Documentation

Asia-Link Joint Workshop in Milano
generative_design_lab kassel 2003

From arbitrary starting point via generator to result

Asia-Link Joint Workshop in Milano

Introduction to the Documentation

The first joint workshop with participants from all of our Asia-Link partner-locations (Tianjin, Shanghai, Eindhoven, Kassel, Milano) was held at the Politecnico di Milano in the first week of Dec. 2003 just prior to the fifth conference of Generative Art, GA 2003.

The workshop started with summary reports of each of the partners followed by a small exercise, prepared and conducted by the Generative Design-Lab Kassel (Hans Dehlinger), and a more elaborate competitive execise, conducted by the Generative Design-Lab of the Politecnico di Milano (Celestino Soddu and Enrica Colabella).

The following report is concerned with the exercise conducted by the GD-Lab Kasel, the documentation of the other events is located elswhere in the website of the Asia-Link Project.

The exercise was concerned with some basic ideas of the generative approach to design. By citing some of the known properies of design problems, a frame of reference was established, in which an arbitrarily chosen starting point was used as entrance to a set of transformations.
The staring point consisted of the projected shadow image of some forking branches taken from trees and shrubbs. The goal was to arrive at some piece of furniture from this starting point by explicitly formulating rules of transformation.

The exercice was limited to three hours of work and it was designed to shed light on some of the problems associated with the design of generators, transformational rules and the like.

Prof. Dr. Hans Dehlinger, Dipl. Des. Ole Werner, University of Kassel

Exercise

from arbitrary starting point via generator to result

to the characteristic properties of design, which cause significant problems to the designer, we have to count:

- there is no definite starting point
- there is no set of agreed upon procedures to deal with them
- there is no stopping rule

in this execise we use:

- an arbitrary starting point
- a not yet known generative procedure which we will have to design
- an arbitrary stopping rule as last step of the generative procedure

the goal is the design of a piece of furniture
the arbitrary starting point is the shadow of an object, projected to the wall

strategy of approach:

- formulate possible rules of transformation to transform the shadow image
- experiment with them and refine them
- map out final design of the generative process
- apply generator and produce results

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detaching

Rotate → orthodoxial
vertical/horizontal

oringin

code

shift + superposition → shear

revole/rotate + superposition ↑

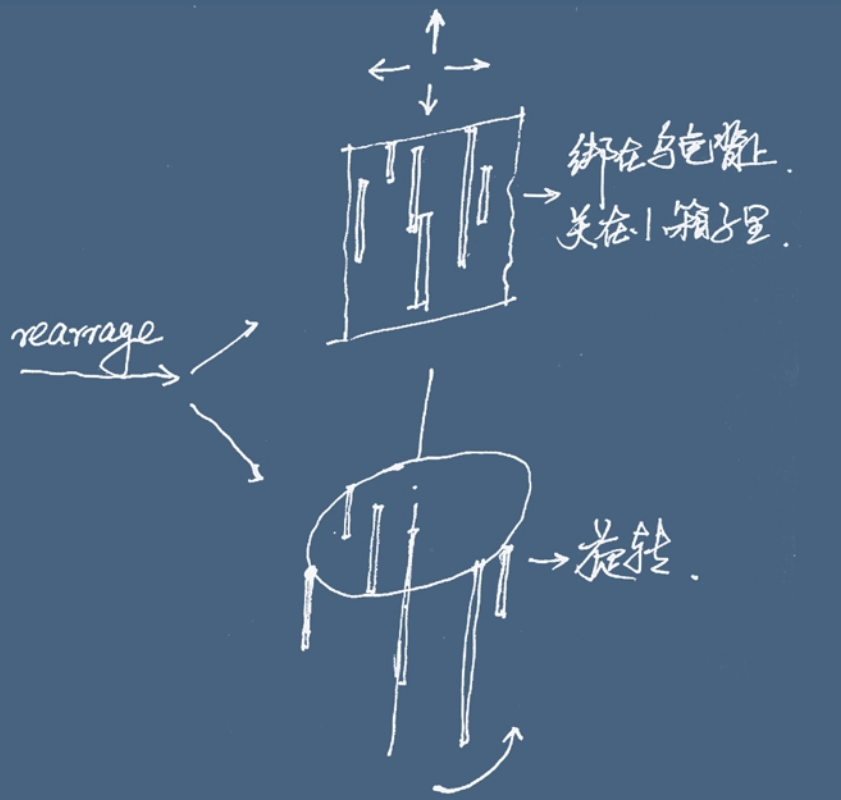
capture a position randomly, and apply each group of sticks different colors, matial; ..... radomly.

↓

glass.
steel.
transparent.
semi-transparent.

put leaves on.

place the original structure inside to support.



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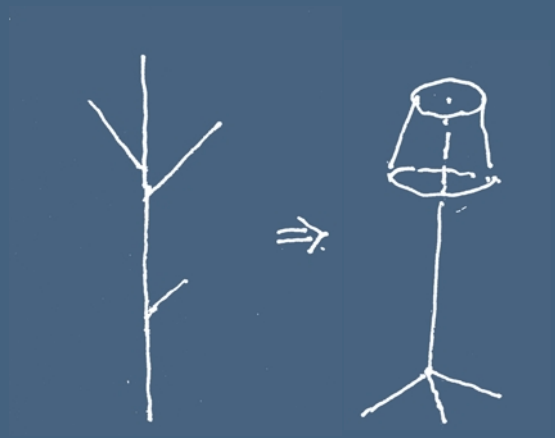
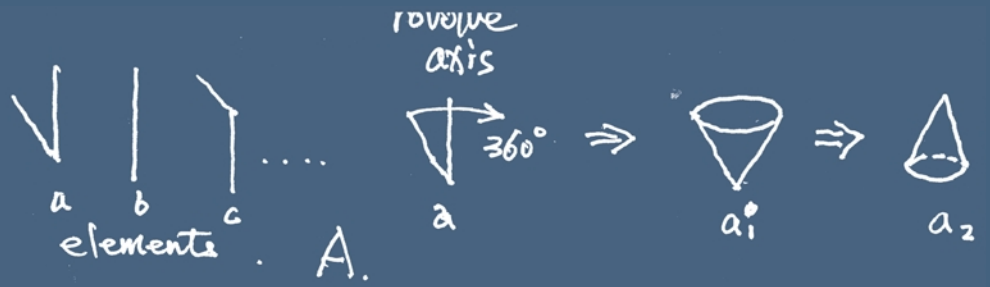
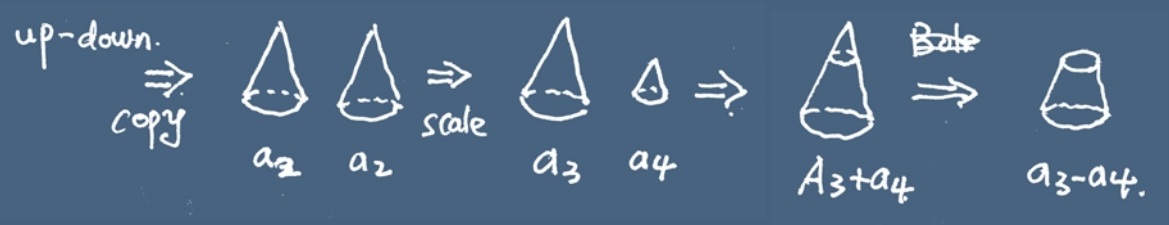
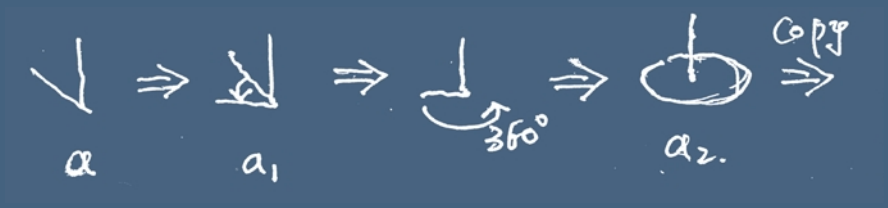






TABLE


a
a1
360°
a2.
copy

a3: up-down
a2
a3'
a3
a2

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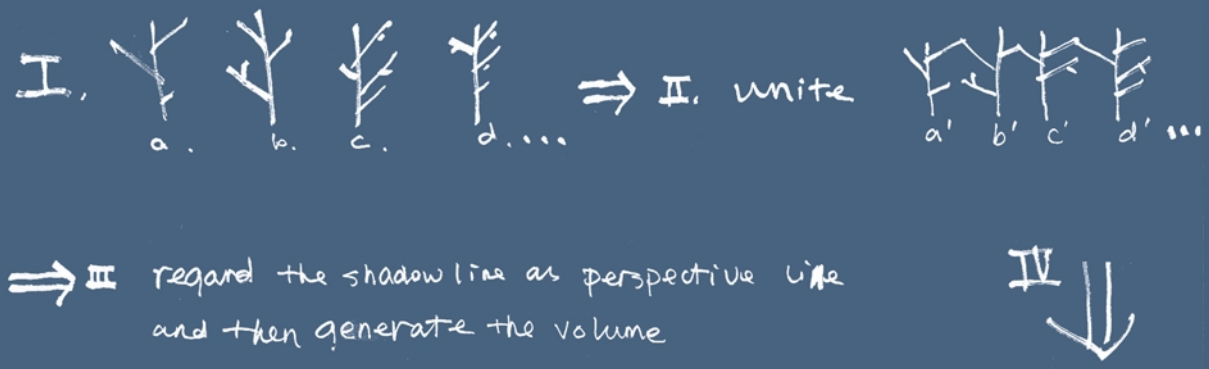

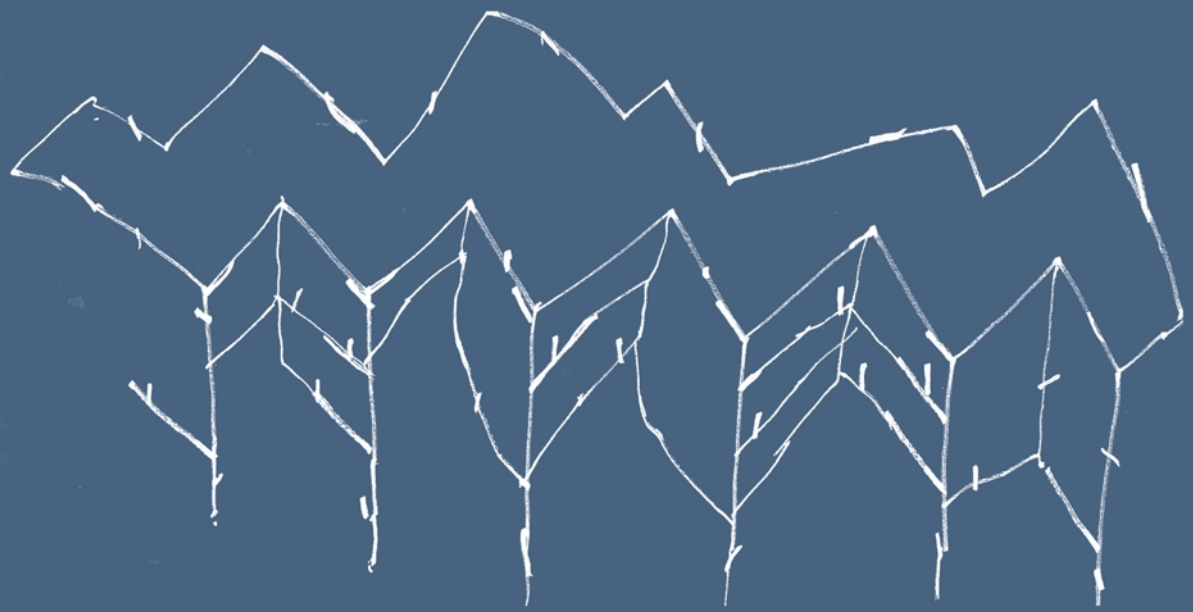

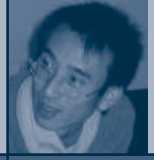

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shelf
2D
shelf
bar seat
lathe
Table
clothes stick
array
Bed or Sofa
hanging Light

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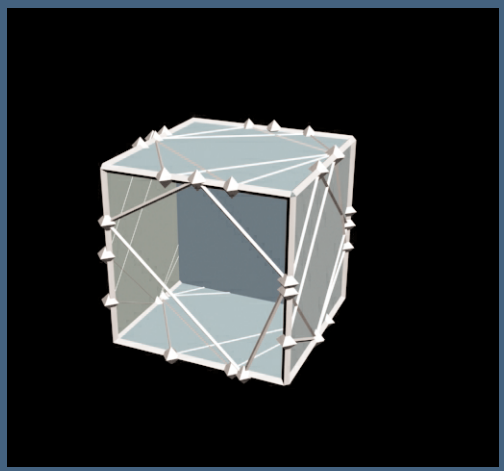
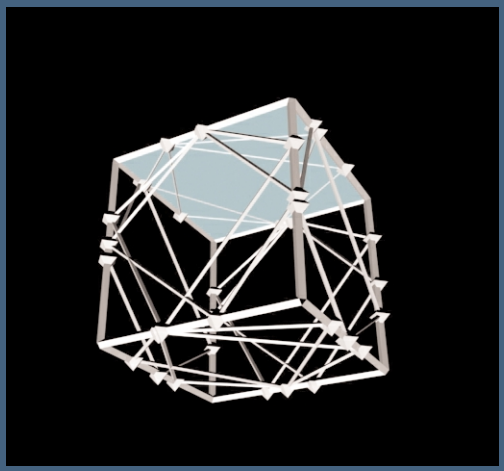
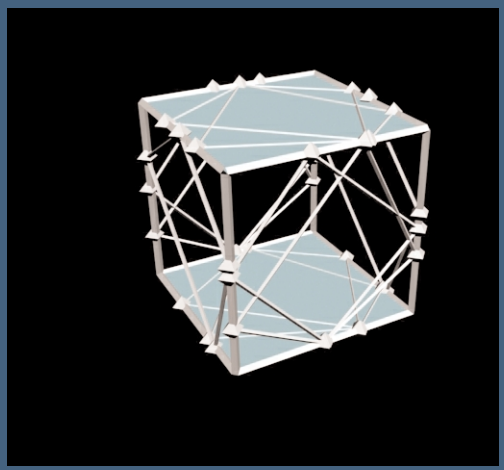
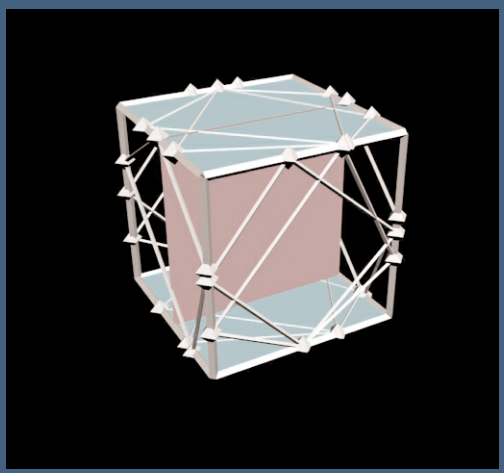

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① divide into 5 parts

② P(1) [→ ⌀

P(2) [→ { → {

(curved) (stretch)

P(3) b → the center.

copy & Rotate (3). stretch.

(4) P(1).2).3) parts. c → the center

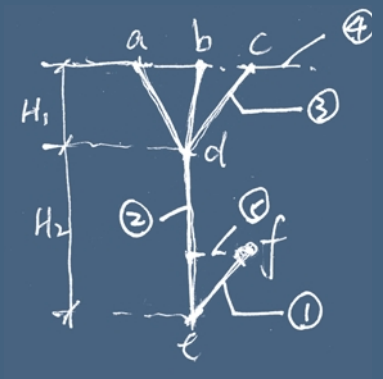
copy & Rotate. (0 ~ 360°)

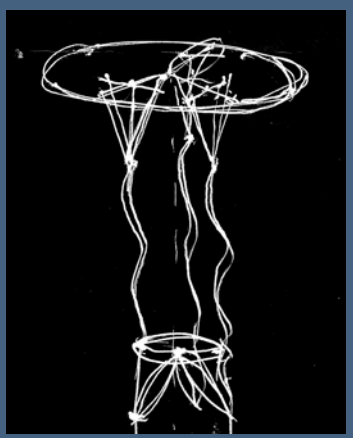
(5) P(4) c → the center.

2ac ≥ R ≥ ac cylinder.

(6) P(5) f → the center.

R' = ef.





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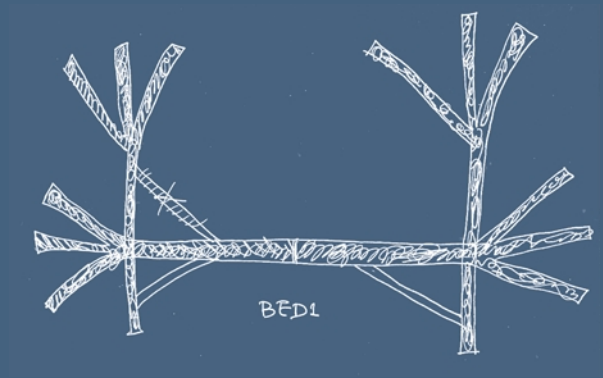

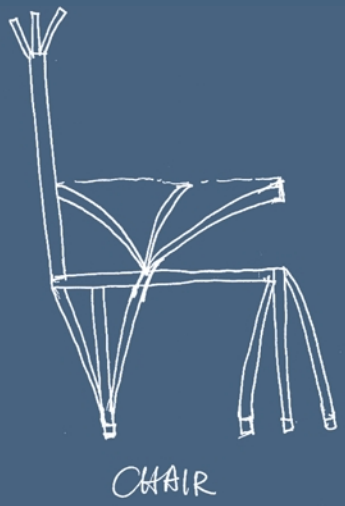

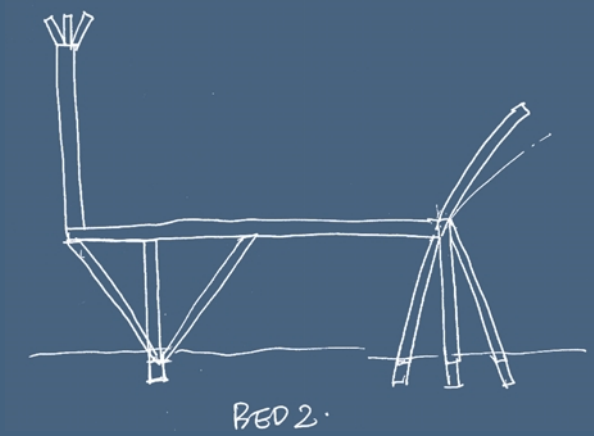

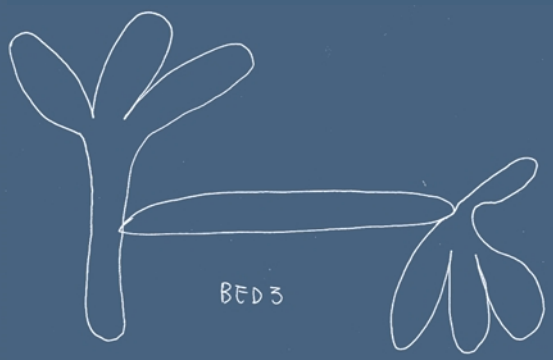

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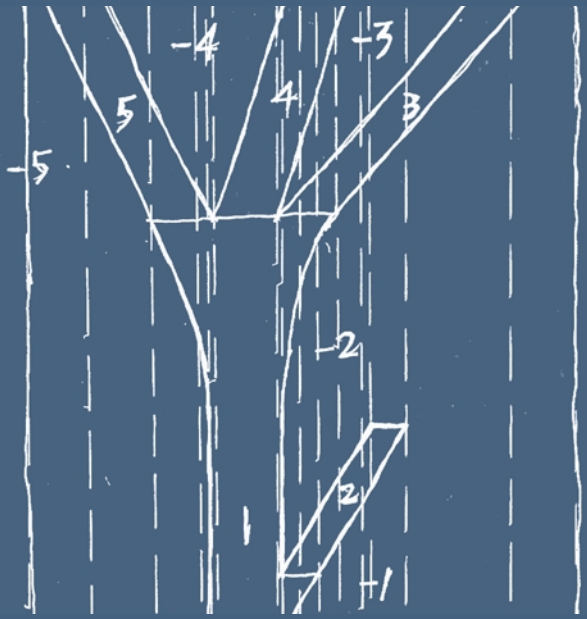
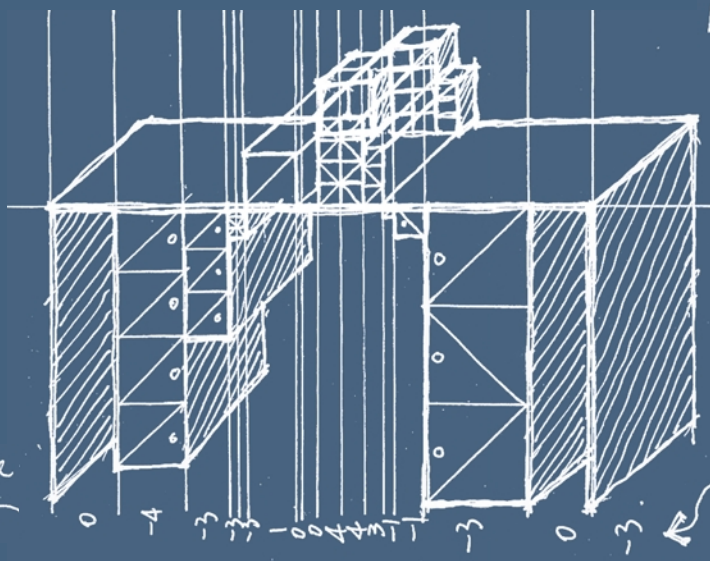


SPACE / SHAPE CODING

From the root to the branches counter clock 1 ~ N

Empty is -1 ~ -N, counter clock, too.

Then divide the image vertically.



LETTER WRITING TABLE

Result decide the drawers.

Add the numbers vertically.

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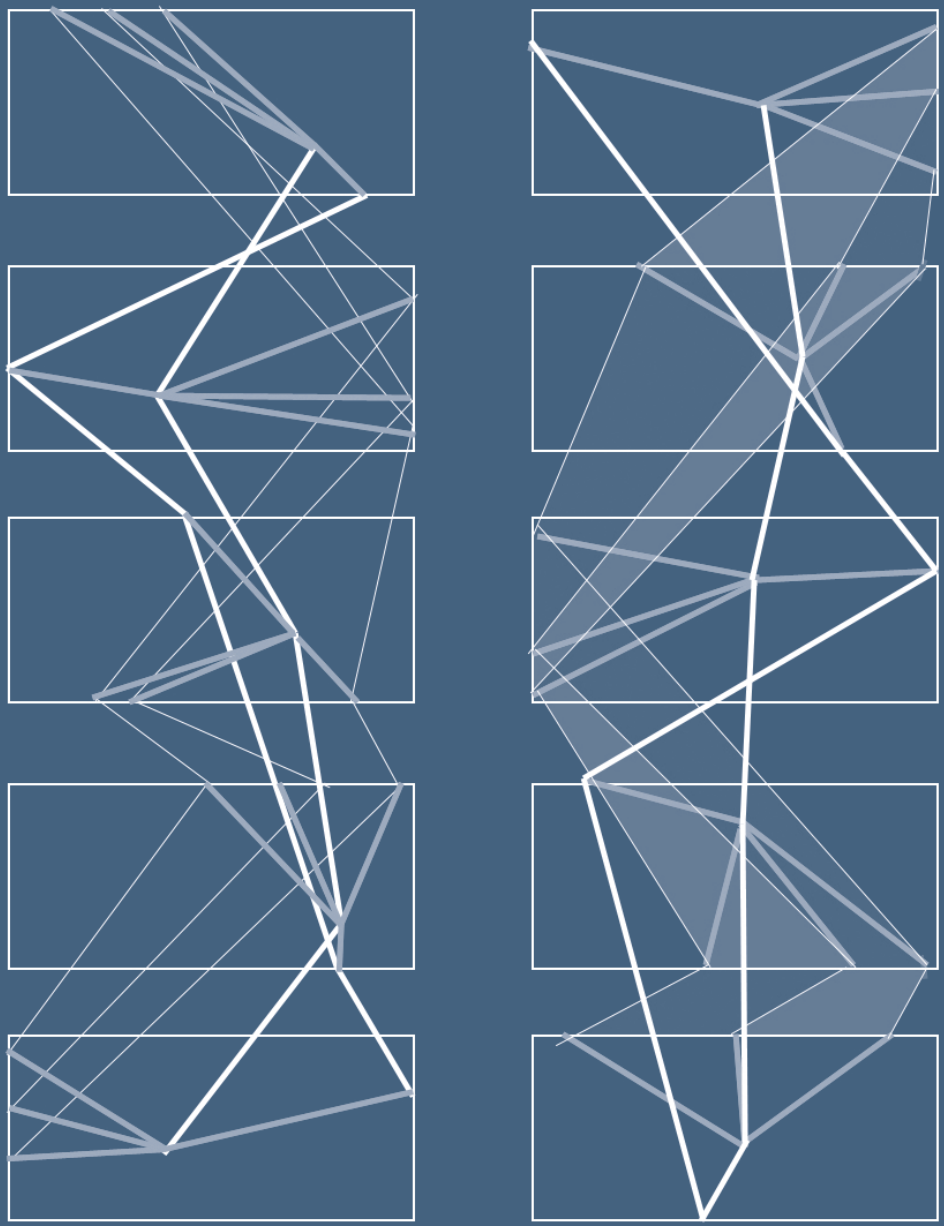

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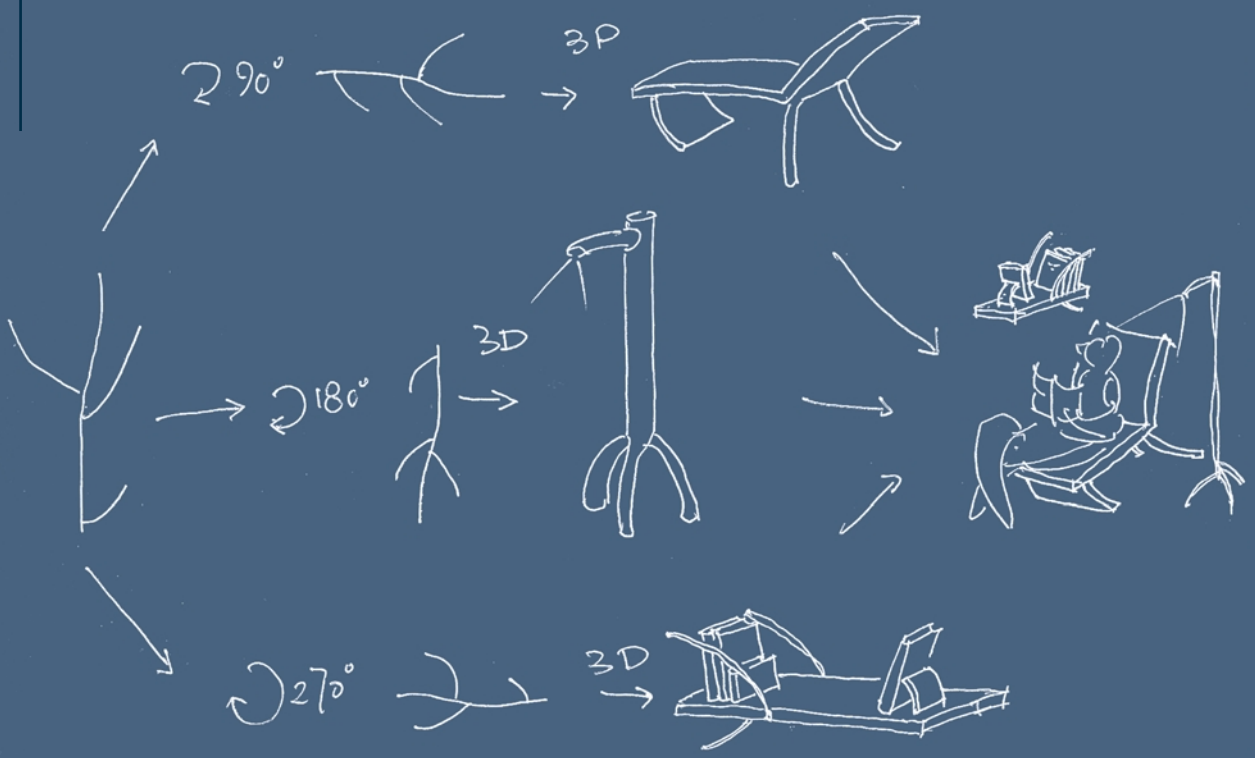

read can increase the life quality.

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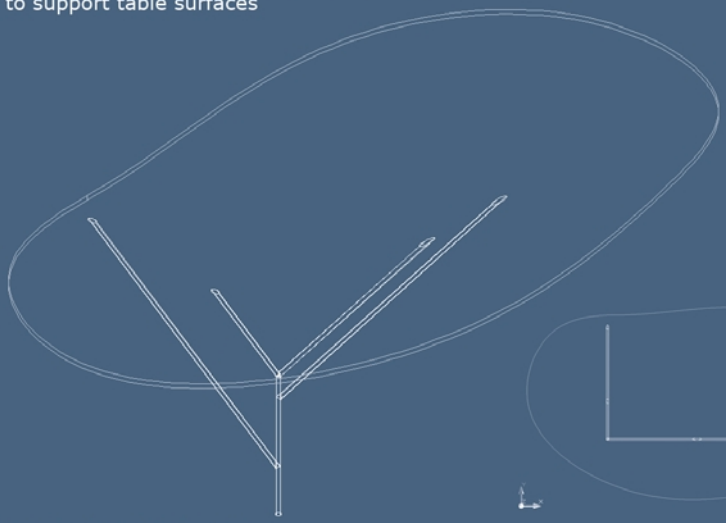
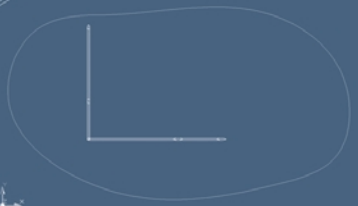
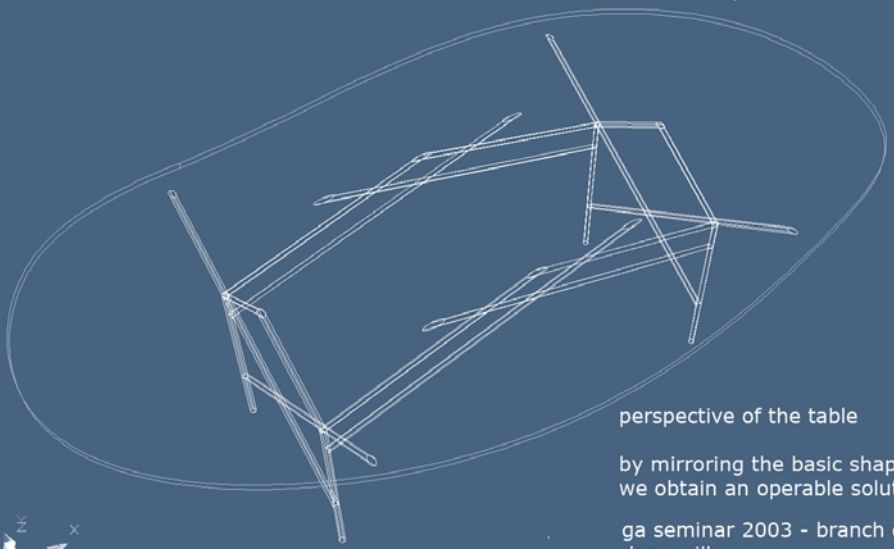
Application of the branch in a perspective view
Branch provides natural dividing of stress, this can be used to support table surfaces





perspective of the branch

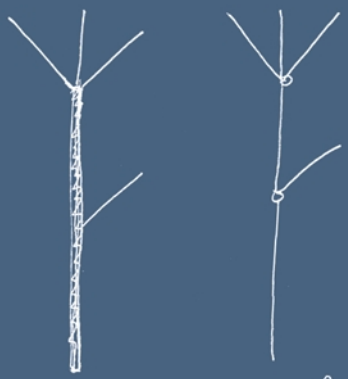
top view of the branch



perspective of the table

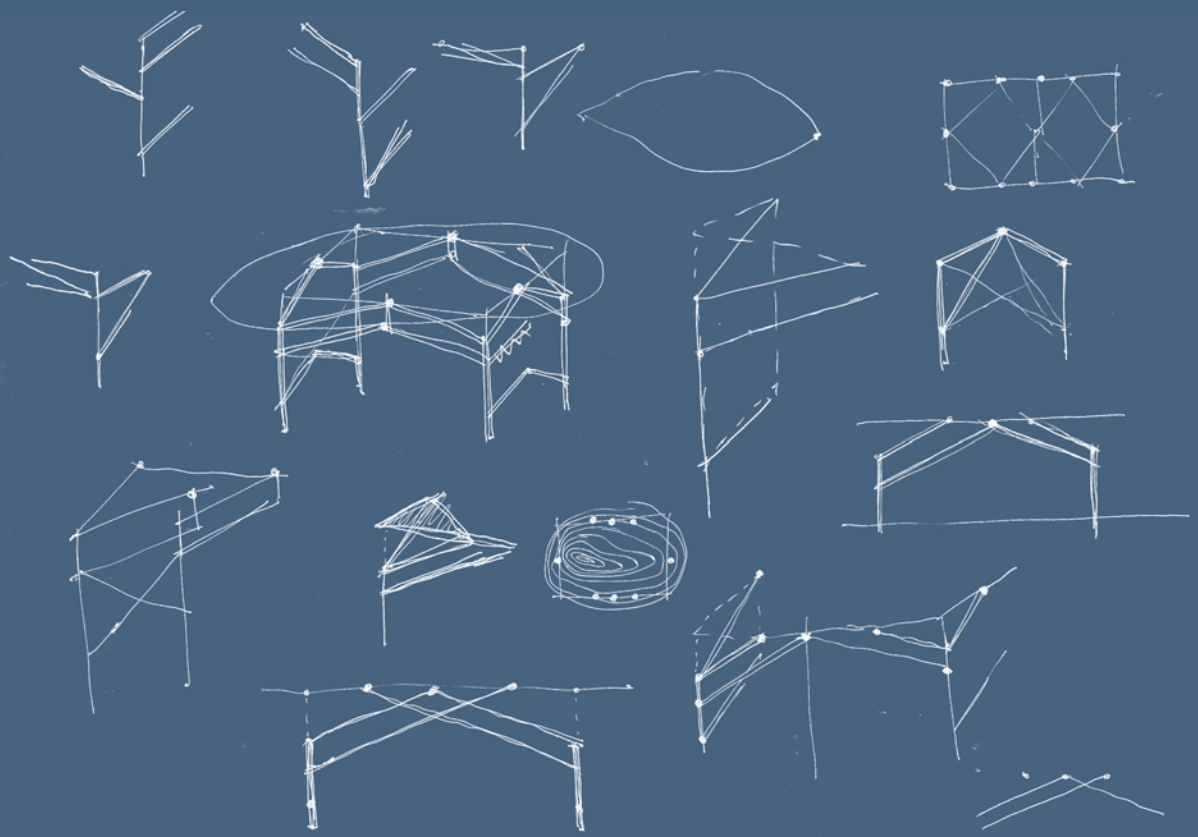
by mirroring the basic shape
we obtain an operable solution

ga seminar 2003 - branch design
daan willems



furniture — transform

+ table — much
+ desk — much
+ chair — much
+ wardrobe — little
+ couch — much
+ sofa — much
+ lamp armature — little
+ garderobe — little
+



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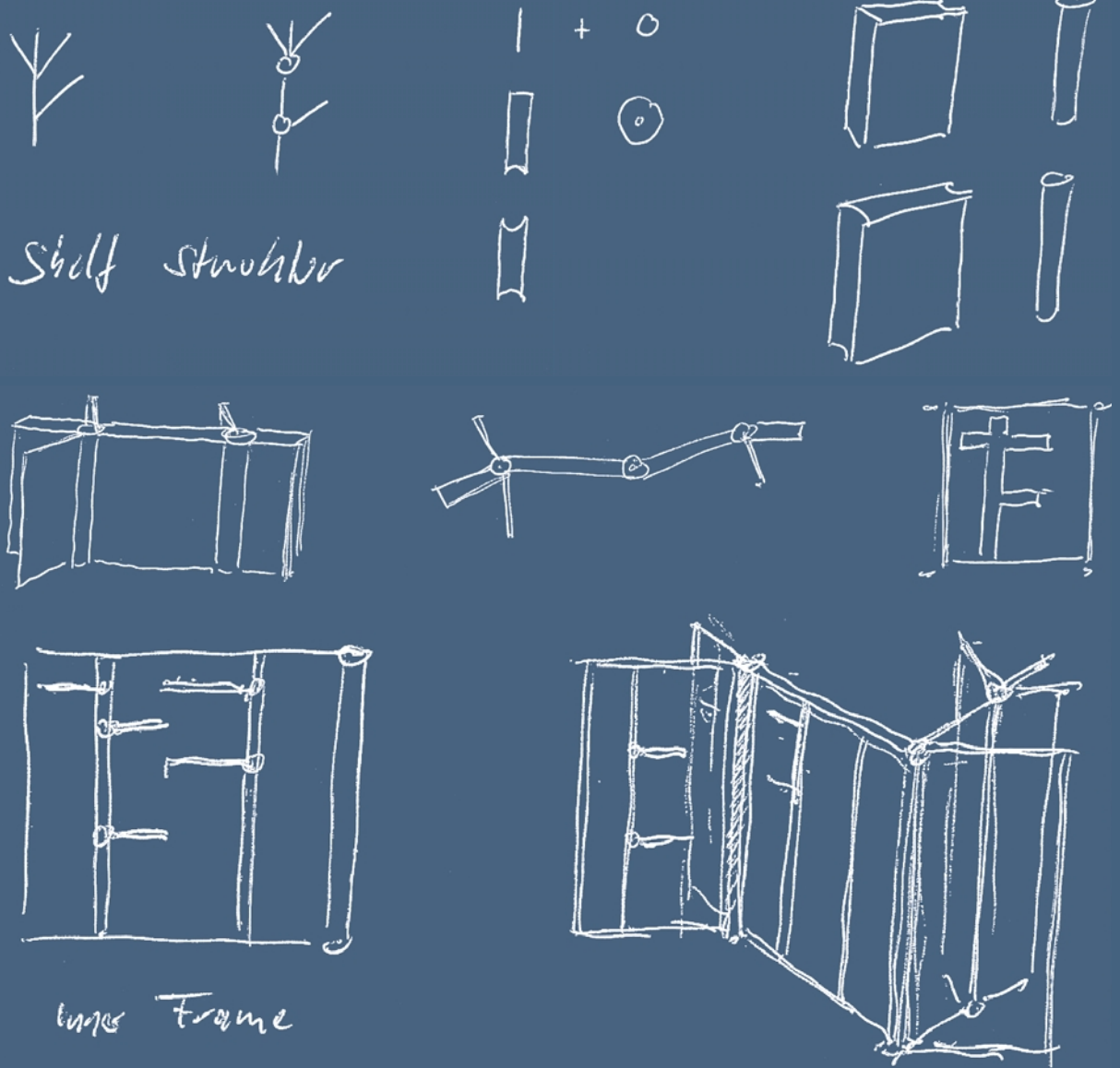

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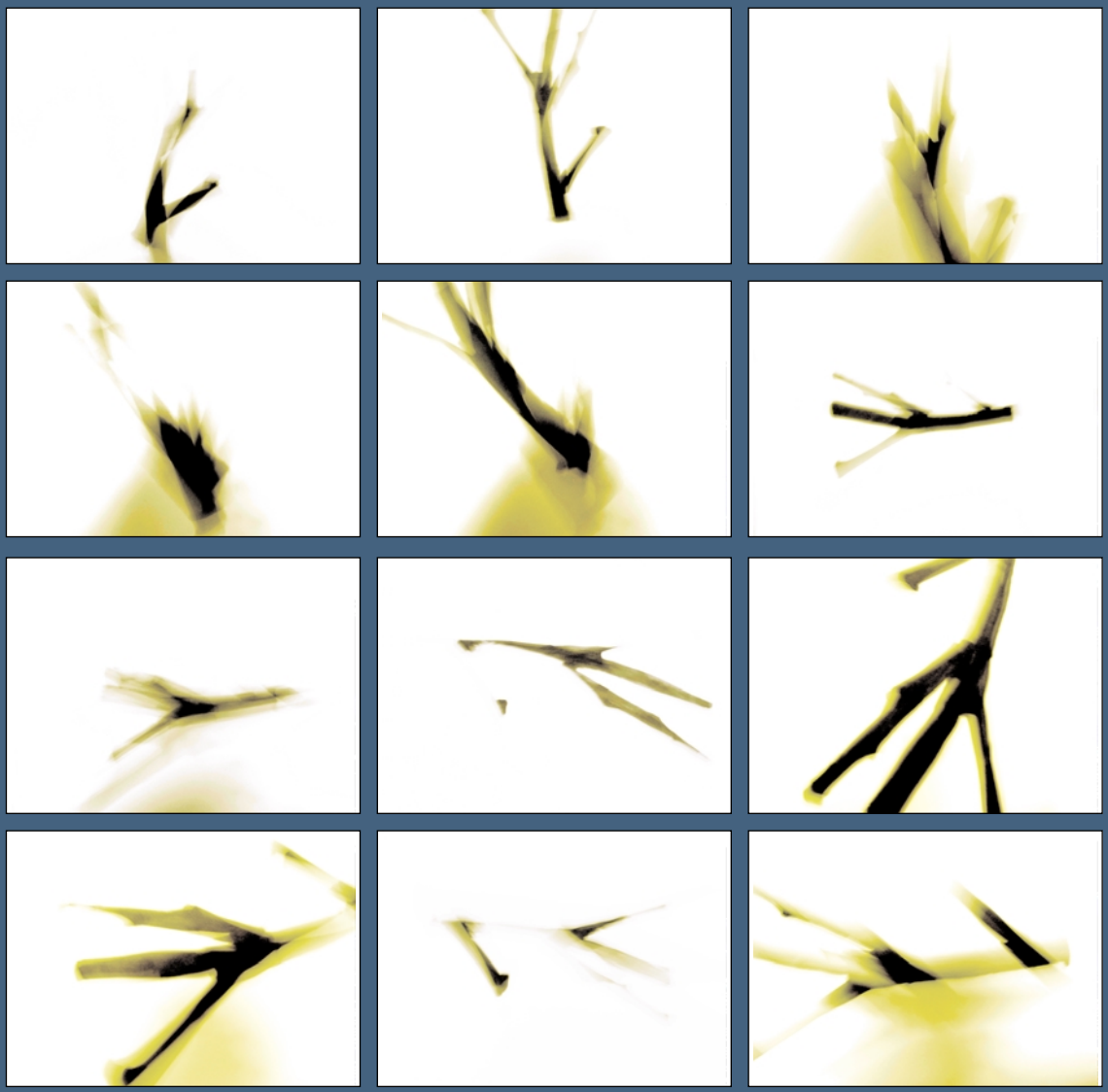

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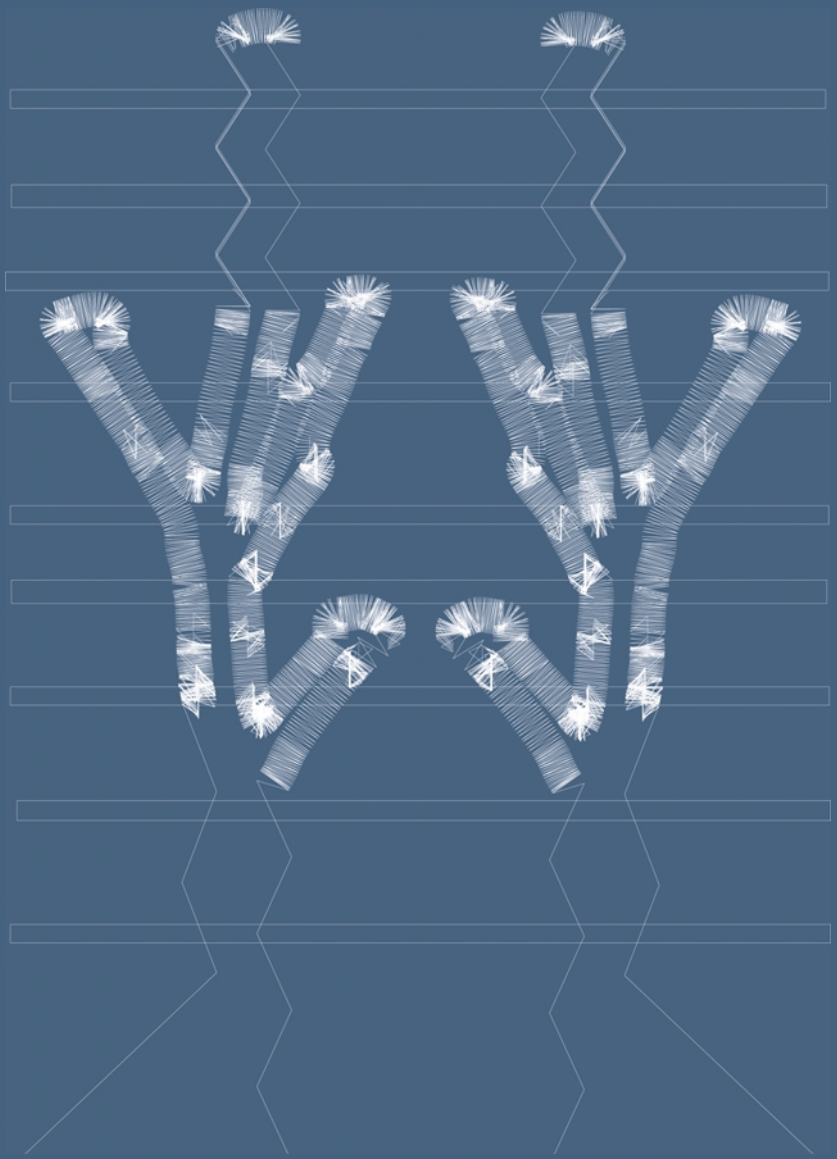
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