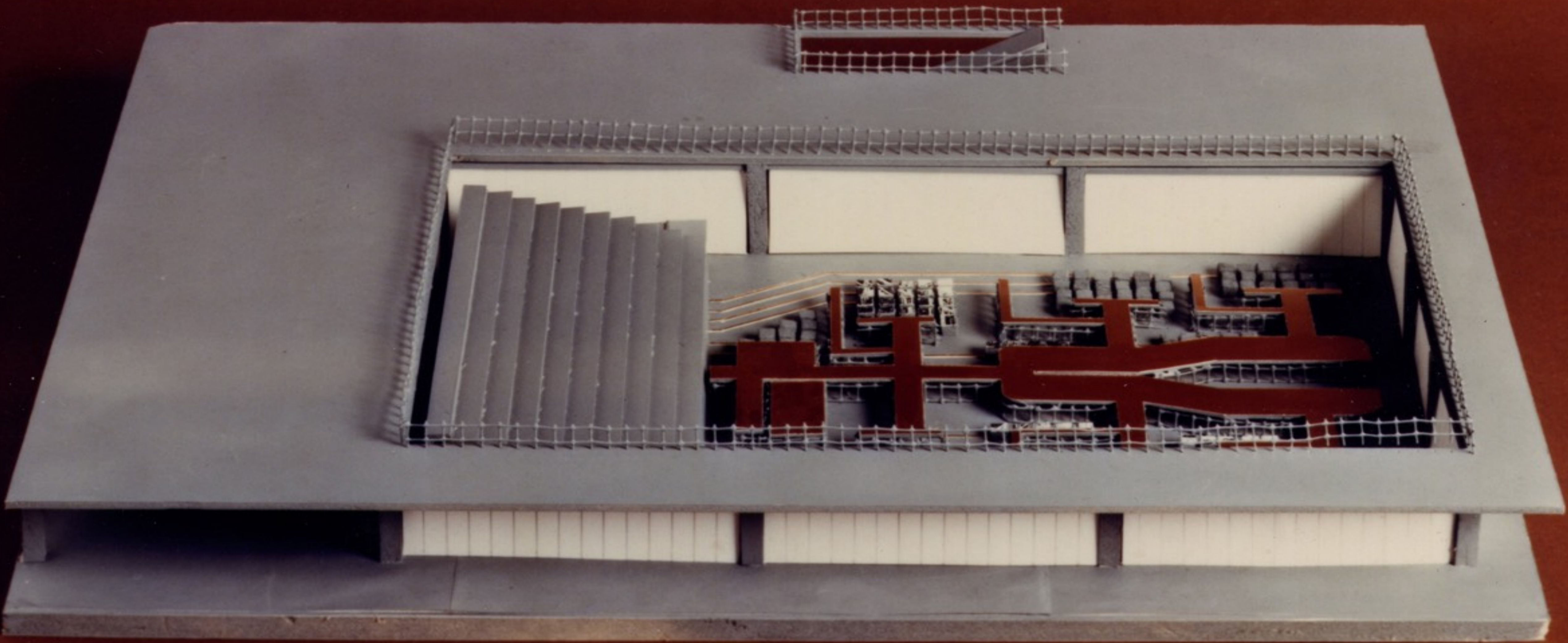
New kind of story

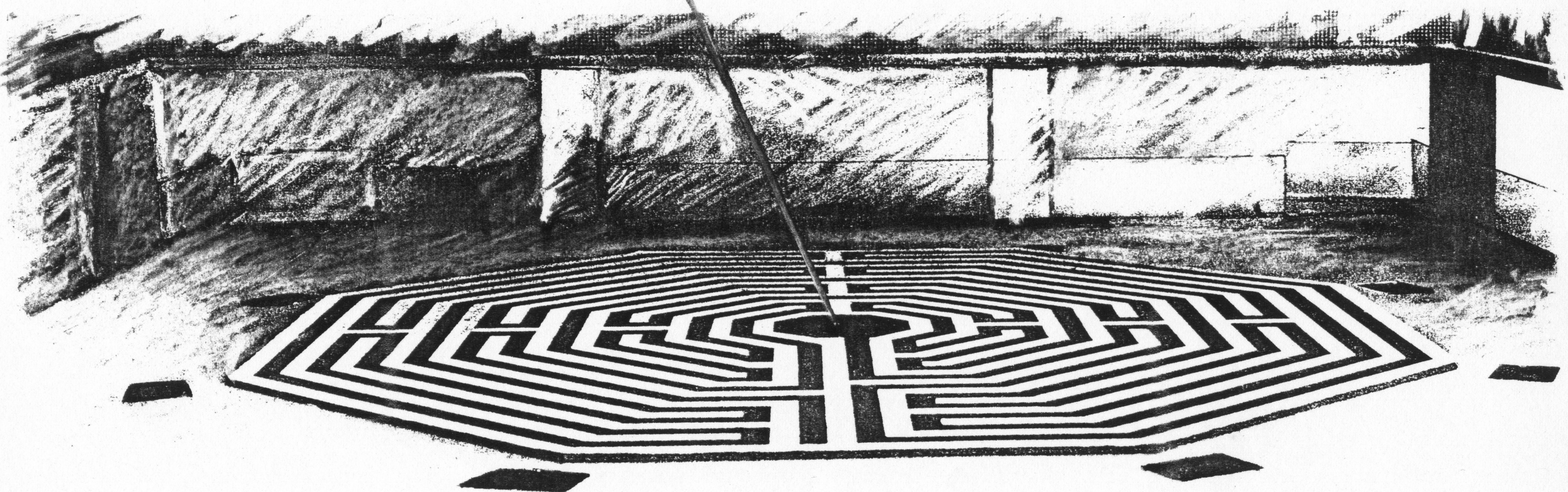
New kind of “theater”













Different singers/sound



Opera???

New kind of story

New kind of “theater”

Different sound/singers

Rethink the orchestra





Hyperinstruments



VALIS Setup



Tod & Joe Chung ca. 1987

VALIS

Opéra



Centre Georges Pompidou

IRCAM

CENTRE GEORGES POMPIDOU
FORUM
2 AU 7 DECEMBRE 1987
A 21 H

L'IRCAM, LE CENTRE GEORGES POMPIDOU/MNAM ET
CINQUIEME AGENCE PRESENTENT

VALIS

opéra

Commande de l'IRCAM
d'après le roman de Philip K. Dick

UN SPECTACLE DE TOD MACHOVER ET CATHERINE IKAM

MUSIQUE DE TOD MACHOVER
assistants: Arnaud Petit (IRCAM)
Joseph Chung (MIT)

IMAGES ET SCULPTURE/ENVIRONNEMENT: CATHERINE IKAM
coordination artistique: Louis-François Fleri
post-production vidéo Duran

MISE EN SCENE: JEAN-LOUIS MARTINELLI
Lumières de Jean-Louis Aichhorn
Costumes de Daniel Charton

avec
Olivier Angèle, Ph. K. Dick et Horselover Fat; Anne Azema, Sophia;
Terry Edwards, docteur Stone;
Mary King, Linda Lampton; Sophie Marin-Degor, Gloria;
Daryl Runswick, Eric Lampton

Emma Stephenson, claviers
Daniel Clampolini, percussions

et, dans le rôle de Mini, **Tod Machover**

DIRECTION: TOD MACHOVER

adaptation: Catherine Ikam, Tod Machover, Bill Raymond;
texte français: Catherine Ikam, Arlette Stroumza
Valis a été publié en français sous le titre «SIVA» aux éditions Denoël;
traduction Robert Louit

Valis a été réalisé avec le soutien de l'Association des Amis
du Centre National d'Art et de Culture Georges Pompidou,
avec le concours de la Caisse des Dépôts et Consignations,
du Media Lab du MIT, du Massachusetts Council for Arts and Humanities,
du Ministère de la Culture et de la Communication, D.A.G.E.C.-C.N.C.



VALIS Brief Video Excerpts

https://web.media.mit.edu/~tod/media/video/VALIS_excerpt-video_CAST.mp4



Hyperinstruments

A Progress Report
1987 - 1991

Professor Tod Machover
Principal Investigator

MIT Media Laboratory
Massachusetts Institute of Technology

January 1992

1.5 The VALIS Hyperinstruments

The most complete instruments so far have been a pair of systems developed for Tod Machover's opera VALIS [Machover 1987], and were implemented in 1987. The two systems, a keyboard based system similar to Figure 1.2, and a percussion system which employed the Simmons Silicon Mallet and Roland Octapad as MIDI controllers, were built from essentially the same software. Object inheritance was used extensively to exploit similarities.

Keyboard Based Instrument

The basic software architecture of the keyboard based instrument is shown in Figure 1.4 below. The instrument has four major modes: *through mode*, which is simple play through on a specific timbre; *shadow mode*, a more sophisticated version of *play through* which allows generalized mapping of notes to MIDI channels; *arpeggio mode*, which generates arpeggiations of the chords being played; and *manual mode*, which generates polyrhythmic repetition of held notes.

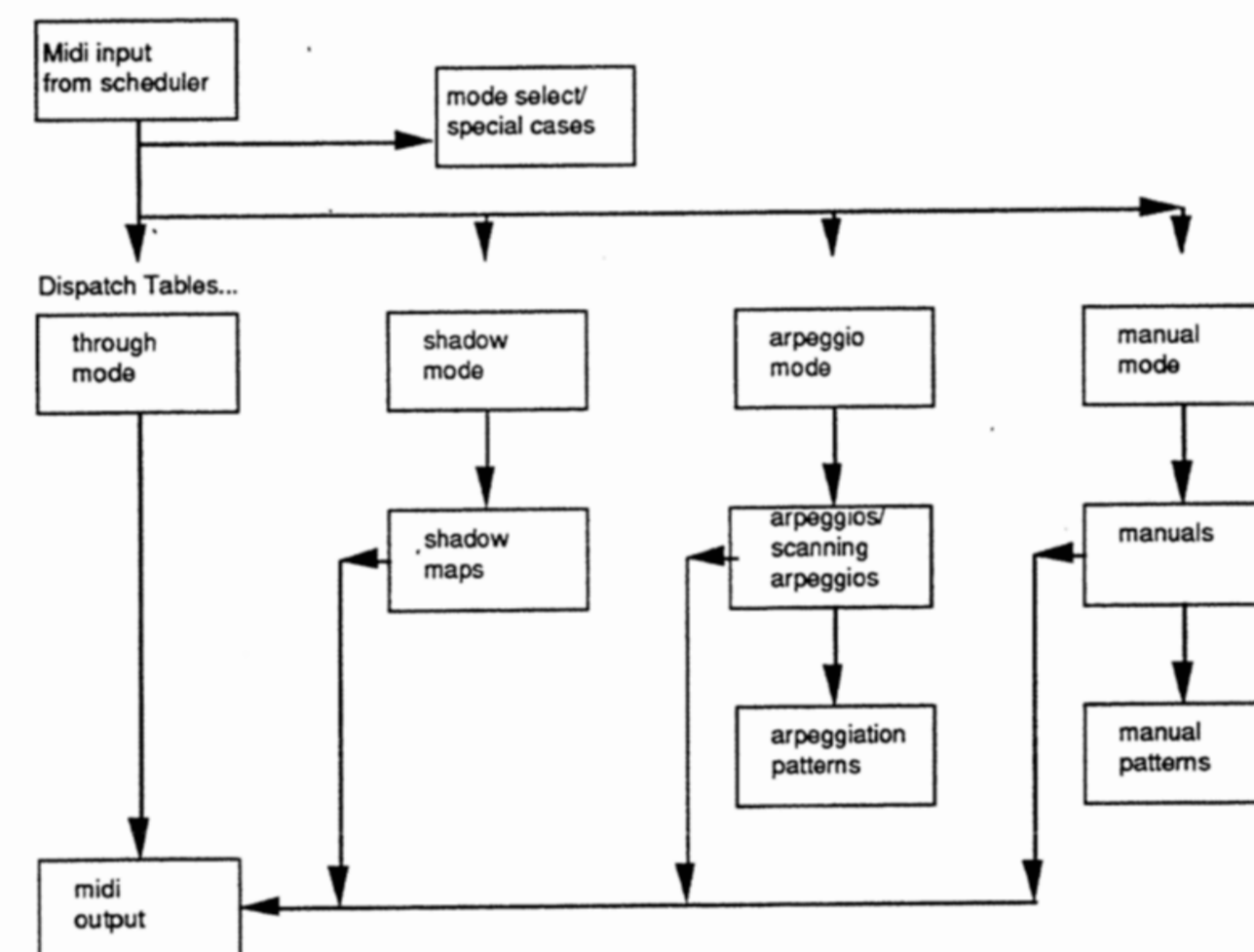


Figure 1.4. Keyboard System Software Architecture

When MIDI input arrives from the scheduler, it is fed into a dispatch table which directs the input to different functions in the instrument depending on the type and values of the MIDI bytes. The instrument has four dispatch tables, one for each mode, and the mode that the instrument is in is entirely determined by which table is active.

Suffering Song

957

Linda Lampton
Eric Lampton
Fat
MIDI Perc.
Kbd.

Your suffer-ing, the suffer - ing_ you have gone through it is ov - er, it is,
Your suffer - ing, your suffer-ing is_ ov - er, suffer-ing, you have
I have been shak - ing all my life from

https://web.media.mit.edu/~tod/media/mp3/16_VALIS_Suffering-Song.aiff

961

Linda Lampton
Eric Lampton
Fat
Kbd.

it is ov - er, it is, your suffer - ing it is ov - er, your suffer-ing ov - er, do you_
gone_ through, it is real-ly ov - er, suffer - ing is ov - er, ov - er, do you
fear. Shak - ing, run-ning, los - ing the peo - ple I

965

Linda Lampton
Eric Lampton
Fat
Kbd.

see? Phil - - - - ip? The suffer-ing you have
see? Phil-ip, Phil - ip, Phil - ip, Phil - ip? The suffer - ing
loved. Now the fear is dy - ing. I have ben

969

Linda Lampton
Eric Lampton
Fat
Kbd.

gone through, gone through is ov - ver, ov - er, it is, your suffer-ing is ov - er, it real-ly
you_ have gone through is ov - er ov - er, it real-ly is, ov - er, it is, it_
shak - ing_ all my life from fear.

Future of VALIS Hyperinstruments

Future of VALIS Hyperinstruments

Get Original Hyperinstruments to Work Again!

Future of VALIS Hyperinstruments

Get Original Hyperinstruments to Work Again!

Richer Texture yet More Flexible

“Fat’s Dream”

https://web.media.mit.edu/~tod/media/mp3/05_VALIS_Fat's-Dream.aiff

160 L *sung emphatic*

Fat *This life is lone - ly and pho - ny, and*

Perc. (Vib.)

Pno.

Tape *Start Tape*

166

Fat *e - du - ca - ted per - son. —*

Perc. (Vib.) *Xylophone???*

Pno.

Tape

163

Fat *worth - less, Un - fit for an in - tel - li - gent and*

Perc. (Vib.)

Pno.

Tape

169 *più f, very emphatic!*

Fat *Where are the ro - ses? Where is the*

Perc. (Vib.)

Pno.

Tape

Future of VALIS Hyperinstruments

Get Original Hyperinstruments to Work Again!

Richer Texture yet More Flexible

“Fat’s Dream”

Make Impossible Possible

“VALIS Song”

656

Linda Lampton
I want to see you man, I want to see you, I want to see you man,

Eric Lampton
you I want to see you man, I want to see you man, I want to see you, I want

Acc.

665

Linda Lampton
want to see you man, I want to see you, I want to see you,

Eric Lampton
see you man.

Acc.

659

Linda Lampton
I want to see you, I want to see you man, I want to see you, I want to see you man, I want

Eric Lampton
to see you man, see you man, I want to see you, I want to see you man

Acc.

668

Linda Lampton
As quick-ly as I can, As quick-ly as I can, As quick-ly as I can, As quick-ly as I can, As quick-ly as I can,

Eric Lampton

Acc.

662

Linda Lampton
to see you, I want to see you man, I want to see you, I

Eric Lampton
I want to see you, I want to

Acc.

669

Linda Lampton
As quick-ly as I can, As quick-ly as I can, As quick-ly as I can, As quick-ly as I can, As quick-ly as I can,

Eric Lampton
As quick-ly as I can, As quick-ly as I can, As quick-ly as I can, As quick-ly as I can, As quick-ly as I can,

Acc.

VALIS Song video clip from Paris production
https://web.media.mit.edu/~tod/media/video/VALIS_Excerpts-Paris.mp4
2:46-7:15

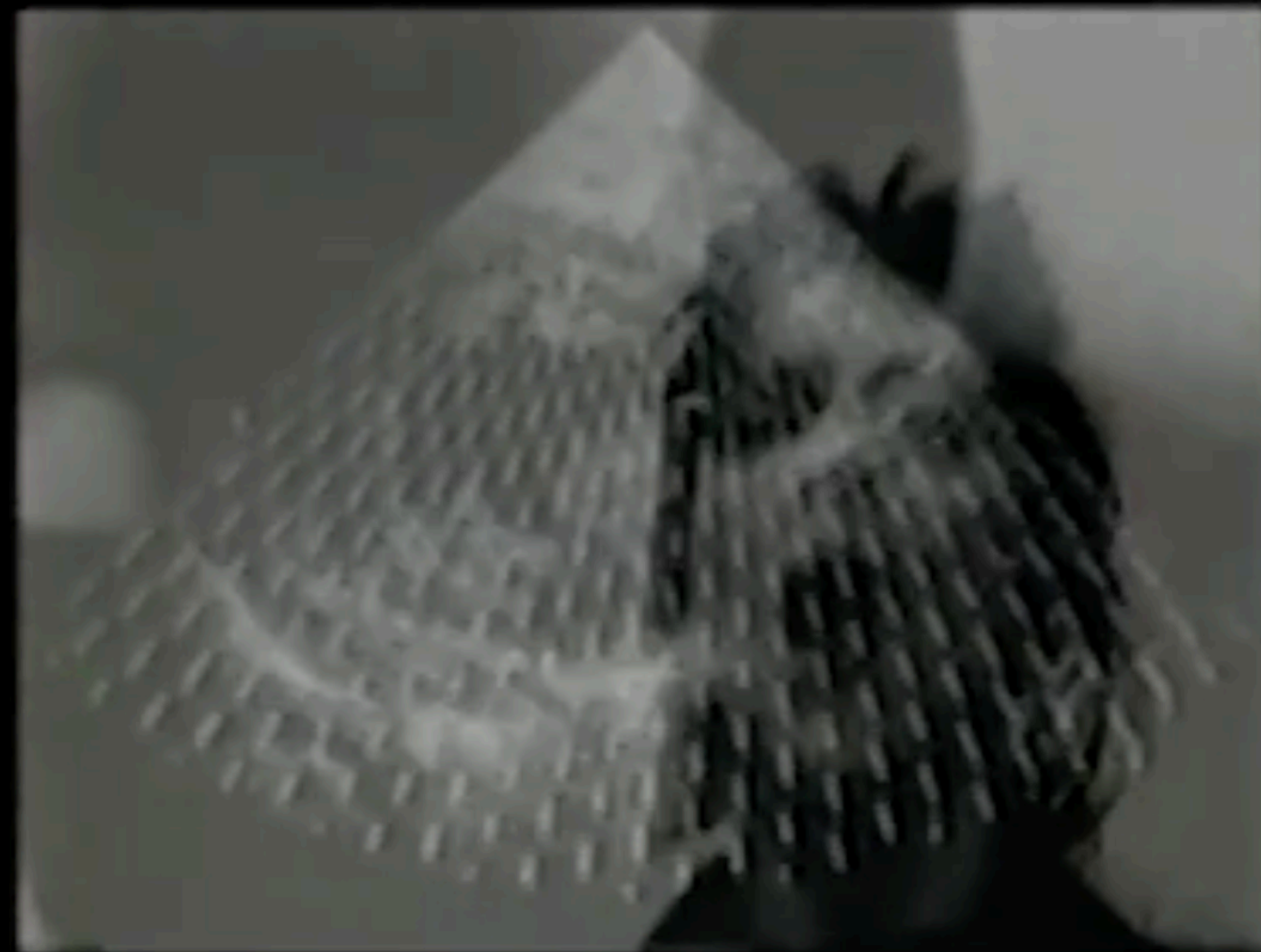


VALIS Song video clip from MIT CUBE production

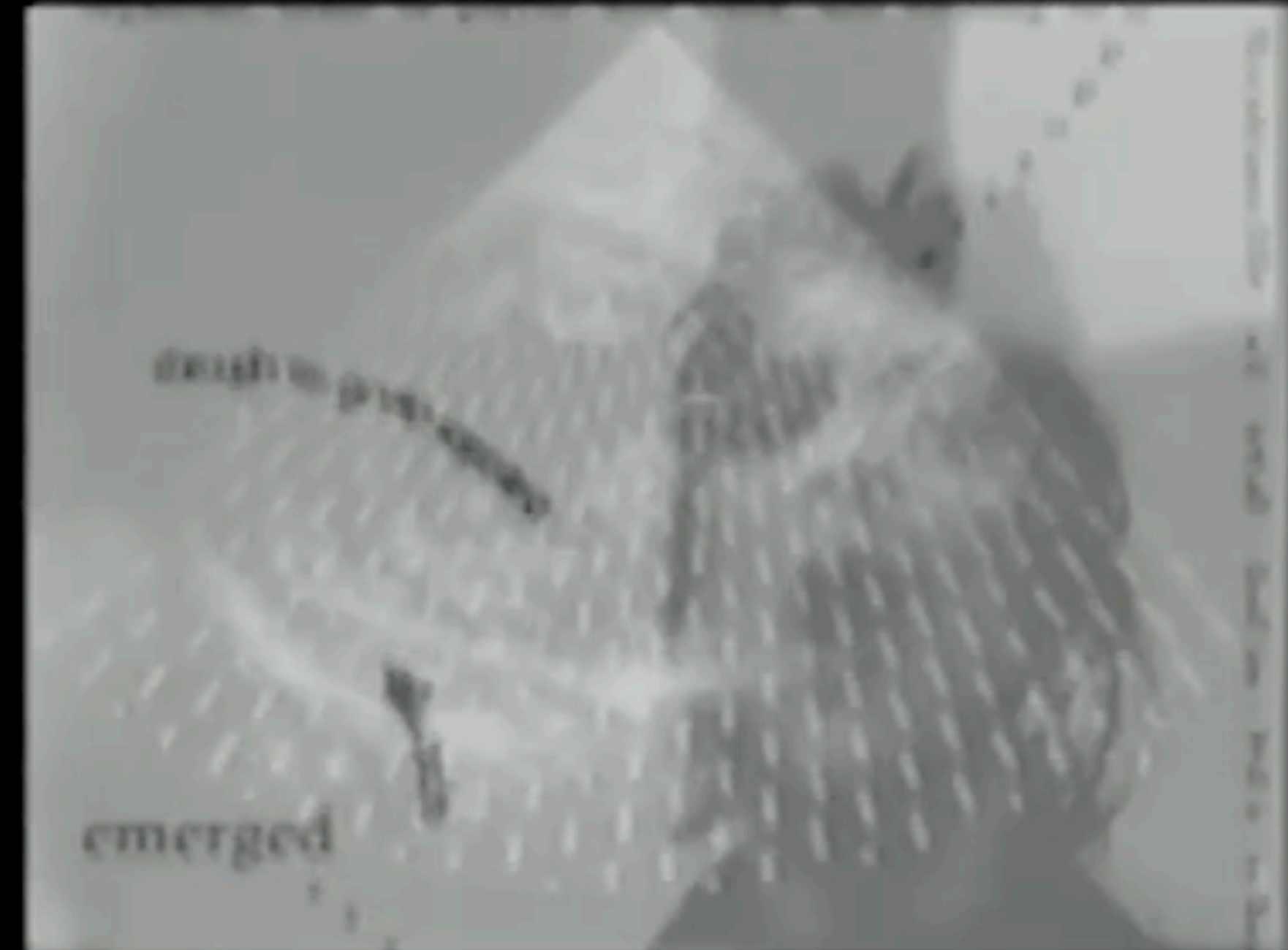
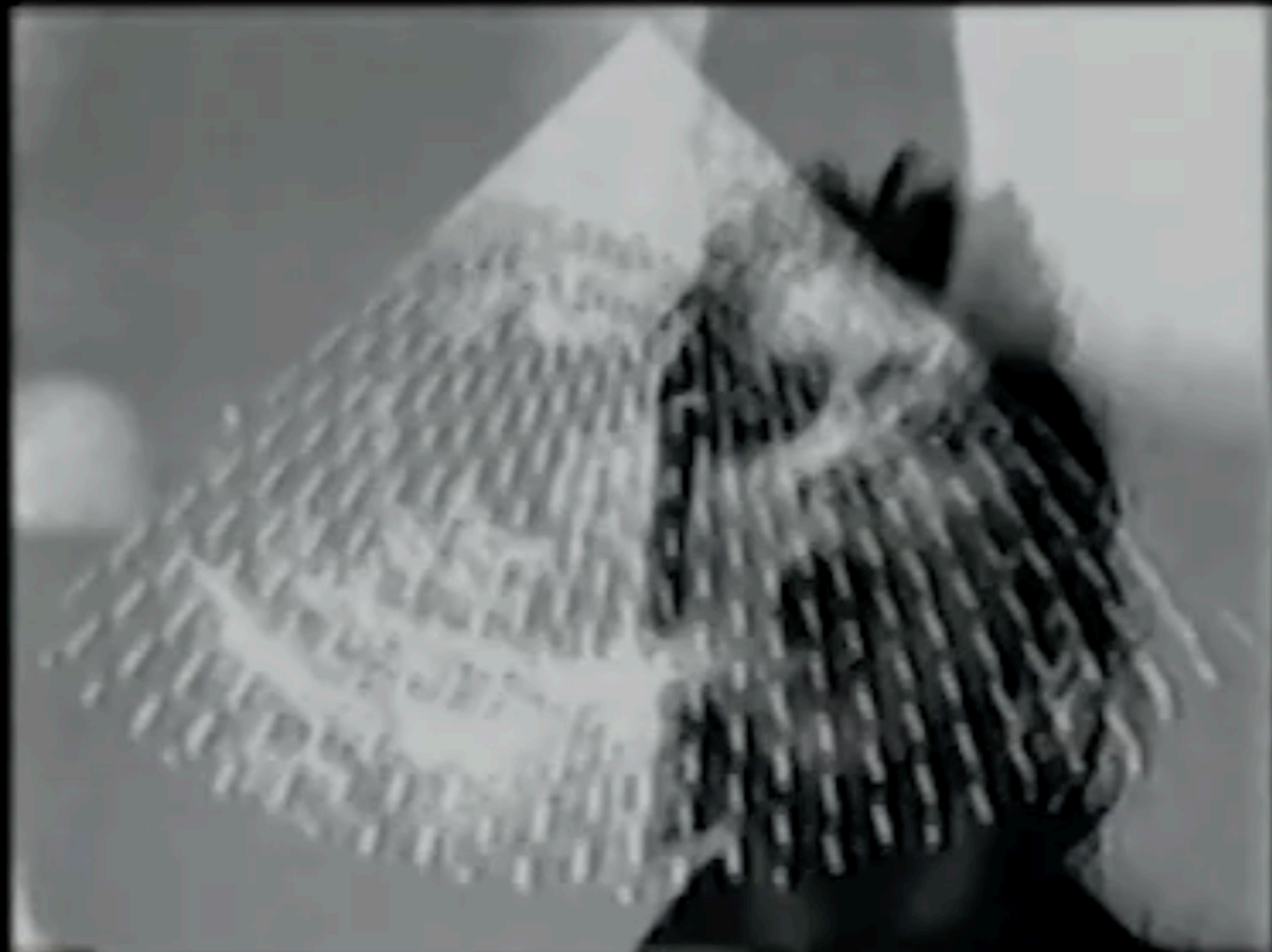
https://web.media.mit.edu/~tod/media/video/VALIS-Song_MIT-version-excerpt.mov



VALIS Song
video clip from
Lincoln Center production



https://web.media.mit.edu/~tod/media/video/VALIS-SONG_3-Monitor-Version_1-25-1994.mp4



Future of VALIS Hyperinstruments

Get Original Hyperinstruments to Work Again!

Richer Texture yet More Flexible

“Fat’s Dream”

Make Impossible Possible

“VALIS Song”

Make Possible Impossible

“Mini’s Solo”

Mini's Solo

[MINI performs, sculpting sounds out of thin air, and "animating" the entire "Valis system"]

996
Elec. timbral rise
p
4x

ca. 1' 10" inharmonic "bongs"
ca. 1' 15" inharmonics
ca. 1' 30" "hidden voices"

Detailed description: This musical score segment covers measures 996 to 1004. It features three staves: an upper treble staff, a middle bass staff, and a lower percussion staff labeled '4x'. The upper staff begins with a whole rest at measure 996. At measure 997, it contains a series of inharmonic notes. The middle staff shows a 'timbral rise' starting at measure 996, indicated by a wavy line that rises from a piano (*p*) dynamic. The percussion staff has a solid black line throughout. Time markers are placed above the staff: 'ca. 1' 10" inharmonic "bongs"', 'ca. 1' 15" inharmonics', and 'ca. 1' 30" "hidden voices"'. The measure numbers 996, 997, 998, 999, 1000, 1001, 1002, 1003, and 1004 are indicated at the top of the staff.

4X to be done like this for whole piece? (if still applicable)

1000
Elec. etc.
4x

ca. 2' 00" ca. 2' 30" ca. 3' 00" ca. 3' 10" ca. 3' 20"
calming down pulsating

Detailed description: This musical score segment covers measures 1000 to 1004. It features three staves: an upper treble staff, a middle bass staff, and a lower percussion staff labeled '4x'. The upper staff has a whole rest at measure 1000. At measure 1001, it contains a series of notes. The middle staff shows a 'calming down' effect starting at measure 1001, indicated by a wavy line that descends. The percussion staff has a solid black line throughout. Time markers are placed above the staff: 'ca. 2' 00"', 'ca. 2' 30"', 'ca. 3' 00"', 'ca. 3' 10"', and 'ca. 3' 20"'. The measure numbers 1000, 1001, 1002, 1003, and 1004 are indicated at the top of the staff.

1005
Elec. voice like drones
V-----A-----L-----I-----S
4x

ca. 4' 45" bowl/voice

Detailed description: This musical score segment covers measures 1005 to 1009. It features three staves: an upper treble staff, a middle bass staff, and a lower percussion staff labeled '4x'. The upper staff contains a series of notes labeled 'voice like drones'. Below the notes, the letters 'V-----A-----L-----I-----S' are written with dashed lines. The middle staff shows a 'bowl/voice' effect starting at measure 1005, indicated by a wavy line that rises. The percussion staff has a solid black line throughout. The measure number 1005 is indicated at the top of the staff.

https://web.media.mit.edu/~tod/media/mp3/17_VALIS_Mini-Solo.aiff

