Portfolio of Yufan Xie

2014-2019

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https://vimeo.com/xieyufan

Portfolio of Yufan Xie

2014-2019
Deluxe Version

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Architecture is a discrete system of powers. It could be nature, society, space and body. For architects, like us, what we are doing is seeking for implicit relationships between system and goal with our perception, then bringing them into space we create - this is how we inhabit the world.

In 4-years attempt, I experienced a transition from single rationality to a complex mixture of digital intelligent and humanity approaches. I believe that, in the foreseeable future, our mind will be the core of design and construction before the machine is truly intuitive.

001 **SYSTEM from** **NATURE**

SELF-ORGANIZING

002 **SYSTEM as** **SOCIETY**

BIT-EROSION

003 **SYSTEM of** **SPACE**

SHARING THE WALL

004 **SYSTEM of** **BODY**

A DAY OF WORKAHOLIC

SYSTEMAGIC

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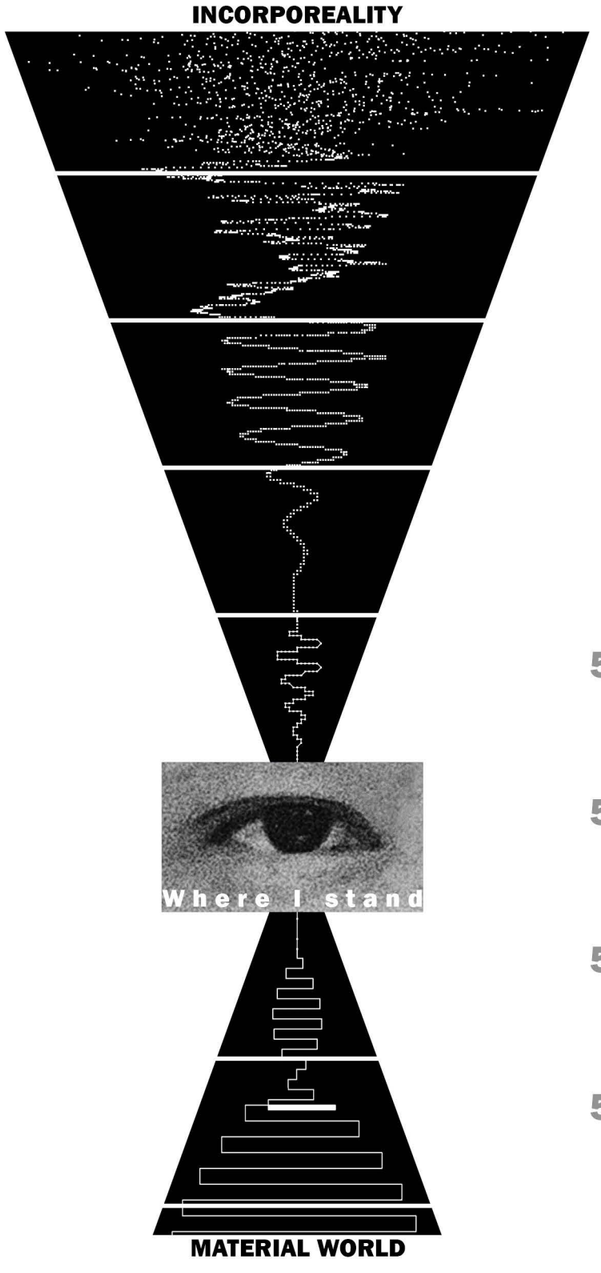

MEDIATED

5 - 0 **MEDIA**

BOUNDING BARCODE

5 - 1 **HUMAN**

DIGITAL MUTATION

5 - 2 **FABRICATION**

DIGITAL FABRICATION

5 - 3 **CONSTRUCTION**

CONSTRUCTIONS (LOUNA + XIAMUTANG)

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SYSTEMAGIC

"The whole is greater than the sum of its parts"

------ Aristotle

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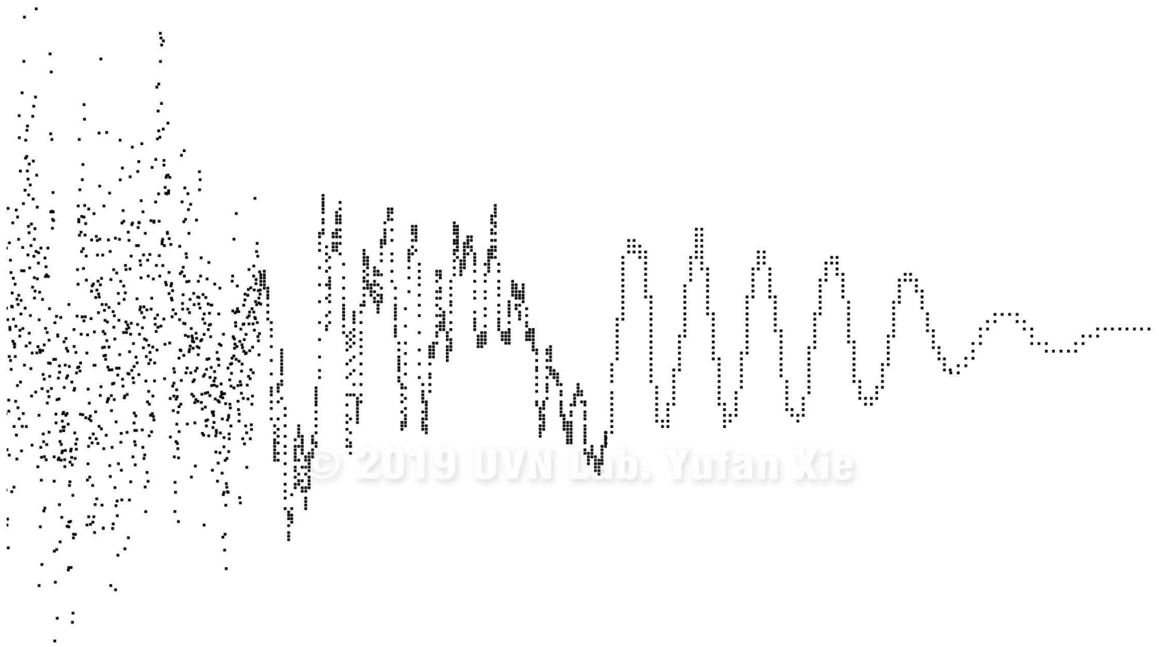
System is an organization of components, from which intelligence evolves. It's a comprehensive model of biology, space and society. By extracting basic rules from prototype and reconstruct, we create systems, from which intelligence evolves - namely systemagic.

SYSTEM ---------- SPACE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Self-Organizing
NATURE

Community
SOCIETY

Social Housing
SPACE

Personal Housing
BODY

Architecture is a discrete system of powers
It could be nature, society, space or body.

SYSTEM from NATURE

001

Self-Organizing System of Basic Behaviors

Self initiated project, 2017
Published on "CubicRAB"

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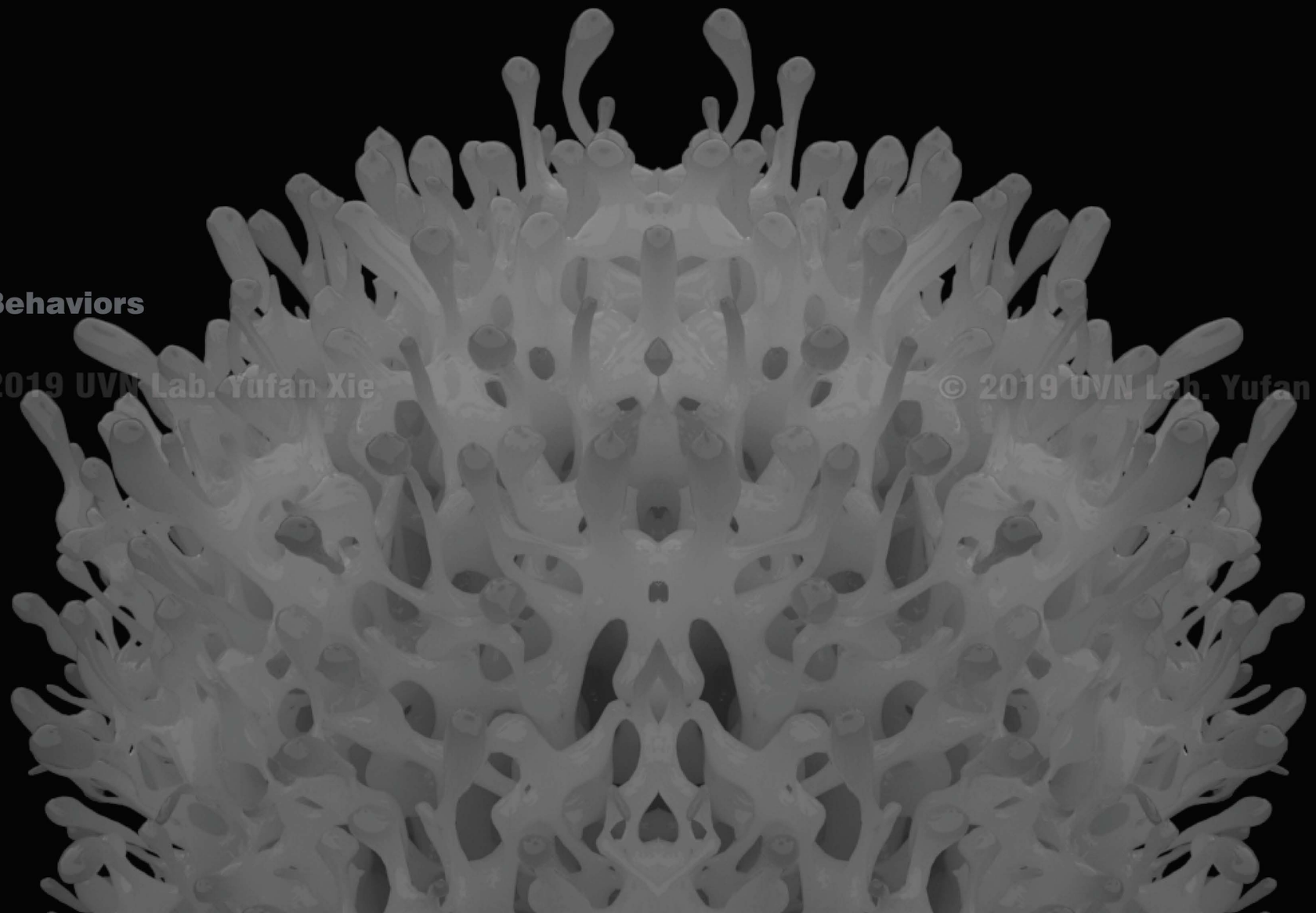

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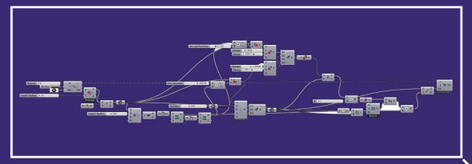
Link:
https://vimeo.com/282106863

How we define behaviors, how the system develops.

As a cell, or a system of similar particles, it behaves like fluid, which can be counted as cloud in aerography. There is no "part" or "one", it's a whole system, an aggregation of behaviors.

Self-organizing is a generative project I launched since 2017 September. The origin purpose of this project was to imitate a Cellular-Automaton style algorithm. But my intent of "creating" system, or, designing a system made me rethink about how system works. Then, this idea pushed me forward, finally by picking basic behaviors from different prototypes and reconstructing them, I finished this algorithm as a mixed system - which can be seen as variation from any of its prototypes.

THE SYSTEM



It's a density system, developing itsself to fully occupy the space.

The whole system is based on 2 types of particles playing special roles: Seed and Body.

As system develops, points are changing between 2 types according to density.

Accordingly 2 pairs of basic behaviors are implemented - Birth and Death behaviors originated from DLA-like system, Attract and Repell behaviors(dynamic factors) originated from Differential system.
Separately, Seeds take Birth and Attract behaviors, Body take Death and Repell behaviors. Due to these functions they have, once calculation happens, the total quantity and distribution - the density will change, giving new principle to filter out new Body and Seed.

Particle Types

Seed

Growing and attracting points with lowest density located on "outer" edge.

Body

Dying and repelling points with highest density located "inside".

Prototypes

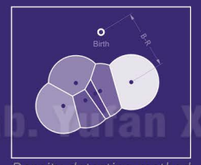
DLA-like

Rigid Body Aggregation

Differential

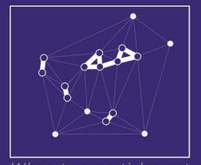
Dynamic Body

Birth



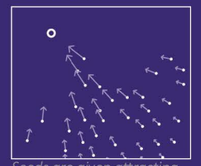
Density-detecting method based on Voronoi. Seed with lowest density will randomly generate a new point within birth-radius(B-R).

Death



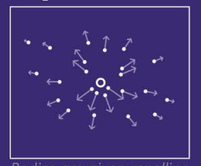
When two particles get too close (smaller than death-radius D-R), one survive, maintaining overall population

Attract



Seeds are given attracting force to "grab" particles nearby closer. Accordingly, particles around seeds will be stretched, becoming "branches".

Repell



Bodies are given repelling force to "push" others apart.Repelling is also the key part of expansion – bulging branches and the whole system.

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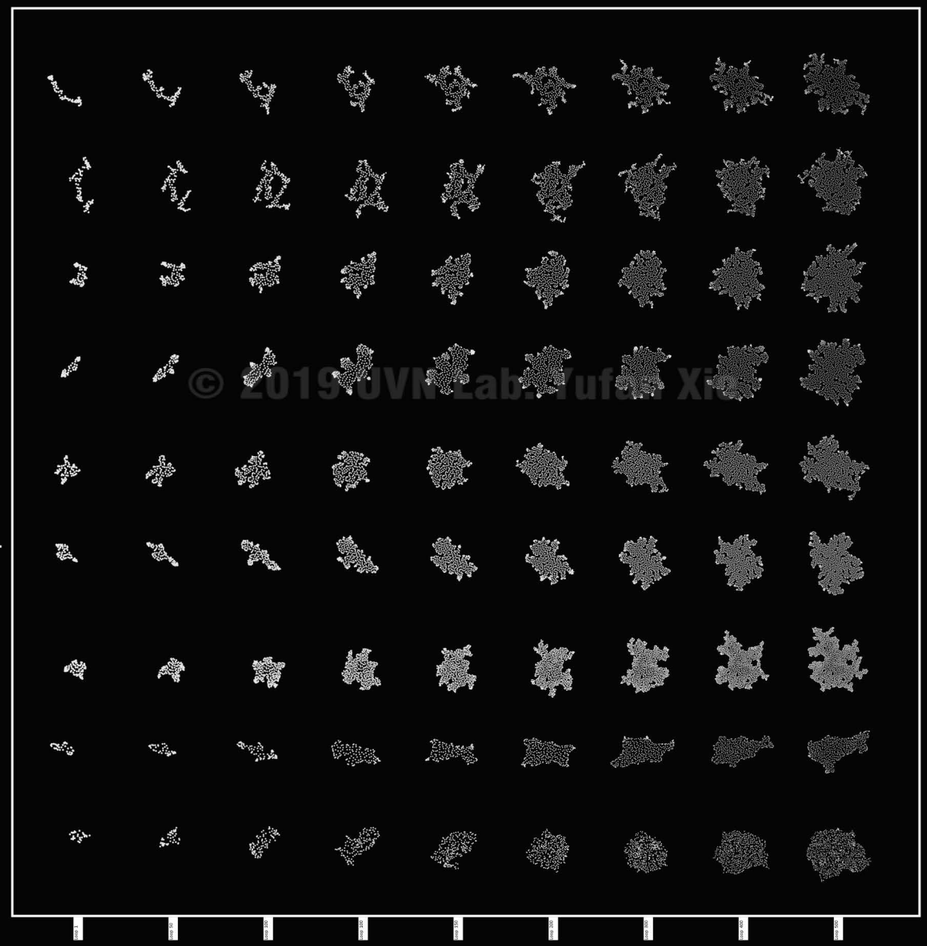
By reconstructing BEHAVIOURS
We create SYSTEM

THE PROCESS

The way how thing develops itself is like waving pendulum between thresholds,but they could never reach, it is the neutral and dynamic state that develops the system. It is a non-linear mixture of behaviors and powers, with few behaviors, enormous possibilities evolve.
These behaviors, are opposite thresholds. If we cancel any single one from pairs, the system would become imbalanced and single-polarized, and totally lost ability of self-organizing.



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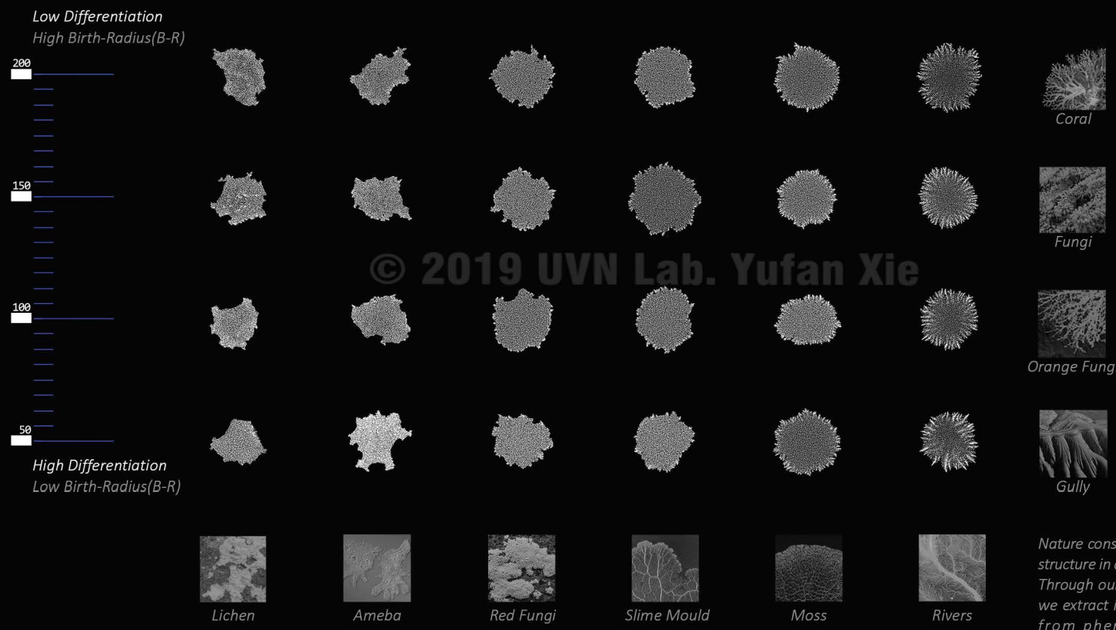

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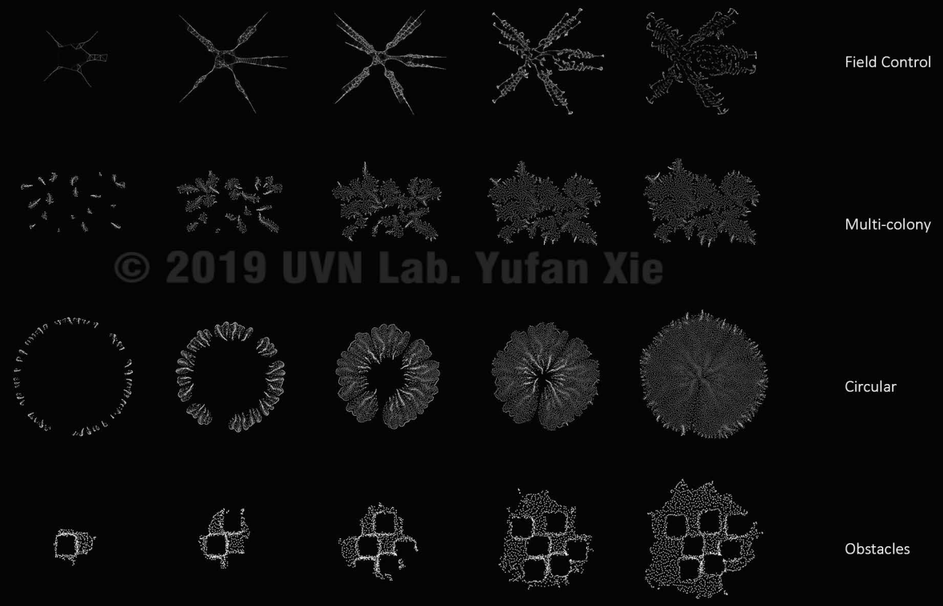
Nature consists of different structure in different scales. Through our human mind, we extract individual rules from phenomenon, in different ways.

If we set higher weight to one specific behaviour, the system will show more feature of this prototype.

Weight of BEHAVIORS
Weight of PROTOTYPE

ENVIRONMENT as a variable



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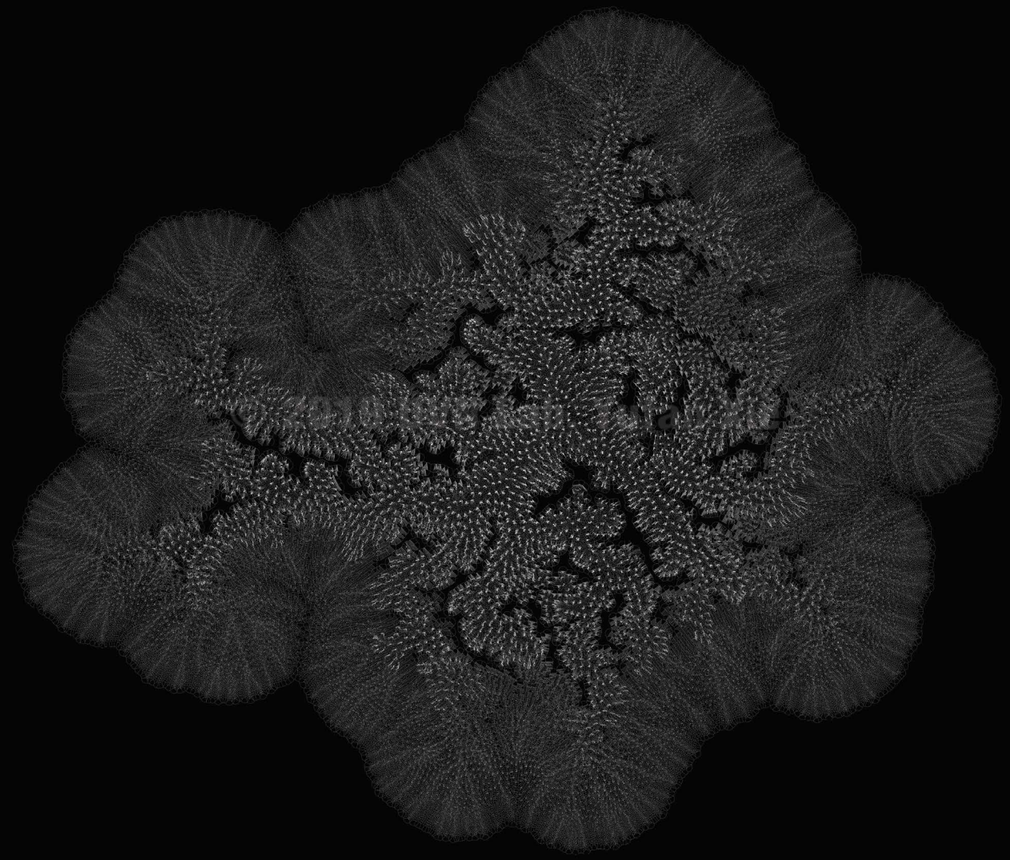
One of the essential feature of intelligence, is reacting to its environment. By changing variables of environment, the system shows intelligence and responds to surrounding, adapting themselve to field and environment - such as multi-colony growth, obstacle growth and field growth.This means the possibility to utilize variables of complex field and society in practical application.

TIME as a variable

Accumulative result based on timeline



Cumulated Growth
Filter Rate:20% - 60%
Iteration:600
Search Radius:300
Birth Radius:300

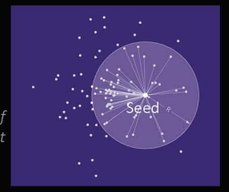
By controlling variables on **timeline**, *we get differentiated form in different stages.(Picture above shows a result of controlling* **seed amount**.

3D DEVELOPMENT

To improve the performance and application, after months, I started to work on a 3D version, a full-version algorithm with simpler methods for **solving extremely complex problems in a 3D level.**

Proximity Detection

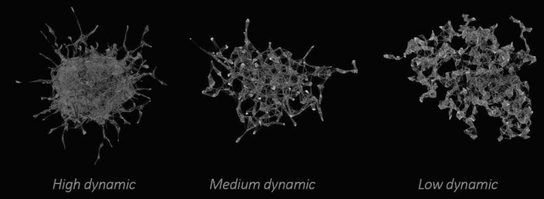
Average length of sum of vectors within S-R
Weight = length(V1 + V2 + V3 +....+Vn)/n
It provides density and location of pointcloud(inner points are average but outer points are not)



Vector Birth

The average of sum of vectors around within S-R will be applied to seed with a limited random shuffle.
Vector = Random + (V1+V2+V3+...+Vn)/n

Test on new rules



High dynamic | *Medium dynamic* | *Low dynamic*

High Birth-Rate Low Search-Radius | *Low Birth-Rate High Search-Radius* | *Low Birth-Rate High dynamic*

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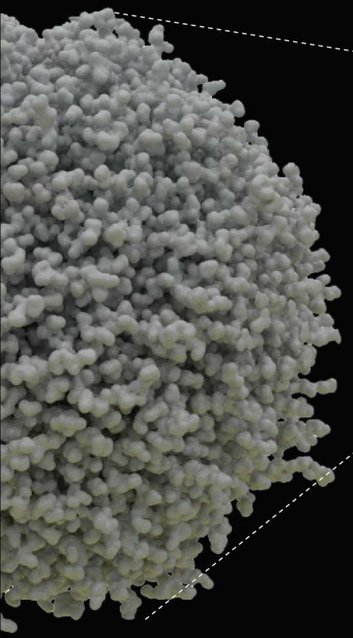
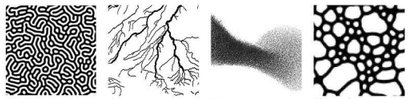
Self-Organizing Terrain

PROSPECT
on complex system



Attract
Repell
Death
Birth

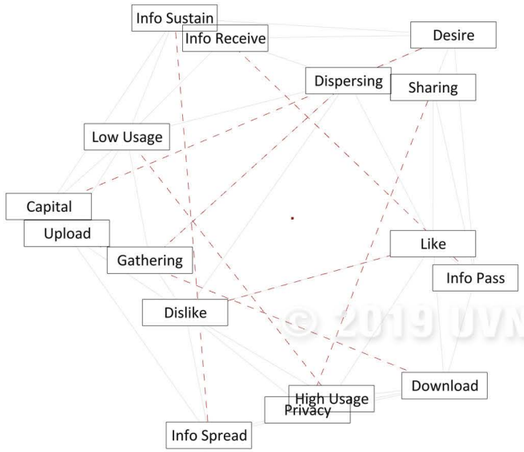
Information
Networking
Intelligence
Structural



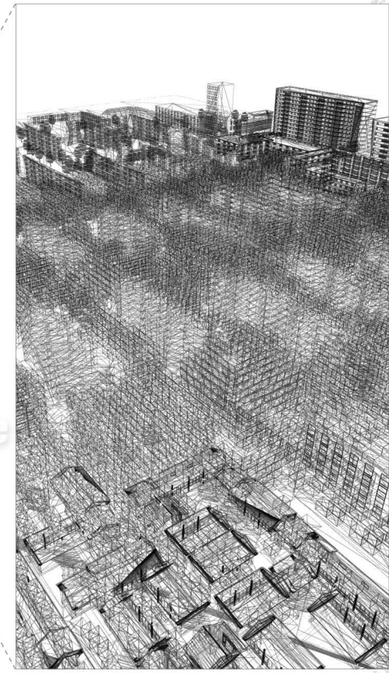
React Diffusion *River System* *Swarm Agent* *Topology Optimization*

NEW SYSTEM

New Behaviors



Capital
Person
Density -
Density +



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SYSTEM
Mathematical density

Behaviors of system can be seen as keys of gene, the properties of system are defined by properties of behaviors.

RE - ENCODING
1 dimensional info
2 dimensional

If we take behaviors from other prototypes like React - Diffusion system, each point of this system can hold more complex information. I assume that, as extracted essential functions, properties of any behavior, can be directly combined with the existing system, just like decoding and re-encoding genes - this is what I plan to experiment next - to develop this system as a ***Comprehensive Information Model(CIM).***

SOCIETY
n+ dimensional info
n+ dimensional behavior

Human society is a multi-dimensional system of basic behaviors*, and basic components hold far-more complicated informations - just like chemicals of swarm. For example, the spreading information - internet, breaking news or hot issues - is a layer of complex system similar to React-Diffusion system.*

DENSITY
Solid space density
Social life density

Architecture is a explicit form of social hierarchy*, it could also be a self-organization - we can find a better solution based on balanced powers -* ***a bottom-up solution****.*
In my schoolwork ***BIT-EROSION****, I started my very first experiment on* ***iterative spatial structure.***

SYSTEM as SOCIETY

002
Bit-Erosion
Fuguoli Community Renewal

Year 4 project
Community Design
International Studio, 2017
Instructor: David Porter, Keren He, John Zhang, Tao Han, Xiaolei Hou, Siyong Liu

This project is a community renovation in section 2 of CAFA Int'l Studio. We collaborate with powers from Tsinghua University and international universities to renovate the declining community.

For me, urban development is an alternation of generations and life habits, in China, this process seems to be more severe - for government planning and booming economy.
Technically, in late 2016, during my pursue of algorithm and computational design, right after my early attempt in form finding, I've been considering hard about algorithm application in other layers of architecture and urban design - it includes spatial topology, social hierachy, and behavior of spaces. Later, in 2017 winter, I put my thinking into practice in this schoolwork, to proof my concept of behavioral social system in complex.

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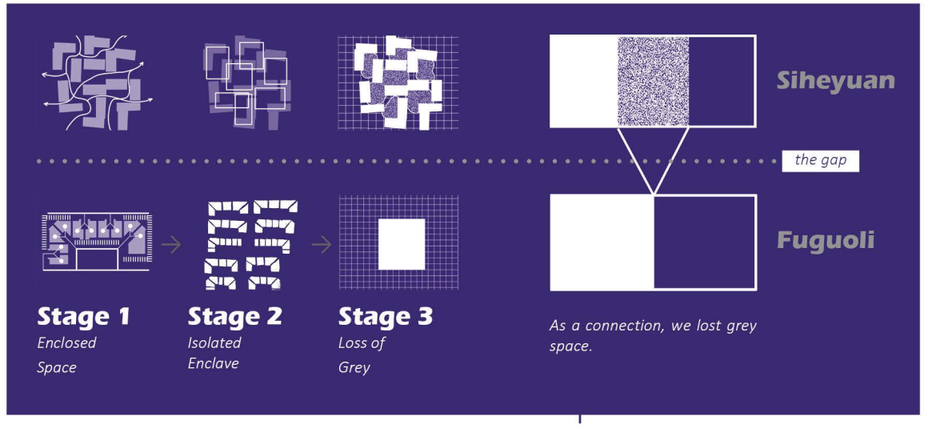
Should RENEWAL be planning?
How do we AVOID repeating the mistake of DEMOLITION?
Is there possibility for ITERATIVE EROSION rather than DOGMATIC EXCISION?

The Dilemma - Broken Context

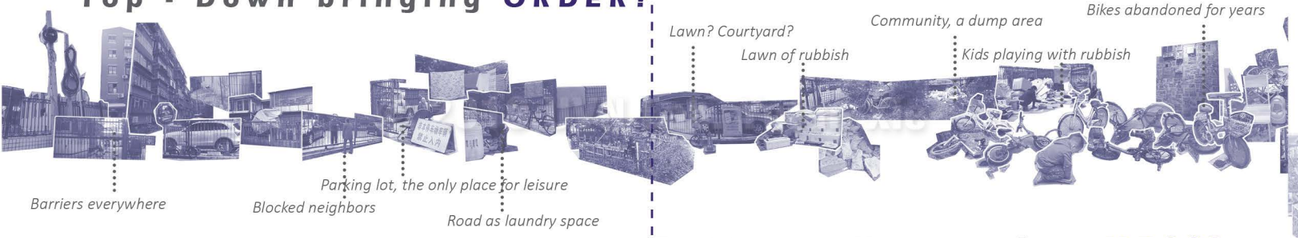
Hutong

Demolised Space

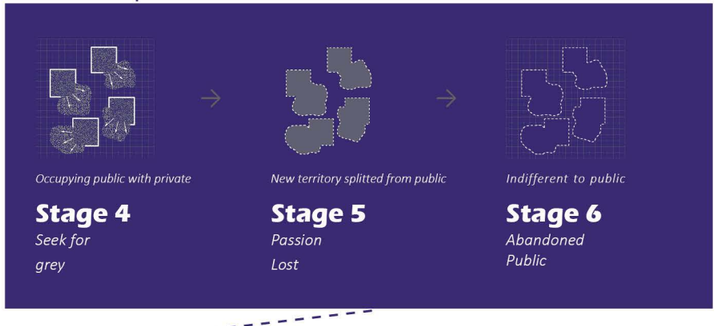
Fuguoli, *a typical China community of resettlement located in western downtown area in Beijing, an exclave of abandoned space covering over 20,000 sqm with 16 individual apartments, which used to be an area of demolished Hutong, was chosen to be the site.*



Top - Down bringing ORDER?



Bottom - Up causing MESS?



Top-down planning deviated from habit weakened vitality of community

We both lost passion for PUBLIC SPACE

Leaving Residents

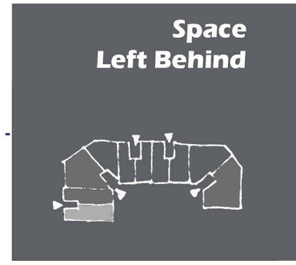
Many aged residents wish to move away to suburb, living in high apartments is a trouble for them.
As for middle-aged residents, whose families have children, will stay longer in this community, they are expecting changes to this community.

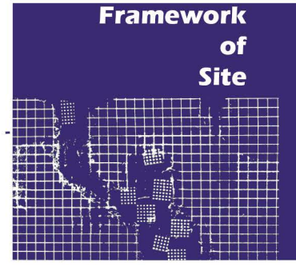
Alert
Who are you?
What are you doing to my house?
Don't remove my house anymore!

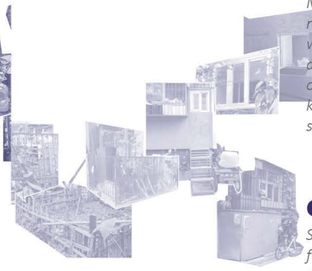
Leaving
I have leg issues...
I'd rather living in suburb...
It's a trouble to go downstair everyday...
We old peoples hope to leave there...

Missing
I do miss my life in Hutongs...
Miss my neighbors...
Those apartments are so tedious.

Wish
Our community is so messy.....
Everybody wanna make a change...
But what could we do?
I'd like a courtyard rather than car parks

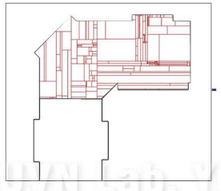






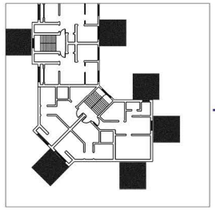
Inward Space

Most part of shady rooms(mainly on east and west side of building) are divided into tiny units by aged owners for rent. Frames are kept, walls are changed for space.



Outward Space

Self-built structures of ground floor residents to expand their balcony and basement. It inpired me where the new structure should start from



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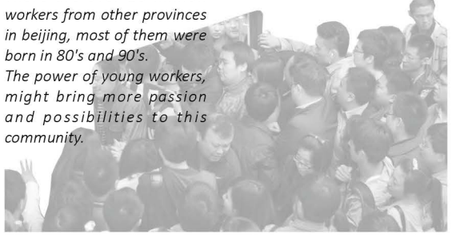
the Break

BIT - Workers

There are over 20 million workers from other provinces in beijing, most of them were born in 80's and 90's.
The power of young workers, might bring more passion and possibilities to this community.

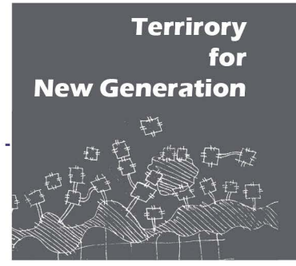


Transportation
I rent a house in suburb
I spend 4 hours on the road everyday
Totally exhausted.....

Fees
Downtown room cost over ￥5,000 per month
It's still rising.....
That would take a big part of my salary.....

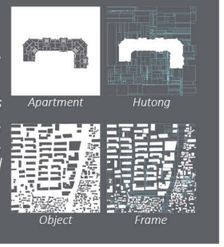
Environment
Now I'm living in basement
If possible
I'd like a small cabin on the ground

A place to stay
The government is removing old houses
"Low-ends" are forced to move out
Now we got no where to go.....



Private to Grey

By transforming idle spaces back to shared grey space, the pattern of city changes, OBJECT can be transformed



Keep Framework

Framework, a metaphor of vanished space, revealing the memory of past. By keeping the framework, the context can be preserved.

t h r o u g h

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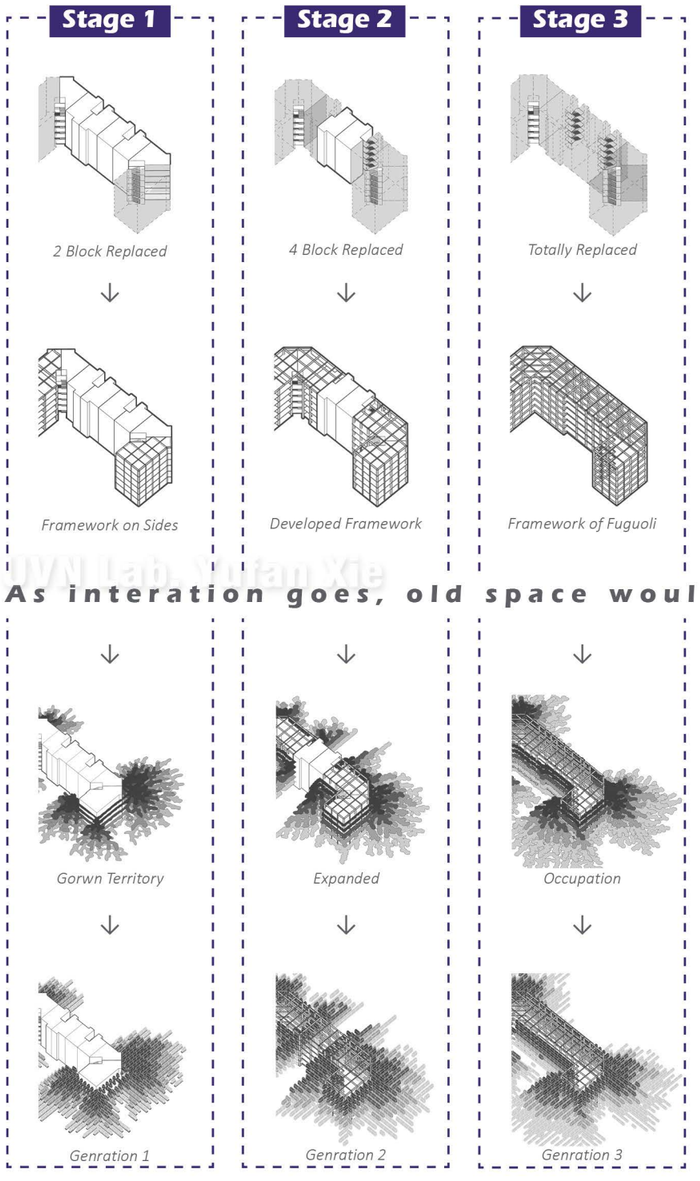
As interation goes, old space would be **ERODED**

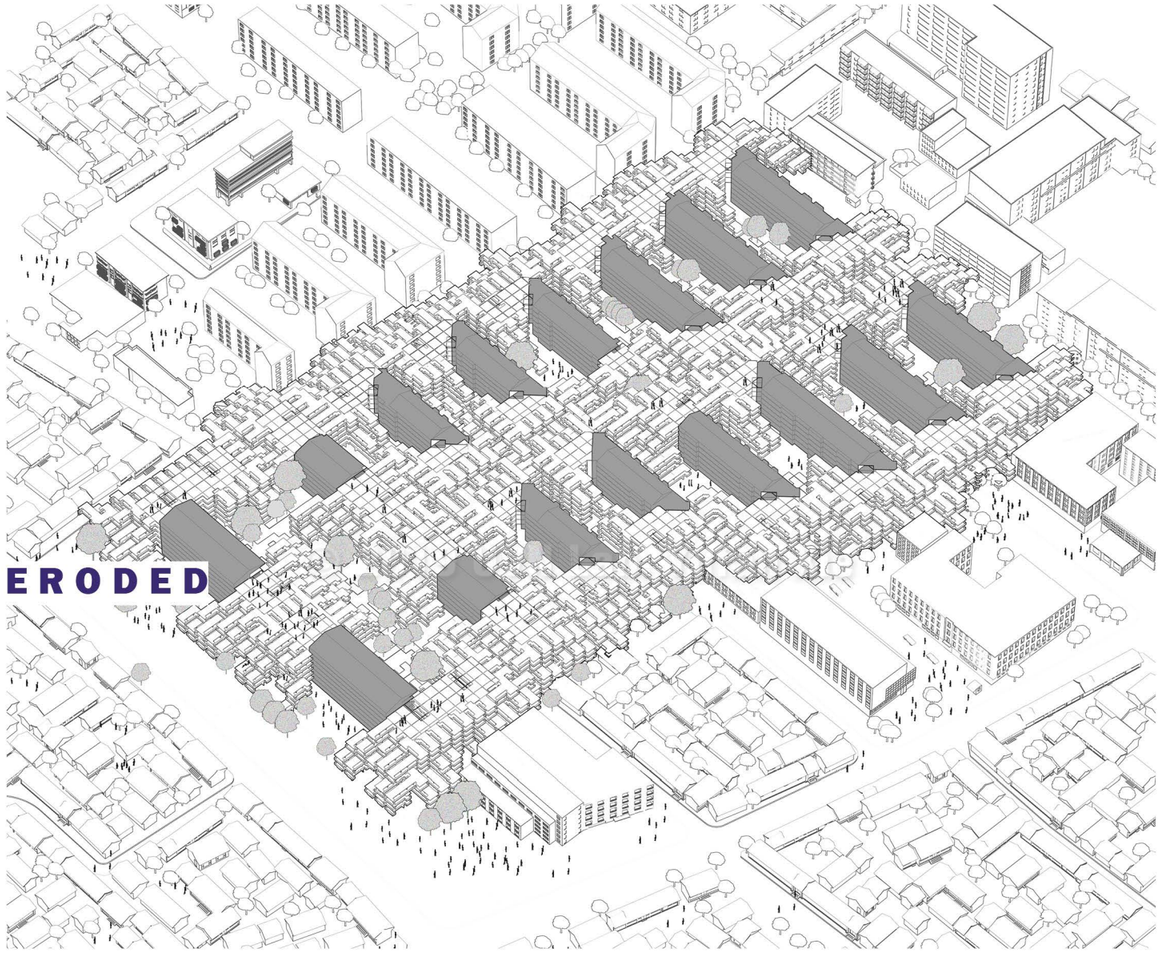
Self-Organized Territory

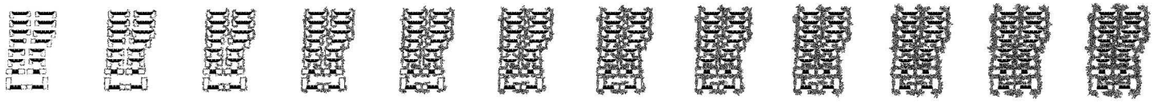
Accumulative territory above the ground grows from transformed space. Back set form can provide better radiation for each floor.

Dense Units

Low rent, simple, shared public space - space for mixed high-density community. I hope new generations will produce more vitality for this community.

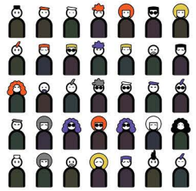






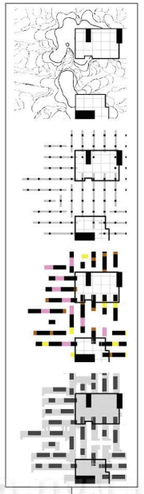
Customer

Server



I wanna have my own unit!

Territory Optimization



Territory

Radiation Axis

Linear Sequence

Linear Sequence

Algorithm

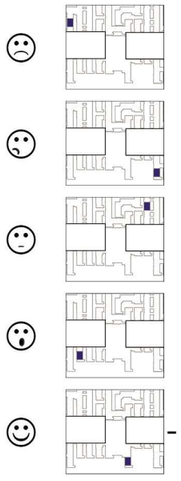
Layout

Options

Shared Space

Shared functions are picked apart from our daily life, by limiting private space, better and bigger public spaces are guaranteed. Free circulation and grey space provide better chance for communication between neighbors.

Customer can choose who they would like to share with, and where their units will be placed.



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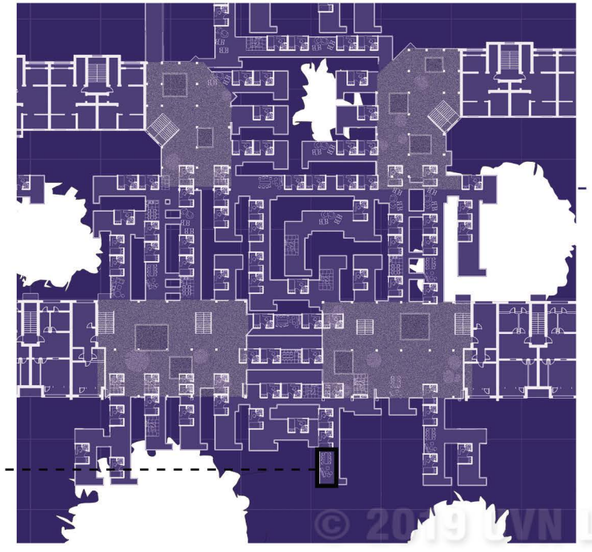
Construction



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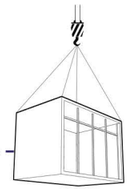
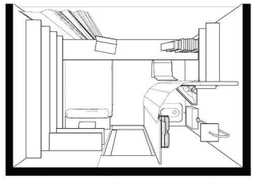


Private Unit

*Tiny units of 2000*3000, taking 50% area of all, mainly for daily personal living - sleeping, shower, storage etc. Every 2 units share a public space, which is chosen between several*



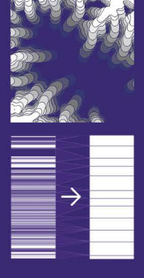
Power-driven Algorithm

The SELF-ORGANIZING SYSTEM is implemented to be the tool for generating space.

*On existing structure, the new territory grows.Architecture itself is a hierachy of power and behavior, the "**growth**" is a process driven by political and spatial behaviors, will keep growing dynamicaly, finally reach a balanced space form.*

The explicit form is a result of implicit balanced power.

Spatial Behavior



Birth

Spare Space

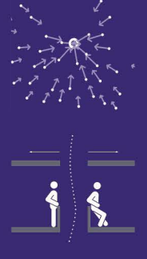
Outer units
low utilization
fulfilling idle spaces

Death

Limiting Density

Inner units
removing overcrowded space
maintaining density

Social Behavior



Attracting

Power of Capital

Higher density
Higher profit
Higher utilization

Repelling

Power of Persons

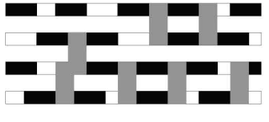
Lower density
Larger personal space
Better sunshine

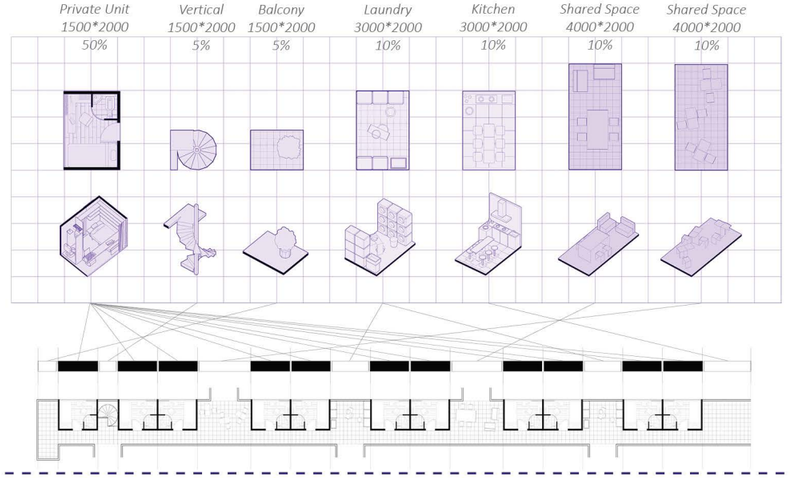
Linear Sequence

A repeated pattern is applied to linear space, every 2 private space share a public space chosen from several types.

Private *Shared*

For neighboring shared space, paths will connect them across lines, to increase communication.



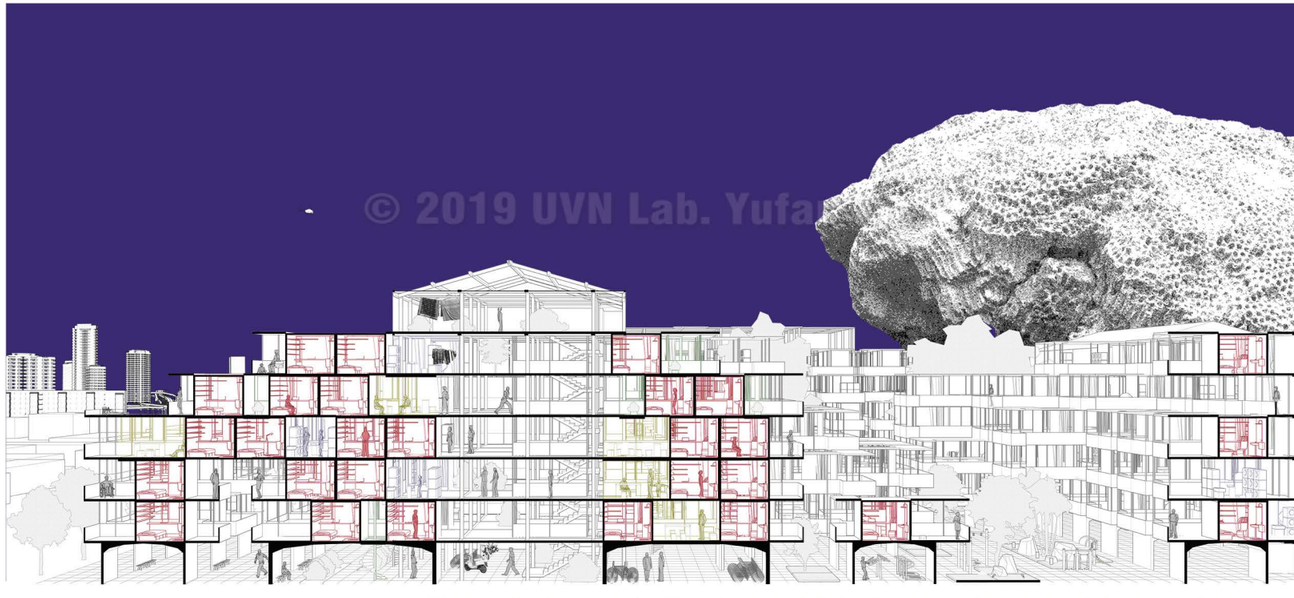


As you watch through the community
old and new
big and small
objects and frames
A huge mixture of society grows
on threshold of spaces

On rocks live the corals
they reproduce
aggregate
die
and calcify

lives turns to rock
on which new ones rise

Have we ever return the space we borrowed?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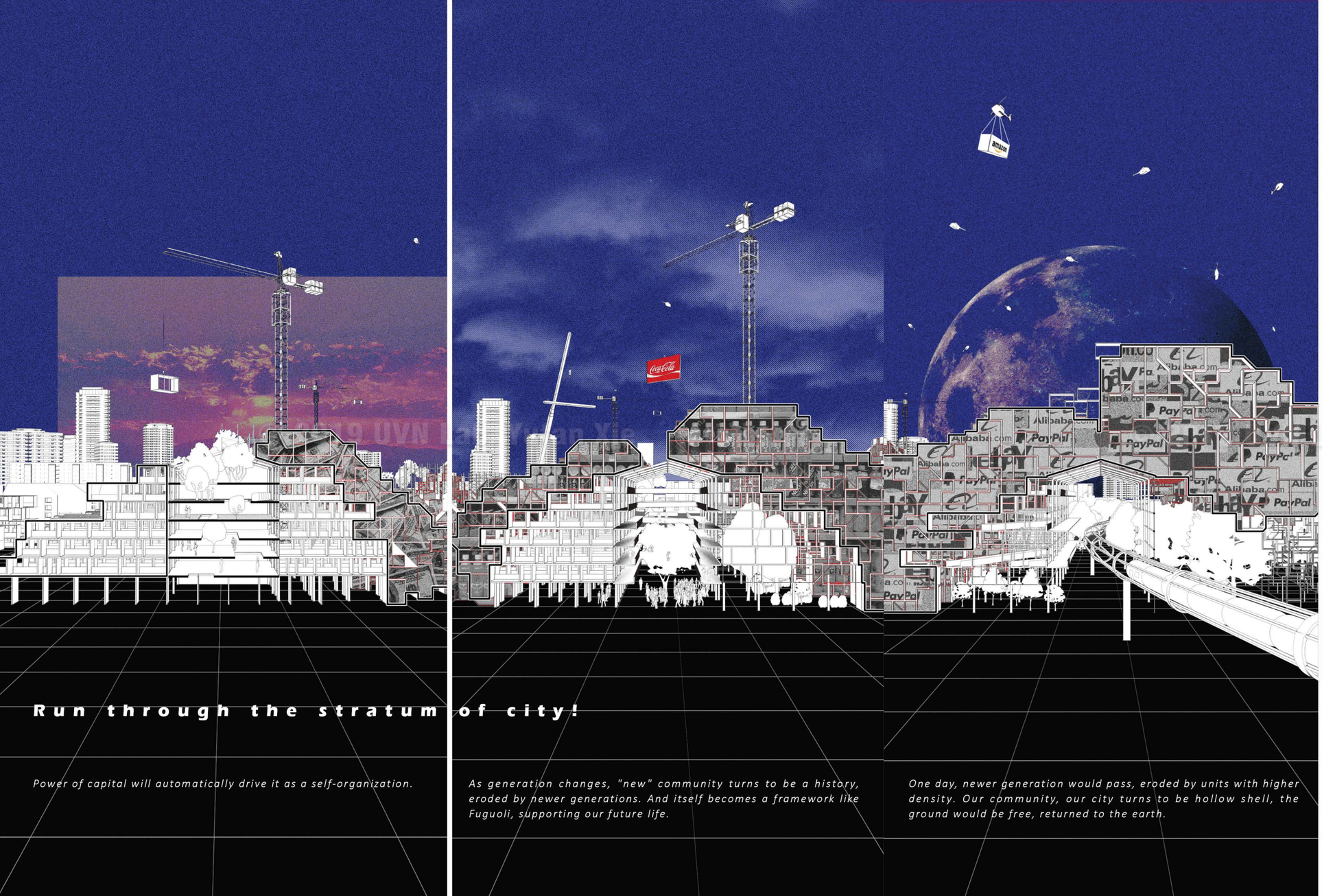
Run! Run! Fuguoli! Run into the sky!



Run through the stratum of city!

Power of capital will automatically drive it as a self-organization.

As generation changes, "new" community turns to be a history, eroded by newer generations. And itself becomes a framework like Fuguoli, supporting our future life.

One day, newer generation would pass, eroded by units with higher density. Our community, our city turns to be hollow shell, the ground would be free, returned to the earth.

Human city would be a illusion. Only from frameworks they left we can see our past, above which our new city could be built. It's a stratum, we left our trace behind, why not return something we borrowed from the earth?

SYSTEM of SPACE

003

SHARING THE WALL

Great Ormond Social Housing

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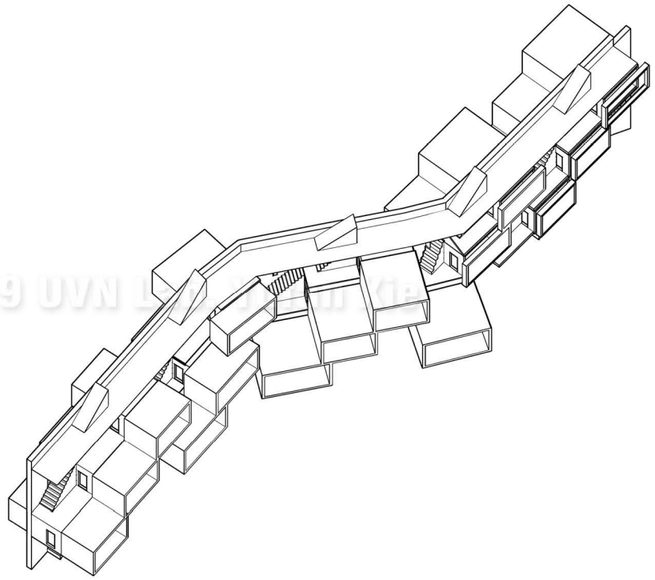
Year 4 project
Social Housing Design
exchange programme
UoW, London, 2018

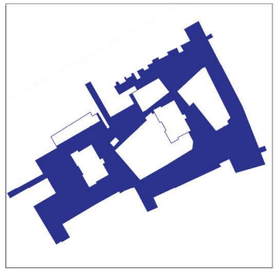
Instructor: John Zhang

What we are facing is a diversified modern world. Research on individuals and relationship between groups helps us understand the space we inhabit and the model of living. The space is a system - a system of implicit hierarchy, a structure of society.

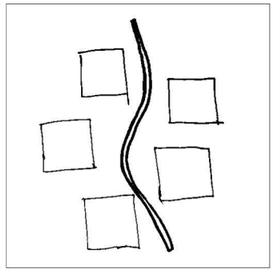


We were asked to design a social housing in Great Ormond Community without removing any existing building. I implemented a linear sequence of shared wall space, which is similar to my Fuguoli Project, but dealing with totally different context and culture. In a limited space of community, the new housing could be a medium between groups, a system of bridging spaces.

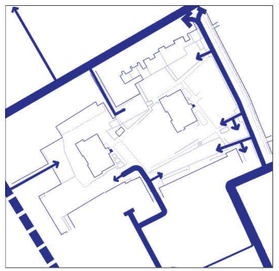
WALL - in a limited community



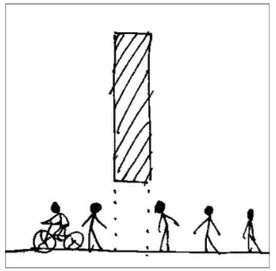
Limited Space



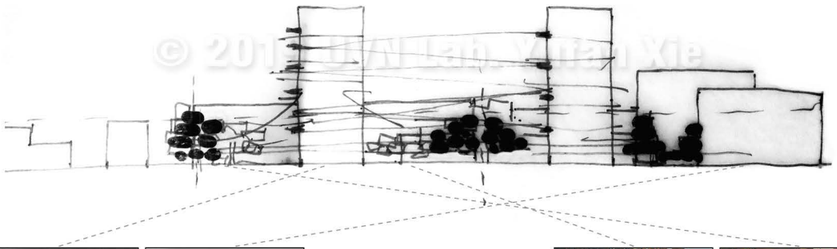
Snake Wall



Ground for Walking



Lift Up

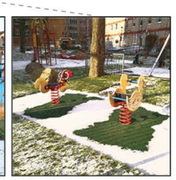


New Immigrants

Mid-East immigrant families, mostly with children.

Lonely Seniors

Old people with leg issues, who live alone in their flats.



Poor Students

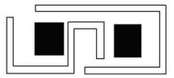
Young workers and students in London

Sick Kids

Sick Kids and their families/nursing staffs Addtionally for patients from other hospitals nearby.

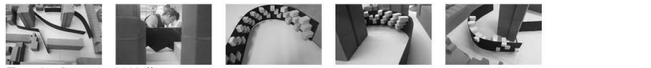
BRIDGE - between mixed groups

Finding the WALL



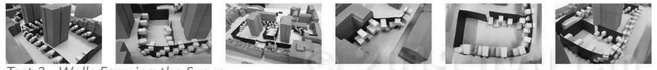
Wall space prototype

Units plugged into the wall, extended to face inside

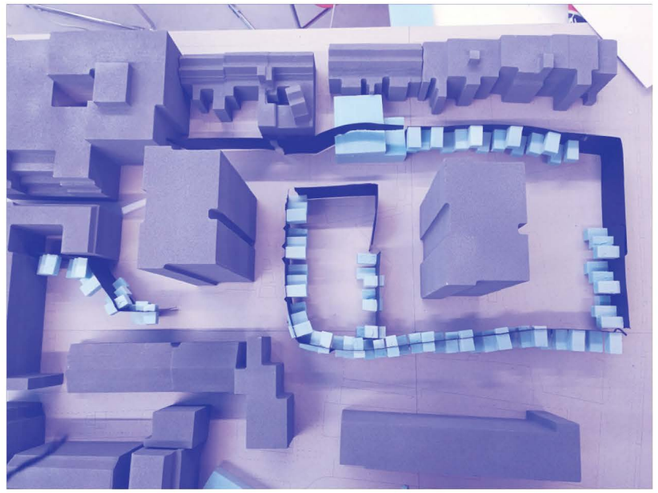


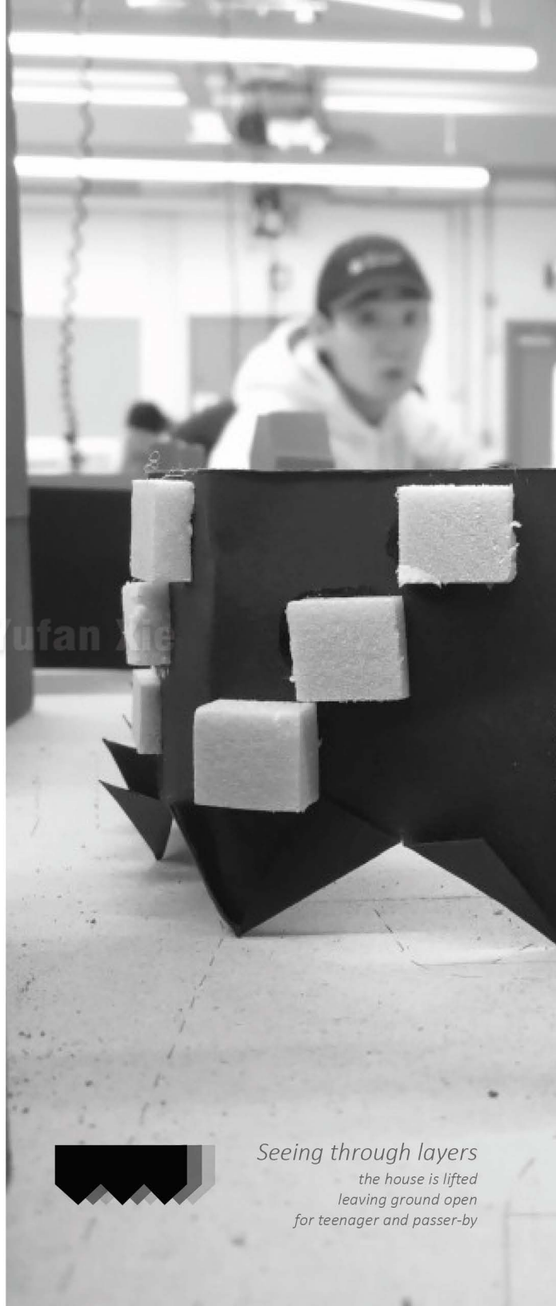
Test 1 - Seperate Walls

Test 2 - Curvature Walls



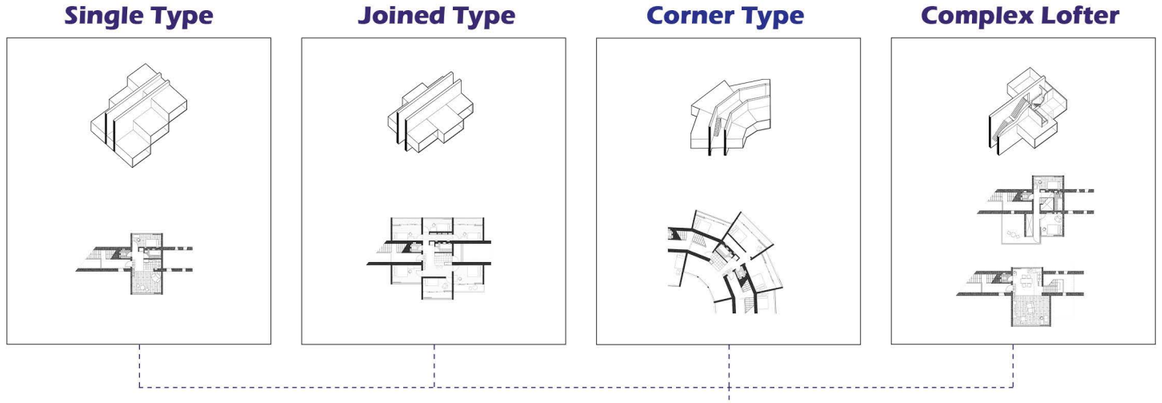
Test 3 - Walls Framing the Space

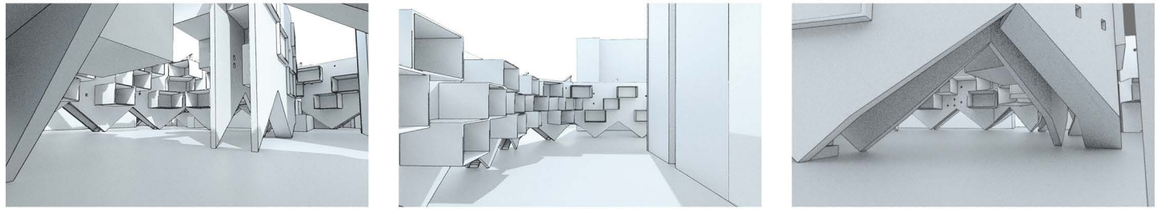




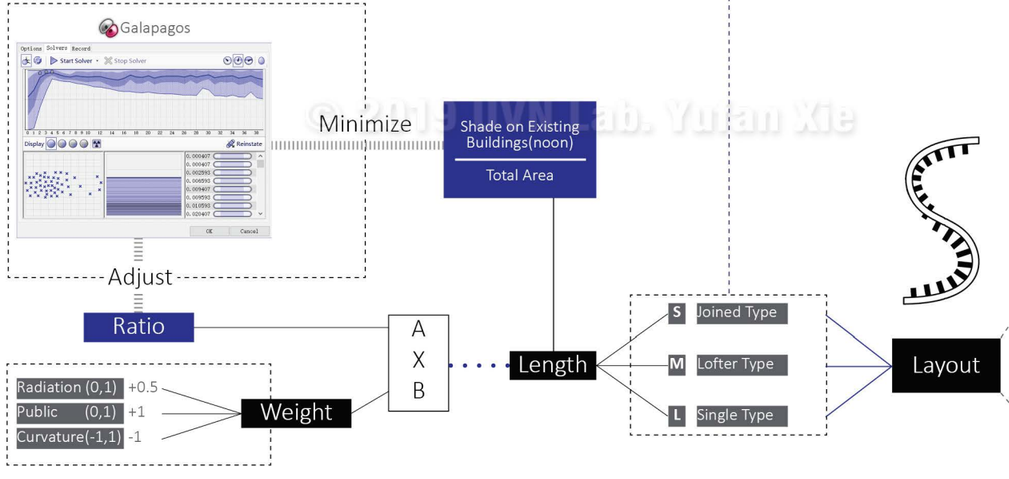
Seeing through layers

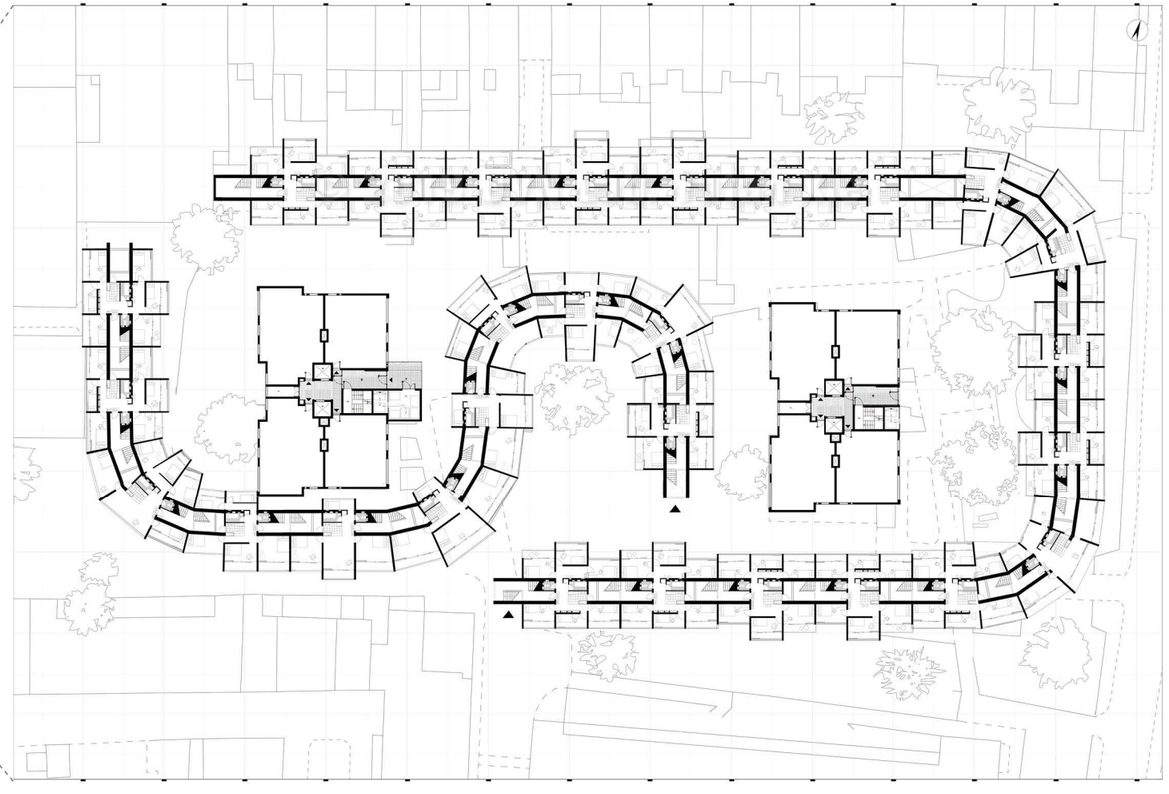
the house is lifted leaving ground open for teenager and passer-by





Minimize the shade & Maximize the area

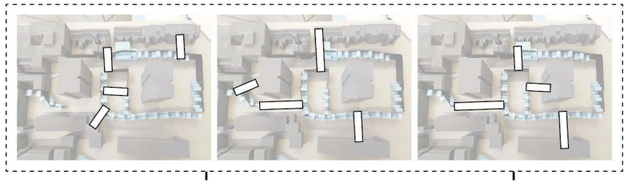




I wrote a length-computation method based on an environmental variable, which is a weighted mean of factors of radiation, public and wall curvature.
I hope to keep units always facing inside, producing contact between public area and balconies.

Depending on distributed area, several types can be selected from library. Small units are combined to be a larger shared type, middle-sized units are conbined vertically to produce higher space quality, large units are designed to be individual single type for higher efficiency.

Finding the BRIDGE

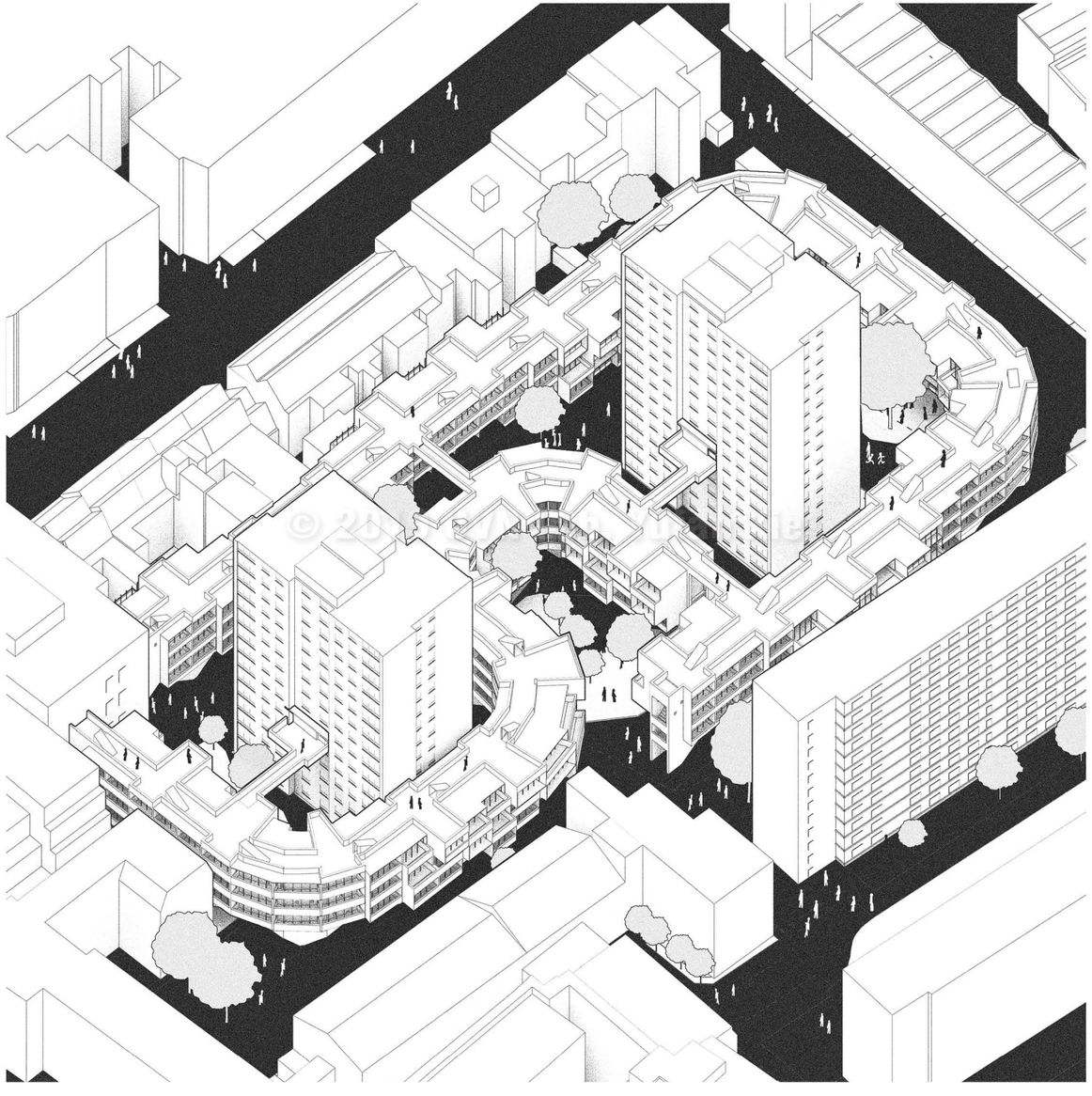


It's not an isolated wall, life within the wall is integrated to the community, by bridges on the roof and lifted arches of the wall. The roofs of lower spaces could be an extended balcony of upper ones, and top roof could be expanded then. A thin wall turned to be a open space in the air.

The ground level is totally free for existing residents, such as childrens and elder ones. Patients from hospitals nearby can play down there, too.

Apartment(linked) *Flat(linked)* *Playground* *Hospitals*

LIVE WITHIN THE WALL



Old roof and new roof, turns to be a whole. Seniors with leg issues can hang out directly from the floor they live in.

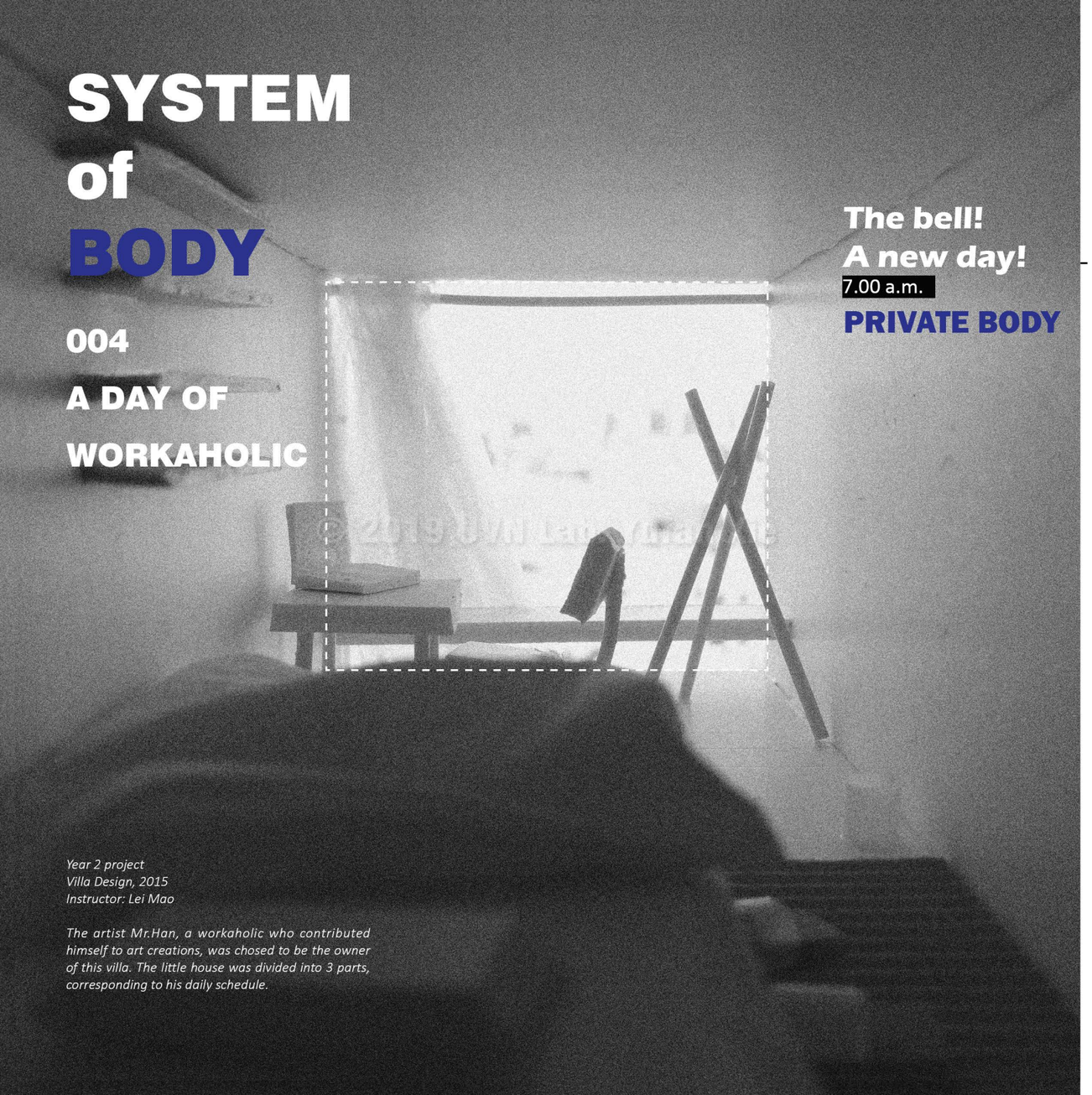
LIVE WITH THE WALL

The ground level would be a free space for walking and cycling under arches - patients from hospitals nearby could also hang out around.

When I walk inside the wall
The shimmering light runs
through holes on the wall
producing a cosy atmosphere

SYSTEM of BODY

004 A DAY OF WORKAHOLIC

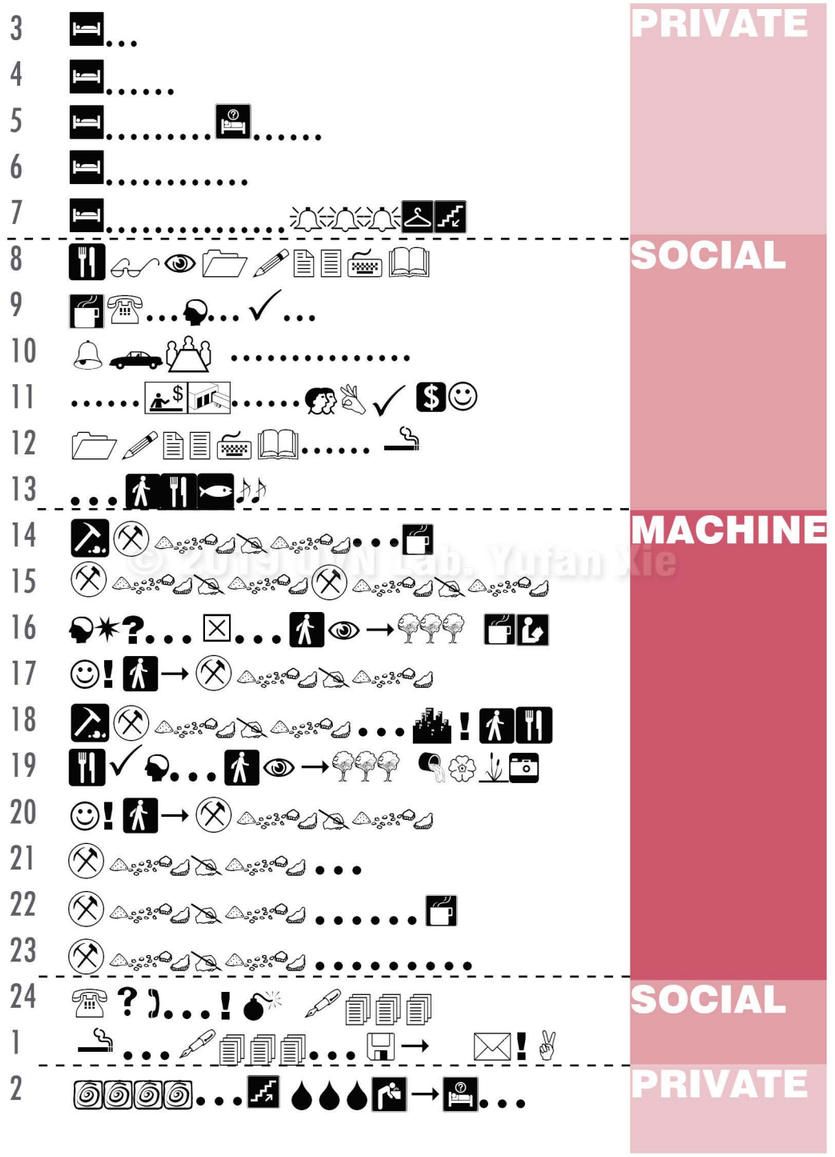


The bell!
A new day!
7.00 a.m.
PRIVATE BODY

Year 2 project
Villa Design, 2015
Instructor: Lei Mao

The artist Mr.Han, a workaholic who contributed himself to art creations, was chosed to be the owner of this villa. The little house was divided into 3 parts, corresponding to his daily schedule.

Mr.Han
Hegezhuang, Beijing
Sculpture Artist
Writer

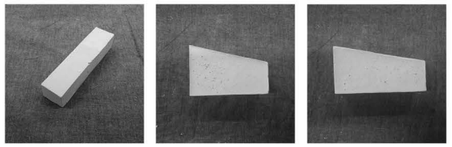


Comparing with physical body, the space of our body is a discrete system.

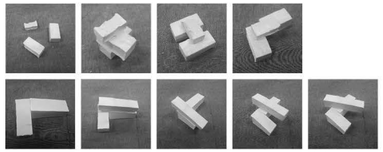
SOCIAL BODY

The body interacts and is shaped by social networks.

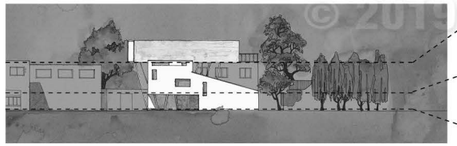
Private Box **Social Box** **Machine Box**

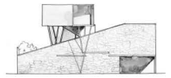


The body is splitted, into fragments of daily life.

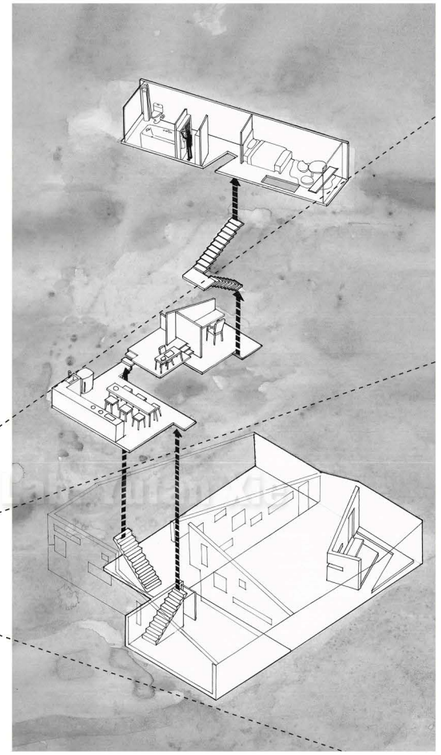


Houses are boxes containing our bodies





Most part of my life is based on works.I hope my livingroom could be a small tube lifted off the ground, with a perfect view in E-W direction. So I can see sunrise and sunset everyday.

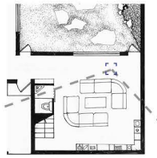


A nice-fried egg! Now let me check my schedule.....

8.00 a.m.

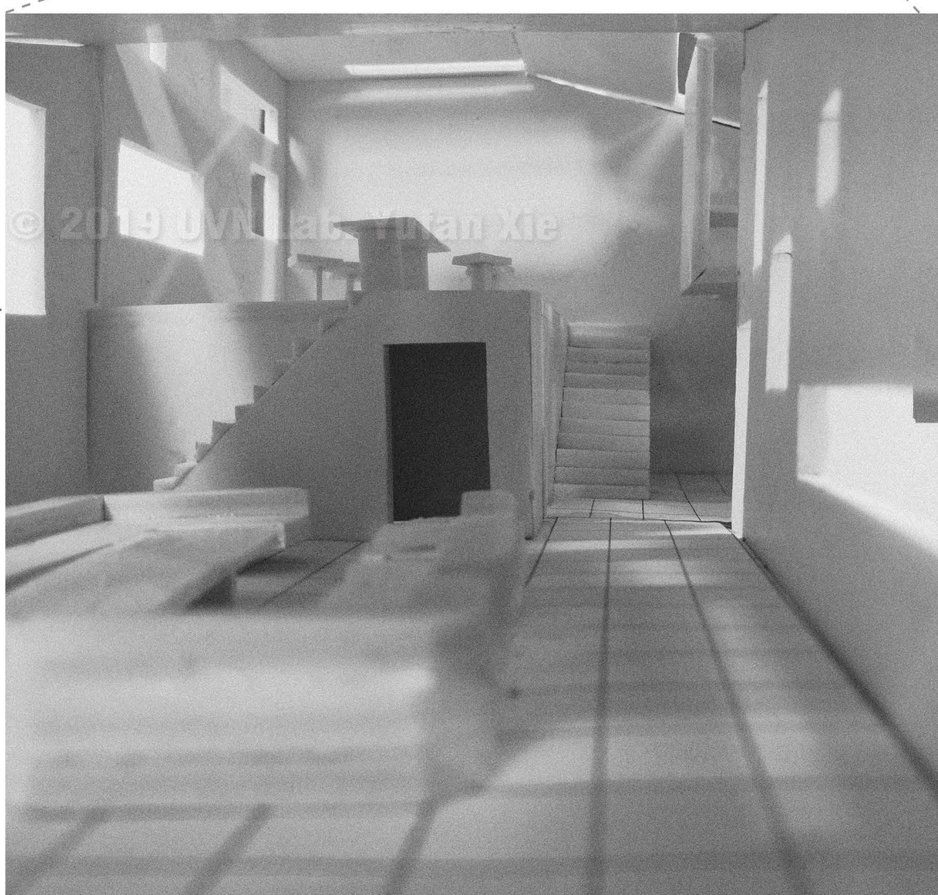
The kitchen at middle part, together with writing space, is a platform that connects private part and others. He start, and end his day on this level.

The windows on the wall, provided him with aperfect view, to see scenery. Light drips through gaps on the roof, makes the whole space full of cozy atmosphere



Phone call? ..... Buyer comes! Be refreshed!

10.00 a.m.



MACHINE BODY

The body is a machine that produce machines.

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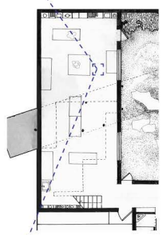
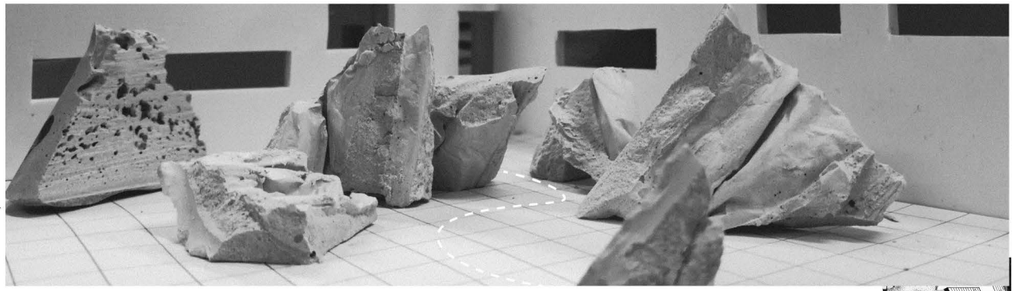


The best time of my day! Sculpture is my life!

2.00 p.m. *I 'd like a big working area in the 1st floor, I'd be happy to see landscape through windows.*

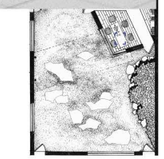


INTERIOR LANDSCAPE

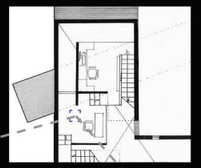
The exterior landscape at the center of space, is an interior space of body. It's a private garden for his own, apart from his social life.

I'm stuck! Take a rest. I gotta get a cup of tea...

4.30 p.m. *Only in this place can I enjoy my inner peace.*



On the middle platform of writing, he ends up his day. Then he could get back to his own life, apart from his daily work.
It is close to living room, where he could enjoy his dream.



Ah!! Editor is calling! I forgot my writing work!

11.00 p.m. *I wish I could sleep earlier, but my life does not allow to. Luckily this platform is close to livingroom.*

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MEDIATED

"Our own body is in the world as the heart is in the organism: it keeps the visible spectacle constantly alive, it breathes life into it and sustains it inwardly, and with it forms a system."

------ Maurice Merleau-Ponty

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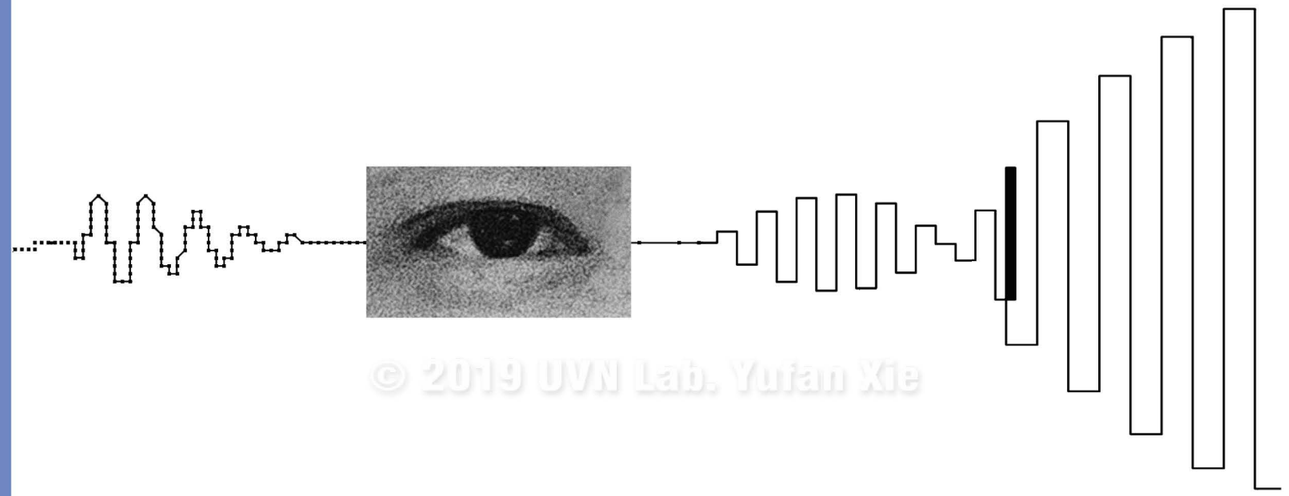
Where we human stand, right between reality and incorporeality, is a space where transitions take place. With new medias and fabrication systems - our new eyes and new hands - the digital system can be quickly realized.

SPACE ---------- SOLID



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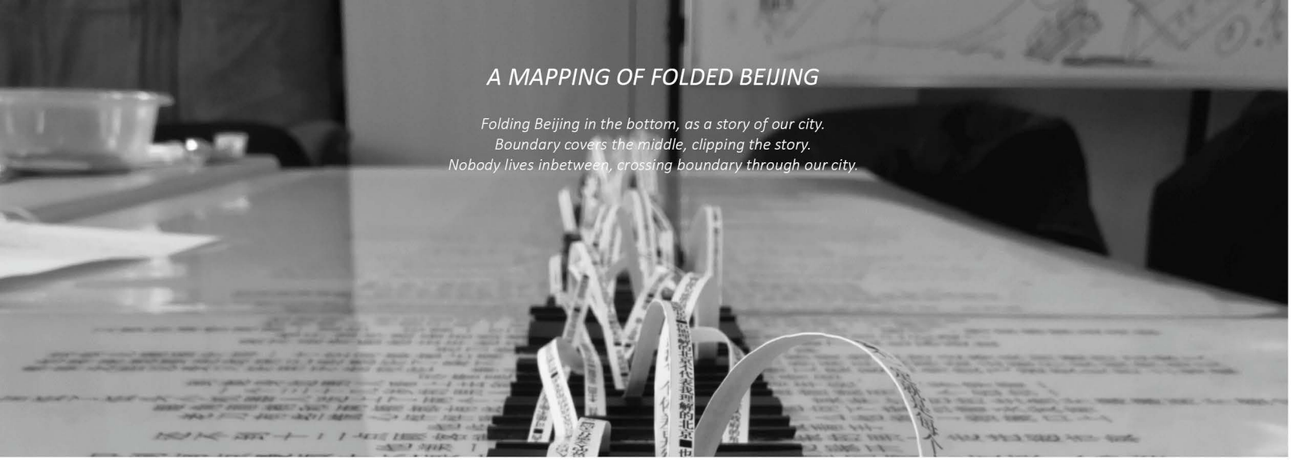
Space Mapping
MEDIA

Augmented Senses
HUMAN

Coordinate System
FABRICATION

Material World
CONSTRUCTION

In the foreseeable future, our mind will still be the core of design and construction before the machine is truly intuitive



A MAPPING OF FOLDED BEIJING

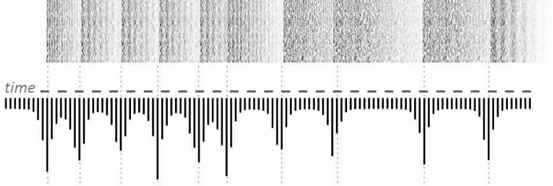
Folding Beijing in the bottom, as a story of our city.
Boundary covers the middle, clipping the story.
Nobody lives inbetween, crossing boundary through our city.

5-0 MEDIA BOUNDING BARCODE

Interactive installation
2017.9 CAFA International Studio, Section I "Folding Beijing"
2018.9 Beijing Design Week, joined as a part of project "Finding MIA"

https://vimeo.com/242415292

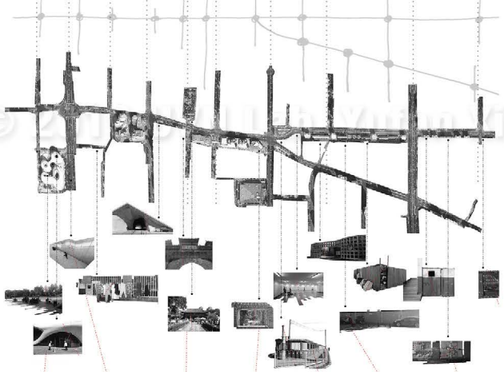
Group member : Luo Runke, Mira Simeonova,Shi Haoyue, Xie Yufan
Duty: Coding, idea, installation making



Story 1
Folding Space
Track of Space

When we are walking down the streets, we are experiencing the rythm of aural space. Standing on the crossroad, we are flushed by sea of information and sound.

The street is a linear stage on track, on which we spend out daily



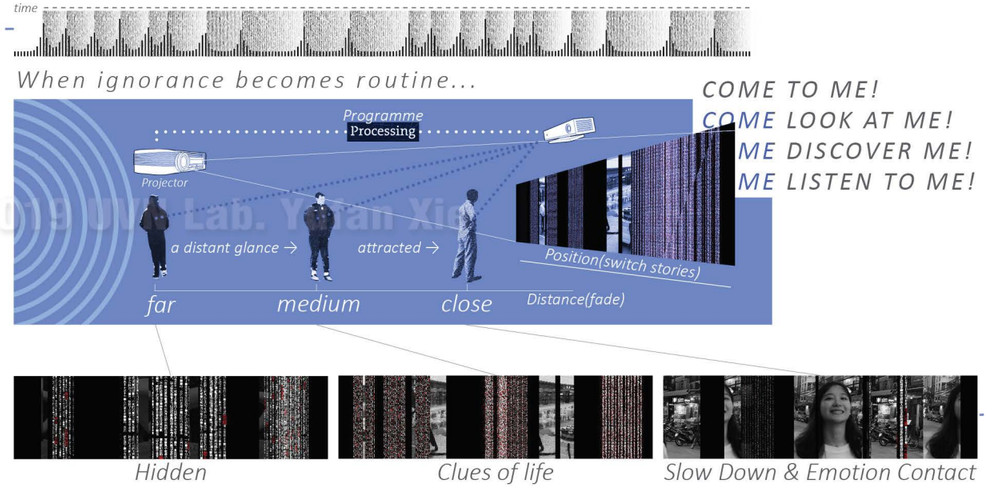
Story 2
Loop of Boundary
Physical & Abstract boundaries between us

Comparing with linear street, boundaries along the streets - doors, barriers, cars, walls and buidlings - are loop sequence of repeating

The street, a stage where our story begins

Folding Beijing - Hao Jingfang

The narrative of Folding Beijing is a metaphor of real Beijing nowadays, the nobodies including you and me, are isolated,"FOLDED" into flat characters. By breaking boundary between us, we unfold every single person to a vivid one.
In an unspecified future, Beijing within the 6th Ring Road is divided by three classes physically, sharing the same earth surface in each 48 hour cycle: The first governing class with 5 million population occupy the space for 24 hours from 6 am to 6 am, after which the earth's surface will be turned upside-down, to move the second and third class up. The second class has 25 million middle-class people, and will enjoy 16 hours from 6 am to 10 pm. Then, the building of the second class will fold and retract while the high buildings of the third class unfold and rise, which hosts 50 million lower class people, who can be awake for 8 hours till 6 am. When each class is turned down or folded, the residents there would be put into sleep. Travelling between classes is tightly controlled and violators would be put into jail.



Noise and text of street flushes our mind at intervals, take us along with the pattern of street.

Daily life is flashing fast like barcode, impossible to know a stranger on the street.
As we step forward, to see, to touch, boundary fades away, we get directly to stories of single persons.

Boundary loops,until we step forward

Get closer, we discover

Story 3
The Nobody

I'm a house sale, *about 2 years ago I left my home for Beijing.*
My daily work is a little bit tedious, some times I have to stand for hours, but I like my co-workers, they are nice guys

I've retired for 30 years, now I'm 90! See? I'm quite fit!
When I was young, China was at war, I still remember the scenes I saw, the enemy was so hateful!

Coincidence! I'm from Sichuan too, *I've been working as a cleaner for 4 years.*
Tired? Nope, I mean you have to pay for what you wanna get, now I'm working for my whole family!

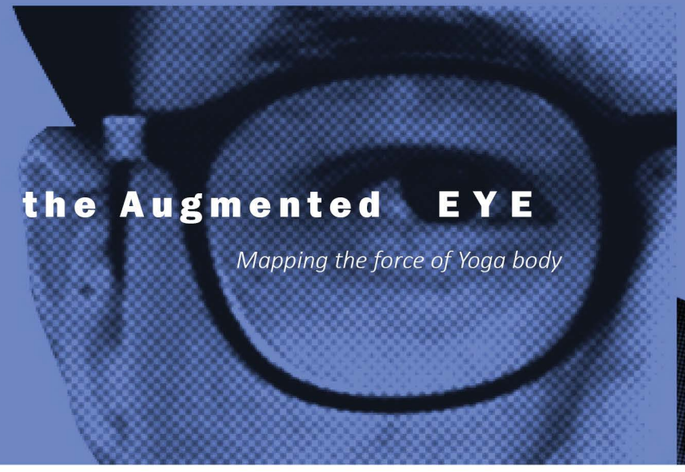
Me? I'm fixing tiles, *my co-workers are upstairs. It's not that hard for me, but you know that, transportation is a trouble for me...I have to spend over 2 hours on my way to downtown everyday.*

This cafe is mine, I just begun my business *for months. It's not that easy to run this in Beijing, the rent is so high, I'm praying for that everyday.*
Cleaners? I don't really care about others around there.....

Extensive project of Fologram Fabrication, 2018
Advisor: Cameron Newnham, Gwyllim Jahn
Group Member:
Tong Yong, Wang Yumeng, Xie Yufan, He Jingyi
Duty: Coding, idea

Human Eye as a Guide

Our human eye helps us to understand the world and rules under form - which exactly cannot be replaced by machine.
It guide us to create with tools - so it is for AR tools.



the Augmented EYE

Mapping the force of Yoga body

the Augmented HAND

Construct the force with Hololens

Machine Eye as a Tool

The eye of machine- a tool, a language which helps us to measure the world like ruler.
AR headset, a second eye of us, extend our ability to fabricate with higher accuracy.
Compared to conventional system, media that linked directly to our perception is our design tool in the near-future.

5-1 HUMAN DIGITAL MUTATION

STABLE SYSTEM

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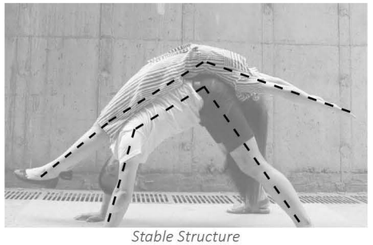
Body

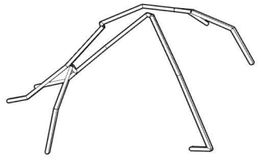
Yoga



Stable Structure

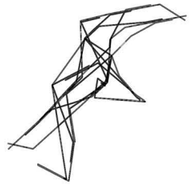
Digitize

Mapping with mark detection

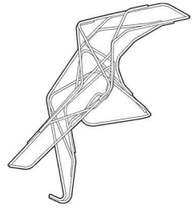


Improvisation with subjective selection

Mutation



Length optimization



Splitting with scripts

STABLE SYSTEM

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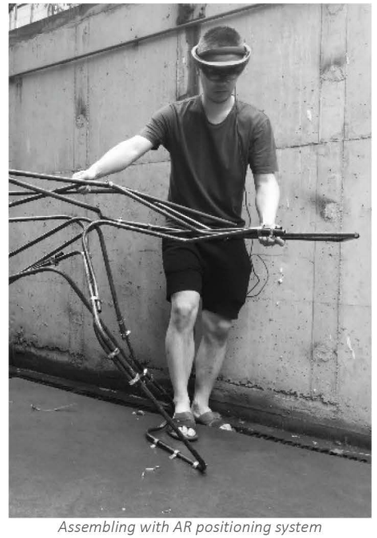
Fabrication

Bending under AR instruction

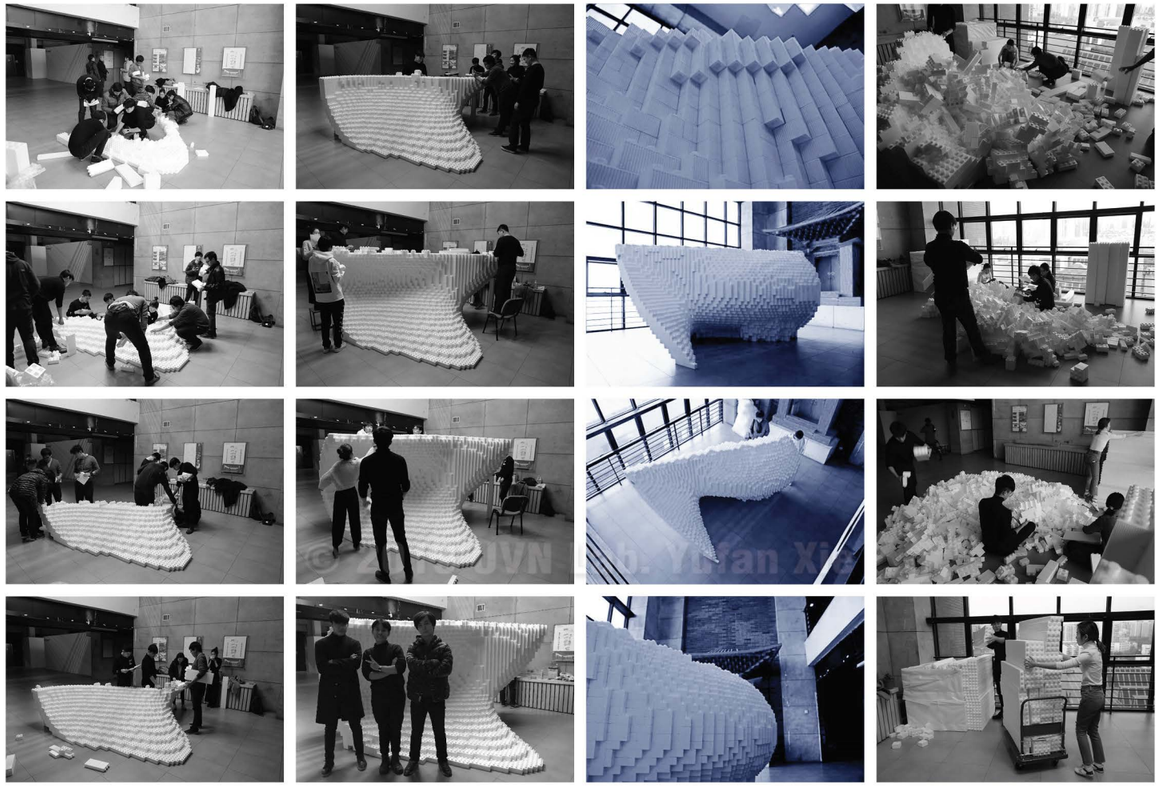


Assembling with AR positioning system

Finished Product

Should architecture be everlasting?

The body architecture, rusted and ruined down like our human body.



The assembling process only took 5 hours, which is unexpectedly fast to build such a curvature wall.
The removal took only 1 hours, including packing up.

5-2 DIGITAL FABRICATION

MACRO - Corbel Ledge System(Team CAFA)

Team CAFA is a parametric research group led by Wedong Wang.
Member: Chen Zhaoming, Qin Jiachen, Wu Yuren, Xie Yufan, Yan Xin, Yuan Fangling, Zeng Wentao
Duty: Modeling, construction, graphic

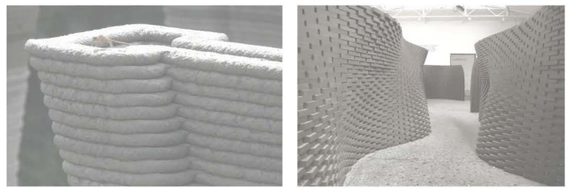
Corbel structure in Chinese traditional buildings

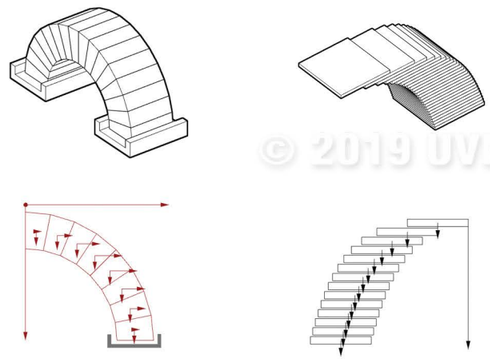
Corbel Structure in world-wide remnants

History of Corbel Vault

Chinese Traditional dense eaves tower, which was developed from loft-style tower, are masonry buildings with many eaves. Besides, the corbel method is also used in many other traditional buildings.

Today, methods we used to build curvature walls in digital fabrication - deposition printing, bricking with three-axes and 4 axes gantry crane, six-axes robotic - basically are all derivatives of corbel ledge. The difference is only the accuracy of layers.





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Normal Vault

Inevitable Horizontal Force
Need support structure

Corbel Vault

Vertical force only
Self-load bearing

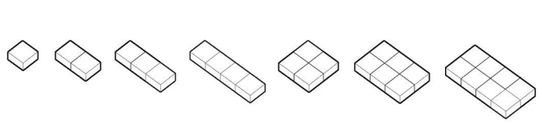
***Corbel Ledge System** is the first application of complex corbel form in real architectural scale. The corbel vault, is a typical brickwork in traditional masonry buildings, where rows of corbels gradually build a wall out from the vertical, has long been used in vaultings, hoods of tower and eaves.*

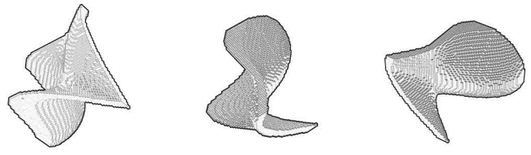
Total Overhang =

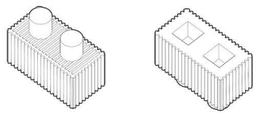
0.5 (1 + 1/2 + 1/3 + 1/4 + 1/5 ..... + 1/n)*

Self Supporting Structure & Algorithm

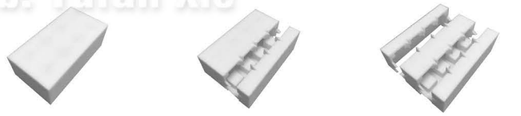
We designed an LEGO-style algorithm(for the original lego algorithm is not structure-oriented) to generate bricks from non-standard shape. ***The length, size, location of bricks are specified to enhance the structure****(e.g. long bricks are generated mainly in overhang part to afford the load. Lower layers interlace with upper layers to avoid discolation.)*
Then following the layers, we can easily build complex shape mannually without any robot or machine.



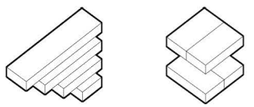




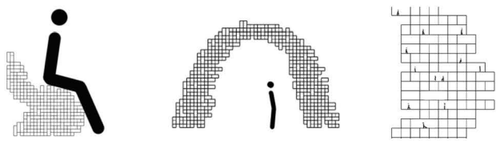
Friction Surface



Extensive research on single module



Length-Overhang
+
Interlace Bricks



Furniture *Pavillion* *House*

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The corbel ledge provides us with a coordinate system in real world.

In 2018 August, we tried pre-fabricating and glue reinforcement. In few hours of the beginning, we built 6 part in advance in our studio - including 5 legs and 1 roof. Then we transported them to exhibition on opening day, finally finished within 1 hour. A type of adhesive glue is used, to make sure that it would not be crashed down by impact or during transportation.

Pre-Fabrication & Glue Reinforcement

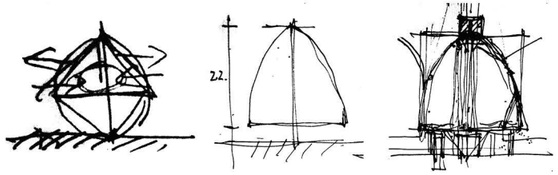
2018 Hongkong-Macao Visual Art Biennale

Member: Li Dijin, Man Yuan, Xie Yufan, Chen Zhaoming, Wu Yuren, Yuan Fangling
Duty: Construction leader

Pre-fabricating

Assembling

5-3 CONSTRUCTIONS

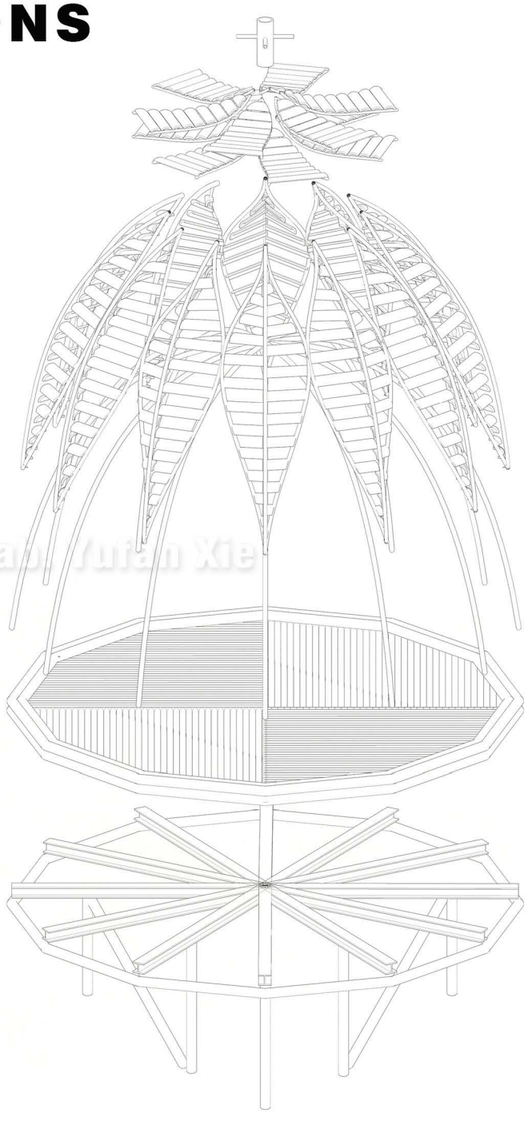


Louna - Hui Pavillion

© 2019 UVN Lab / Yulan Xie

https://vimeo.com/296157651

"Hui" has special meaning for us. We built the pavillion to memorize a friend of us. The system includes 12 leaf shutters which are prestressed, ventilated and water-proof. 12 small "leaves" are fasten to joint on the top, to cover holes between arrays of shutters.



Digging base

The site is unexpectedly steep, entwined with twisted bamboo root. With help from workers, we finished this heavy work in advance of construction.

DAY 1

Assembling steel frame

Bamboo is quite challenging as a new material, we spent 3 days on preparing it.

DAY 2 DAY 3 DAY 4

Testing material

Bamboo Framework

DAY 5 DAY 7 DAY 9

Bamboo shutter

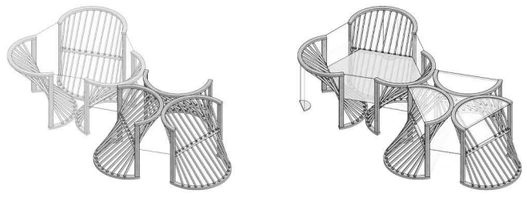
DAY 10 DAY 11 DAY 13

Roof Structure

DAY 14

https://vimeo.com/296156033

Xiamutang - Plum Blossom Fun



We took the form from blossom of plum into the construction system, dividing it into two mirrored group of 3 units, between which the net and trampoline are connected to framework. Our goal is to build a fun place for local kids - the house next to it would be renewed as a library.

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Working on site

DAY 1 *DAY 2*

Preparing Material

Brushing wood and drying took us 2 days, once the rain comes, we had to pack up materials.

DAY 3

Knitting Frame

Workers helped a lot on welding. This ensured the safety of our construction.

DAY 5

Marking Beams

DAY 7

Children voted us with their laughter

Assembling Nodes and Beams

We are devided into 3 groups, to assemble wood frames quickly.

DAY 8

Binding Net

Binding work is quite heavy that we had to work against tension. Luckily, our tutor is professional.

DAY 10

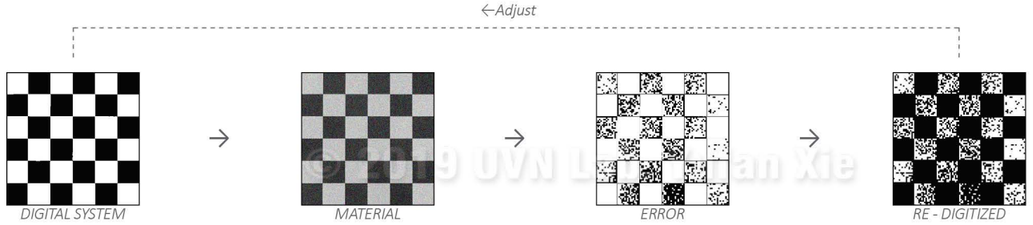
Tensify

DAY 11

Trampoline is a great test of structural stability, beams have to work against stress.

FUTURE

Could material world intervene digital system?



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DEVIATION?

*There is a deviation between **rough material** world and smooth **digital systems** - error and accuracy.*

FACTOR?

*Could we utilize this **deviation as a factor**, to make a reverse intervention of material world on digital system in the process of construction?*

Thanks for reading!

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