

# **NEURAL NETWORKS & AESTHETICS**

**Frieder Nake  
A Workshop, Summer 2020**



Zuse Graphomat Z 64

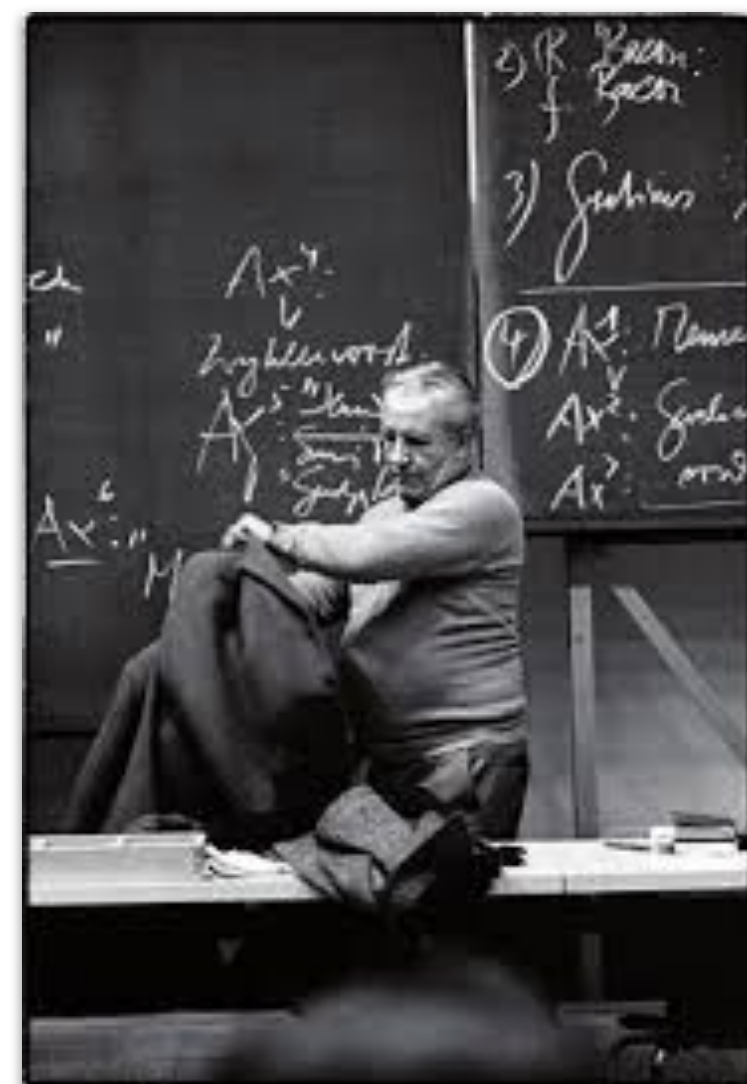
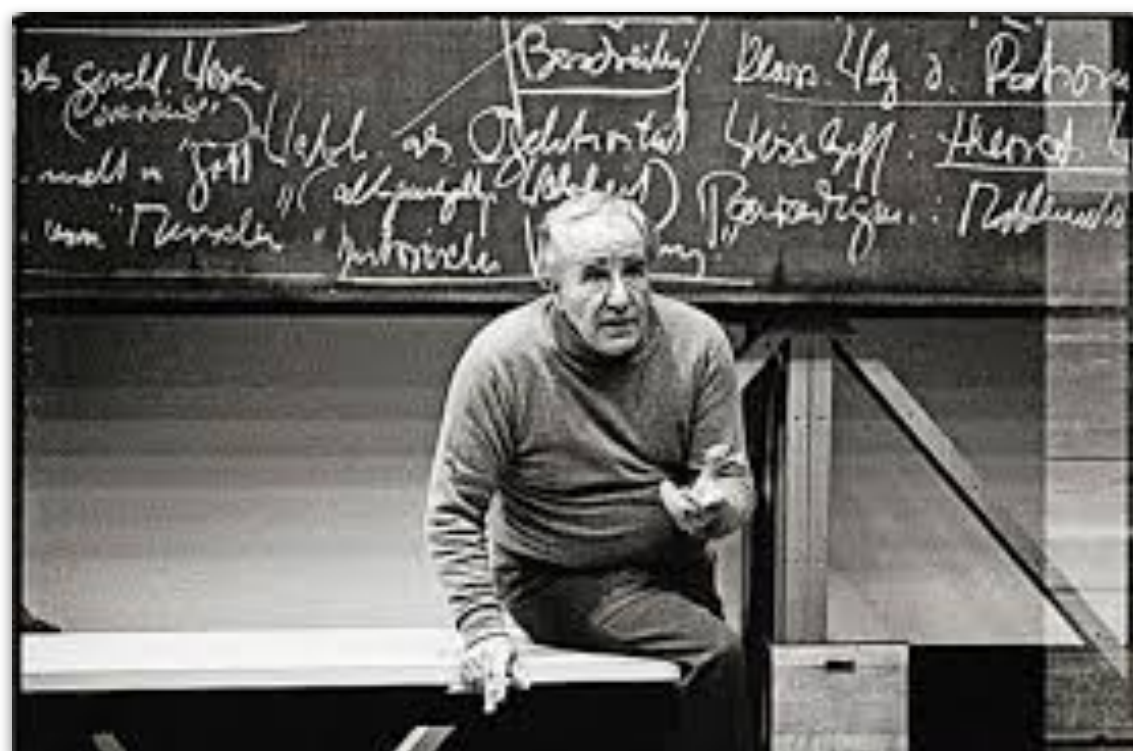
**Jonnie Döbele**



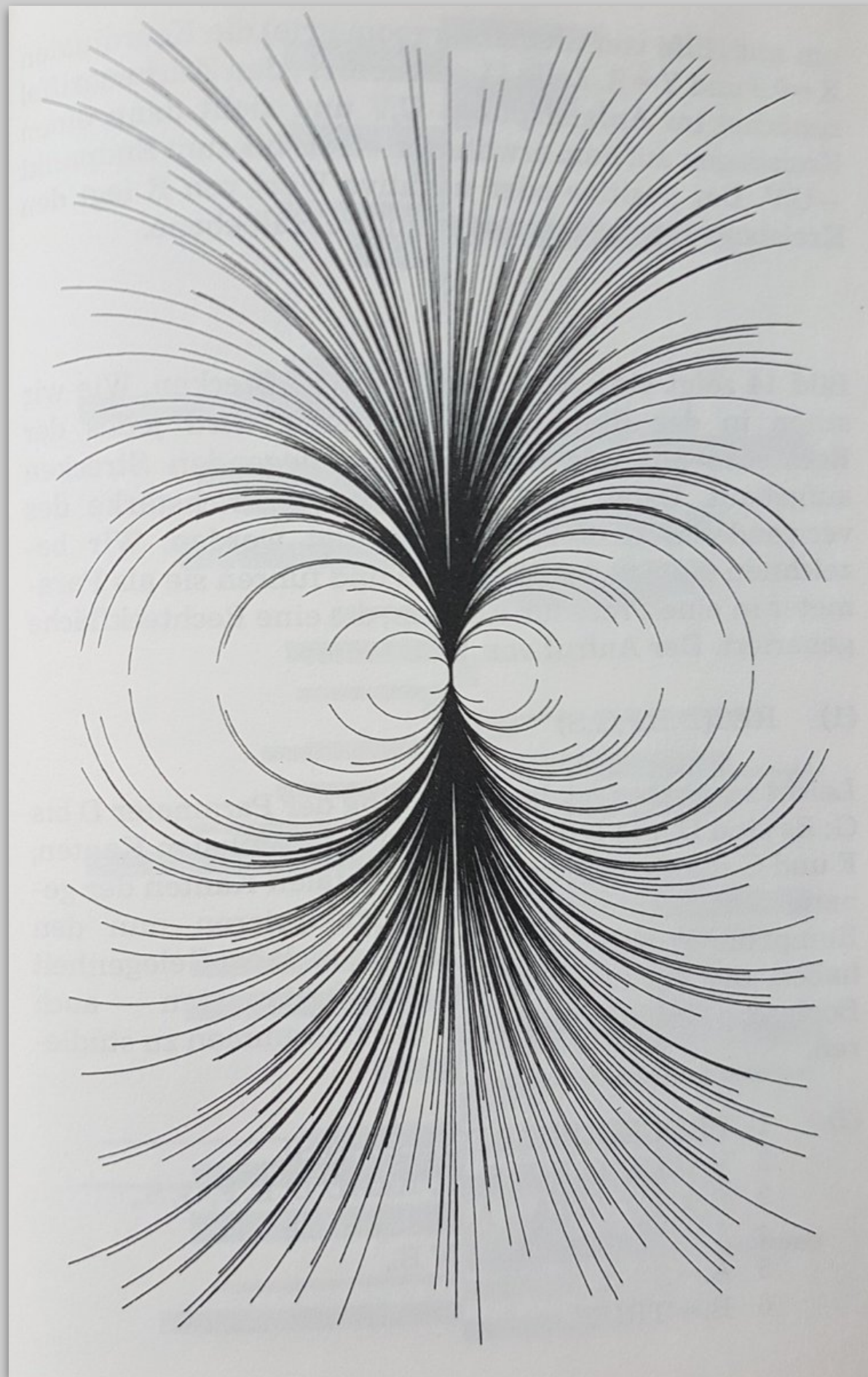
**Max Bense 6.12.76, 18.15 - 19.20h**

Aufnahmen vom Hörsaalsitz



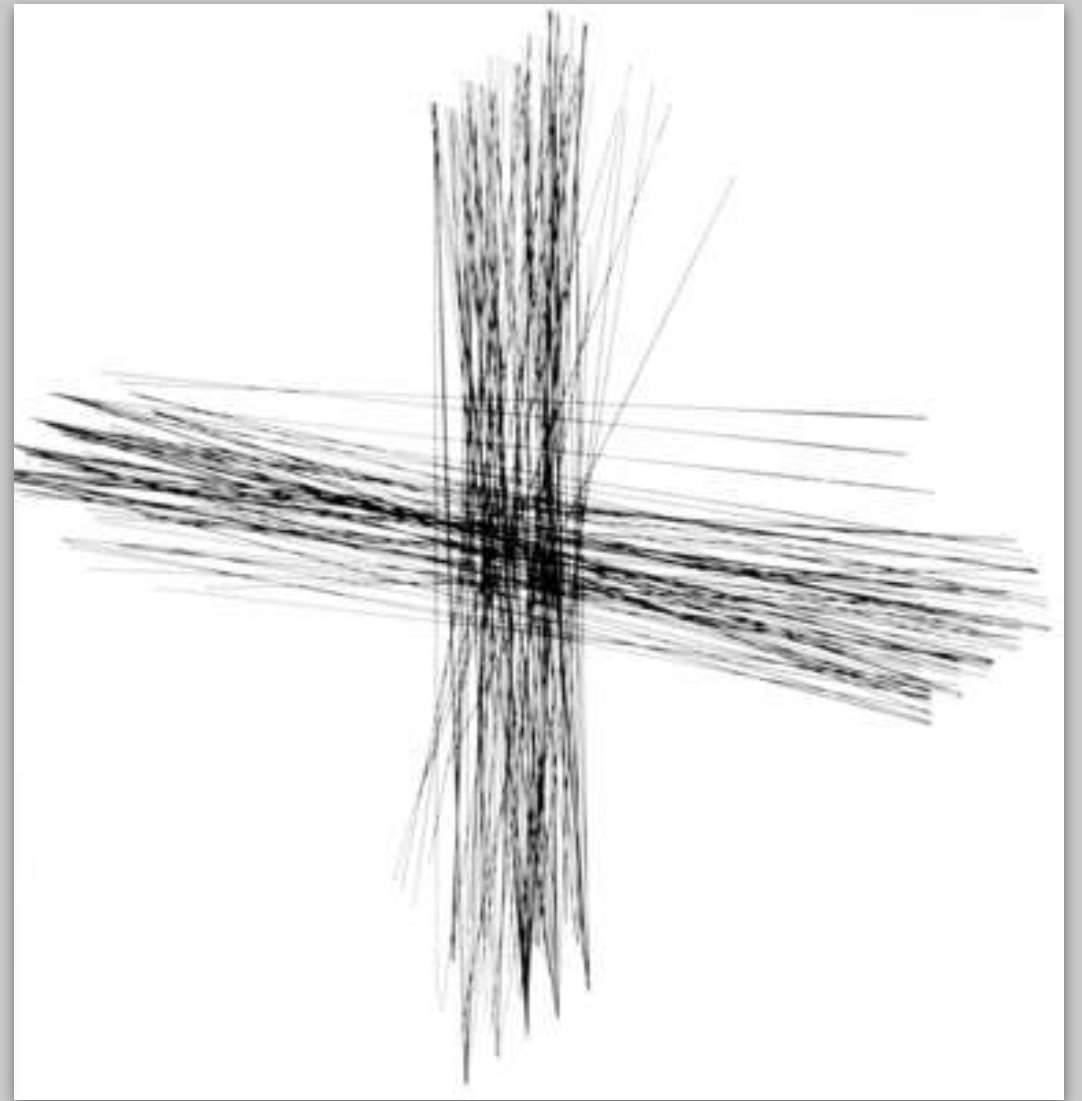
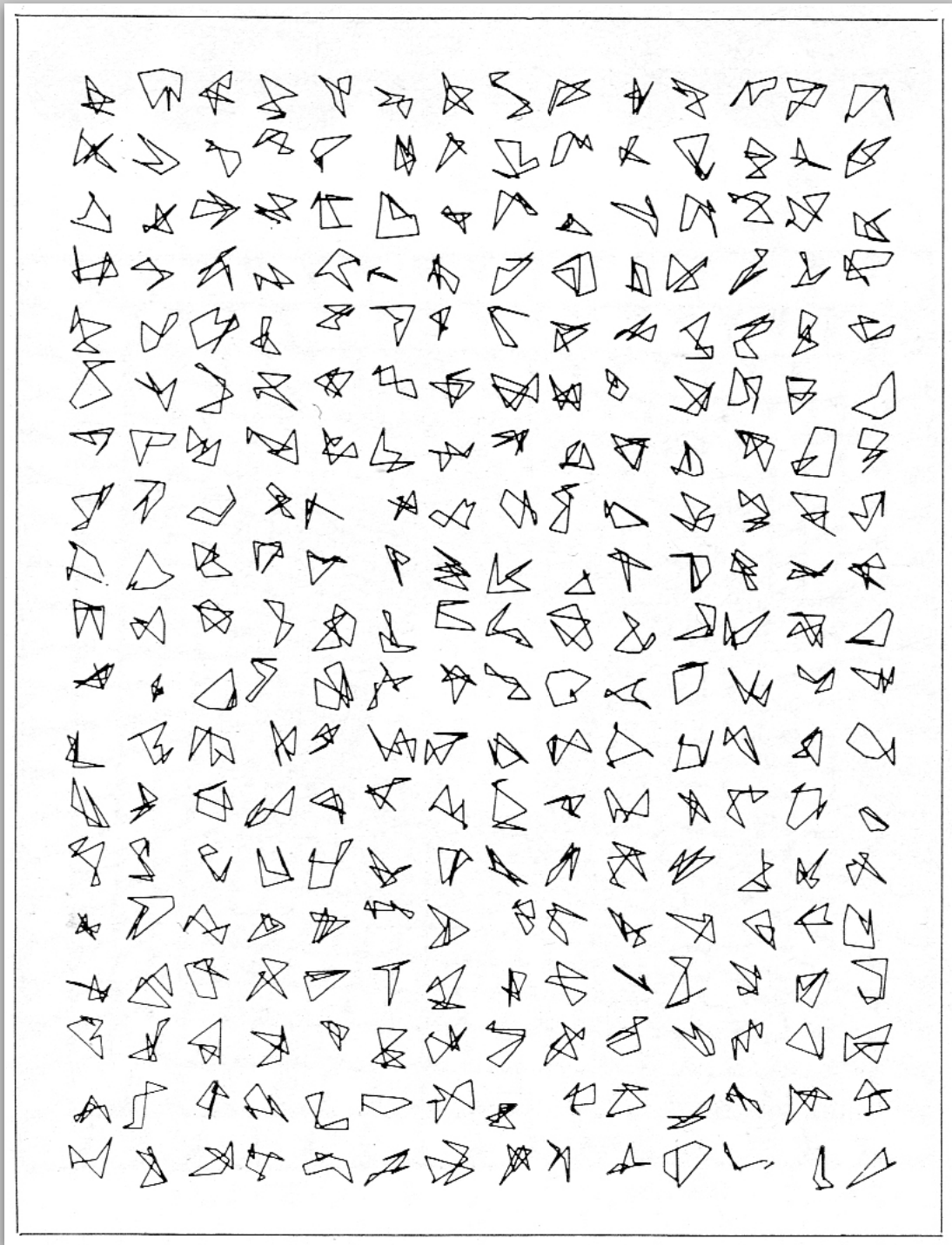




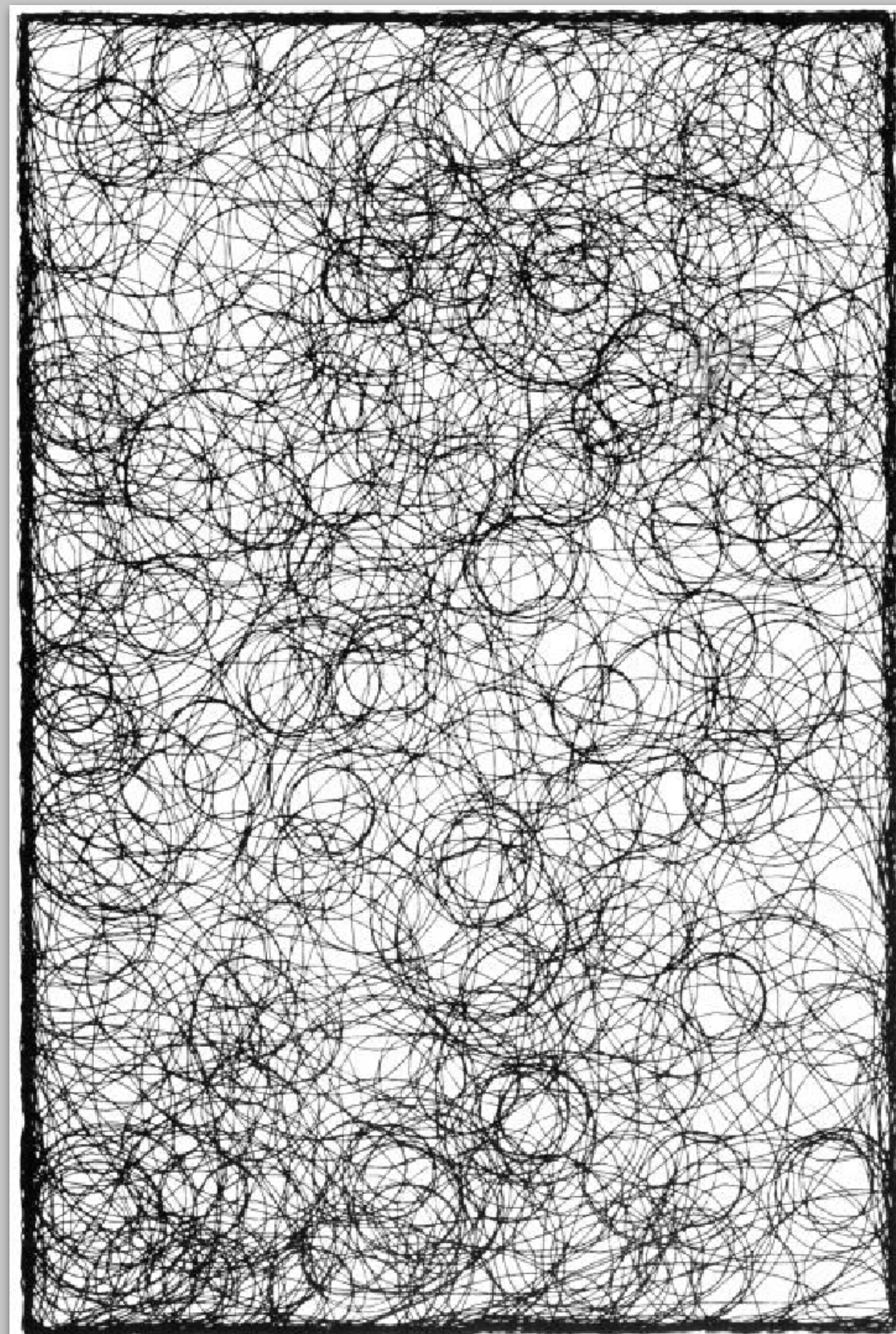


**re-programming**  
**from the image**  
**to the program**

Georg Nees







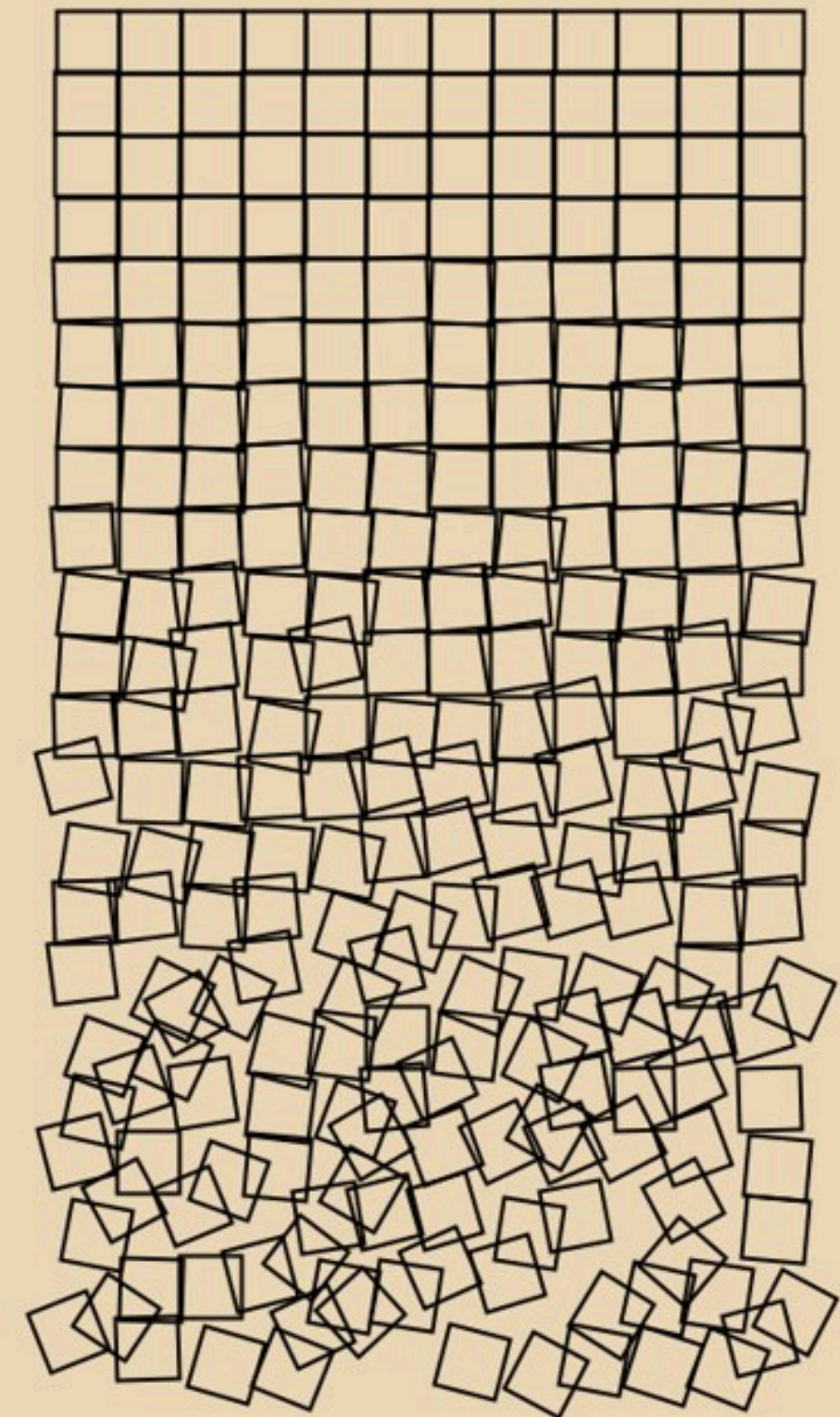
Starten

Python ▾

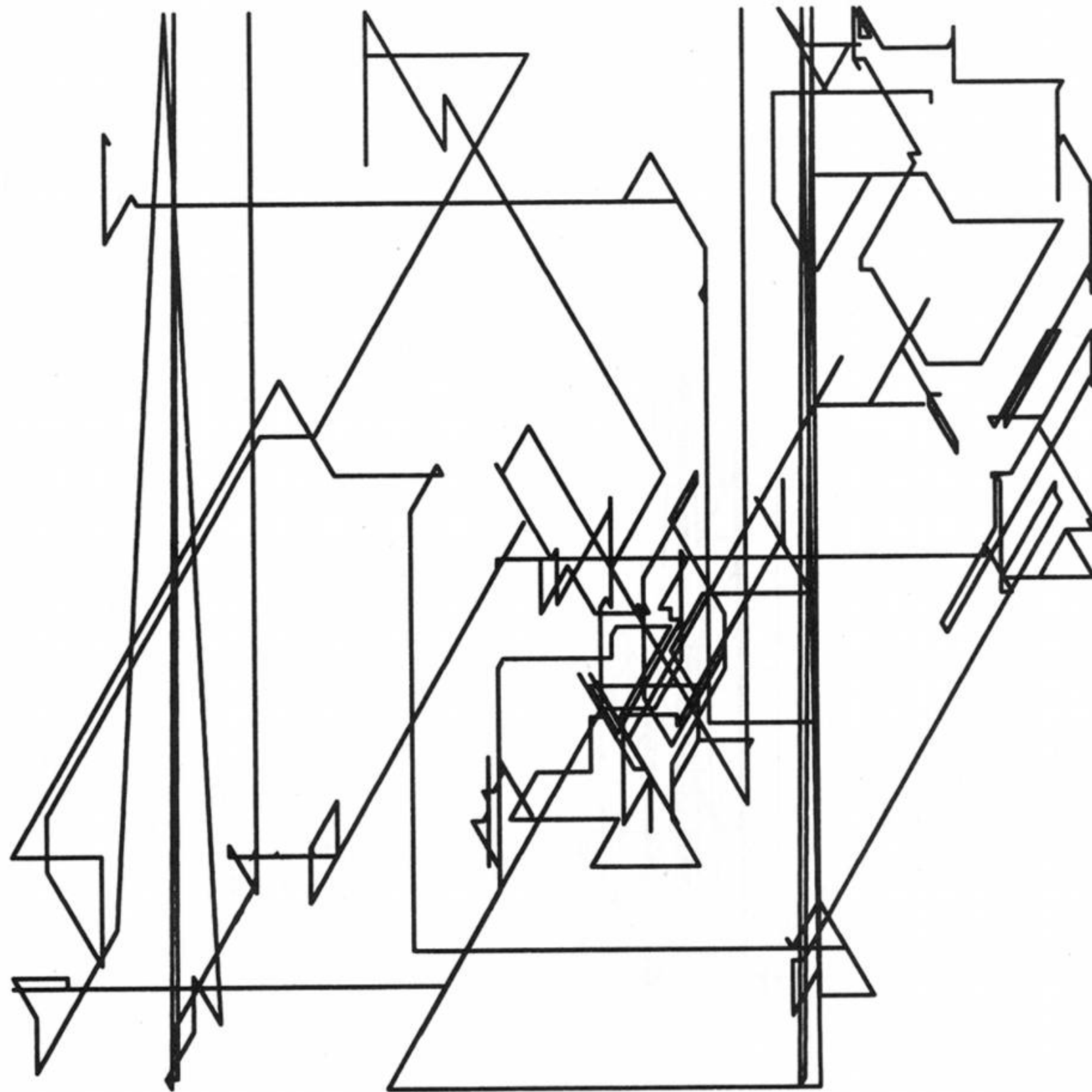
schotter1 ▾

```
1 cols = 12          # Anzahl der Spalten
2 rows = 22          # Anzahl der Reihen
3 tileSize = 32       # Kachelgröße
4 rotinc = 0.22       # Inkrementwert für die Rotation (in Grad)
5 rotsum = 0          # Rotation [in Grad]
6 padding = 3*tileSize # Abstand vom Fensterrand (rechts, links und oben, unten)
7 dampen = 0.45       # Dämpfungsfaktor
8
9 def setup():
10     size((cols + 4)*tileSize, (rows + 4)*tileSize)
11     this.surface.setTitle("Re-Enactment Georg Nees: Schotter")
12     stroke(0)
13     strokeWeight(2)
14     noFill()
15     rectMode(CENTER)
16     noLoop()
17
18 def draw():
19     global rotsum
20     background(235, 215, 182)
21     for y in range(rows):
22         rotsum += y*rotinc
23         for x in range(cols):
24             with pushMatrix():
25                 rotval = random(-rotsum, rotsum)
26                 translate(padding + (x*tileSize) - (0.5*tileSize) + (rotval*dampen),
27                     padding + (y*tileSize) - (0.5*tileSize) + (rotval*dampen))
28                 rotate(radians(rotval))
29                 rect(0, 0, tileSize, tileSize)
30
31
32
33
34
35
36
37
```

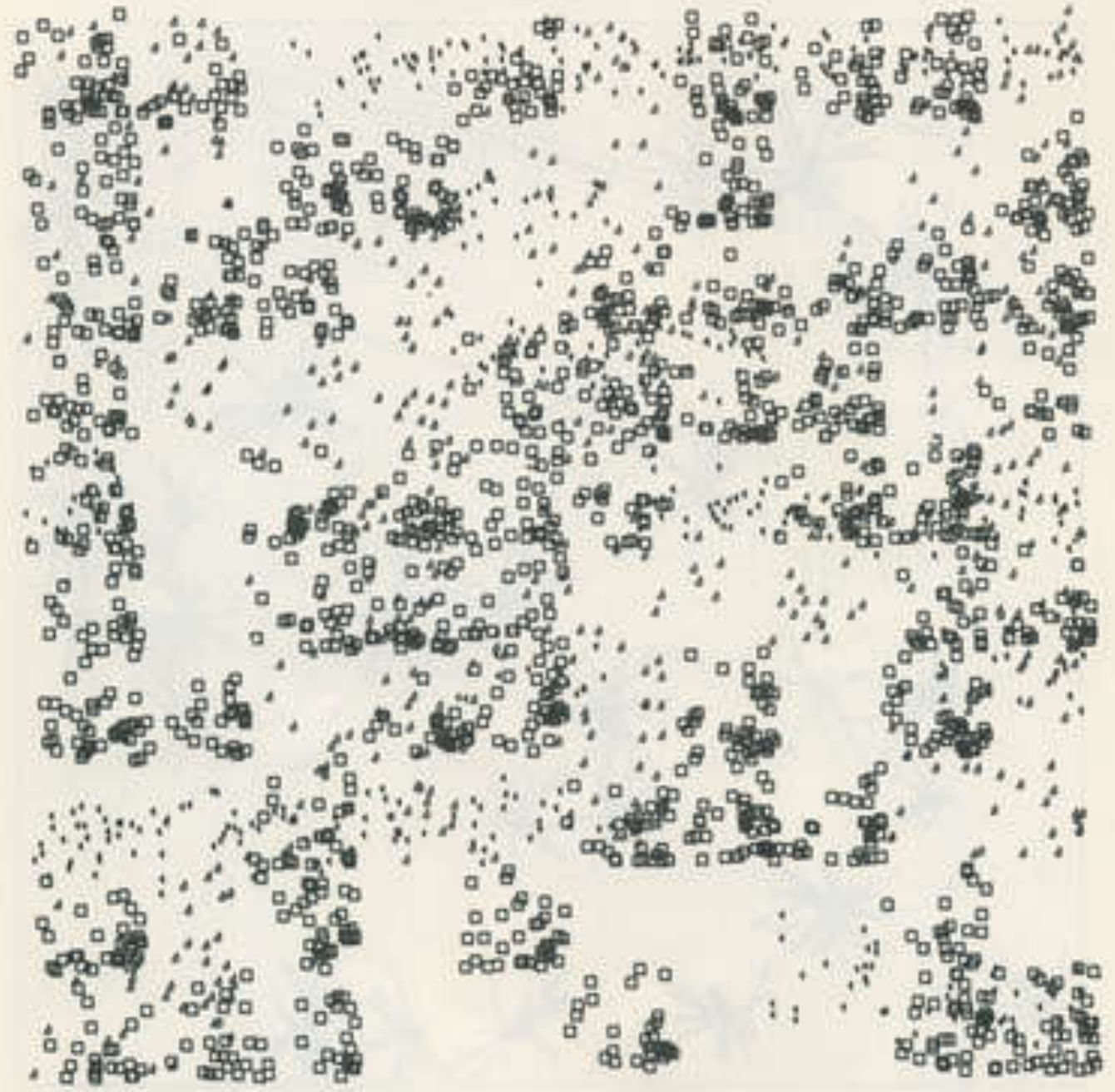
Konsole





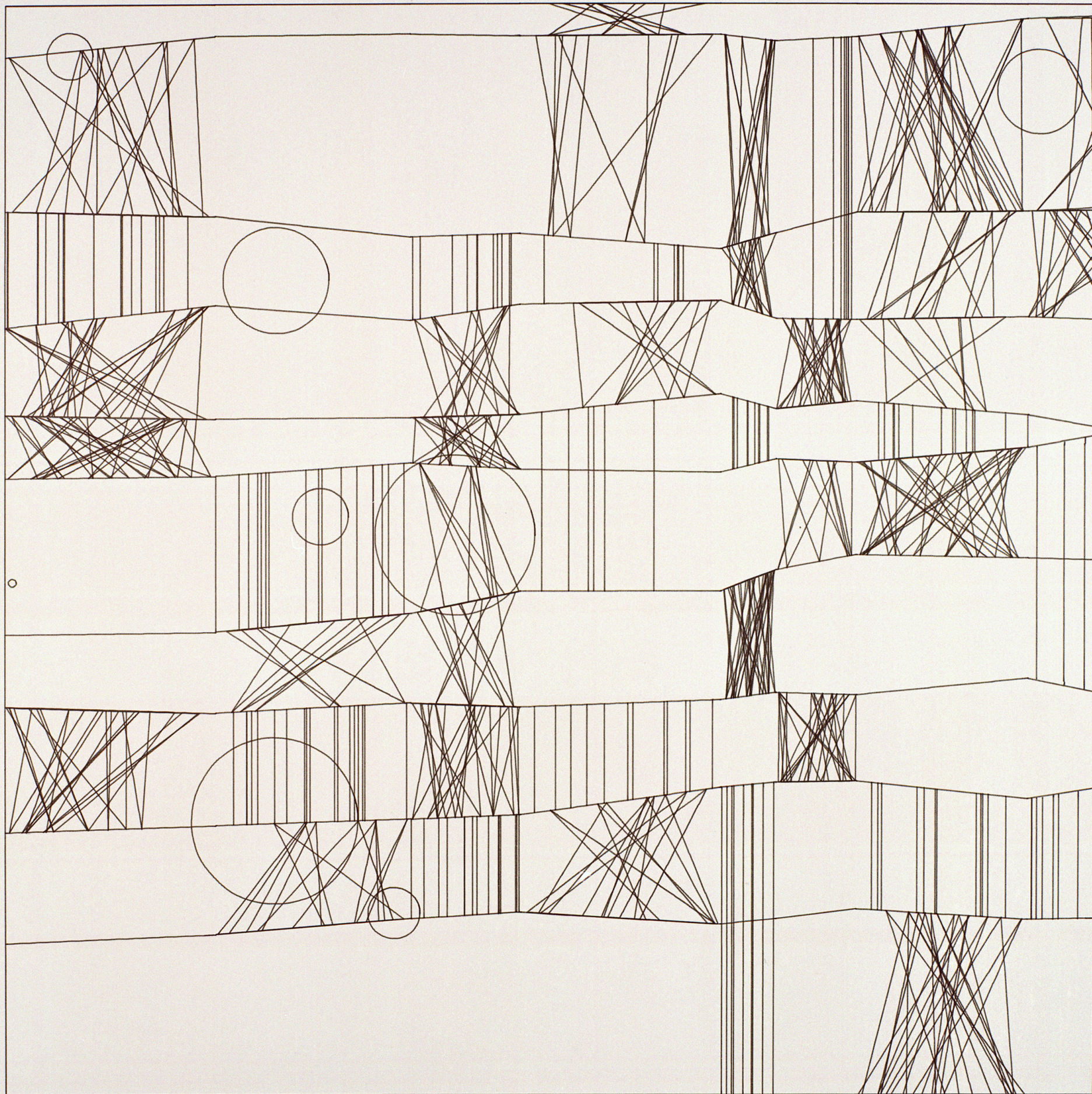


NAKE/ERSE/ZG+

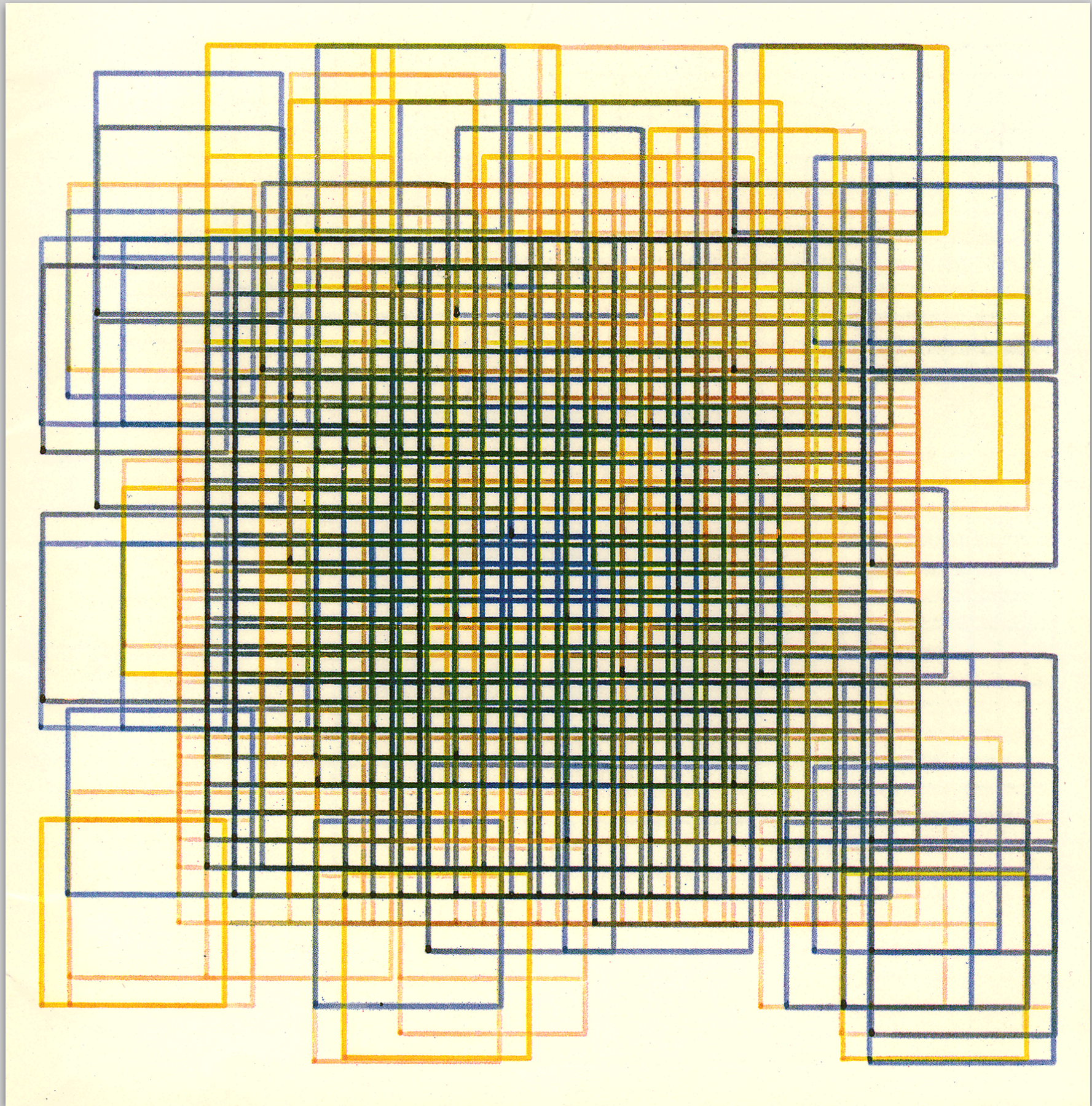


42/791/254













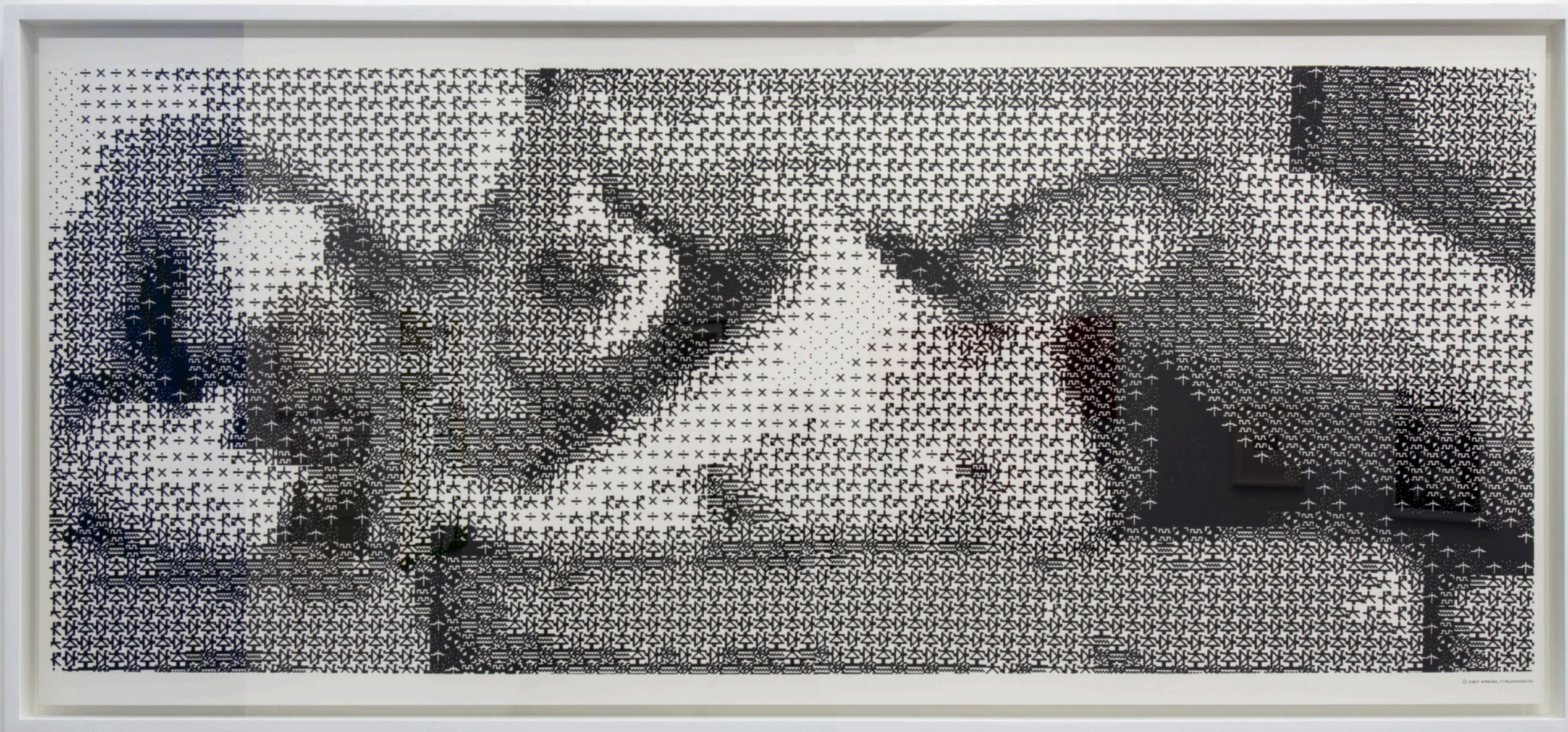
Charles Csuri (b. 1922). Sine curve man, 1967



Piet Mondrian (1872-1944). Composition with lines, 1917

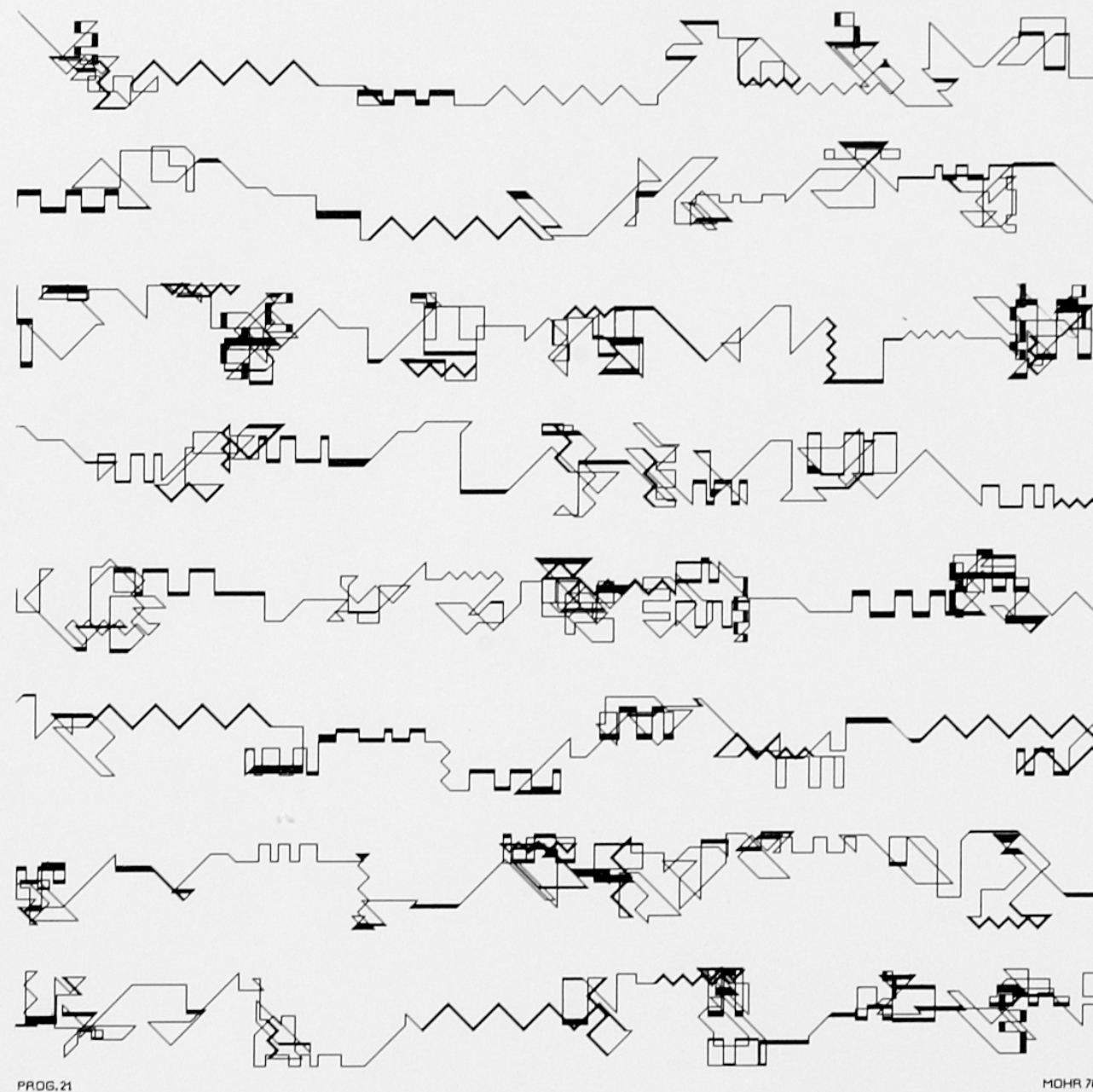
A. Michael Noll (b. 1939). Computer composition with lines, 1965



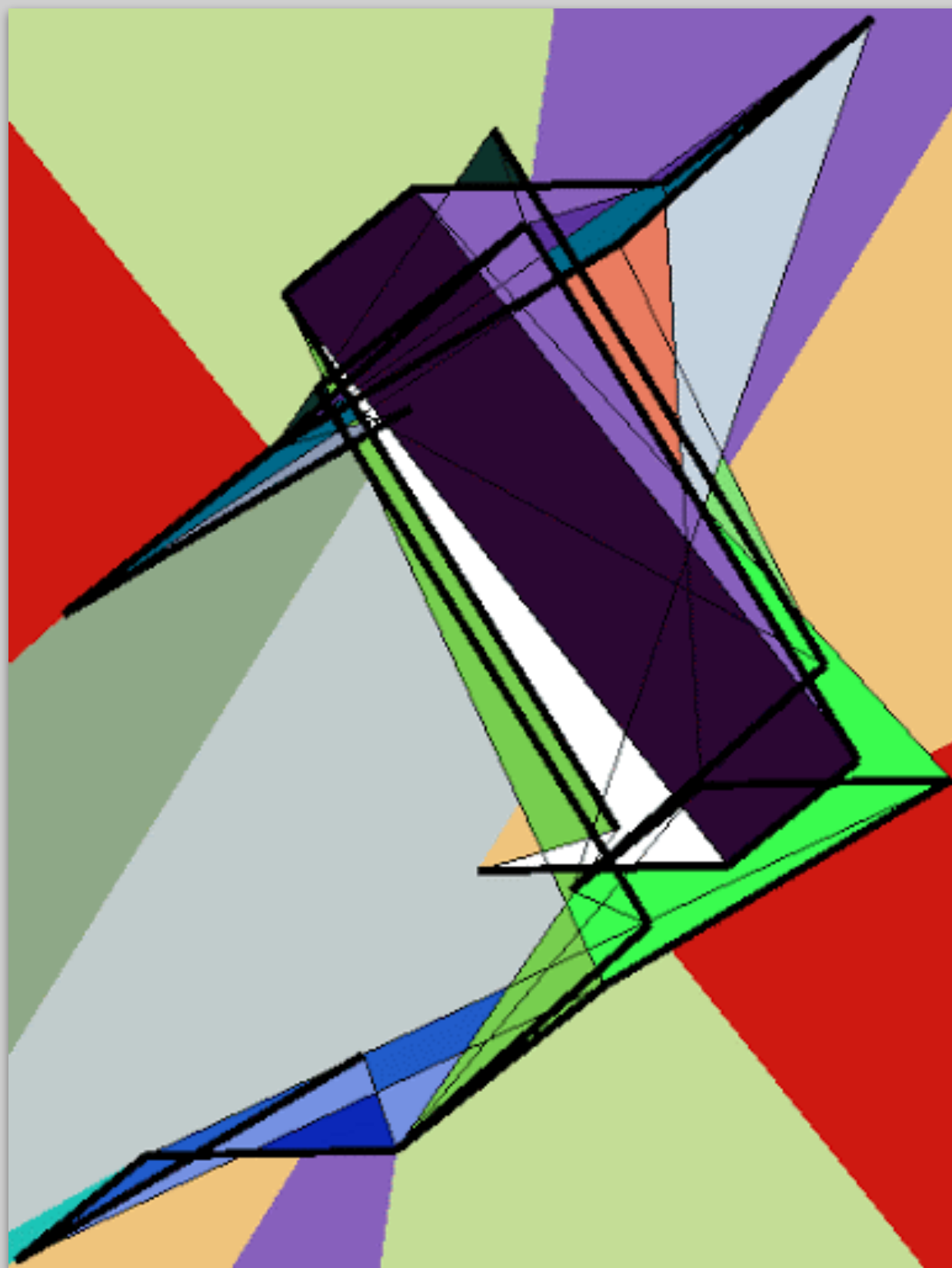


Leon Harmon, Ken Knowlton. Computer Nude, 1966





Manfred Mohr (b. 1938). P021G, 1970



Manfred Mohr (b. 1938). space.color P-703/C, 1999