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**DOES ARCHITECTURE
HAVE SPONTANIETY?**

**COULD ARCHITECTURE BE
PHASING IN PERIODICALLY?**

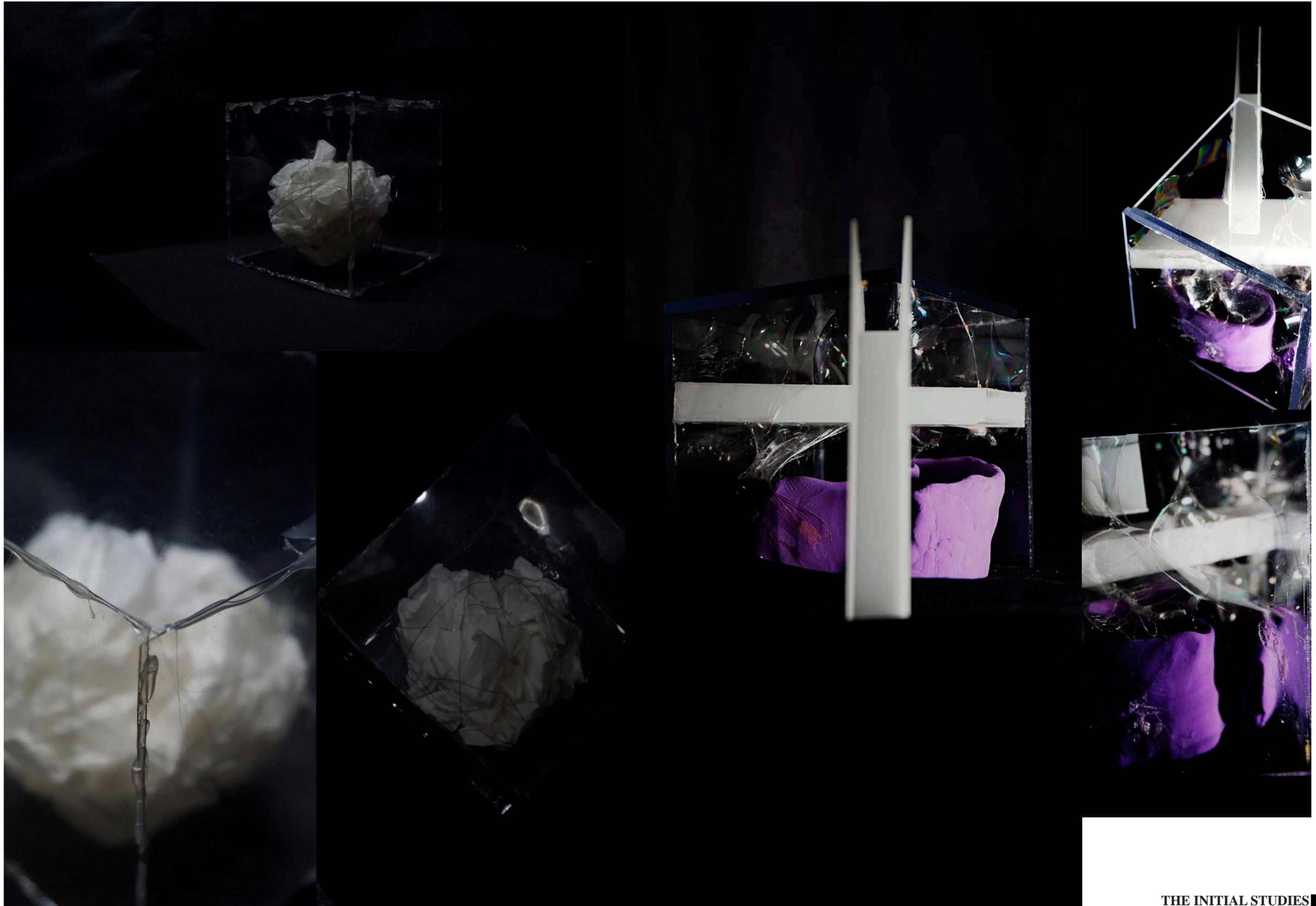
**IS ARCHITECTURE JUST A
CONTAINER OF ACTIVITIES?**

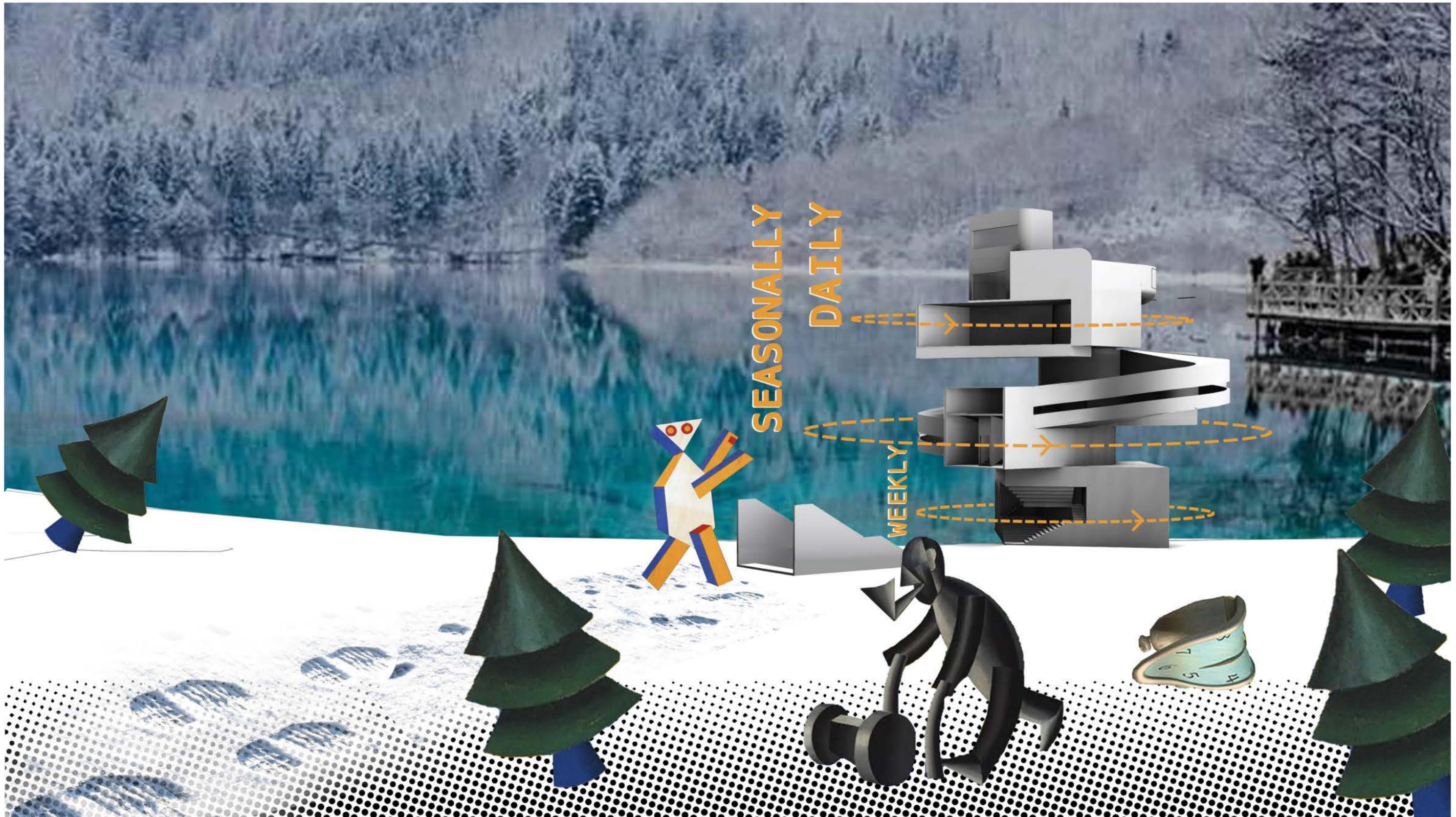
DOES ARCHITECTURE HAVE SPONTANIETY?

COULD ARCHITECTURE BE
PHASING IN PERIODICALLY?
A CLOCKWORK HOUSE
IS ARCHITECTURE JUST A
CONTAINER OF ACTIVITIES?

**I, ME, MYSELF
2021 SUMMER**

CRITIC: DAN WOOD





Mr. O is a paranoia who wants everything to be under control. He lives in a house called “clockwork house” which rotates according to time and his peculiar habits. He’s too lazy that he wants to lie down at any time.

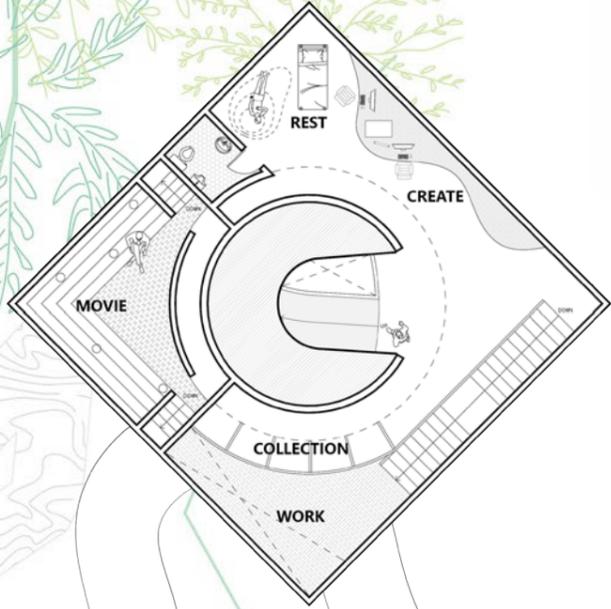
The house is rotating to capture the best views of every moment, and there are 3 parts of it with a traffic core in the middle.

The first part is the daily one, which rotates in the cycle of a day to accommodate his sleeping, working out, cooking and dining in a chronological sequence of one day, he would enter the space that corresponds to the fixed hole in the core at the designated time.

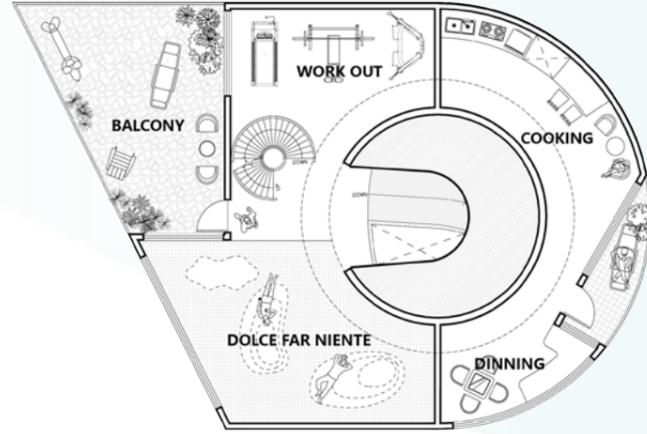
And he combines the cellar and the closet as the second part to fulfill his eccentricity of trying new clothes in a tipsy mood. And this combination rotates seasonally to satisfy his demand that he could enter the combination to immediately get the clothes and the booze in the corresponding season which is pre-arranged neatly in sequence from shirts to coats, from beer to whiskey.

The third part is working and recreation one, he determines not to work on weekends, so there’s no access to the workspace on weekends and chilling area on weekdays. He lives in this kind of clockwork-like life mode and is satisfied with it, he thinks he’s controlling the whole mechanism and the regime, but instead, it’s the mechanism that is in control of him...

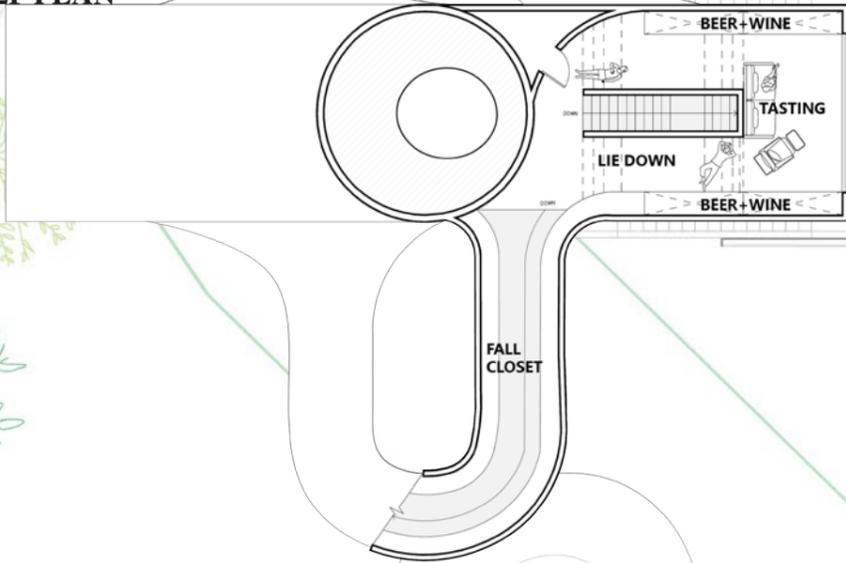
1F PLAN



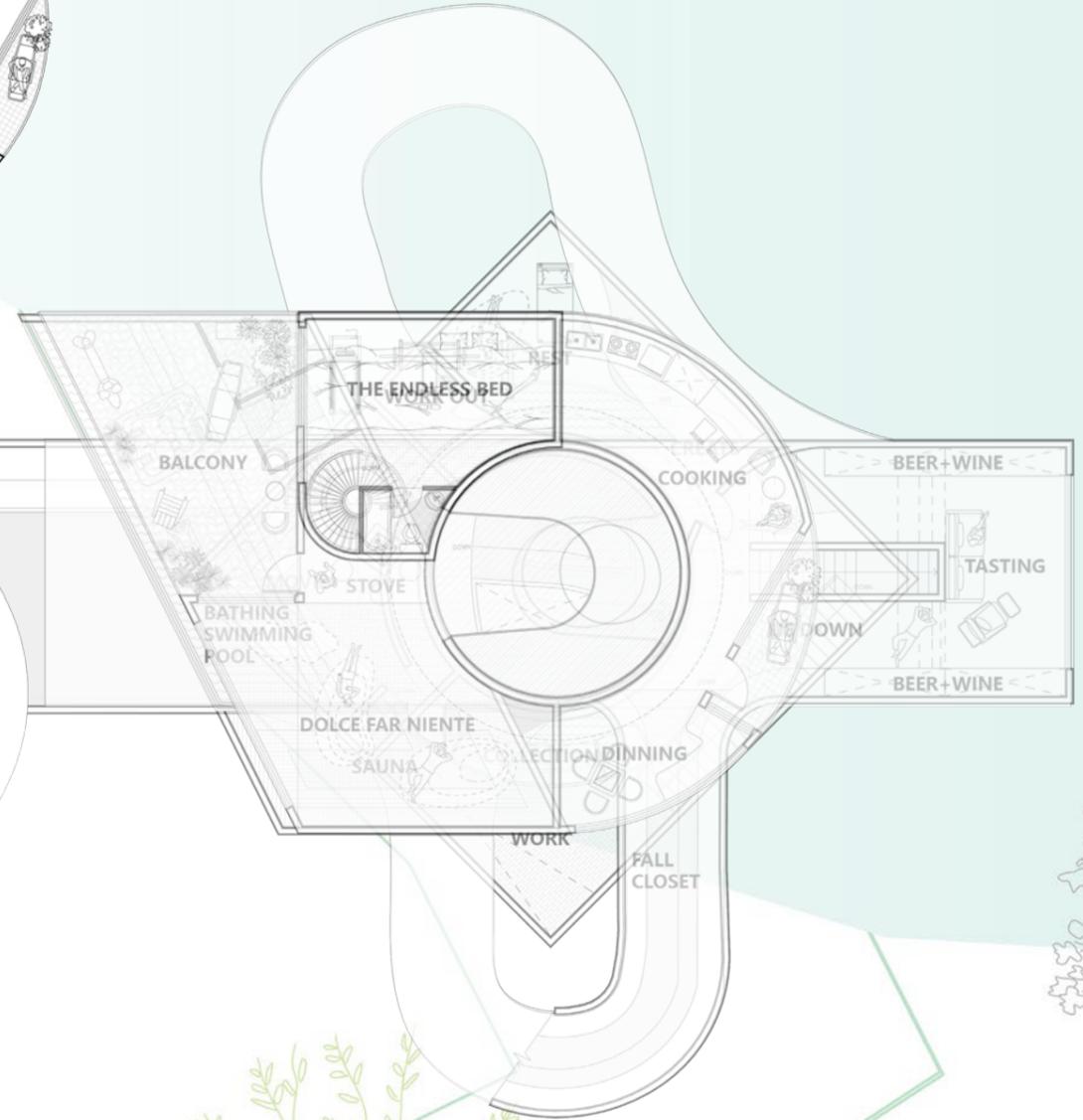
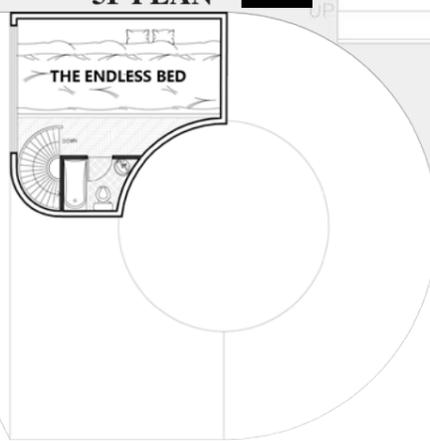
4F PLAN



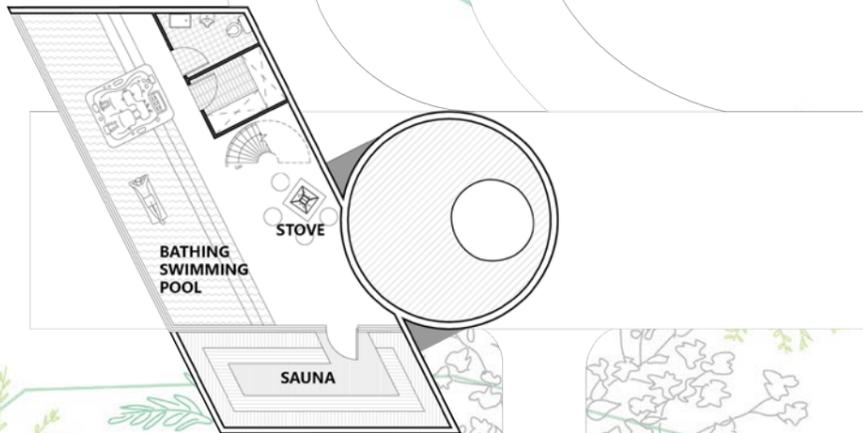
2F PLAN



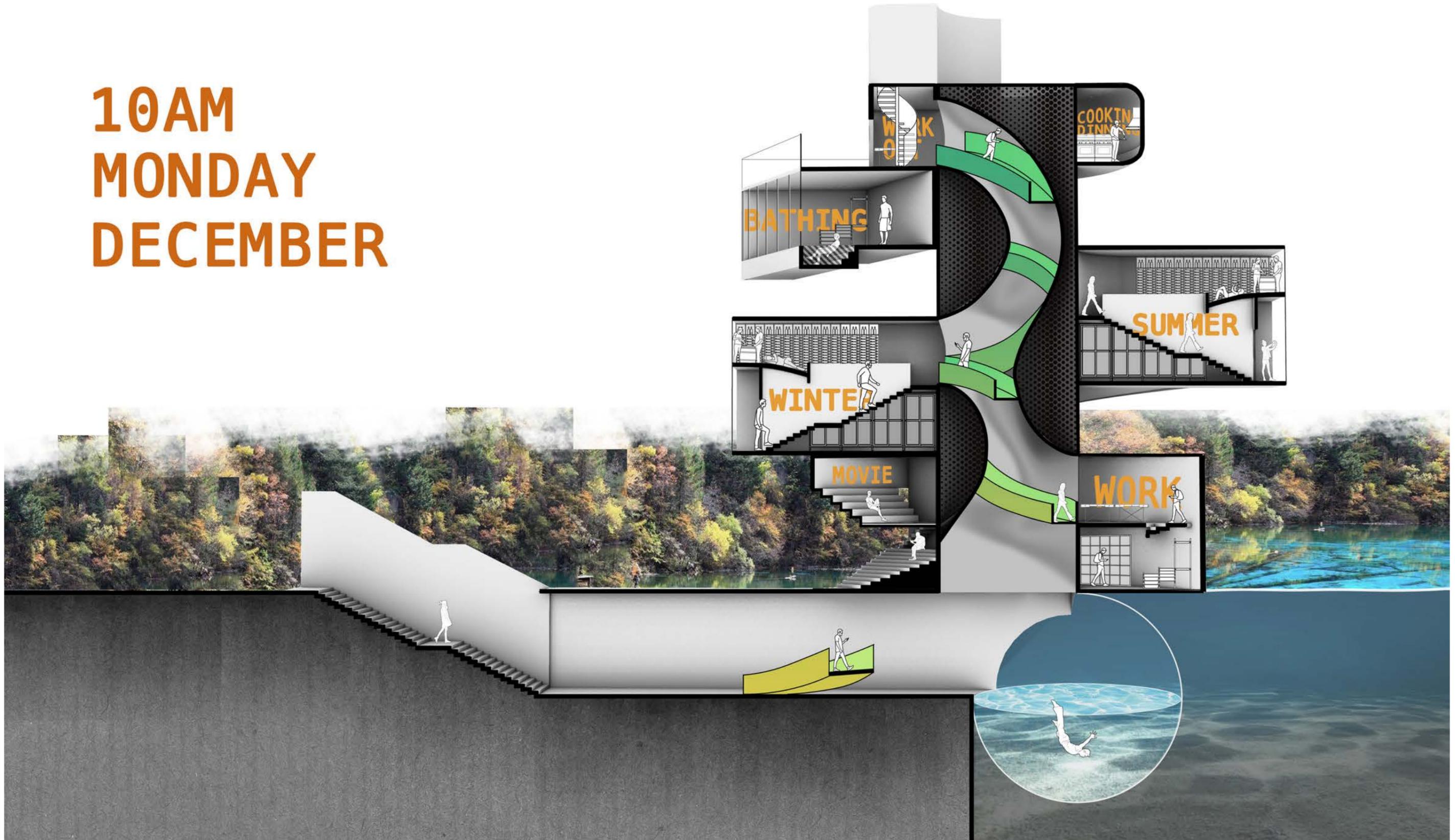
5F PLAN



3F PLAN



10AM
MONDAY
DECEMBER



DOES ARCHITECTURE
HAVE SPONTANIETY?

COULD ARCHITECTURE BE
PHASING IN PERIODICALLY?

**GATHERING, RECONNECTING
& GAINING BACK**

Speculating New Futures
for Bodies, Buildings and the BQE
2021 FALL

CRITIC: LAURIE HAWKINSON

The construction of the Brooklyn Queens Expressway (BQE) in 1954 torn the communities at both sides apart, and blocked the approach to the waterfront of the residents on the Brooklyn Heights. The project is aiming to bridge and reconnect Brooklyn Heights communities to the waterfront and the communities there, and gain back the views occupied by the luxury condominium: Pierhouse at Brooklyn Park. Meanwhile, it connects the Brooklyn Promenade and the BQE, building the connection vertically and horizontally, creating the dynamic relationship of all layers there, and providing the communications. What's more, it's a way to save the BQE in disrepair instead of tearing it down.



In **1954**, the Brooklyn Queens Expressway (BQE) was built, which torn the communities at both side apart, blocking the community communication.

In **2010**, with the construction of Brooklyn Bridge Park, the residential buildings were demolished, there are no such divisions now, but solitude.

In **2013**, the Squibb Park Bridge was opened, which connects Pier 1 with Squibb Park in Brooklyn Heights, trying to stitch the relationship from the heights to the waterfront. And it was demolished in **2019**, then replaced by the current bridge in **2020**.

In **2015**, the Pierhouse at Brooklyn Bridge Park was started constructing. Even though the communities at the waterfront were back, it blocked the views from the heights, and it incited a battle from the residents there.

Bipartisan Infrastructure Bill		Amount(billion)
Total		\$545
Transportation		\$284
Roads, bridges, major projects		\$110
Safety		\$11
Public transit		\$39
Ports and waterways		\$17
Airports		\$25
Railways		\$66
Electric vehicles		\$15
Reconnecting communities		\$1
Pollution		\$21
Cleaning up abandoned wells and mines		\$21
Superfund sites		\$240
Buildings		\$240
Power infrastructure		\$65
Eastern water infrastructure		\$8
Water infrastructure		\$55
Broadband		\$65
Resilience		\$47

Reconnecting Communities

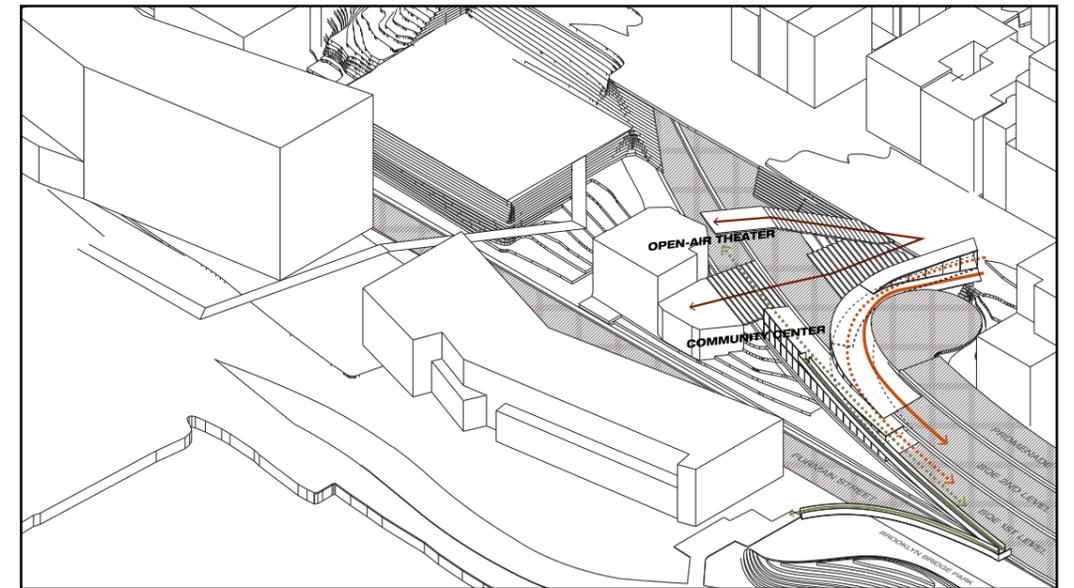
In **2021**, U.S. Senate passed Joe Biden's bipartisan infrastructure bill, which includes 1-billion budget to reconnecting the communities.

In the very beginning, communities was torn apart by the construction of the BQE and the relationships between communities are becoming more and more fragile just like the BQE nowadays. And the rich occupied the waterfront and the views towards it, which belongs to the Brooklyn Promeandes and the public. The infrastructure bill is a golden opportunity to gathering the residents, reconnect to the waterfront and gain the views as well as the rights back.

**PHASE I:
GATHERING
Now (2021-2026)**

**Community Center +
Open-air Theater**

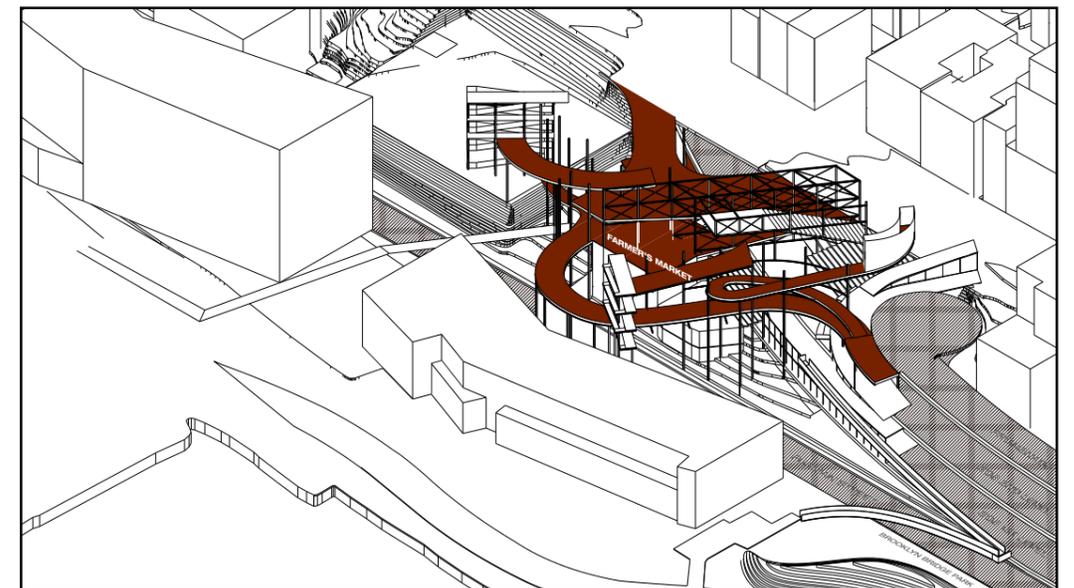
The community center and open-air theater offer a gathering point for the residents there and connect the three cantilevers vertically from inside and outside.



**PHASE II:
RECONNECTING
Soon (2026-2030)**

**Farmer's Market +
Walking/ Jogging/
Cycling Ramp**

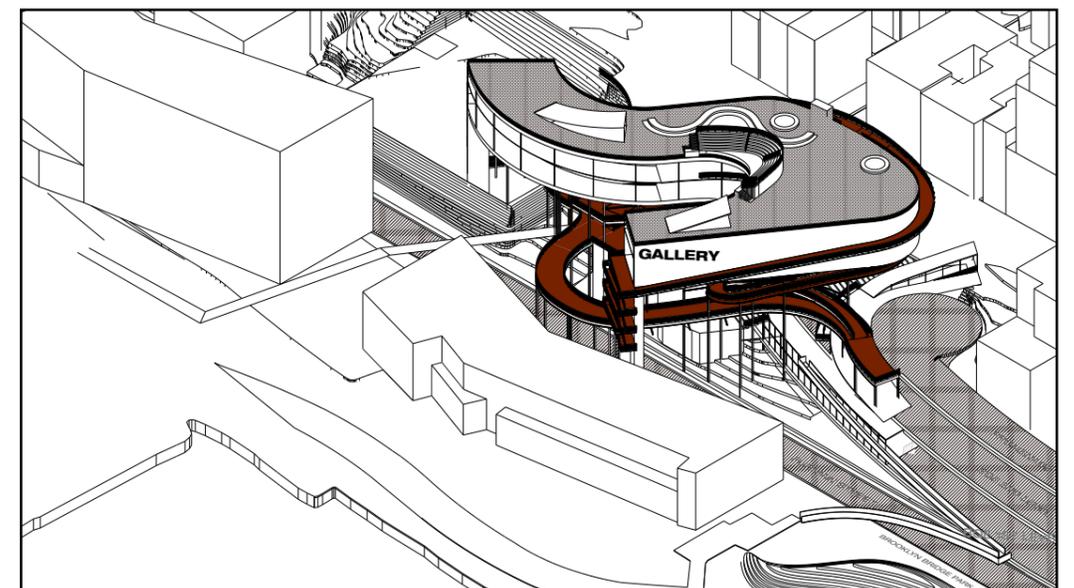
The farmer's market consisting of ramps, connects neighborhoods on the other side and the promenade side. And it will become a multi-purpose venue for dancing etc. or an extension to the open-air theater and other public activities in the evening.

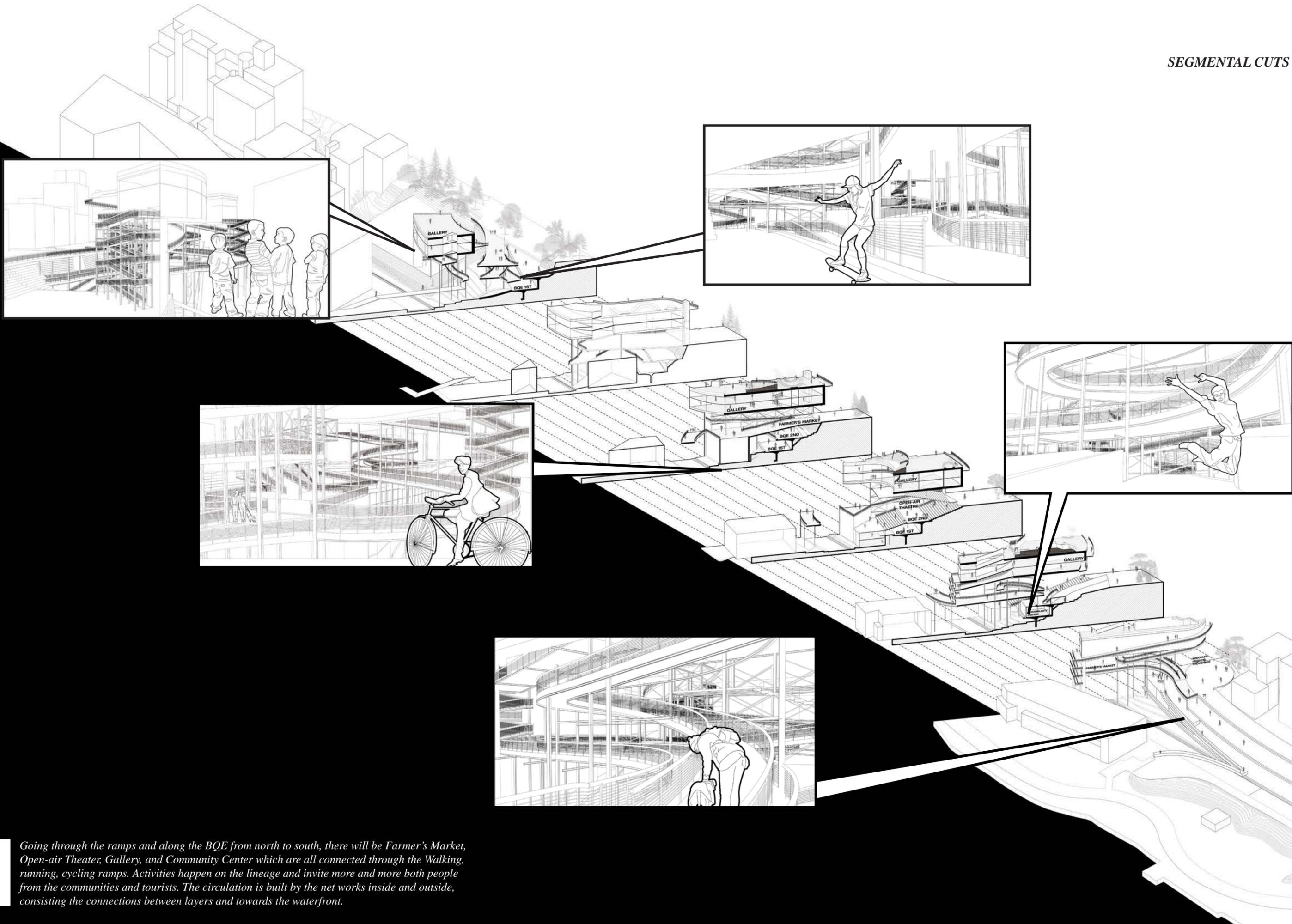


**PHASE III:
GAINING BACK
Eventually
(2030-2035)**

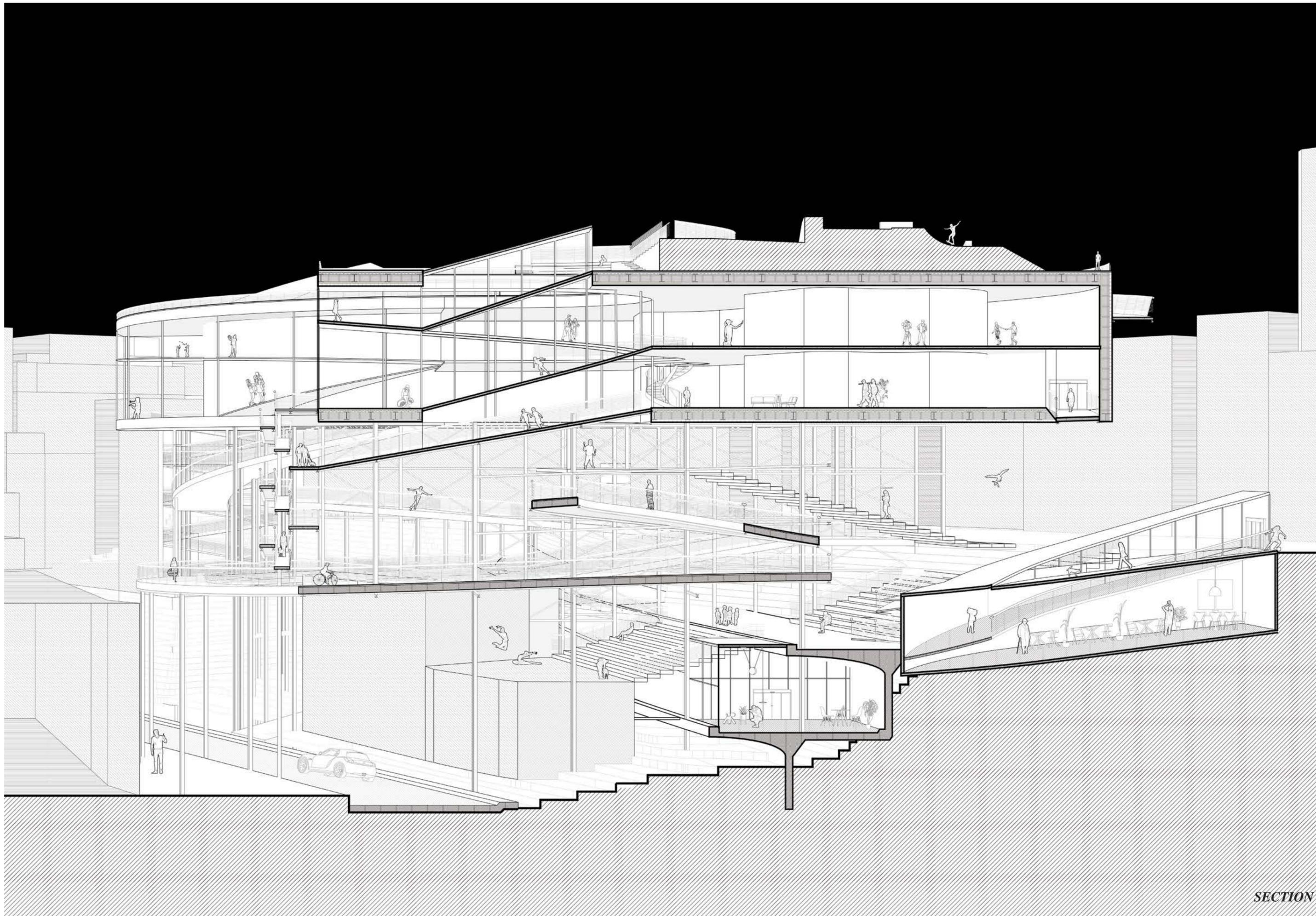
Gallery

The thied phase uses a gallery to maximize the views towards Manhattan, Governor's Island and the Statue of Liberty. Meanwhile, it is gaining back the view belonging to them in the first place.

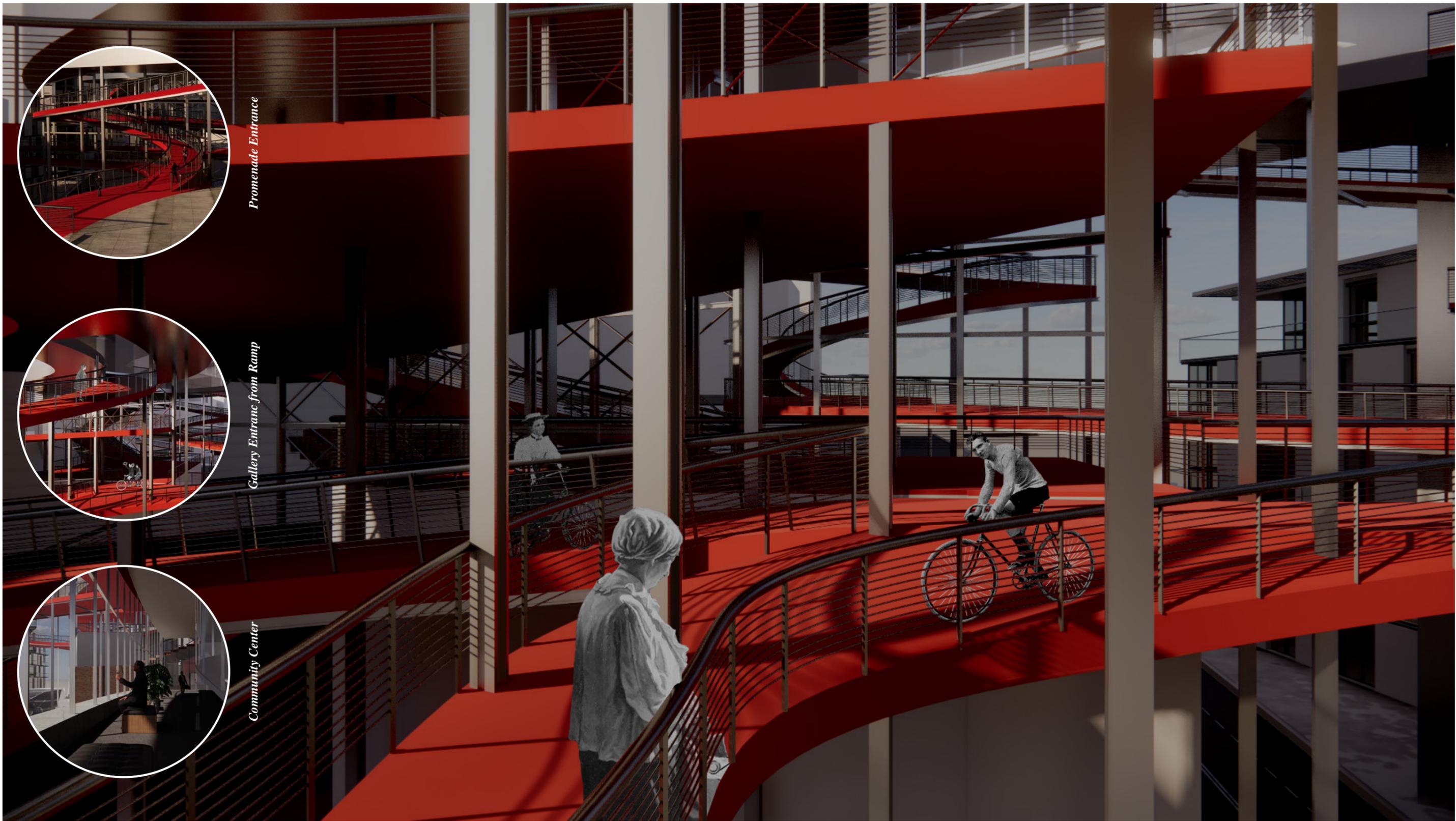




Going through the ramps and along the BQE from north to south, there will be Farmer's Market, Open-air Theater, Gallery, and Community Center which are all connected through the Walking, running, cycling ramps. Activities happen on the lineage and invite more and more both people from the communities and tourists. The circulation is built by the net works inside and outside, consisting the connections between layers and towards the waterfront.



SECTION

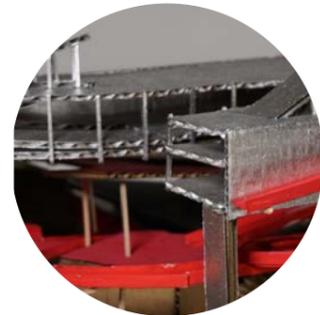


Promenade Entrance

Gallery Entrance from Ramp

Community Center

MODELS



DOES ARCHITECTURE
THE PECULIER

HAVE SPONTANEITY?
FOLKLORES

COULD ARCHITECTURE BE
ARCHITECTURE IN PROGRESS

Life & Death/Control & Un-control/ Growth & Degradation

2022 SPRING

CRITIC: STEPHEN CASSELL & ANNIE BARRETT

**IS ARCHITECTURE JUST A
CONTAINER OF ACTIVITIES?**

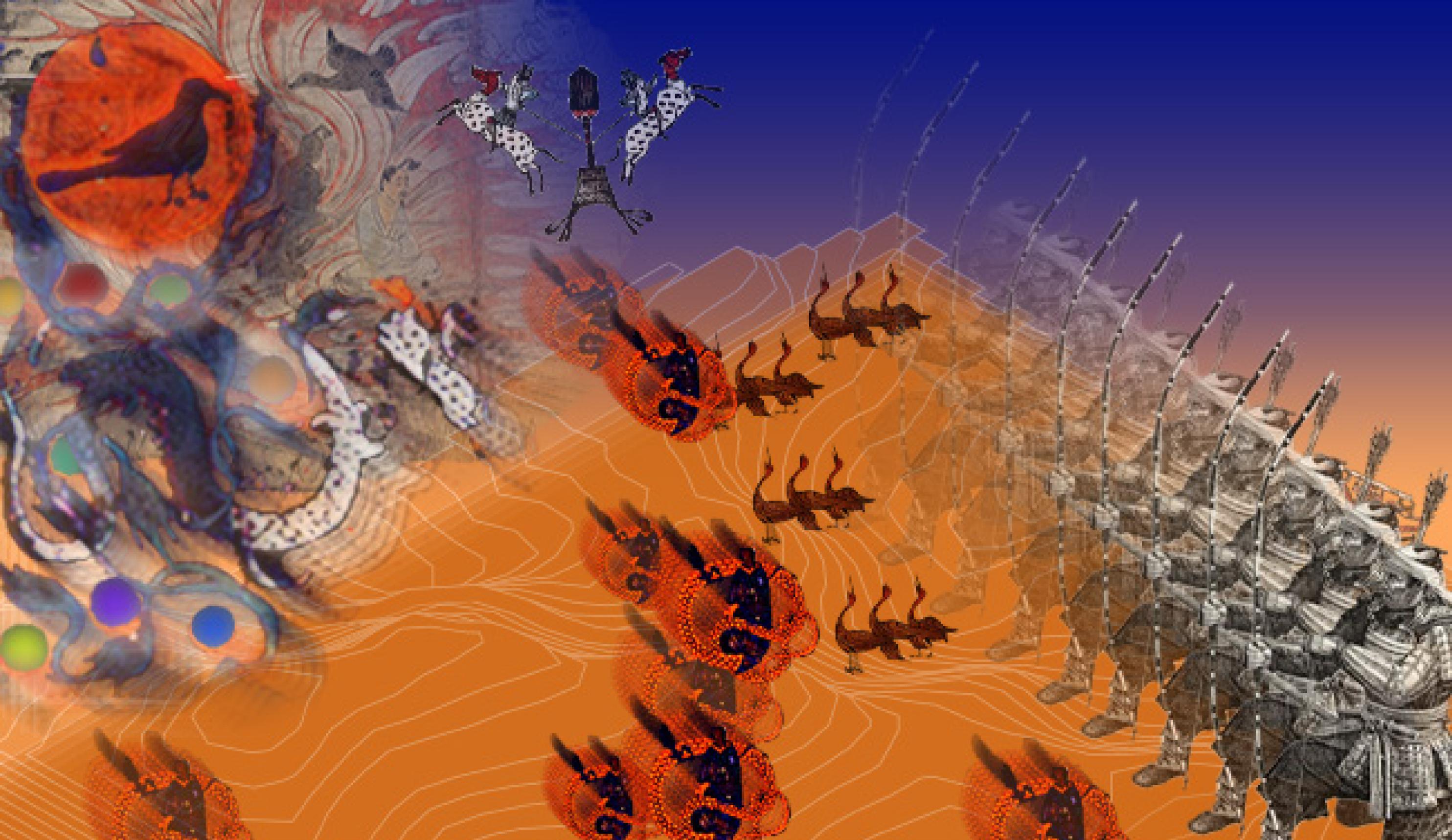


We all know that there's only one sun in the solar system, but what if there are 9 more in the sky?

01 BACKGROUND

Once upon a time, the ancient god has ten children, who are crows of different colors. They serve as the sun to perform the changing of day and night. Normally they are sleeping down in the sea and on duty one by one. But one day they decided to come out together ever after. They're shining bright, just showing their enormous glory.

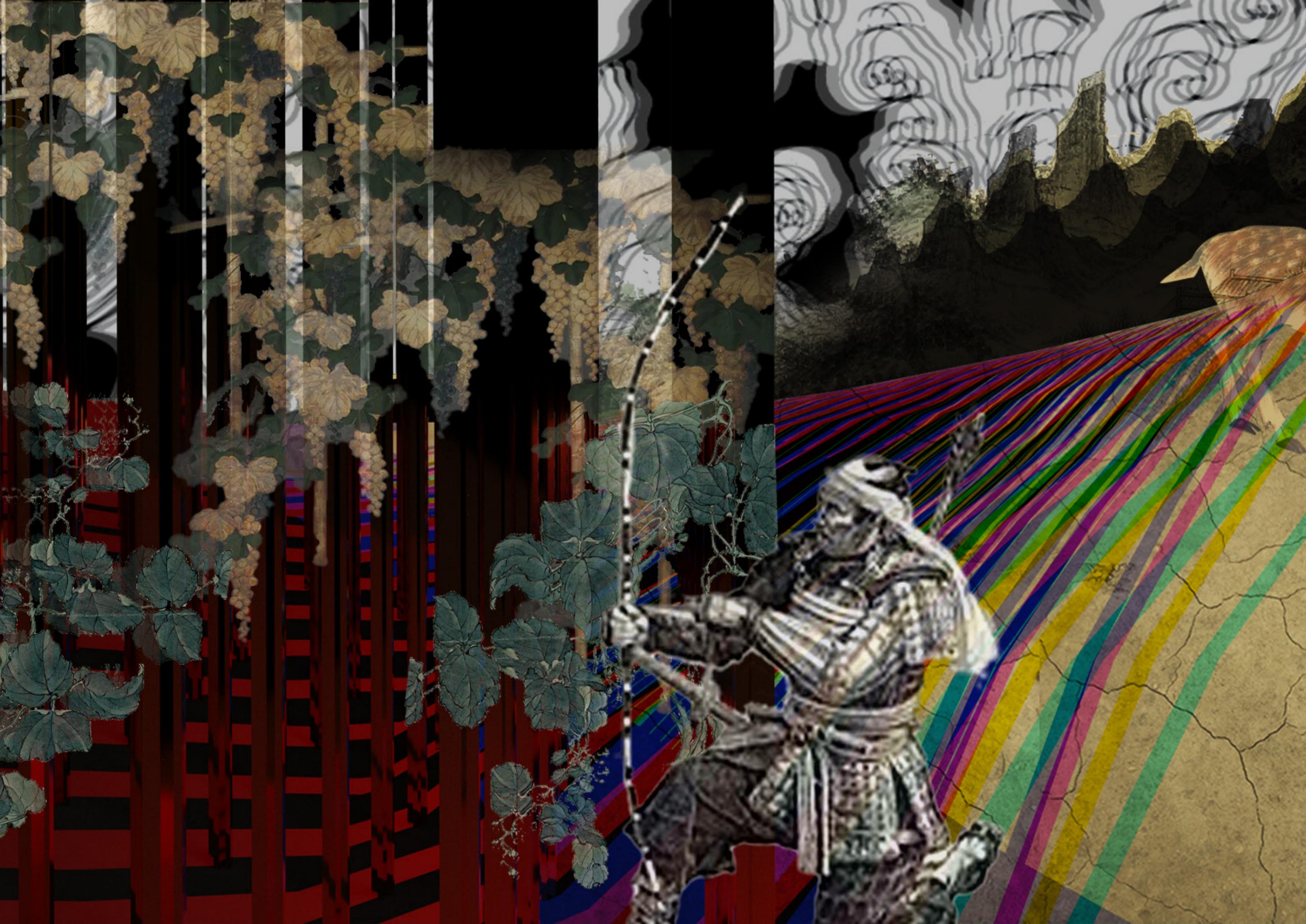
However, it's too bright and it even sets the ground on fire. Everything on the ground is burning, people and other creatures are losing their homes.

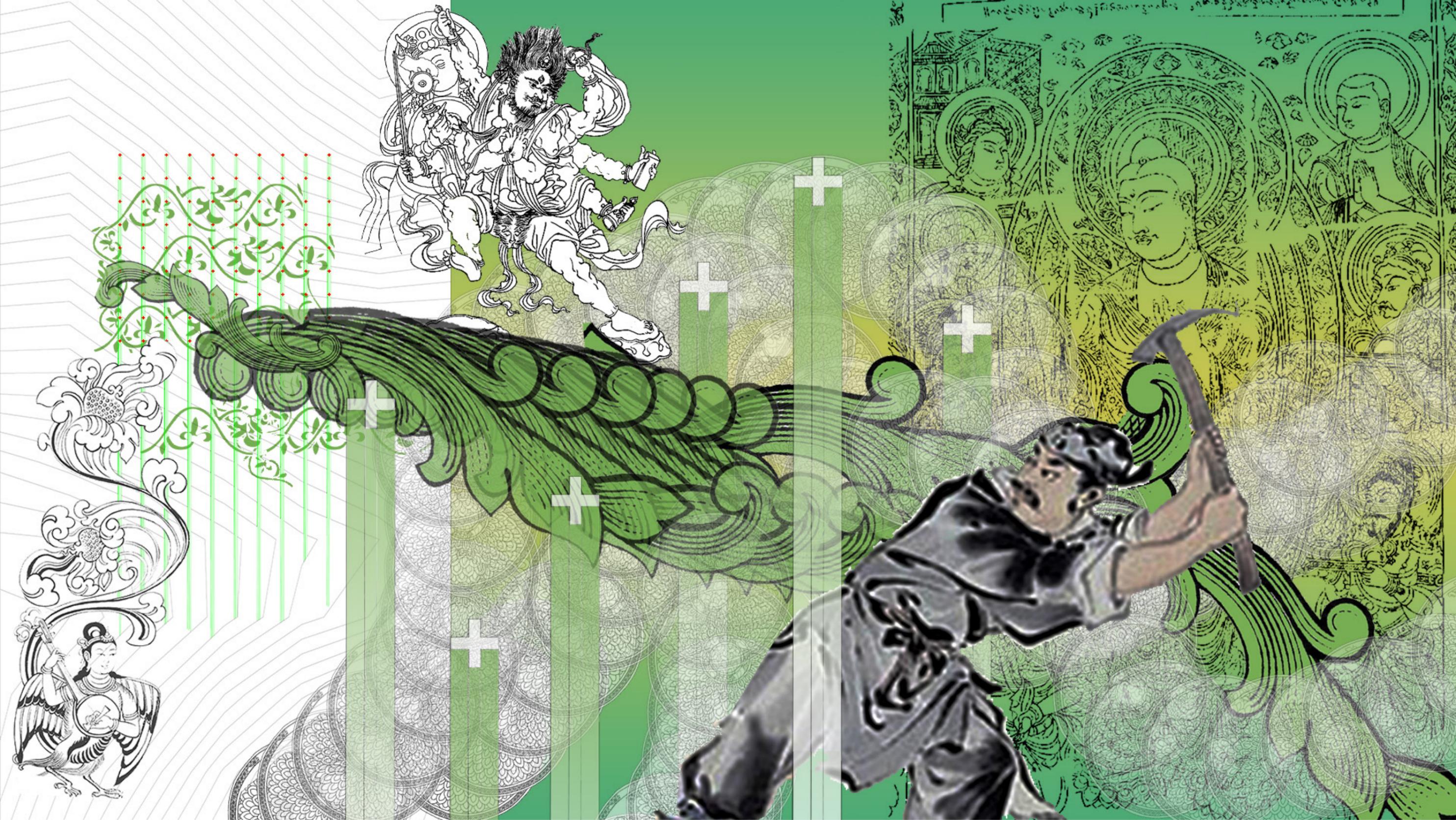


02 HOUYI

Then a guy called Houyi is determined to save human beings by shooting down nine of them to bring peace back to the world. But the sky is just too bright and he could see nothing up there. In order to tell the direction of the suns. He built 10 columns by 10 columns to distinguish the position and directions of the suns.

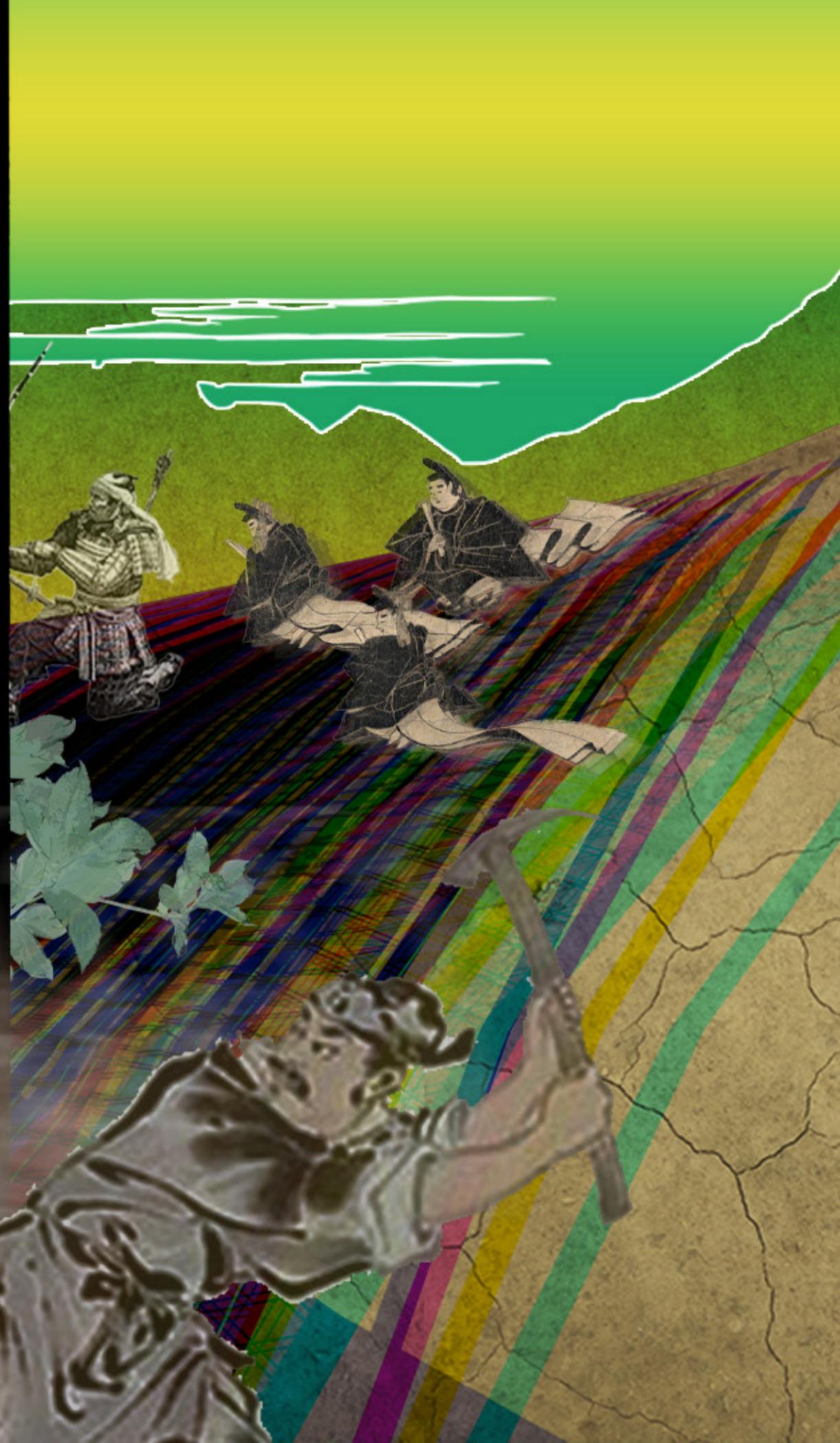
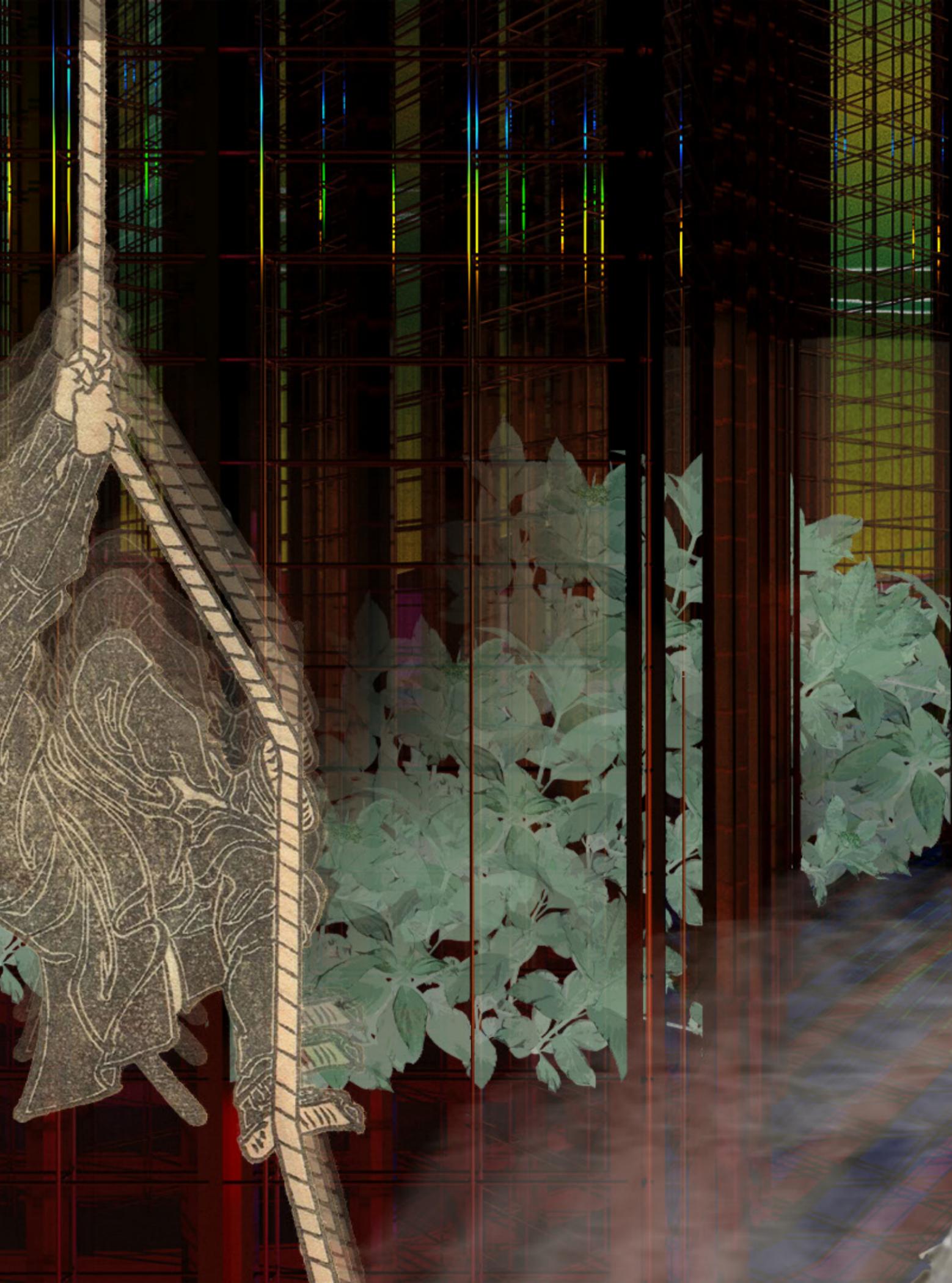
All his actions made the god very angry, and the god made the grapes grow around the columns and the vines shed the ground. So Houyi won't be able to see any shadows.





03 WUGANG

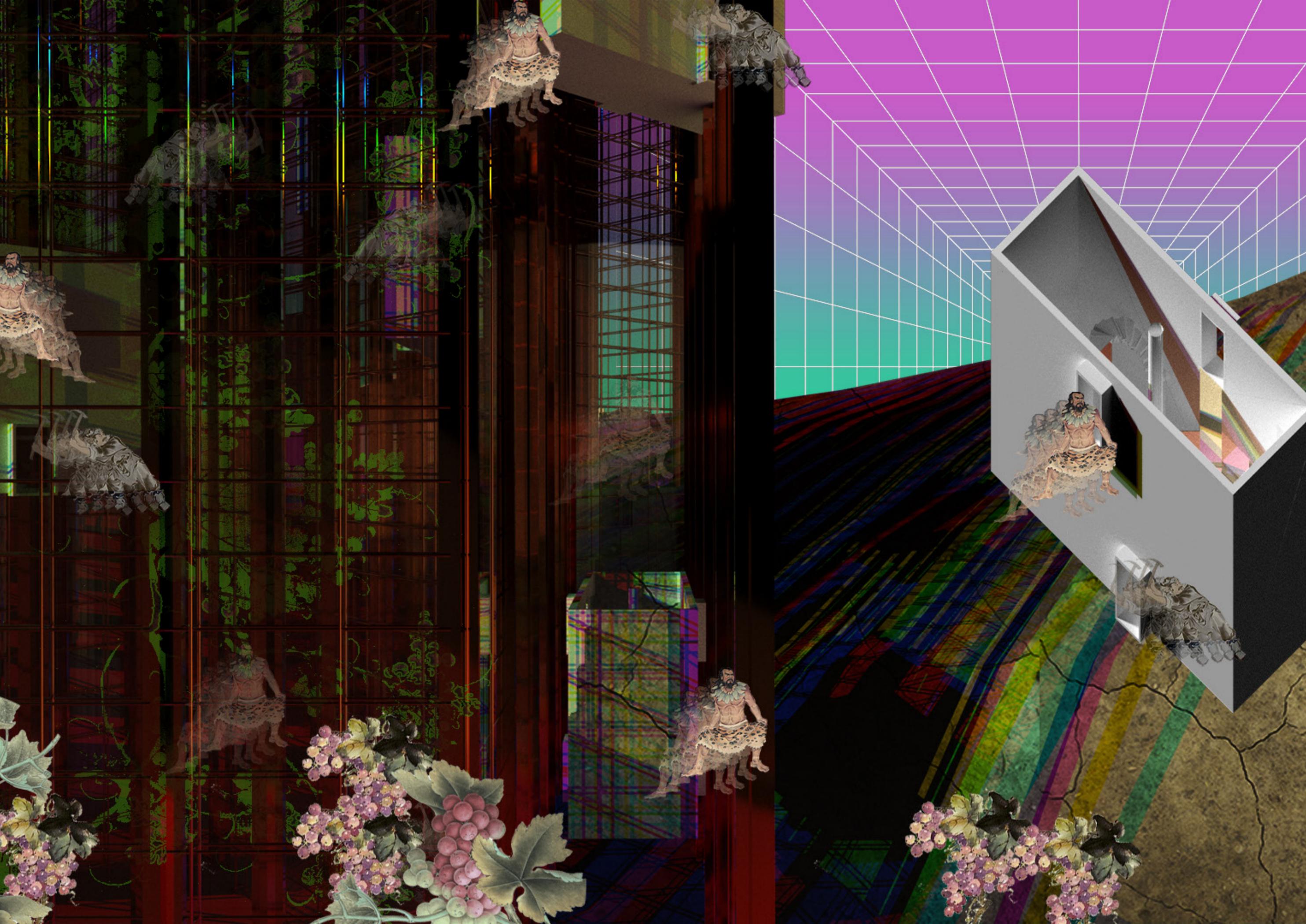
Because of the fire and heat, people are dying. A man called Wugang volunteered to cut all the vines in order to help Houyi and save human beings. He uses all his strength to do the job, but the vines are growing higher and higher which becomes unreachable. He was thinking about how to overcome this problem, maybe set up some scaffoldings? The only material he has is copper, so he made the scaffolding out of it. In order to protect it, Wugang set membranes on both sides of it.

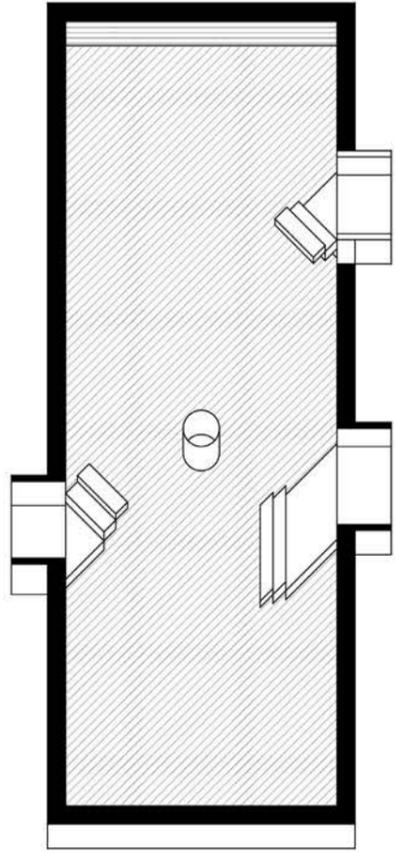
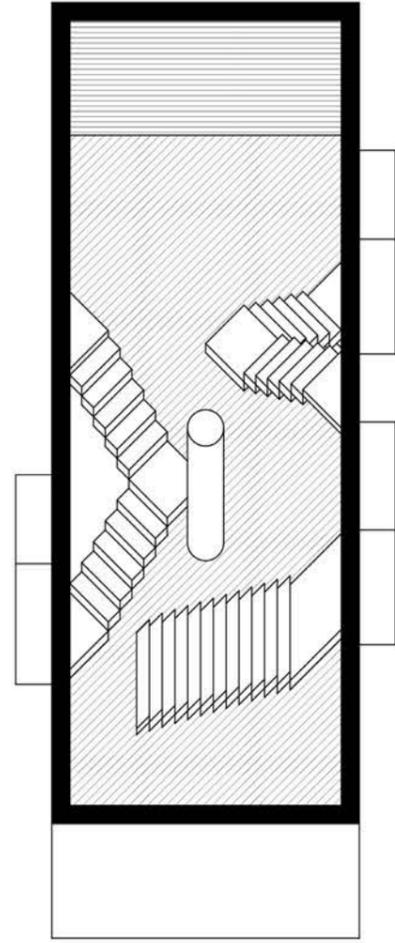
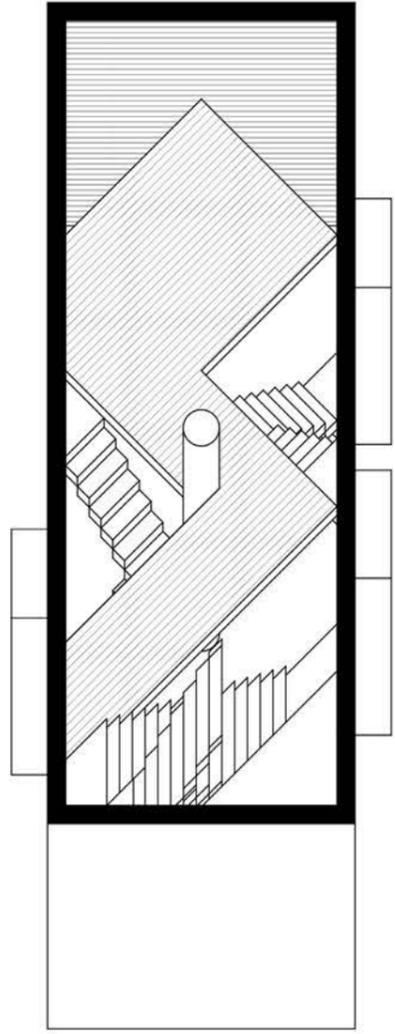
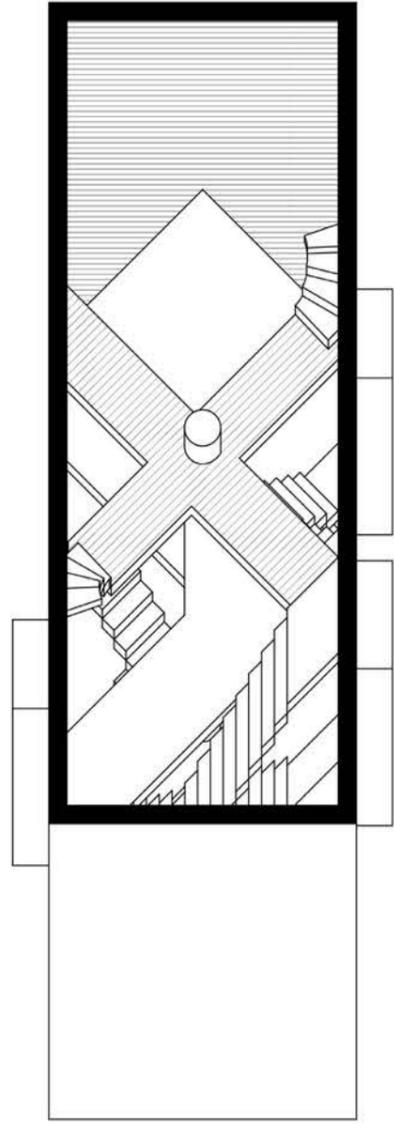
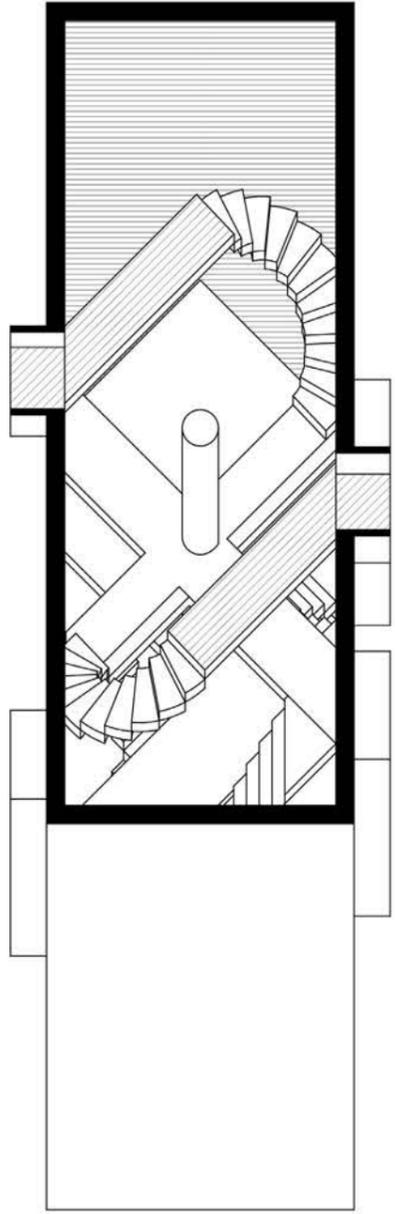


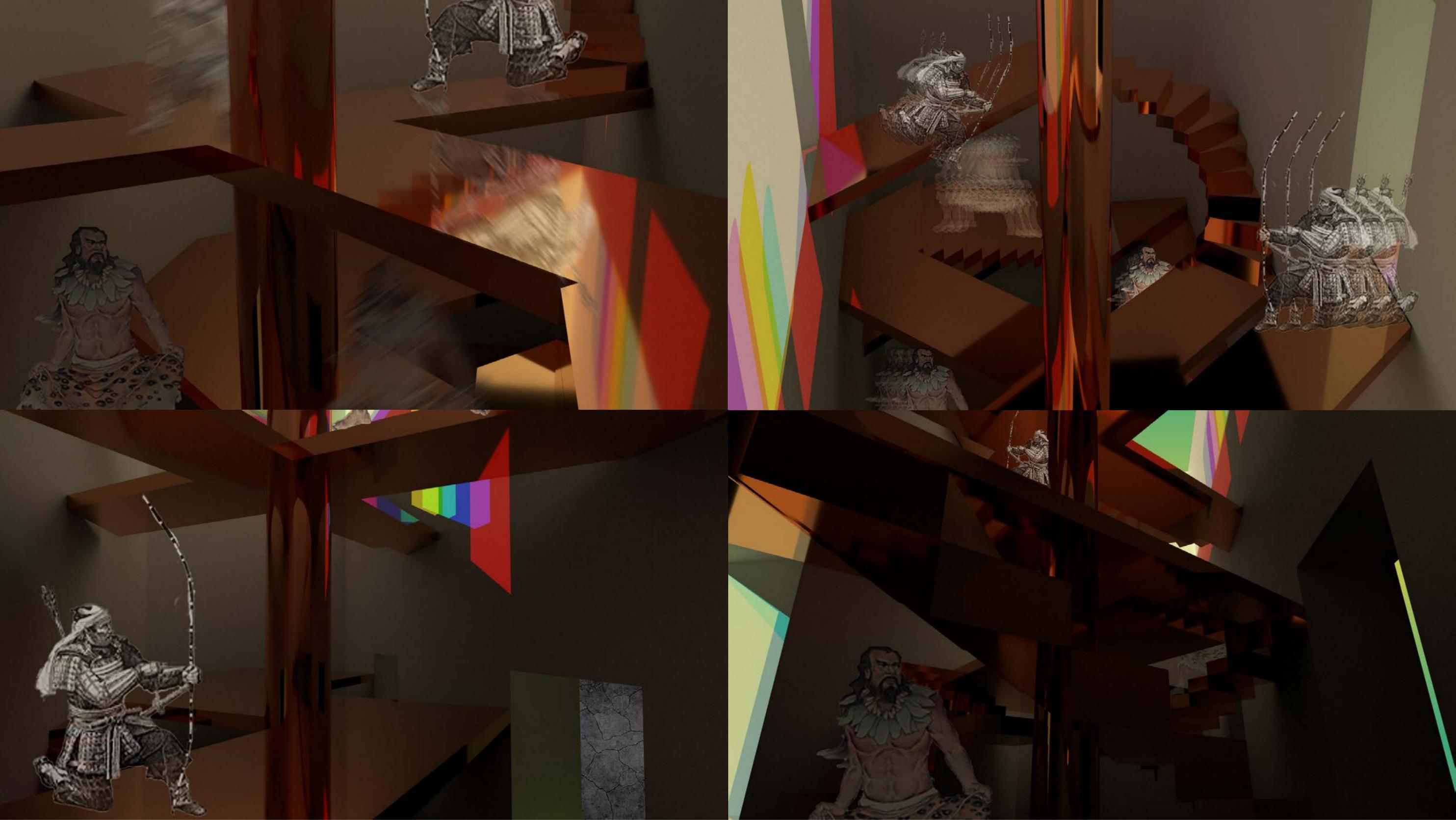


04 KUAFU

The god learned what Wugang is doing and is still not happy with it. So he sent out Kuaifu, who loves the suns so deeply, to help the vines grow. The god also knows people are dying and don't want to make himself disgraceful and lose his dignity. So he asked Kuaifu to work discreetly and finish the job perfectly without being seen by Wugang and Houyi. So Kuaifu builds 10 cells up in the air to hide from them. But Houyi notices that someone is sabotaging around, then he starts to search for who is growing the vines over and over again.



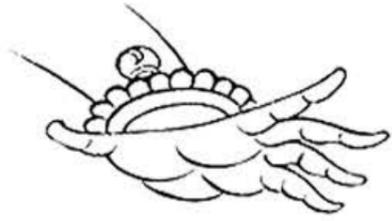




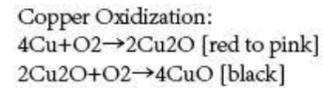
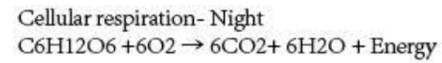
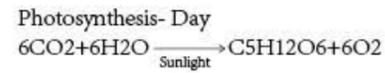
05 THE CELL

The cell has several entrances and exits located at different levels, in this way, Kuafu could easily escape and play hide and seek with Wugang inside. Meanwhile, he could still grow the vines following the god's decree.

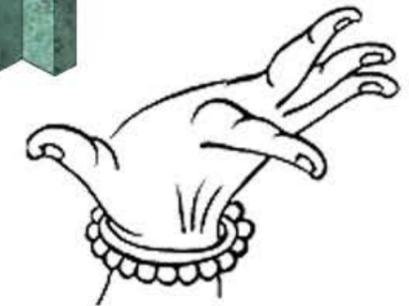
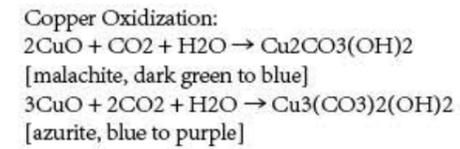
However, under the distraction of Kuafu, the grapes are growing bigger and finally ripe enough then fall on the ground. With no human intervention, the grape fermented naturally and became wine. It flows along the terrain and gets into the slots between the membranes.



O₂ CO₂



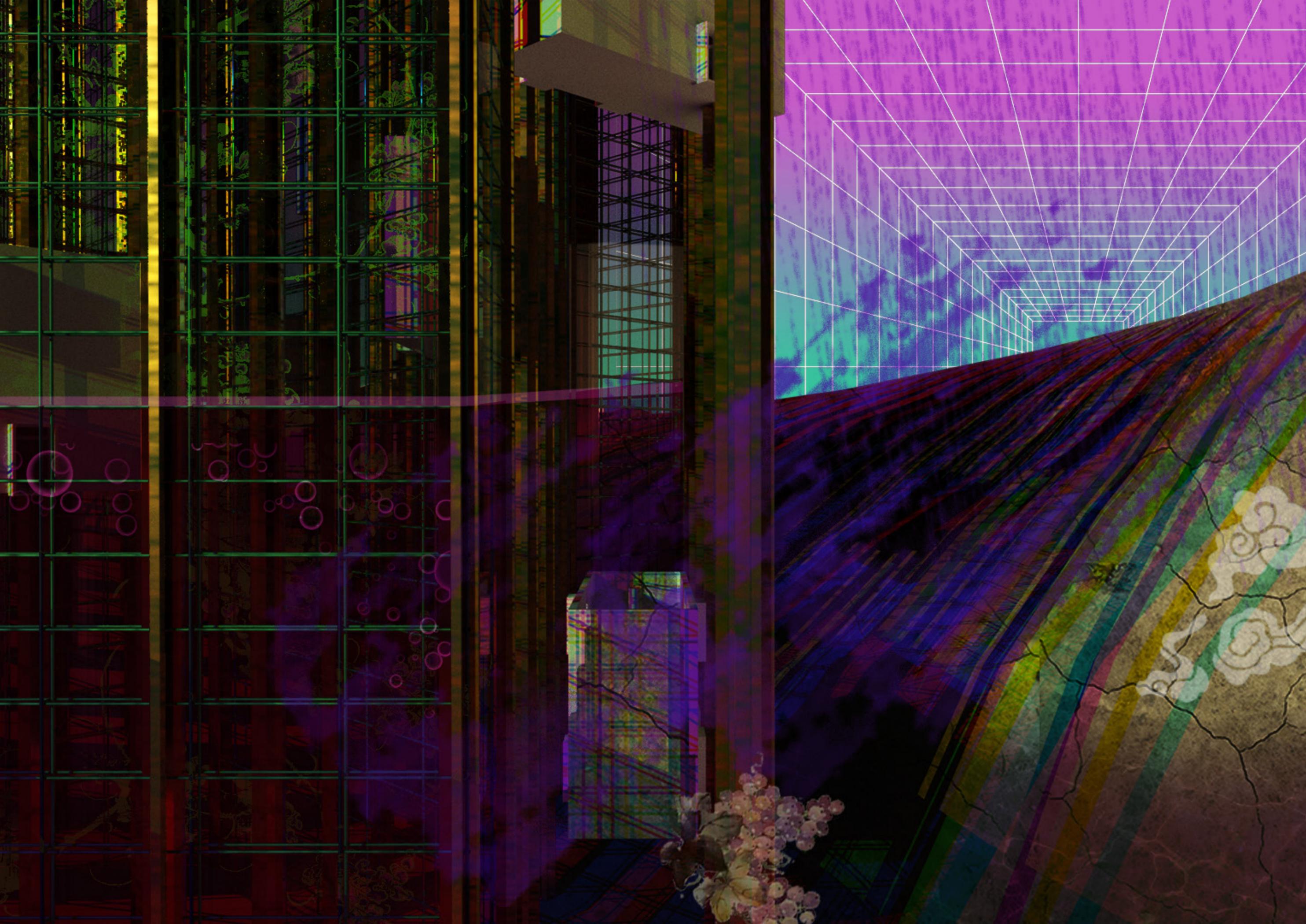
O₂ CO₂

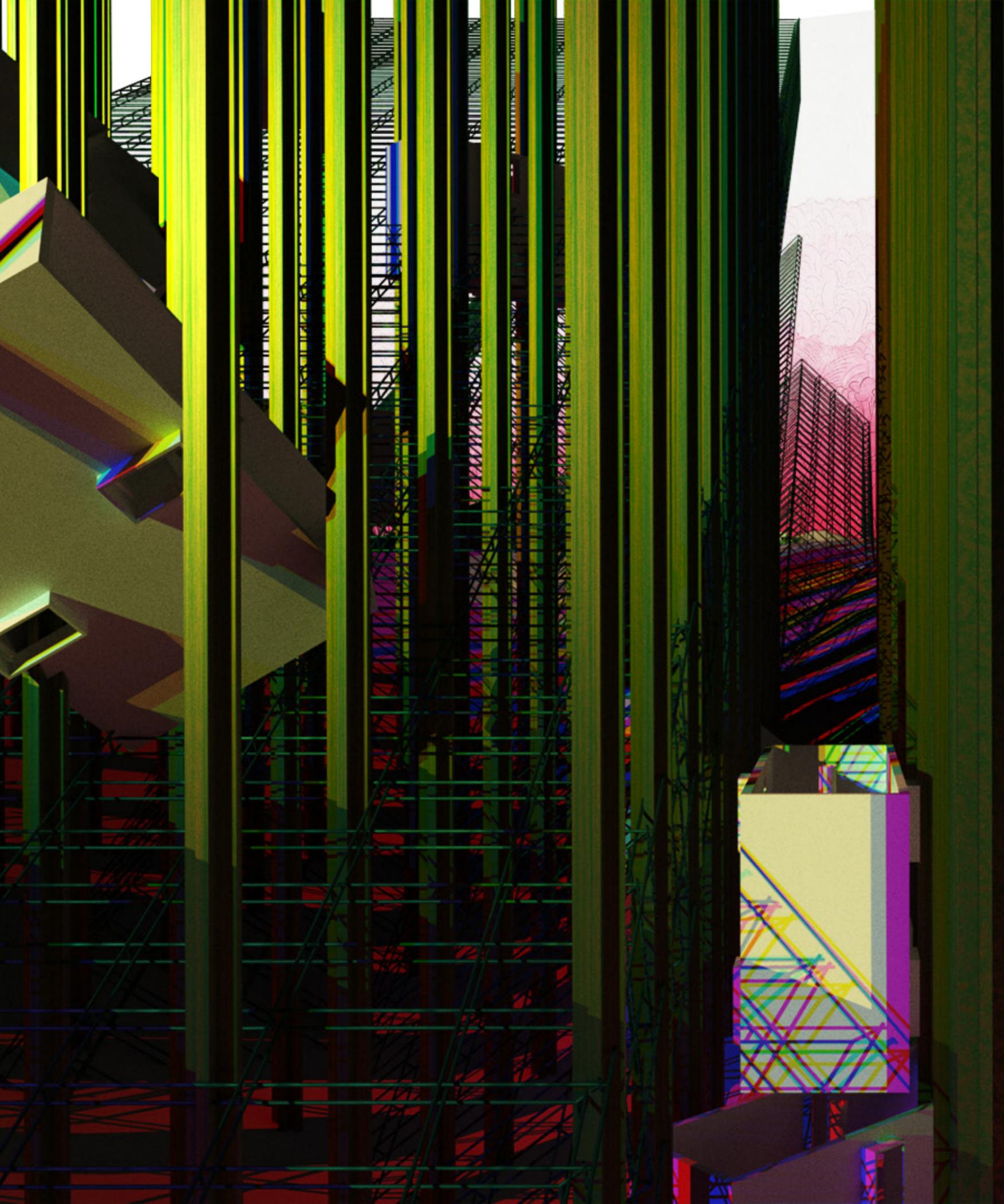


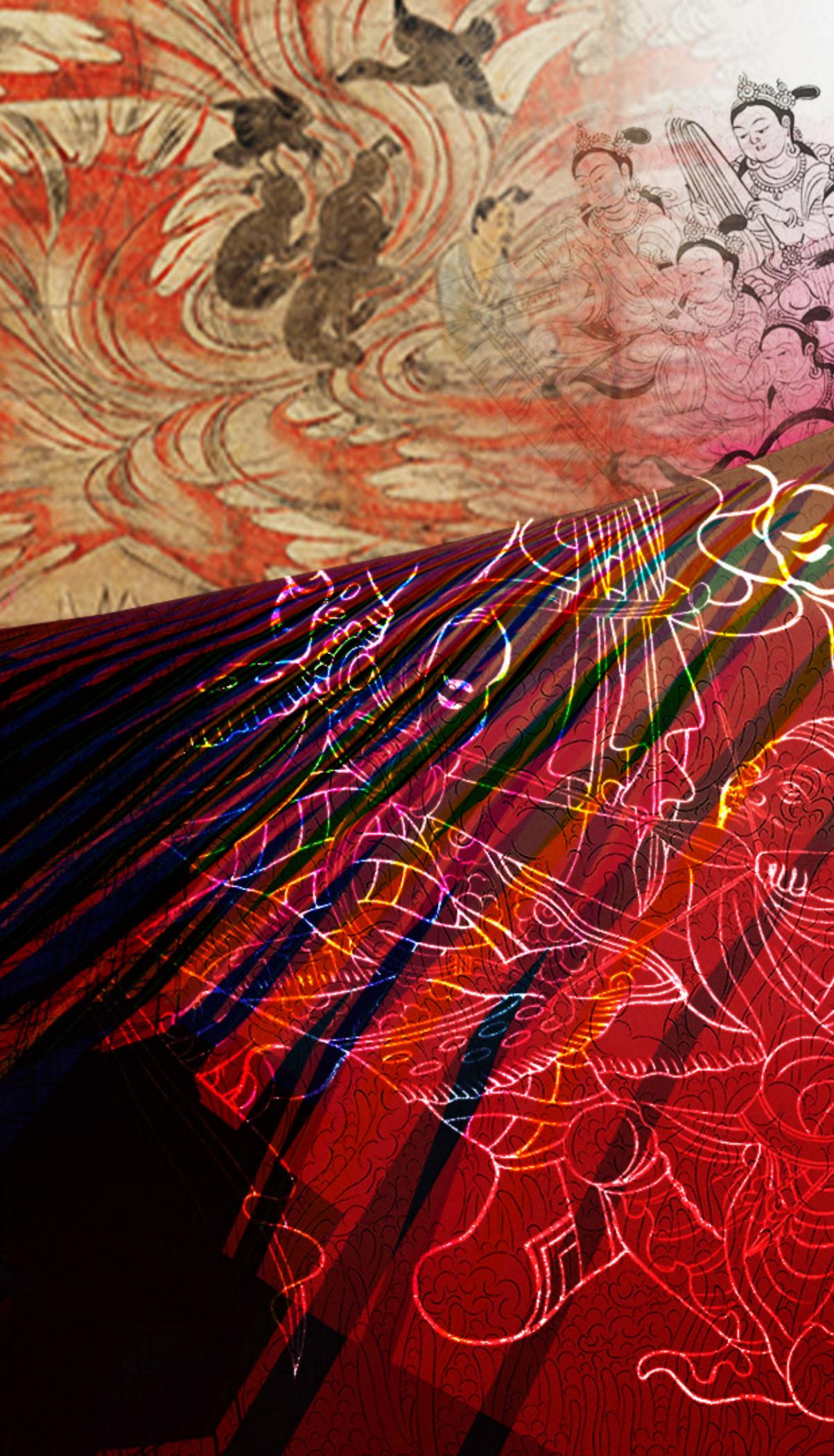
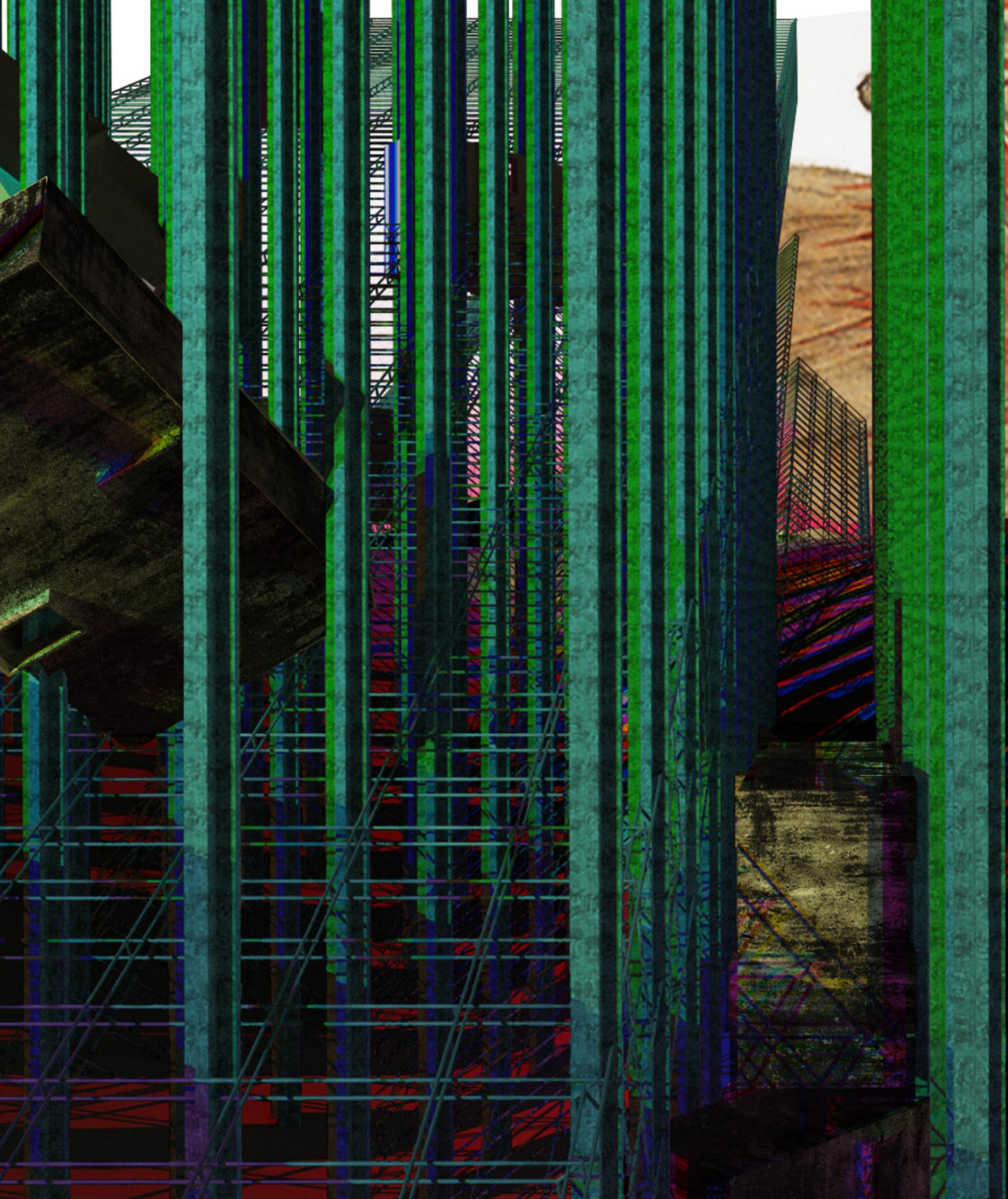
06 THE WINE

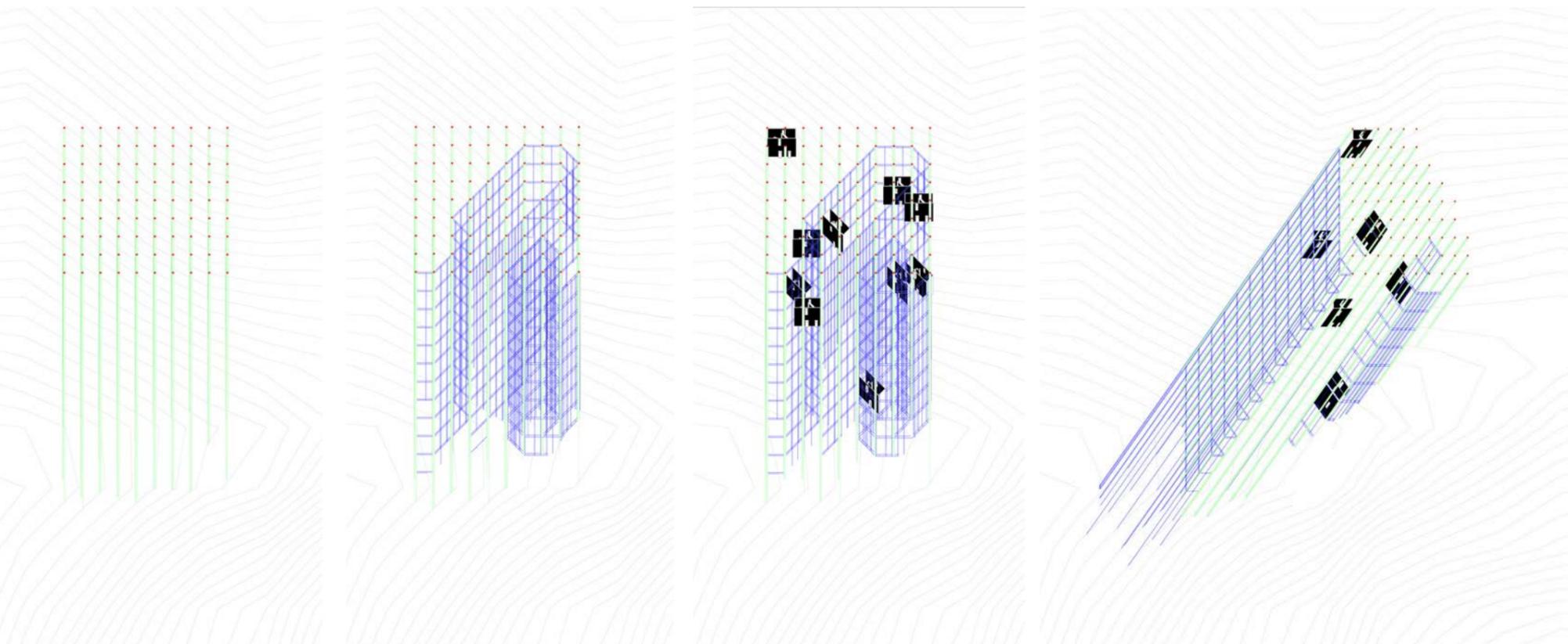
Then the chemical reaction is happening. The wine is going up, contacting with enough oxygen, starting to oxidize itself. And with more carbon dioxide and incremental humidity, the copper scaffolding is starting to oxidize too. Day after day, the scaffolding became super fragile and the wine finally became the acid after the whole oxidization. The brittle scaffolding is soaking in the acid and it broke eventually, the whole complex is falling down to the ground.

Everything has gone, the efforts, the scaffolding and the figures. Only the columns were left there, bathing in the wind and sun, oxidizing itself day by day. The sun's still there. The green patina becomes the index of the solar power and no one remembers the hero who was trying so hard to shoot the suns and save human beings.







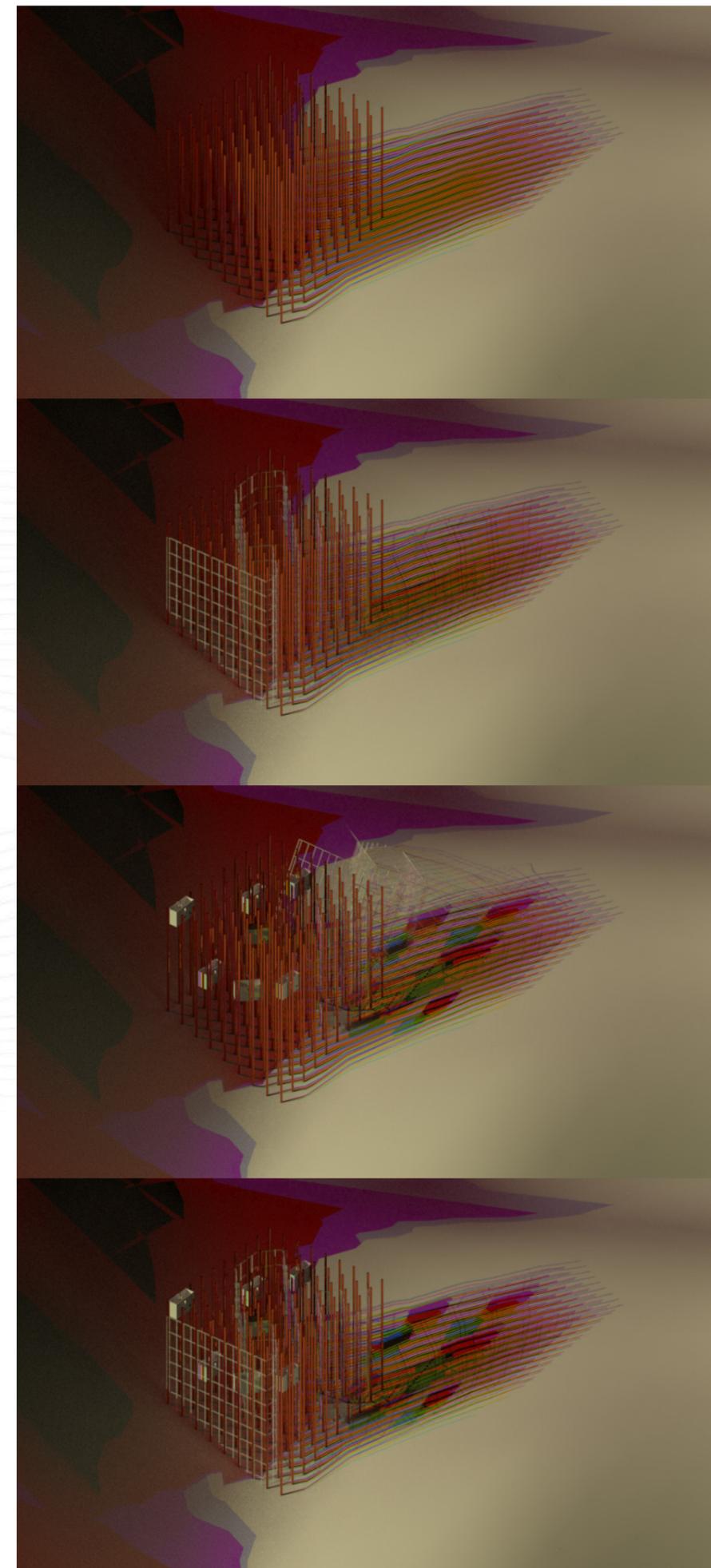


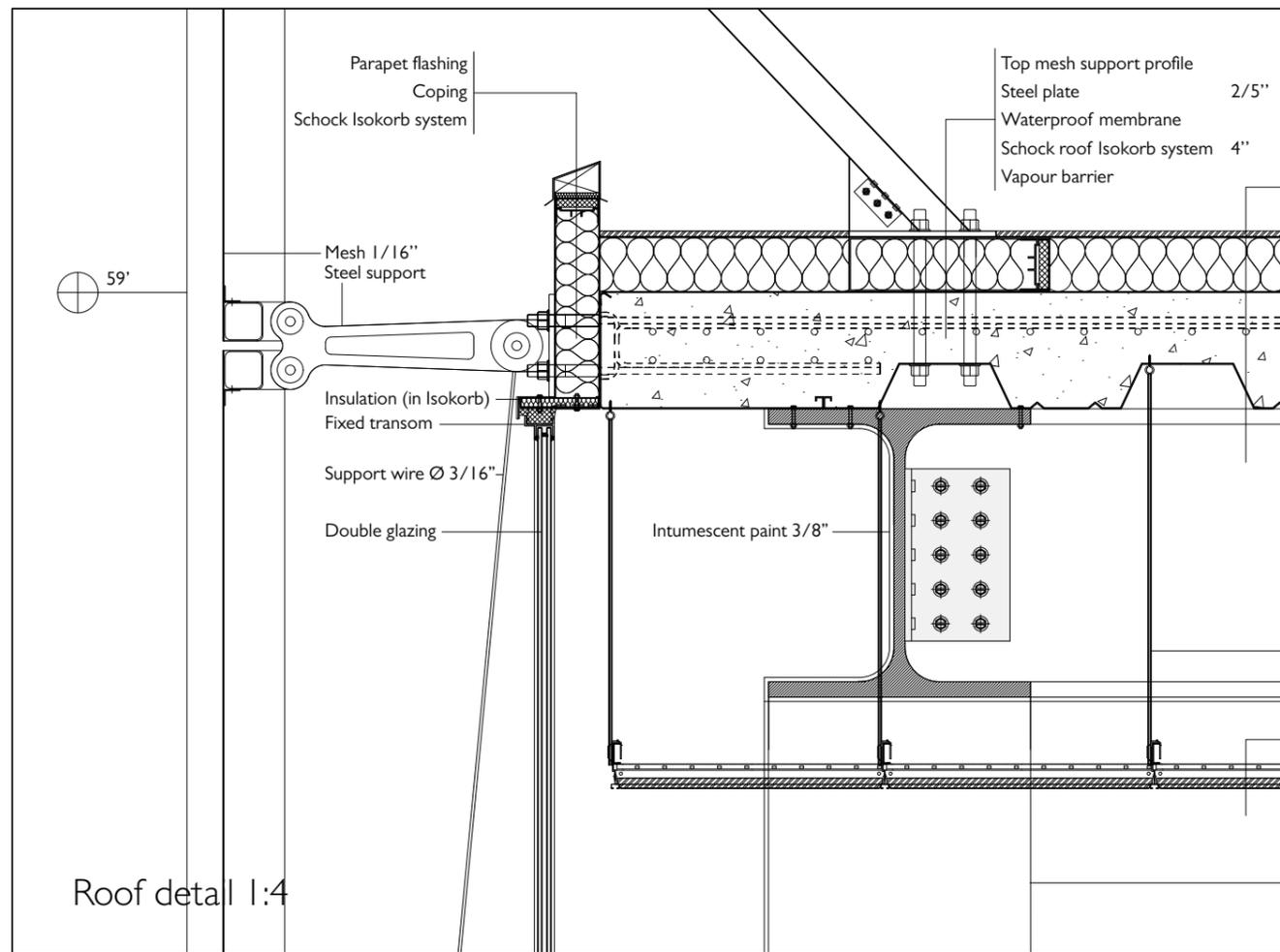
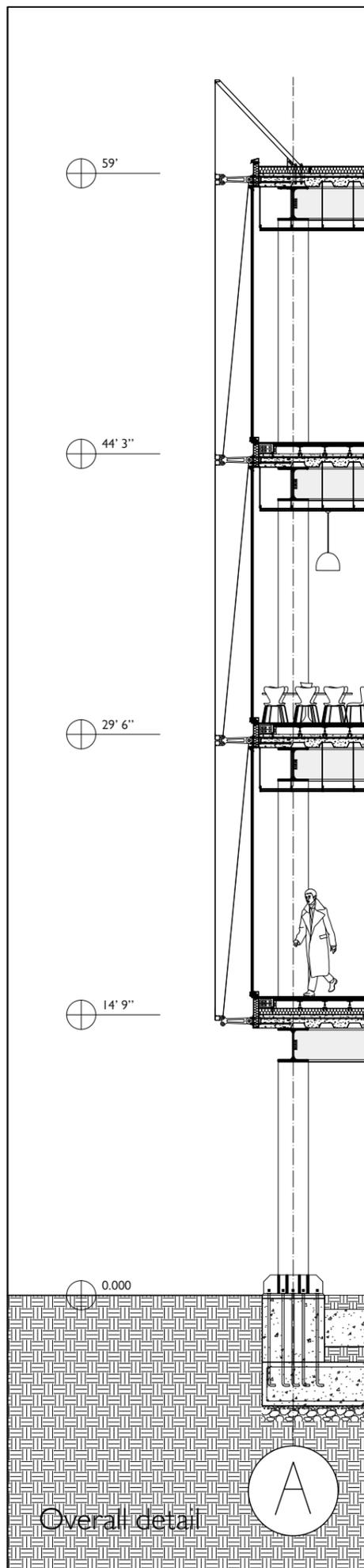
07 THE ARCHITECTURE

Let's go back to architecture.

It's going all the way from columns, then scaffolding, and cells. But eventually, it's in ruins. Human activities influence it every minute, and the architecture is co-evolving with them.

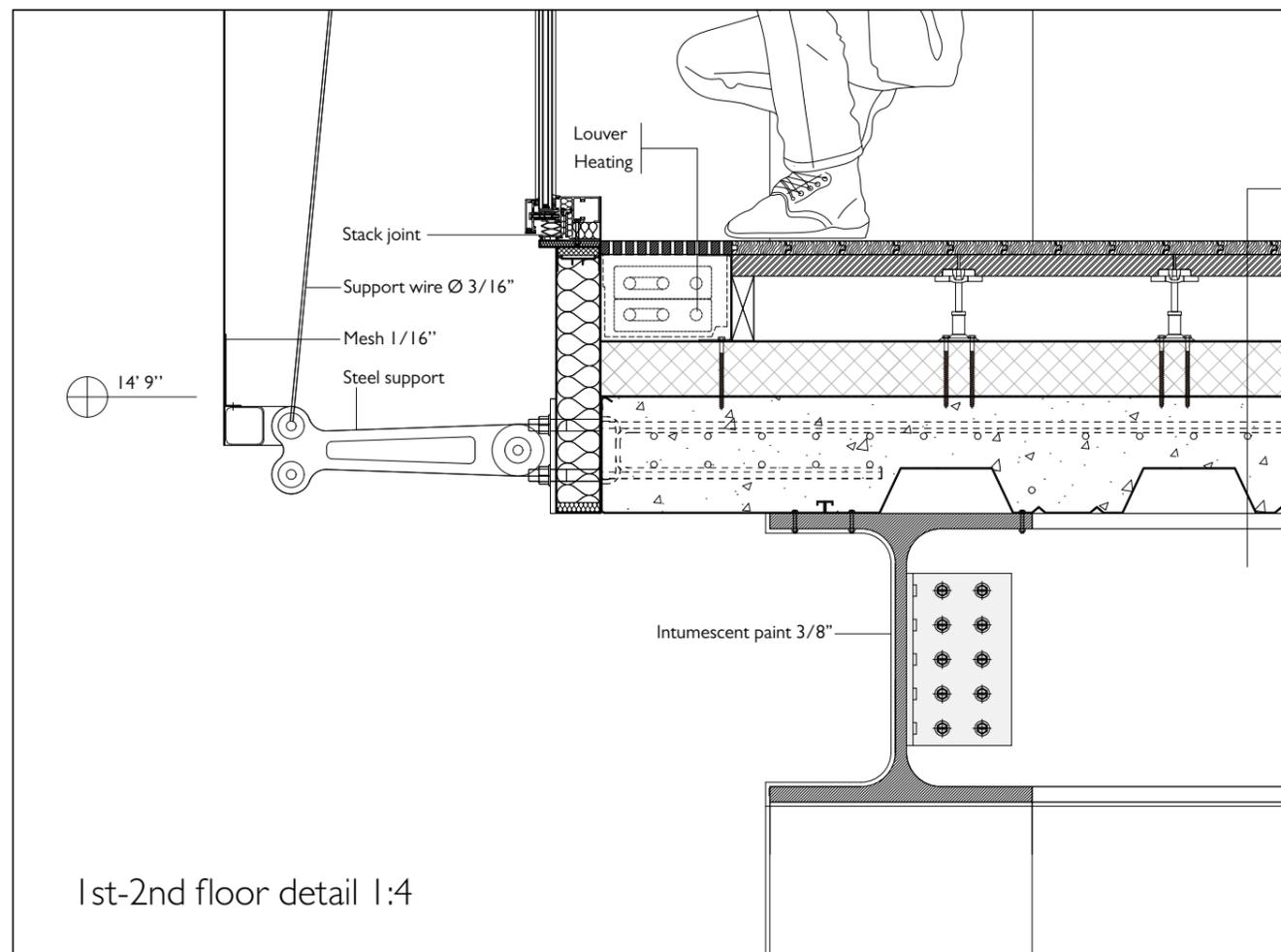
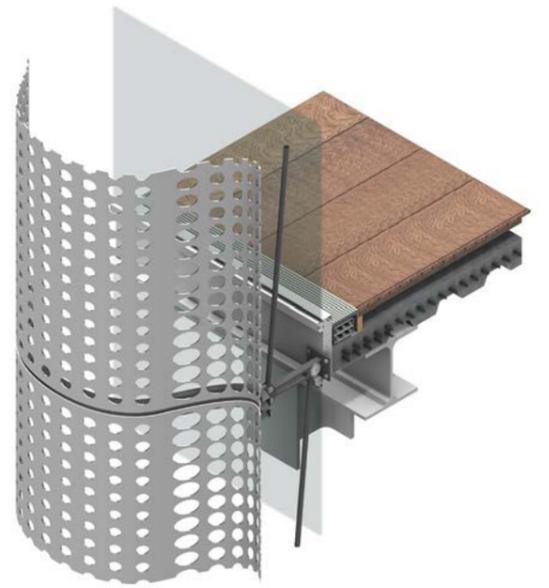
So it's not merely a container or a still object, even if it seems to be. It changes, evolves, constructs and deconstructs itself, together with humans and their activities.





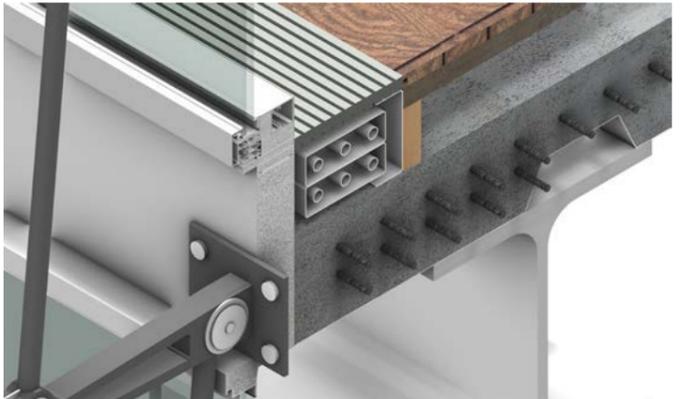
Roof detail 1:4

- Plaster 2/5"
- Waterproof membrane
- Insulation 4"
- Vapour barrier
- Cast-in-place concrete 8 1/2"
- Steel deck profile 1/16"
- Steel secondary beam 1' 9 3/5"



1st-2nd floor detail 1:4

- Plaster 2/5"
- Waterproof membrane
- Insulation 4"
- Vapour barrier
- Cast-in-place concrete 8 1/2"
- Steel deck profile 1/16"
- Steel secondary beam 1' 9 3/5"



Facade Detailing
NORDSTROM Facade Redesign

Columbia GSAPP Technology Elective
A4444-1
In collaboration with Yunchen HUANG, Xian TAN
Critic: Kevin Schorn