

Sculpting with Data { Algorithmic Design }
Design Intersections Afternoon Workshop • 05/25/2018

Data + Design + Behavior

~~customization~~

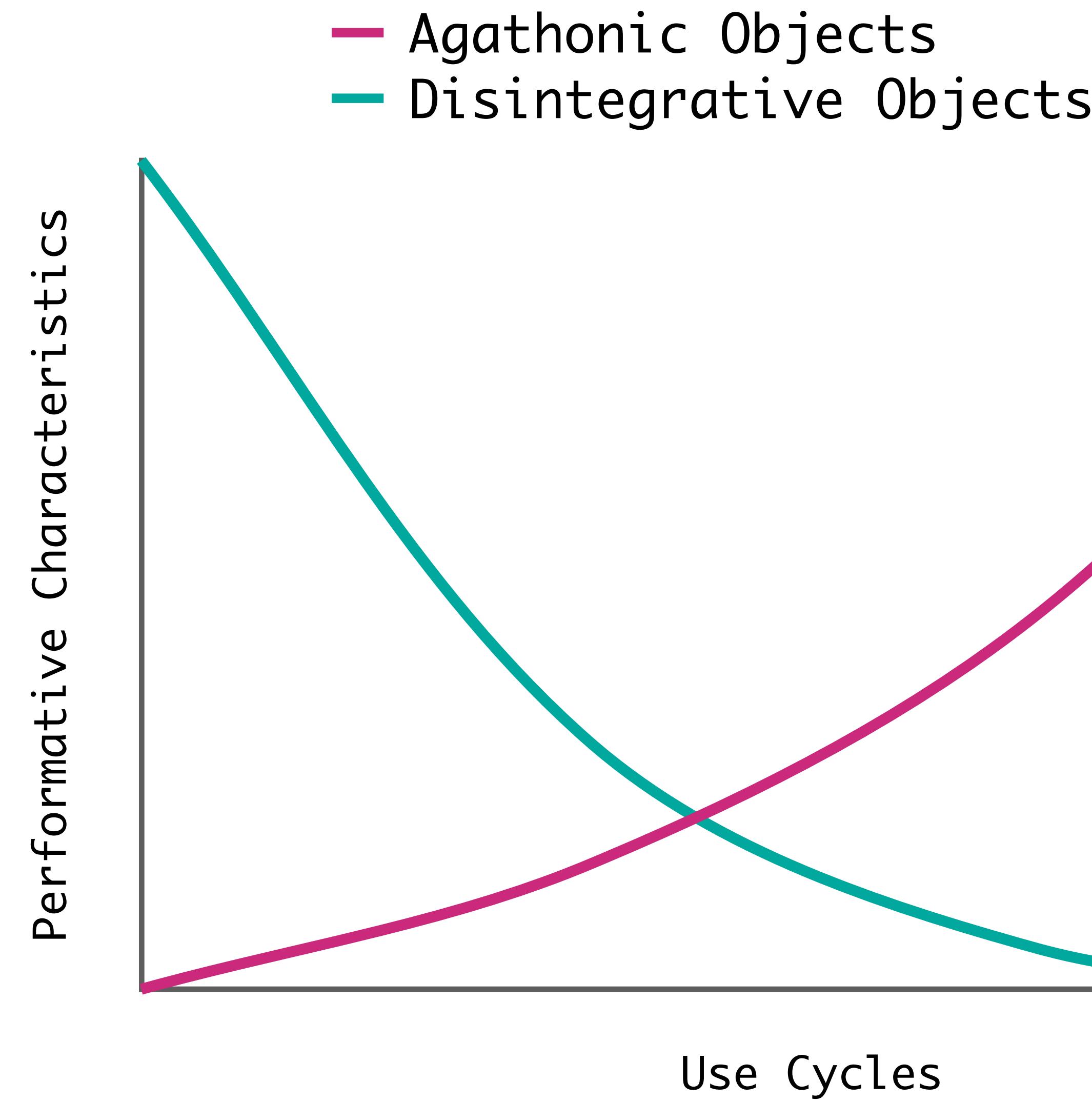
{smart} objects



{agathonic} objects









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Top Picks for Zachary

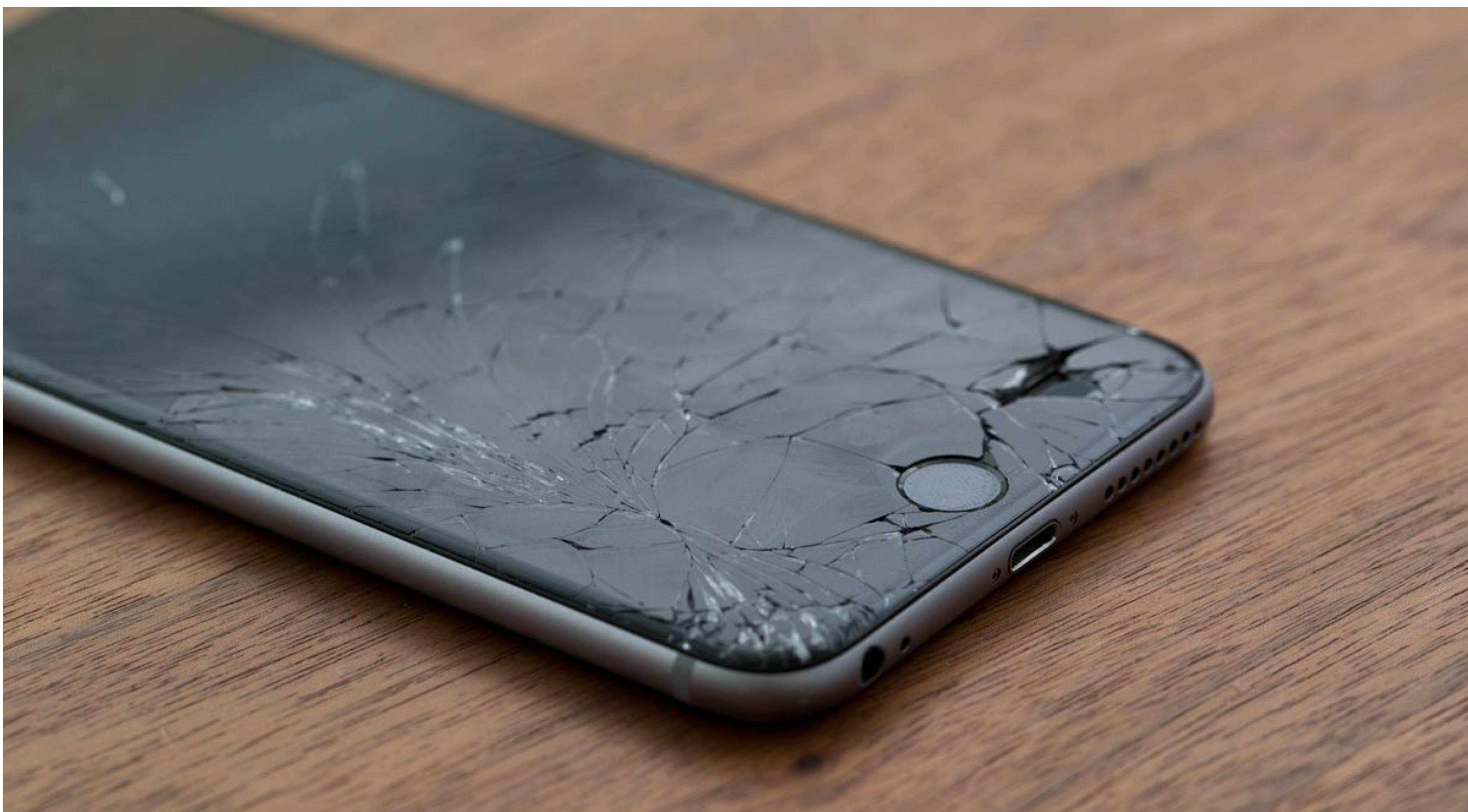


Casual Viewing



Because you liked The Blue Planet: A Natural History of the Oceans

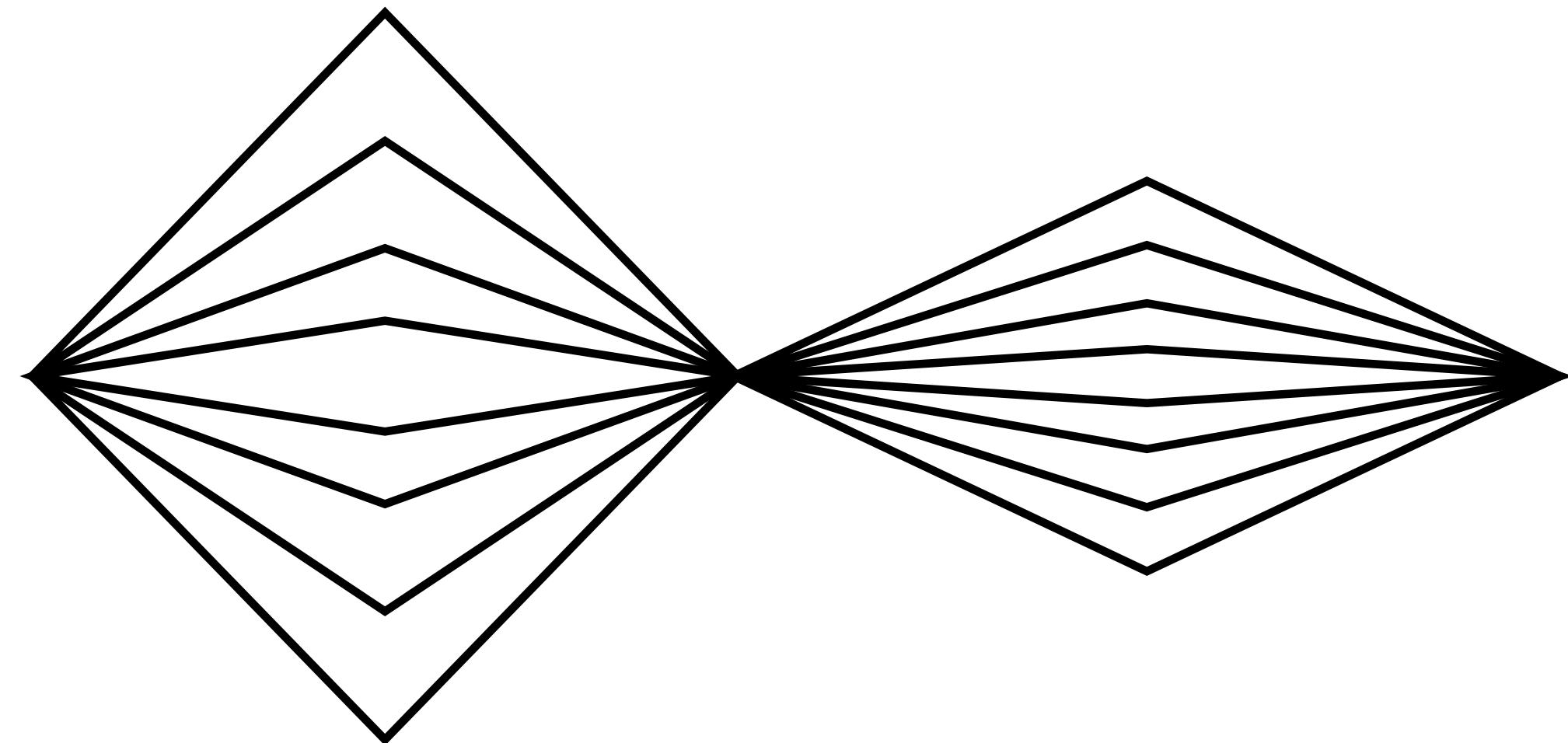




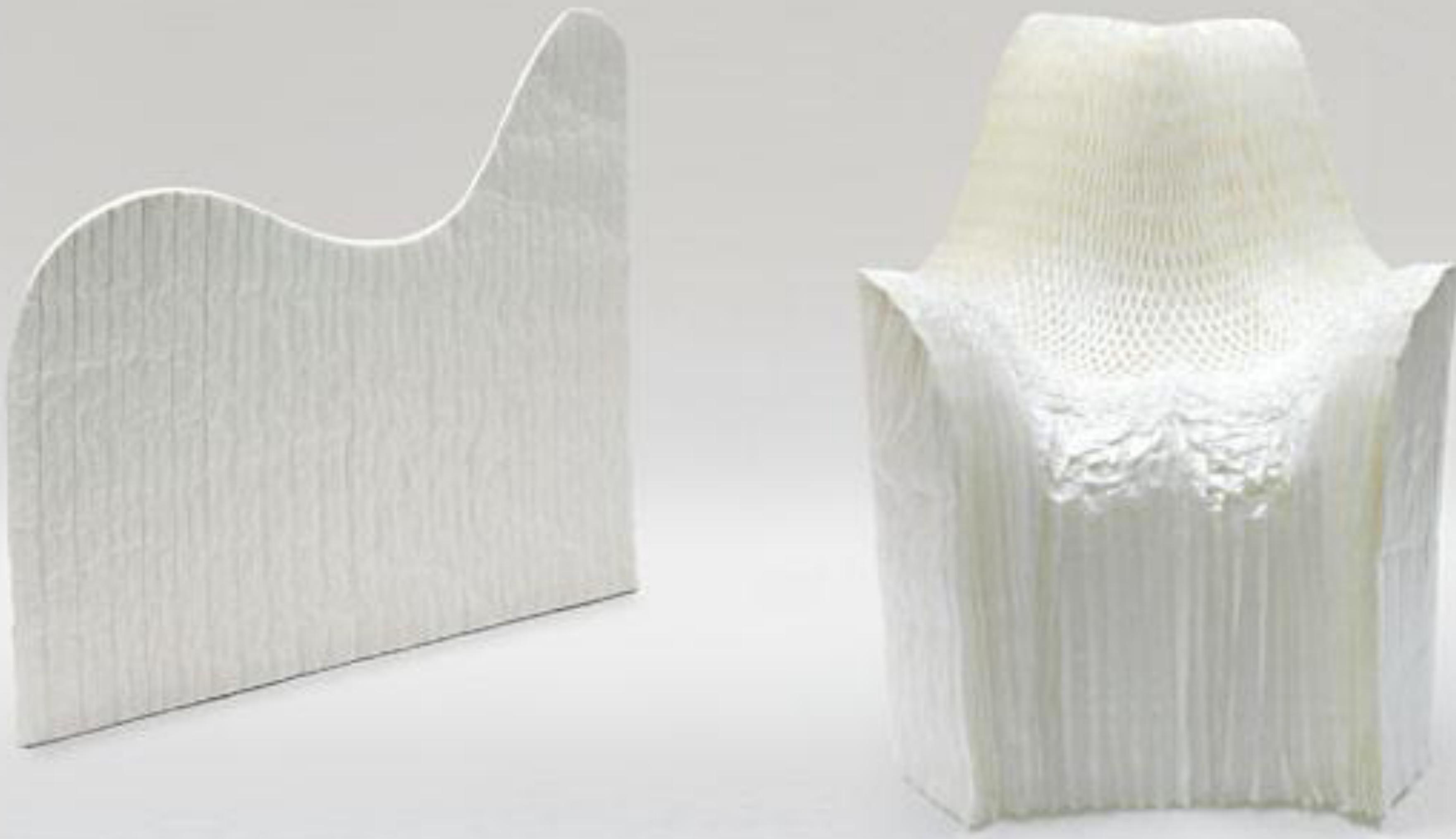
is agathonic design predictable?

can it be designed in advance?

where does data belong?



{emergent form}



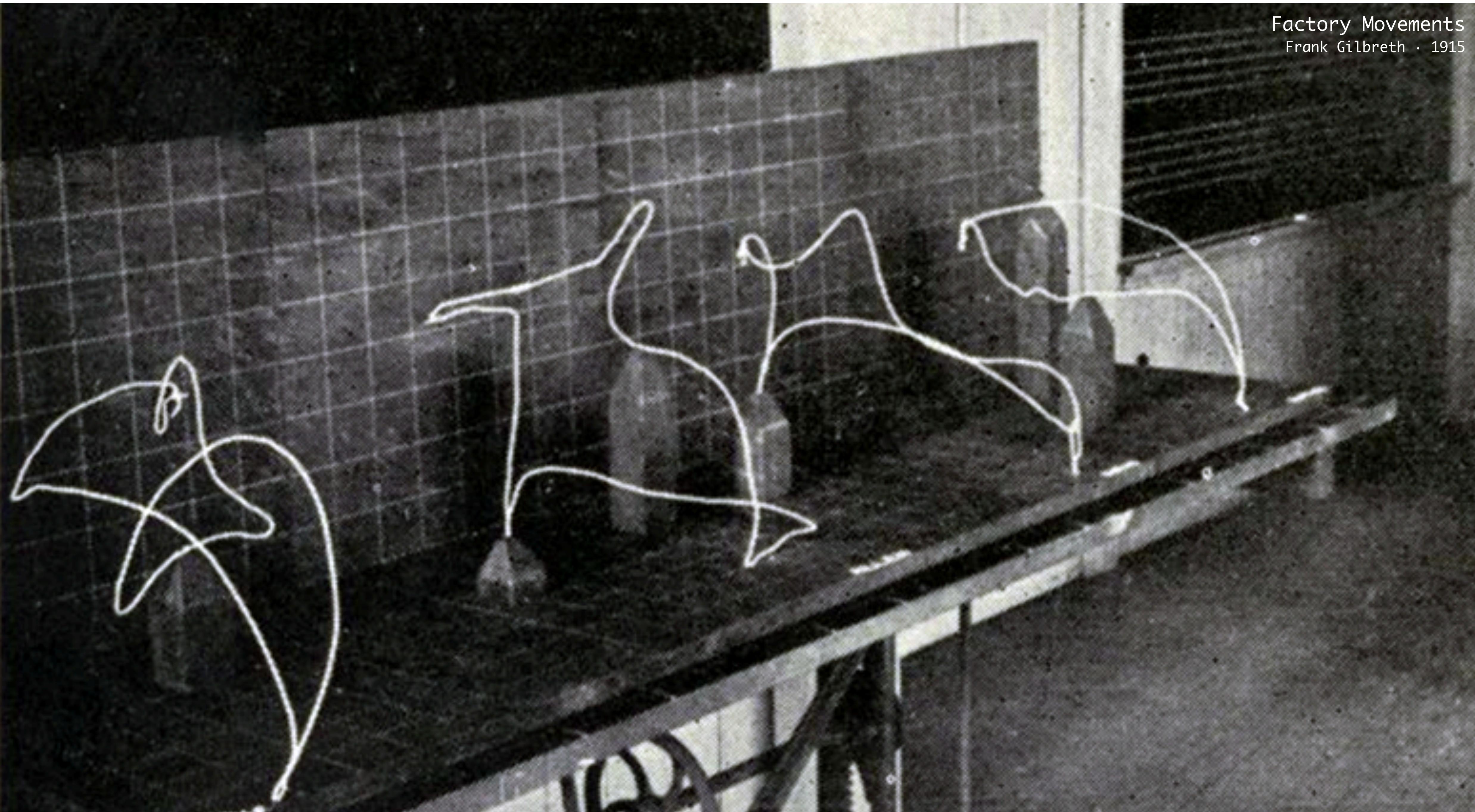
Honeypop
Yoshioka Tokujin · 2000

{physicalized data}

Inuit Hand Maps 18th Century



Factory Movements
Frank Gilbreth · 1915



Form Follows Data
Iohanna Pani · 2009



Form Follows Data
Iohanna Pani . 2009



Look of Love

Haelo Design + Zach Pino · 2016



Look of Love

Haelo Design + Zach Pino · 2016



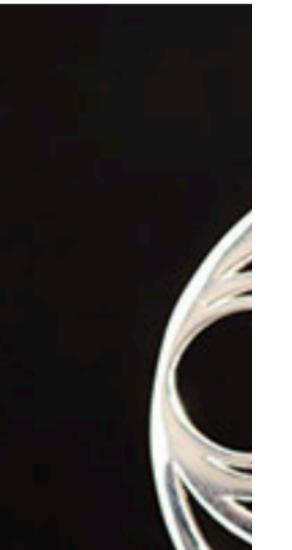
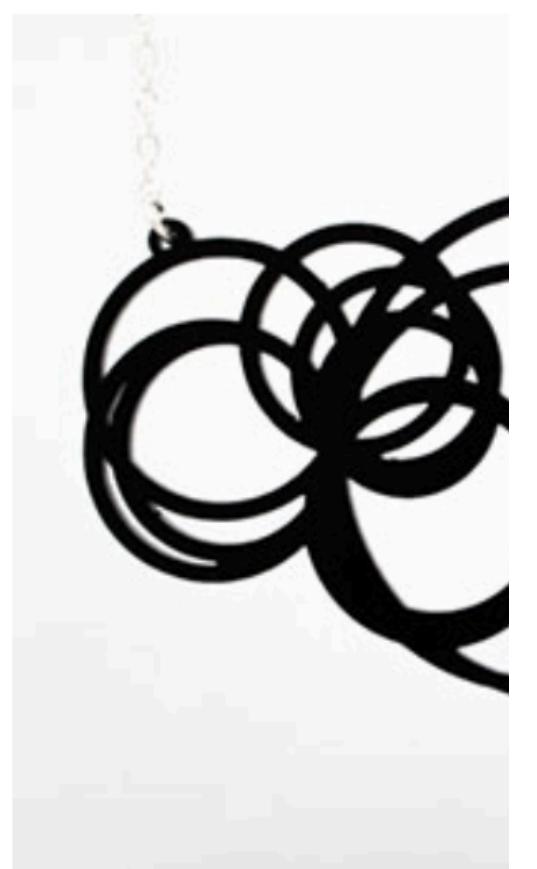
Look of Love

Haelo Design + Zach Pino · 2016



meshu turns your
places into
beautiful objects

get started



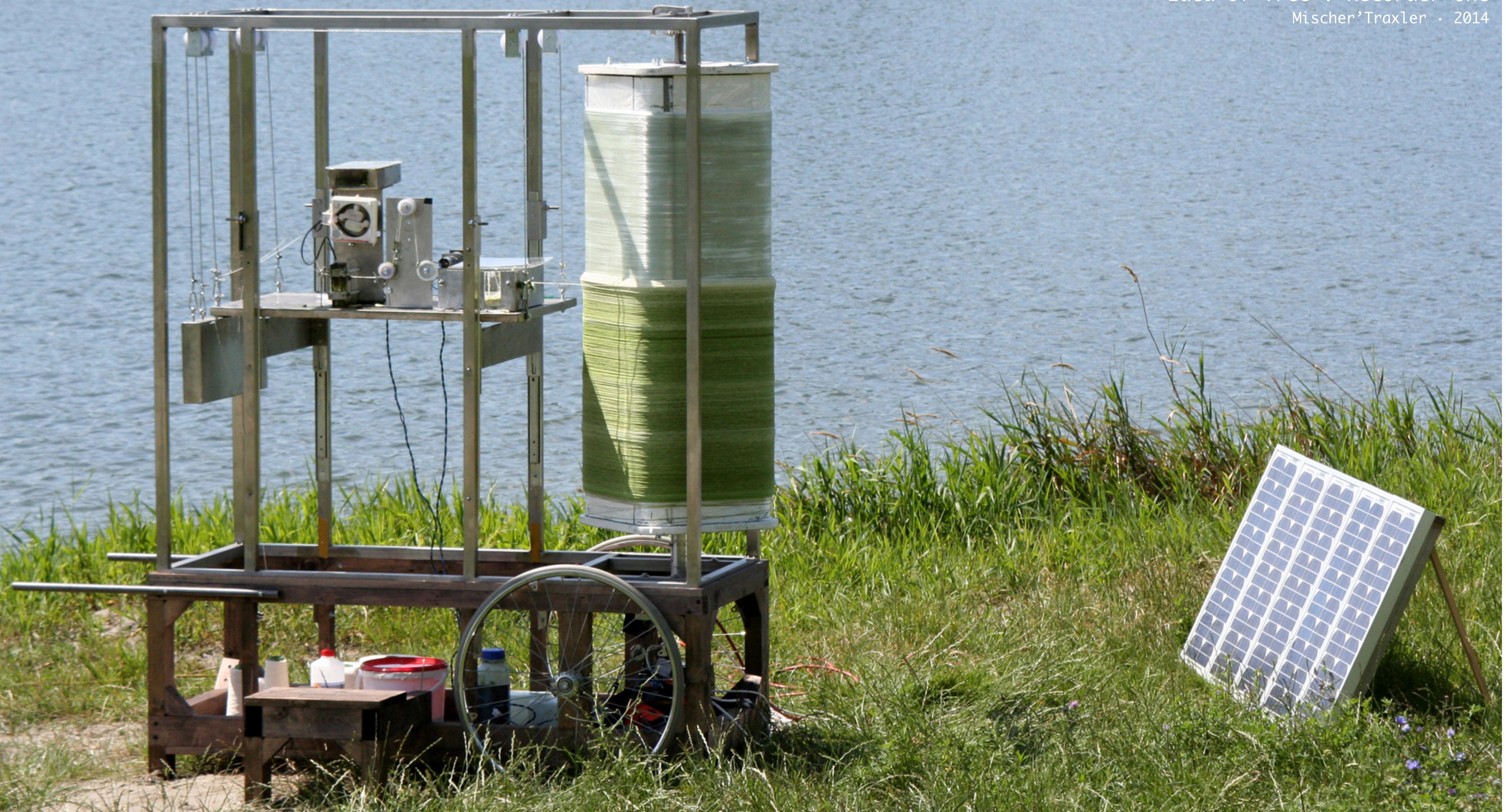


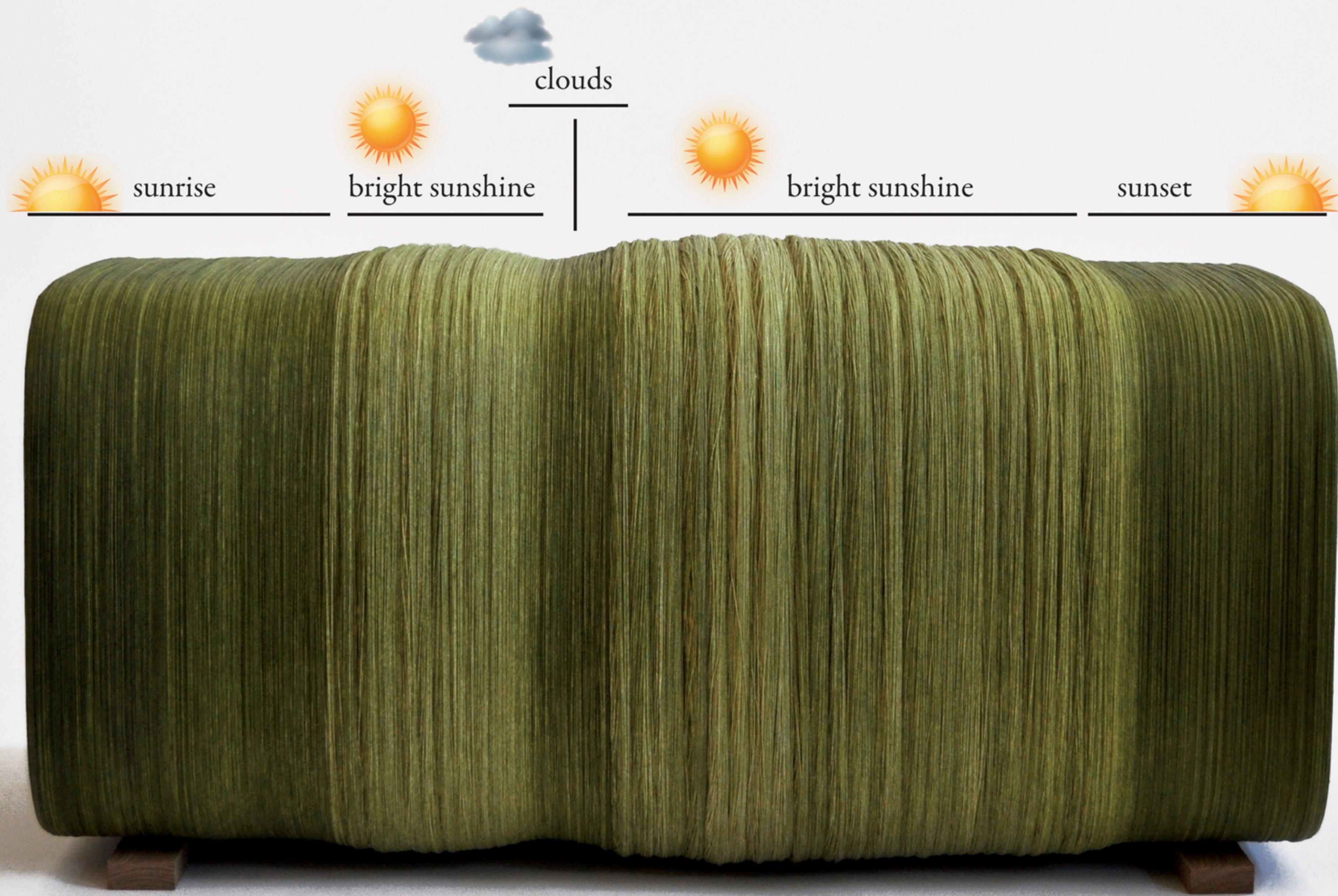
Trends in Water Use
Adrien Segal · 2000



Mollalla Meander
Adrien Segal · 2009

Idea of Tree : Recorder One
Mischer' Traxler . 2014







DNA GLASS



01

Alcohol Tolerance



Capacity



Glass capacity is adjusted based on the level of tolerance to alcohol.

*Glass capacity is not an indication of a recommended amount of alcoholic consumption.

02

Sensitivity to hops bitterness



Glass rim thickness



Create a thicker rim for those inherently sensitive to bitterness, allowing them to enjoy the natural flavor of beer. Design a thinner rim for those less in tune to bitterness,

03

Sensitivity to malt aroma



Top diameter



Create a wider opening for those with a heightened sense of smell, allowing them to enjoy beer's natural aroma. Design a narrower opening for those with a less re-

04

Stimulation preference



Glass design sharpness



A straightforward and angular design for thrill seekers. A smooth, curvy shape for easy-going folk.

05

Sociability



Design complexity



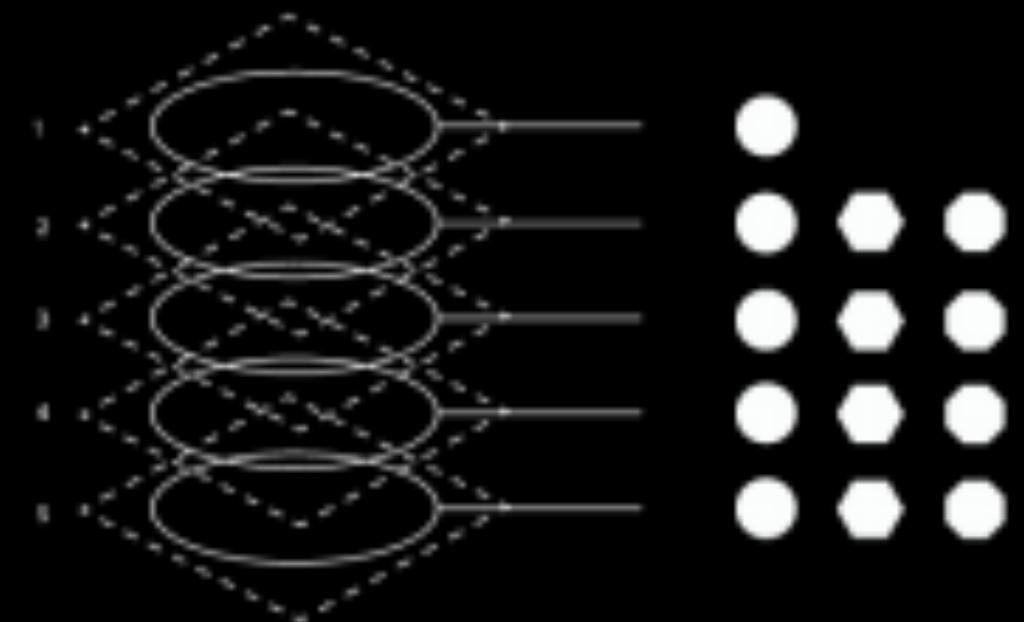
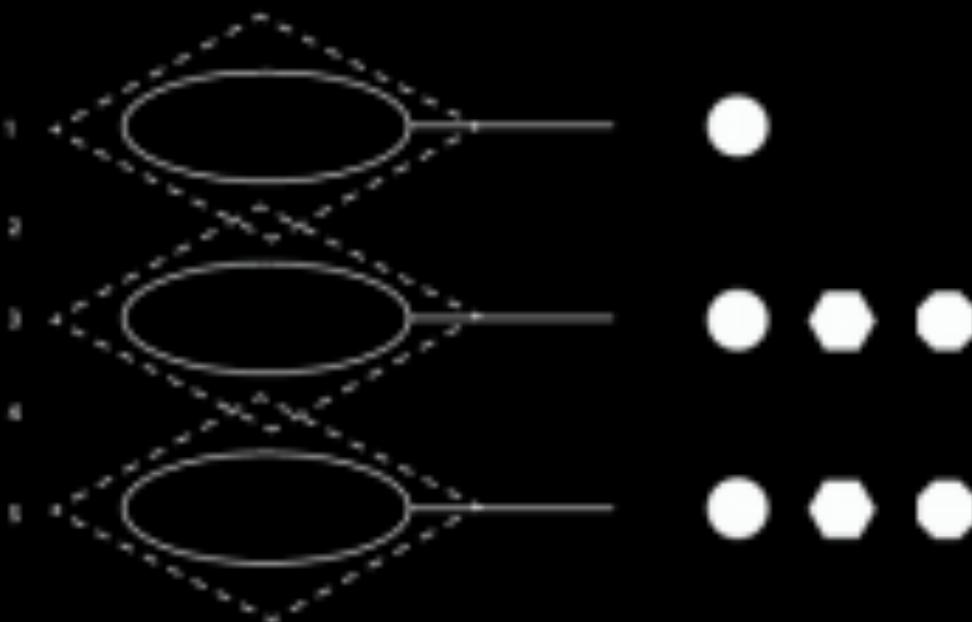
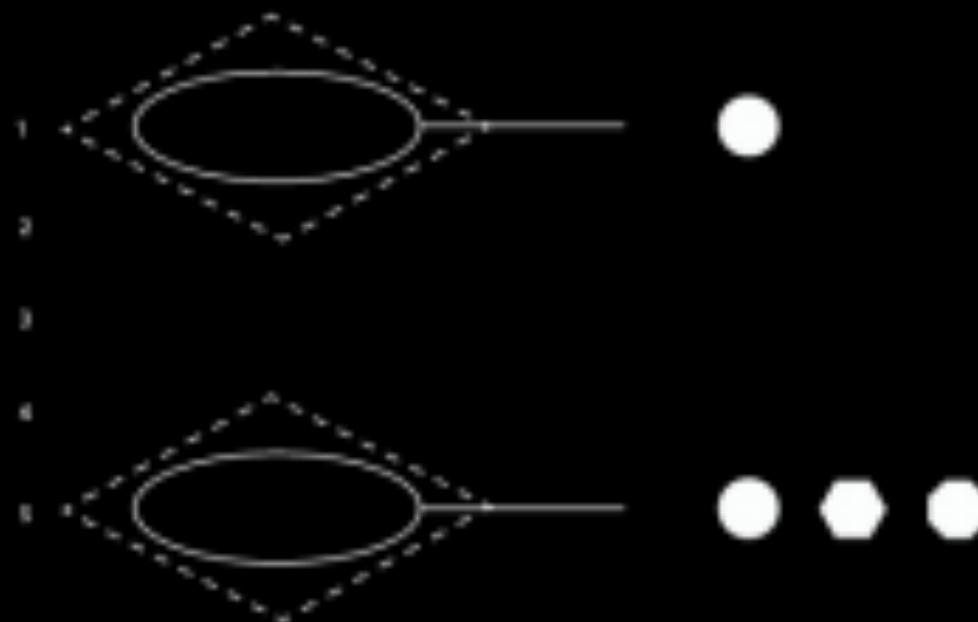
A fun, slightly complicated design for those who enjoy the company of others. A simpler, rather stanch shape for those who prefer a solitary atmosphere.

4

5

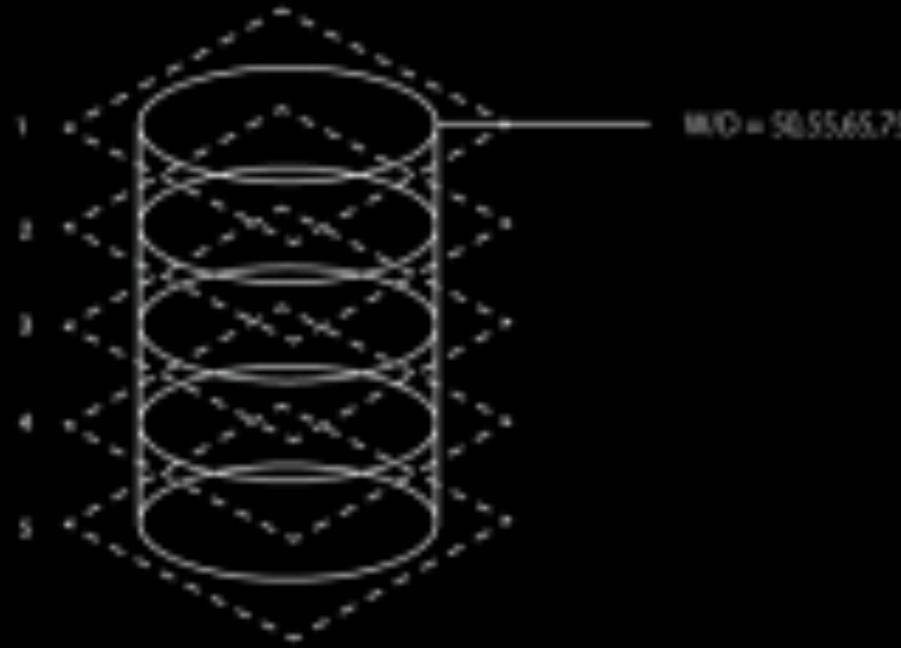
Cross-sectional shape

Dopamine - 11P15.5/636784 | Tenacity - 17P12/14007232 | Resilience to adversity - 6P12/47344162



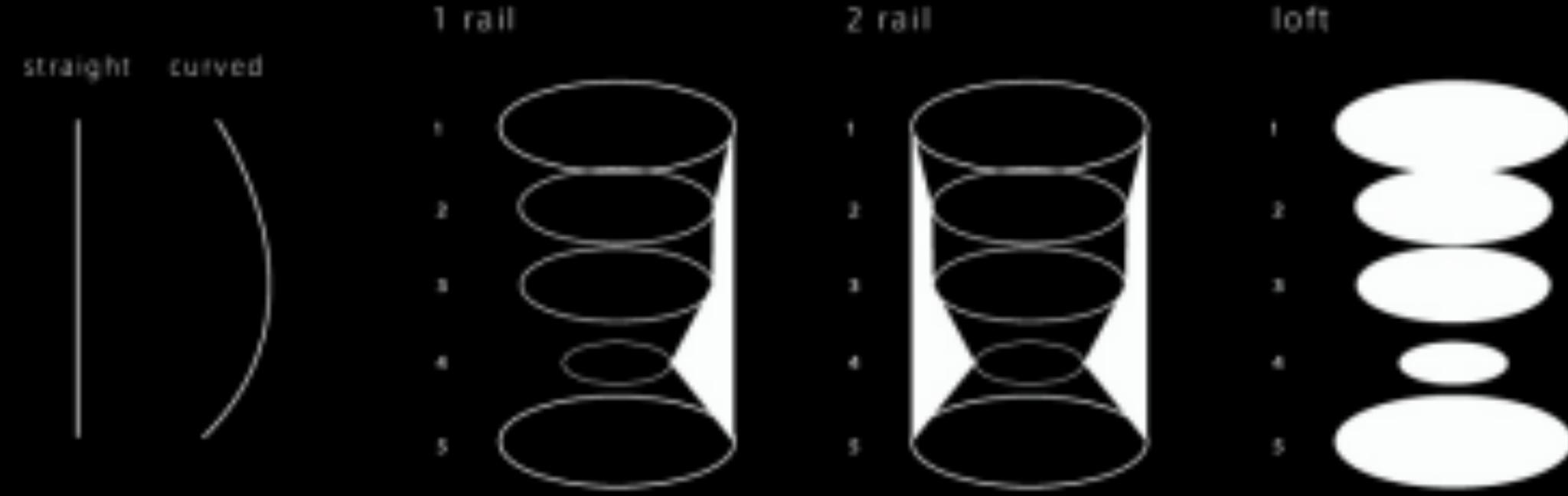
Top diameter

Sensitivity to malt aroma - 2Q37.3/239960704



Sharpness

Stimulation preference - 2P12/80484464



Central axis

Honesty - 1BQ21.1/47059049

Rotation

Exercise habits - 10Q23.3/87683553



1

2

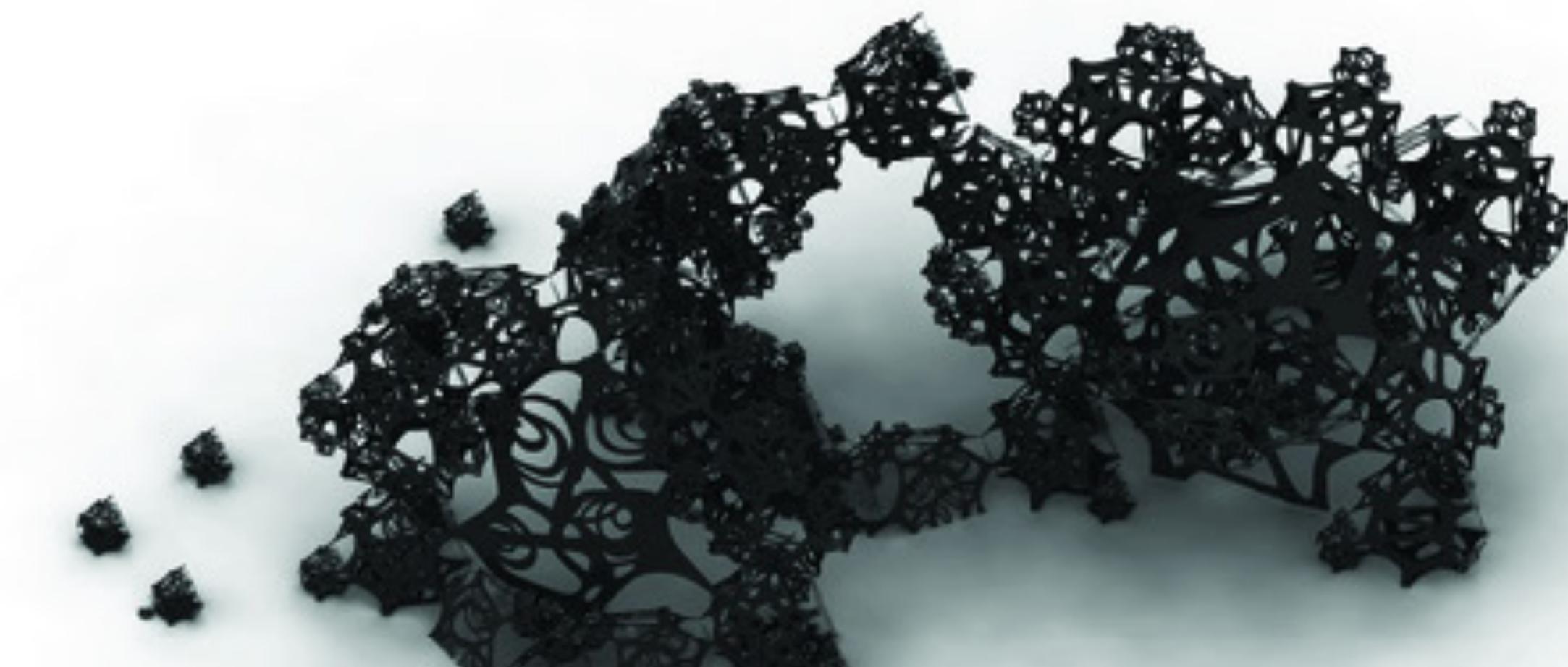
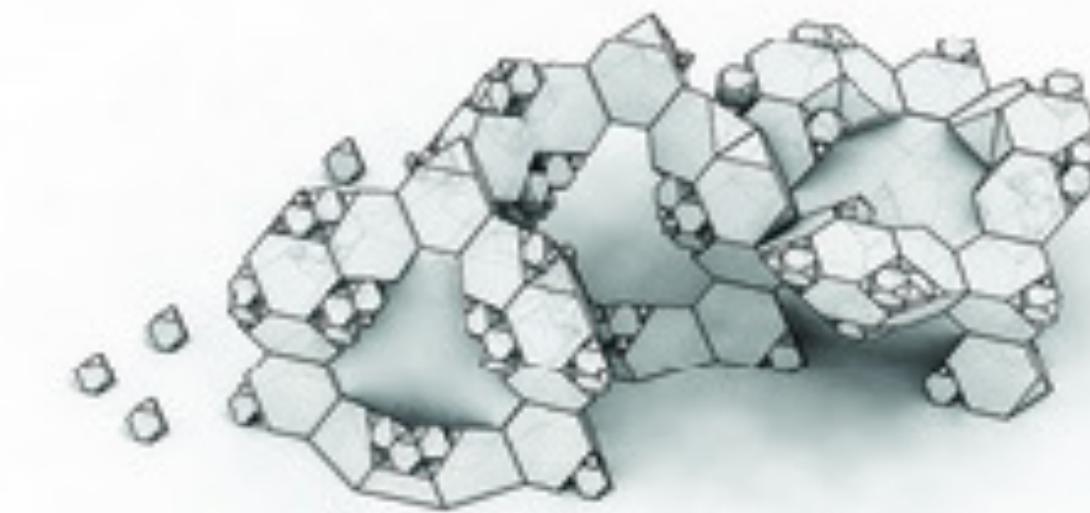
3

Quasi Series
Aranda \ Lasch · 2014



Quasi Series
Aranda \ Lasch · 2015



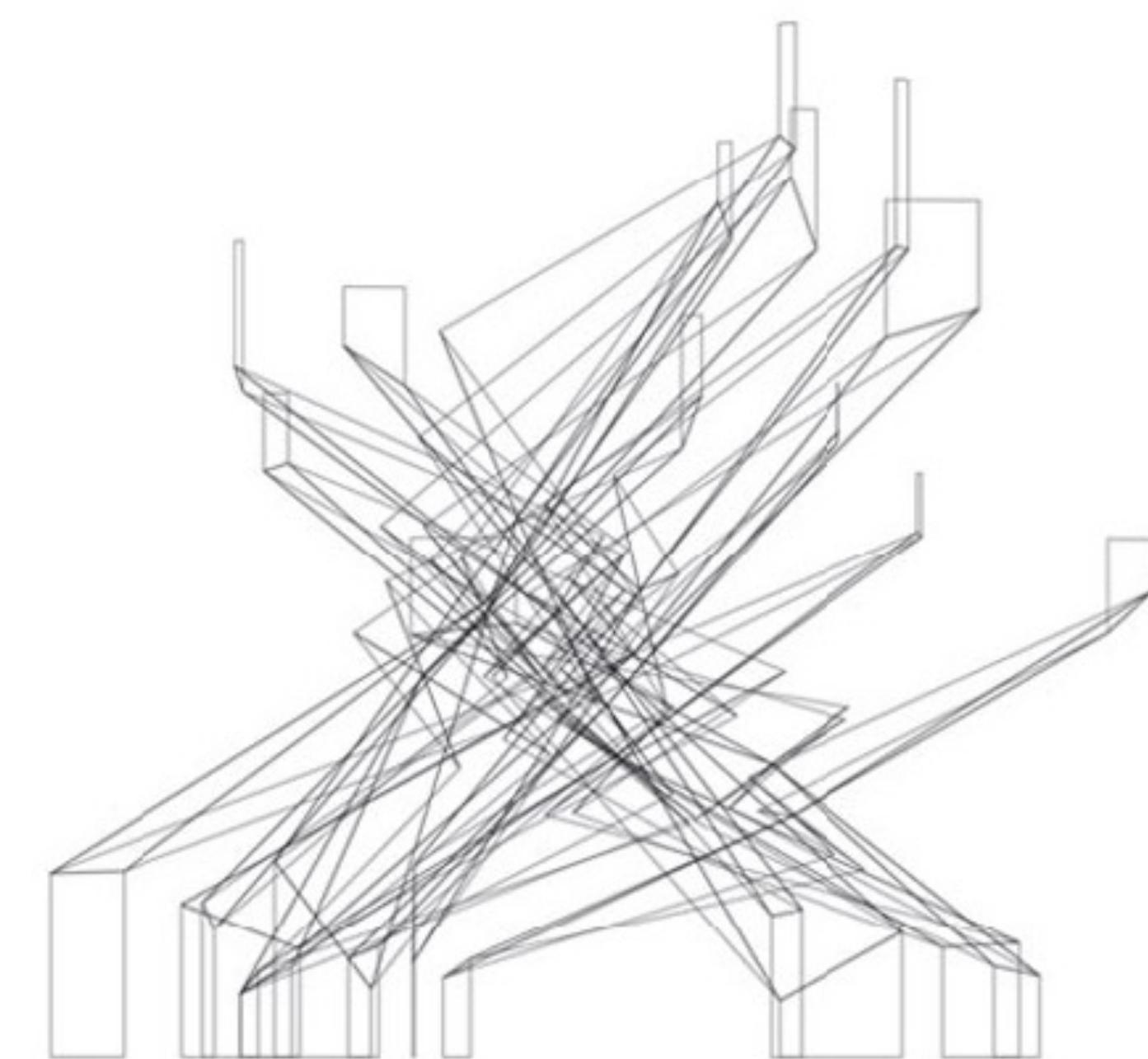
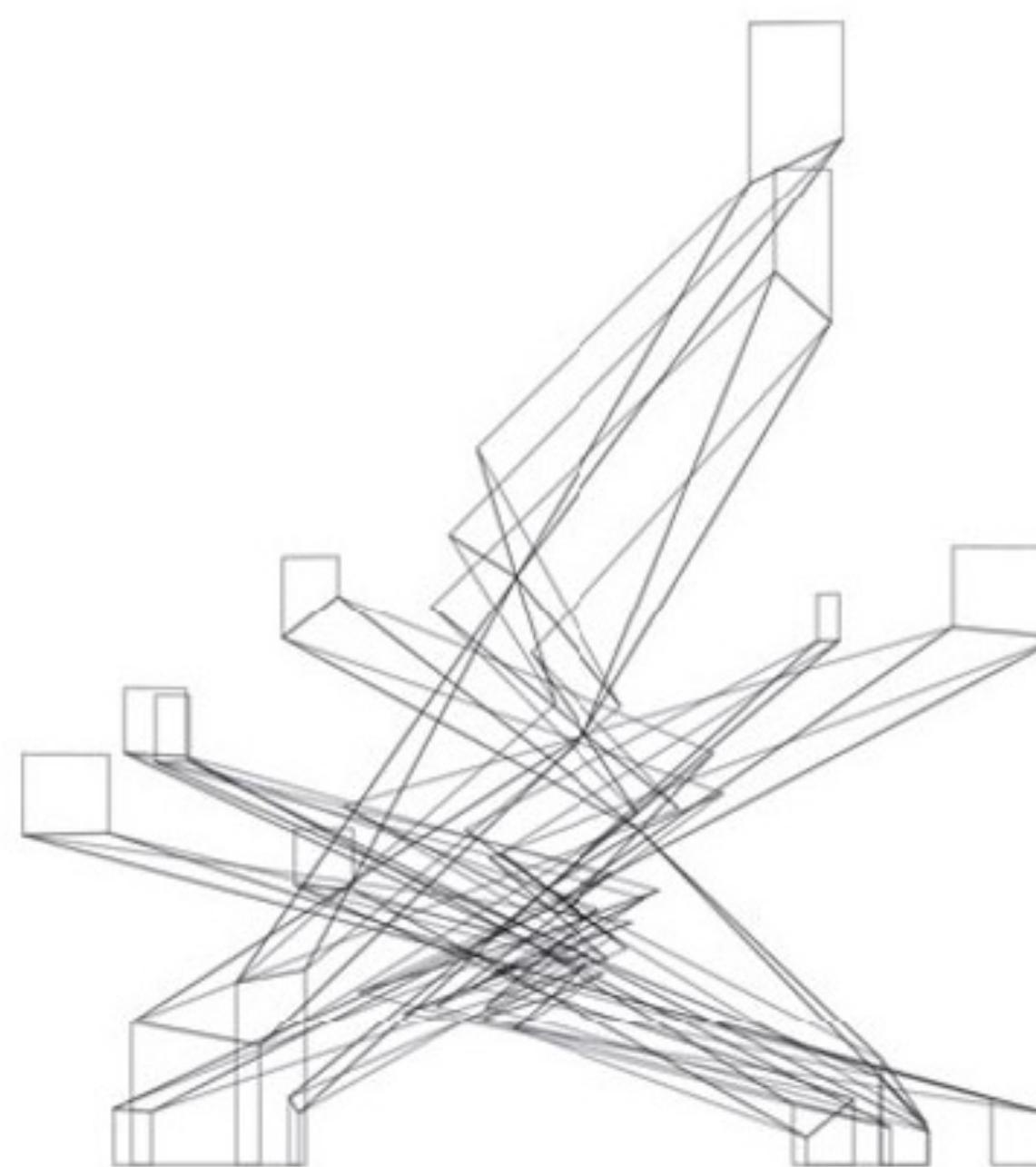
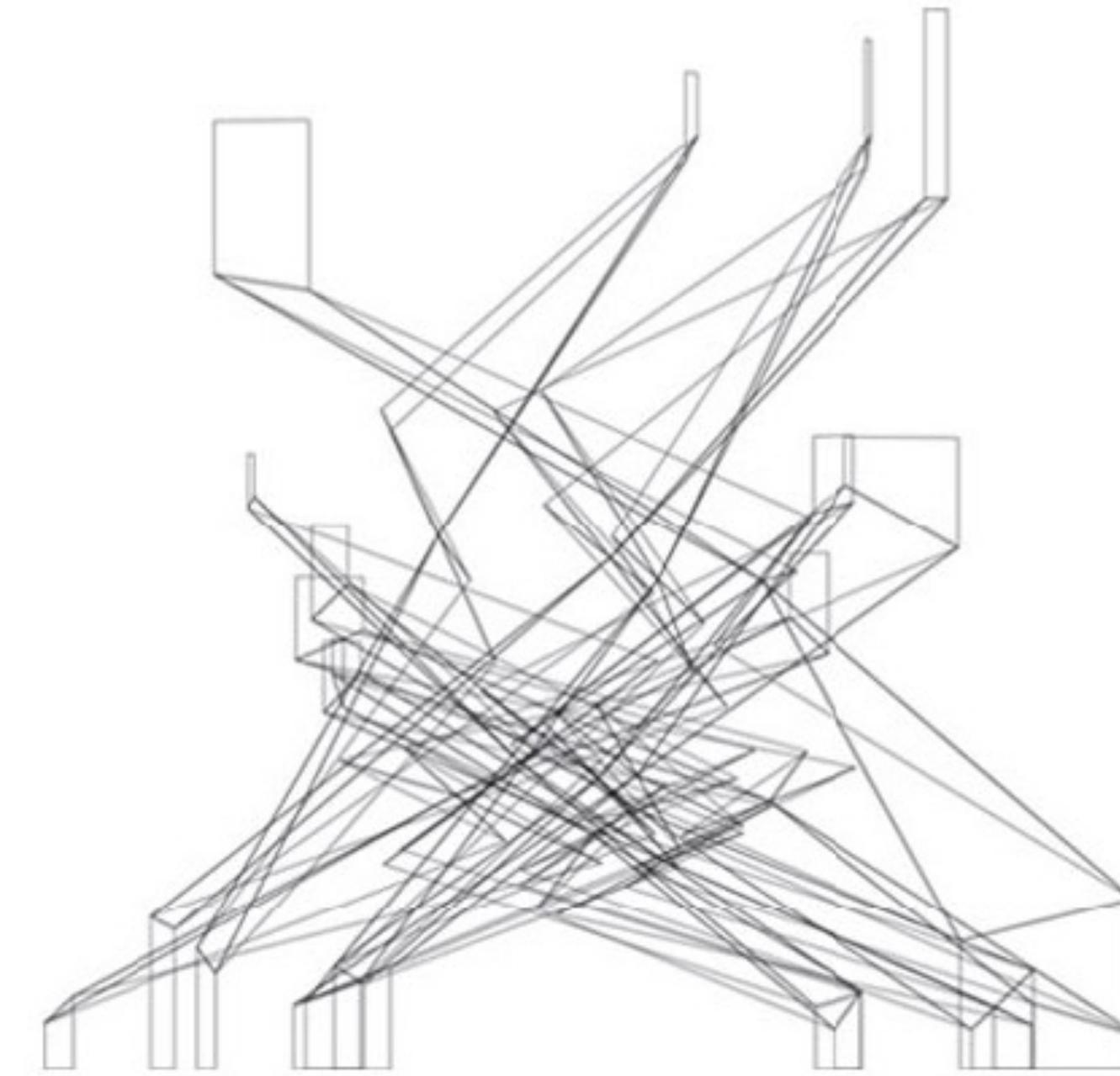
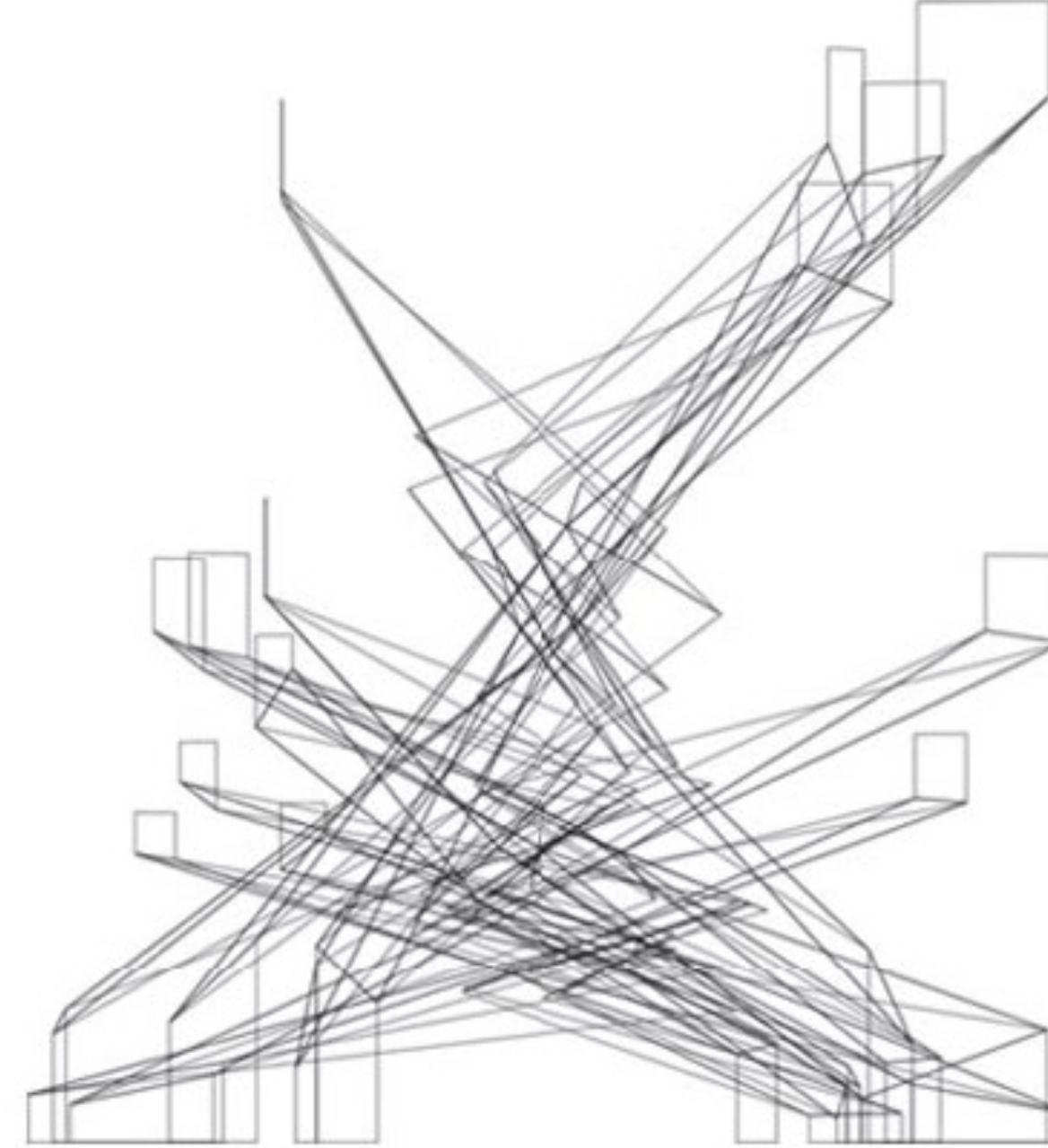


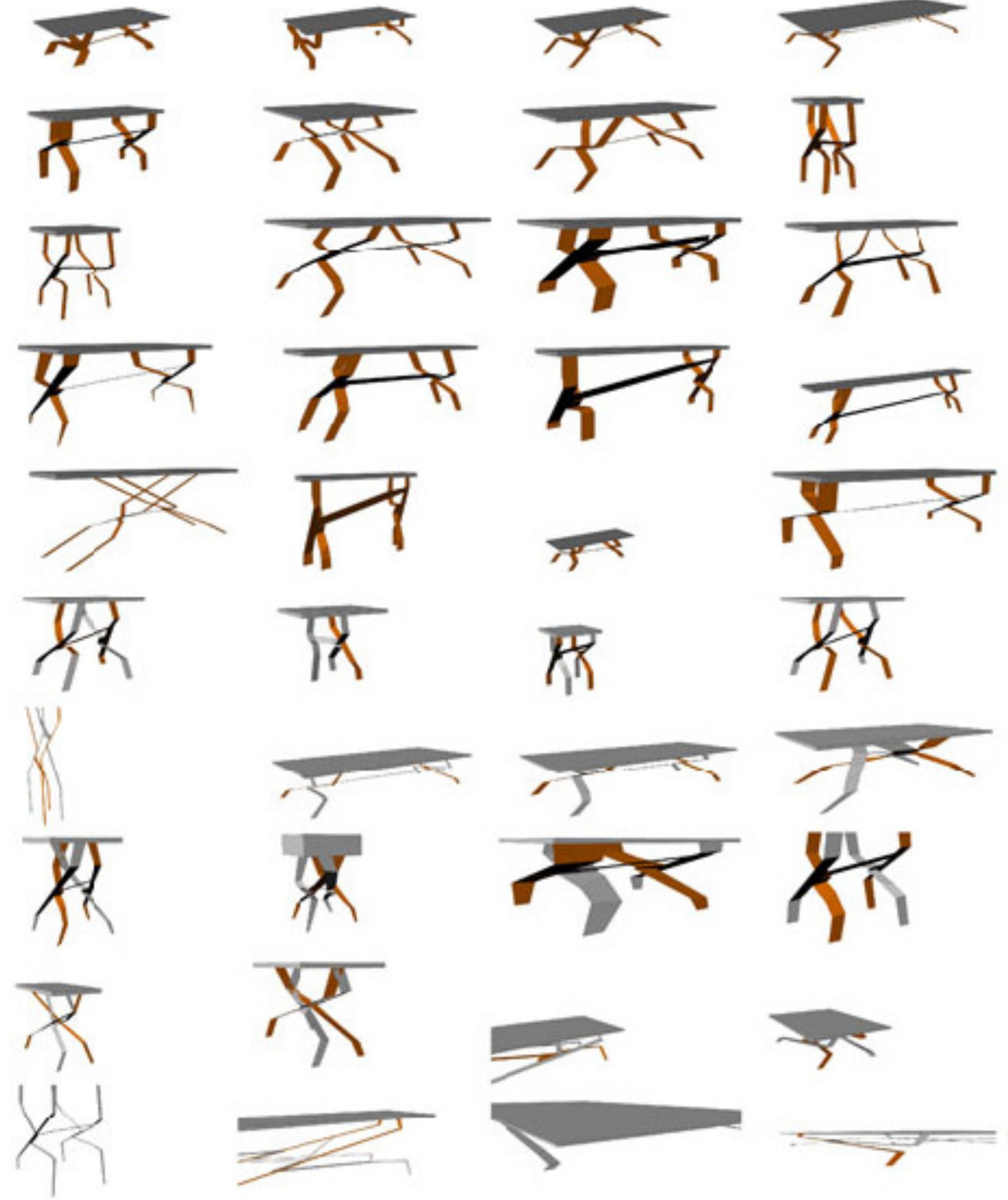
Hyphae Lamps
Nervous System • 2017

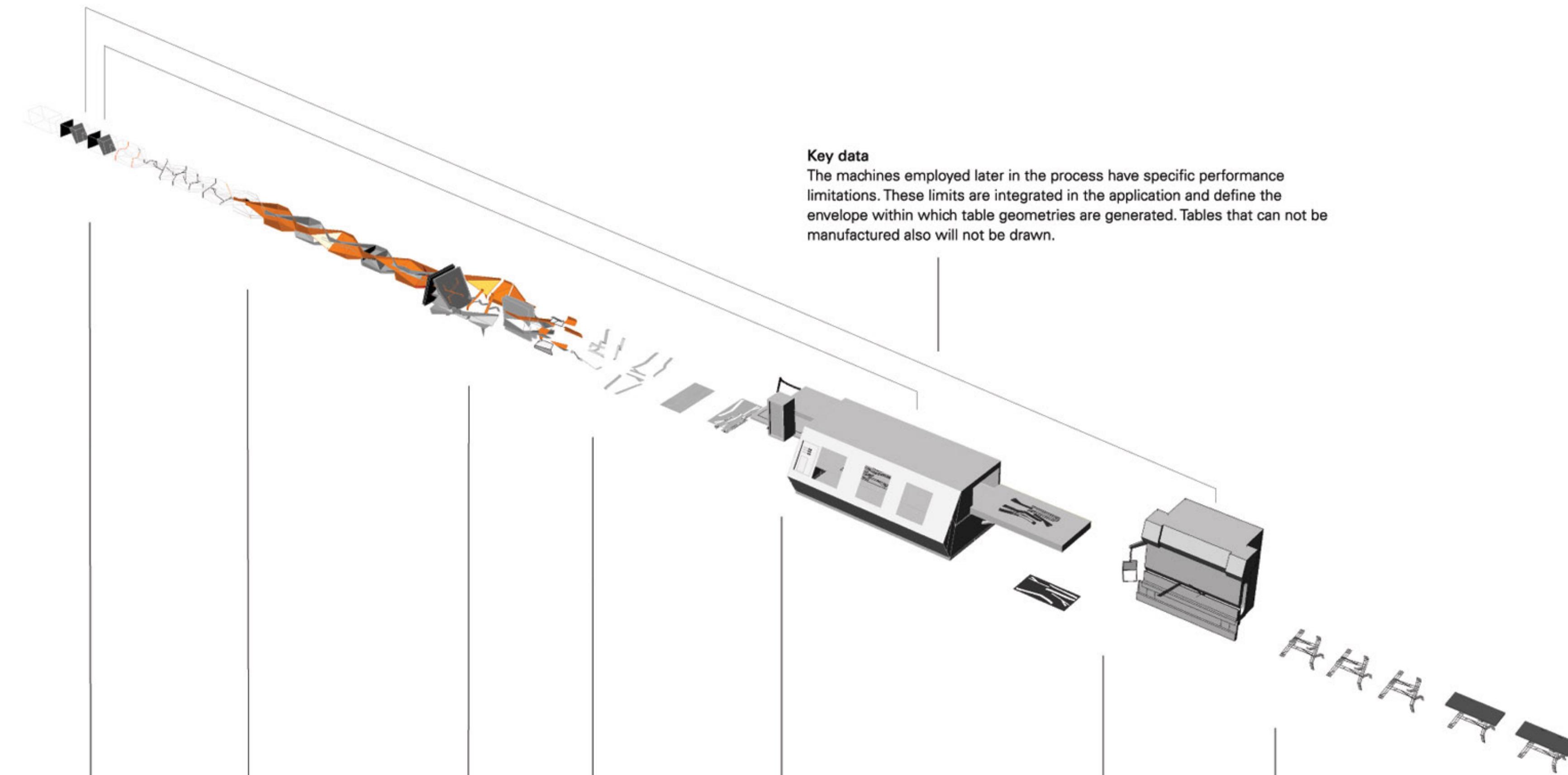


Breeding Tables
Kram / Weisshaar · 2010









Input	Algorithm	Construction Surfaces	Structure Extraction	Unfolding	Laser Cutting	Bending	Table Structure	Complete Table
Basic data is input into the application by the user. Table width, Table height, Table length as well as a set of typology rules are defined.	Within the envelope established, the algorithm continuously generates a series of 2d base geometries each inheriting a set of properties from the mother table.	The basic construction surfaces are generated by triangulating the base geometry created by the algorithm in the previous step.	The table structure is extracted using angled cutting planes. A 3-dimensional model of the table is now available	After computational testing, if the table is deemed suitable for production, the program unfolds the table legs flat. These flat geometries then make up the cutting pattern for a given table structure.	The leg cutting pattern is then transferred into the laser cutting machine where it cuts the sheet steel. Each leg is cut individually, with the bend and joint information for putting the table together engraved on the table leg itself.	The cut flat leg is then moved to the bending machine. The bending machine technician follows the directions on the table leg, turning each bend in the table leg the specified number of degrees.	Once the table legs are bent, the final stages of the table construction involve joining the table legs together, painting them, and attaching the table top.	

DIGITAL PHYSICAL

Key data

The machines employed later in the process have specific performance limitations. These limits are integrated in the application and define the envelope within which table geometries are generated. Tables that can not be manufactured also will not be drawn.

contemporary product design

<3

data visualization

GIORGIA

WEEK TWENTY-FOUR



"DEAR DATA
WEEK 24: DOORS' PATTERNS

HOW TO READ IT:

Every little rectangle represents a door I opened and/or passed through, in chronological order, to enter a space. (P.S. closet doors and furniture doors are not included)

TIME OF DOOR:

- MAIN LOCATION:
 - my building
 - WORK (NEW INC)
 - SHOP/STORE
 - CAFÉ/PUB RESTAURANT
 - CLIENT PLACE
 - TRANSPORTATION
- extra external door (it's cold here ha!)
- external door - entering the building
- eventual MID DOOR
- main space access (e.g. my apt)
- when external door coincides to main space entrance
- external sliding door
- elevator automatic door

ATTRIBUTES

- + extra external door (it's cold here ha!)
- + external door - entering the building
- + the door between my bedroom and my living room
- + glass door (e.g. meeting room)
- + turnstiles
- + so heavy!!
- + boy friend opened it for me
- + somebody opened it for me
- + I locked it!
- + I was carrying my dear Data postcard to post it to you ☺

FROM: NEW YORK CITY
24 FEB 2015 PM
TO: BROOKLYN NY - USA

SEND TO:

STEFANIE POSAVEC
LONDON
- UK -
ENGLAND

After spending more than six hours drawing this hyper-detailed card, Giorgia texted Stefanie as she posted it:
"You need to know that if this one doesn't get to you I won't redraw it. You'll see what I mean."

Dear Data

Giorgia Lupi and Stefanie Posavec · 2014

a week of doors

Stefanie



DEAR DATA - WEEK 24
SECOND POSTING ARGH!!

A WEEK OF DOORS/SPACES
ABOUT THE DATA: I GATHERED DATA ON ALL OF THE SPACES I PASSED THROUGH IN THE WEEK, BOTH INTERNAL + EXTERNAL. A SPACE IS DEFINED BY WHETHER I HAD TO PASS THROUGH A DOOR OR NOT.

HOW TO READ IT:

IN CHRONOLOGICAL ORDER

EACH SPACE IS REPRESENTED BY A: OR A (CROSS-HATCHED LINES CARRY NO IMPORTANCE, MAINLY ONLY FOR DIFFERENTIATION BETWEEN SIMILAR COLOURS) THIS

THE TYPES OF SPACES I PASSED THROUGH INCLUDE: DECISIONS ON THE LAST MINUTE SPONTANEOUS DECISIONS TO MAKE THE COLOURS CARRY MORE IMPORTANCE

IN THE HOME/PERSONAL SPACE: DOCTOR'S OFFICE WAITING ROOM

SPIKE BEDROOM (1 OR 2)

GROUNDFLOOR (OPEN PLAN) KITCHEN + LOUNGE

TOILET BATHROOM

DOCTORS OFFICE WAITING ROOM

UNIV. BLDG. CLASSROOM

FRIEND'S HOUSE: TEAROOM KITCHEN LOUNGE

CULTURAL CENTRE: GYM: MAIN BLDG. MAIN GALLERY CHANGING ROOM

STUDIO: STUDIO BLDG. STUDIO SPACE

TRANS PORT: * CHANGING ROOMS +

OUTSIDE: IN THE STREET TUBE/ TRAIN SPACES ARE FOUND ACROSS DIFFERENT

CAB

FROM:
S.POSAVEC
JULY
LONDON
UK
24-02-2015

Royal Mail
Jubilee
Mail Centre
06-02-2015
33503221



TO: GIORGIA LUPI

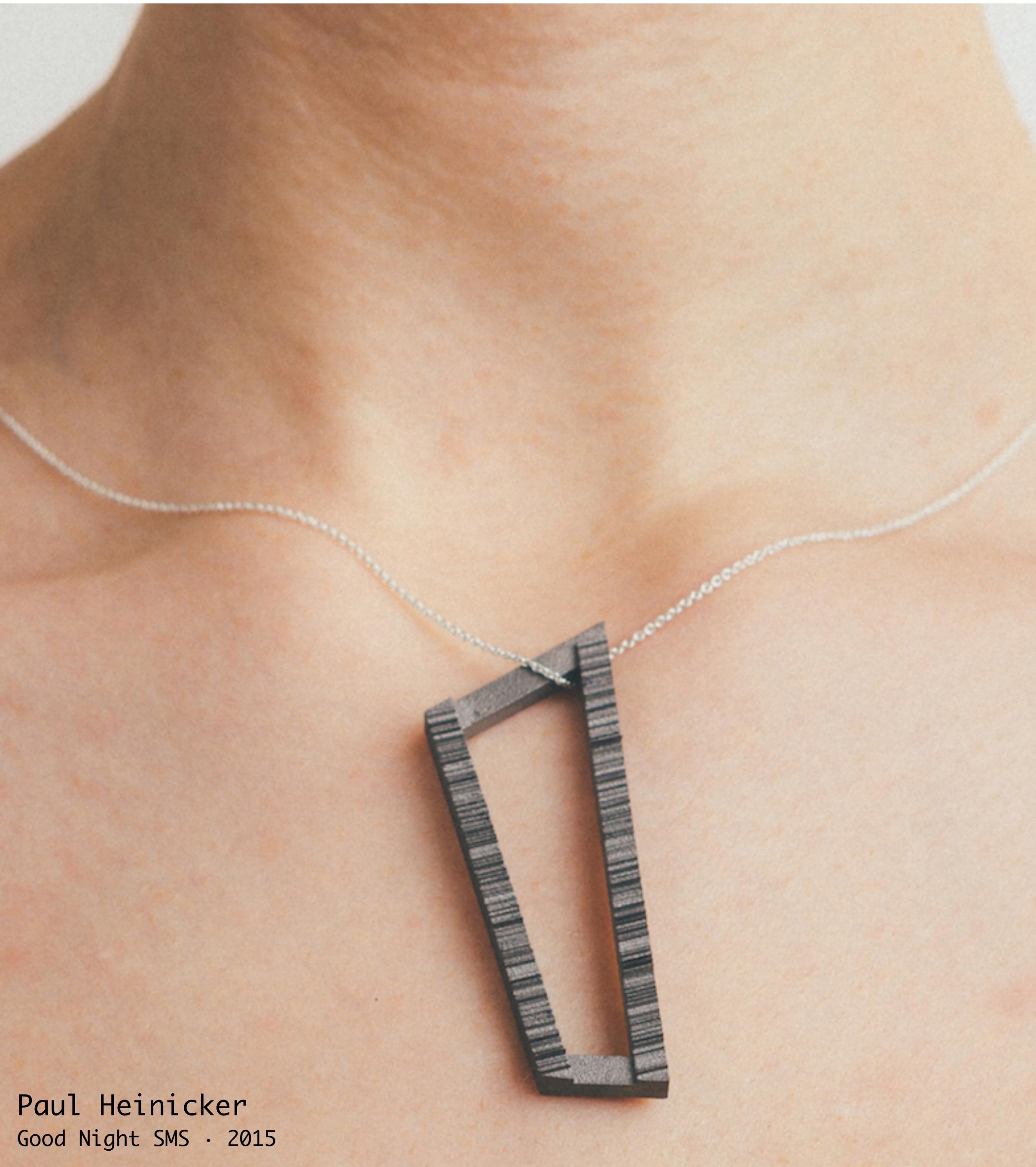
BROOKLYN, NY

USA

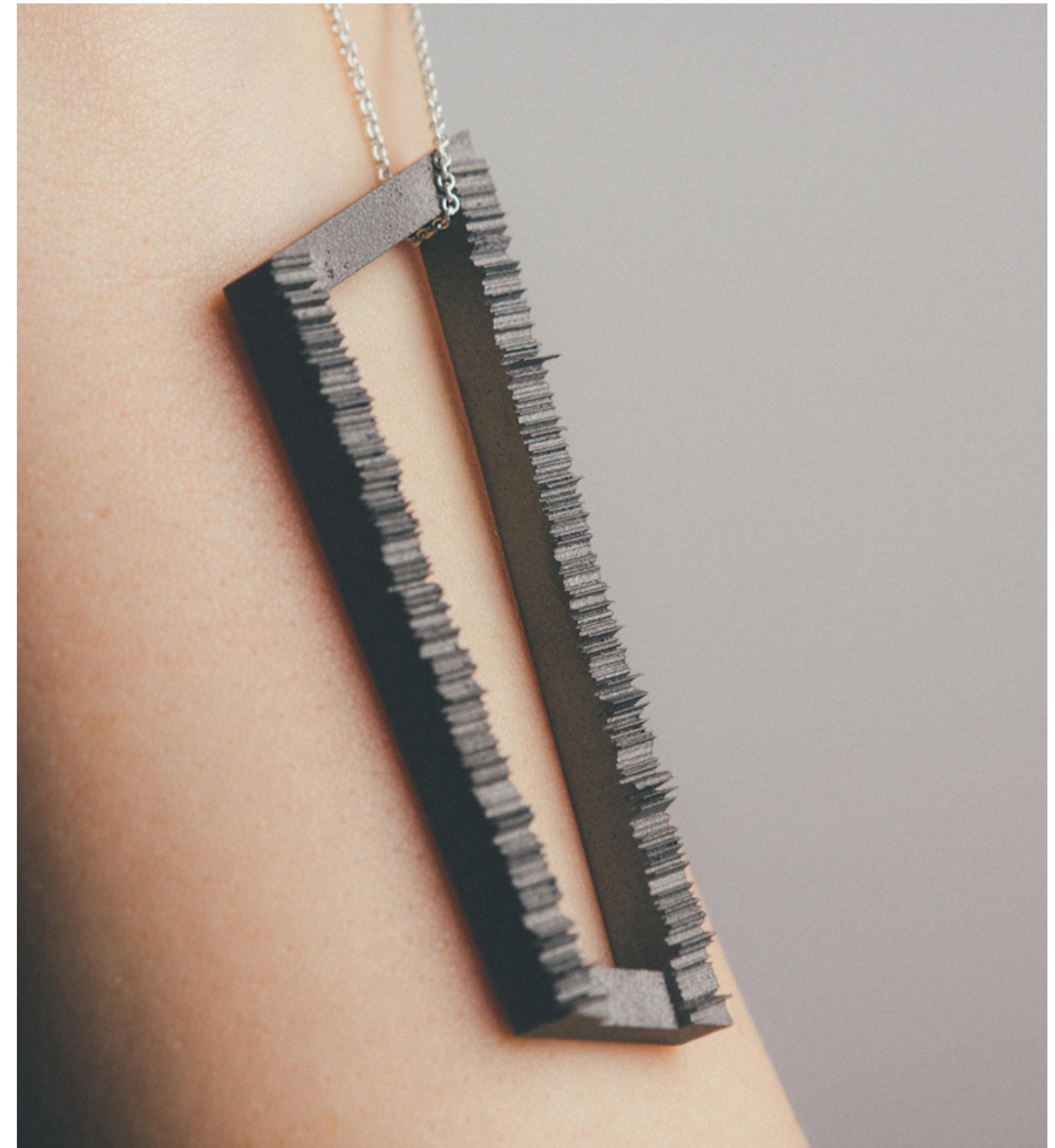
BY AIR MAIL
par avion

Royal Mail®

Unfortunately, while Giorgia's postcard arrived, Stefanie's postcard didn't, so she had to draw hers again (luckily it wasn't as detailed, but it was still supremely annoying).



Paul Heinicker
Good Night SMS · 2015



let's build a dataset!