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# re:habi*i*tation

Harvard GSD Spring 2020  
VIS2484 Interdisciplinary Art and Design Practices  
Instructor\_ Malkit Shoshan

**Lei Ye + Ivan Zhang + Birdia Zuo**



# Abstract

*re:habilitation* (2020)

It is without a doubt that we wake up to something new and shocking every day in 2020. Our project deals with the current pandemic that is taking the world by storm: the COVID-19 coronavirus. Through visual representation, we are hoping to inform our viewers about how individuals in China dealt with the virus.

The virus opens up issues about **domesticity in isolation**, how does one deal with the virus? Or how does one deal with the virus if their loved ones are infected? How does one deal with the **spaces of quarantine**? The spatial element of this crisis is our primary interest and focus, our project takes place in China during the first month of the virus outbreak. Starting with **4 domestic typologies**, our project begins by analyzing a millennial individual's home, typically a studio or 1 bedroom apartment. Secondly, a couple's dwelling, age variant. A single-family dwelling, and lastly, a two-generation family dwelling.

Our project records the necessary measurements of each scenario needed for the proper accuracy of a quarantine zone and the potential spaces needed for when an individual is recovering/ recovered from the virus. Our drawings graphically record the activities and equipment needed during this chaotic time, we hope through our graphic visualization on pandemic spatial expansion, casualties, policies of China and the U.S., stock market drops, and actions of community control in China, we hope to tell the story by unpacking the global process of the pandemic breakout. The actors in our story could potentially involve everyone judging by the current state of things.

The project's topic also deals with the socio-economic and political problems of China and the world at large. The one month pause on returning to work has dealt a huge blow to the global economy and will continue to do so, our project hopes to at least conjure some ideas on the proper process of getting back to work with the diagrams we create.



research



analysis  
narrative



speculation  
engagement

# Table of Contents

*re:habilitation* (2020)

## RESEARCH + graphic visualization *[data of China and the U.S.]*

\_ Pandemic breakout in China vs. the U.S. :

1. timeline
2. spatial expansion
3. casualties
4. policy making
5. stock market

\_ COVID-19 control and test in living environment:

1. self-quarantine life
2. community check + sanitization
3. social distancing, virtual communications, etc

## spatial ANALYSIS + NARRATIVE *[cases in China]*

\_Borders at different scales:  
home / gated community / public space

\_Spatial diagrams:  
home in quarantine and its guideline model

\_Story Charts of 4-family typologies

*\_A Different Spring Festival* [2:08]

## SPECULATION

balcony / gate : in quarantine time +  
post-pandemic

## ENGAGEMENT

Learning from Stimulation Life Game:

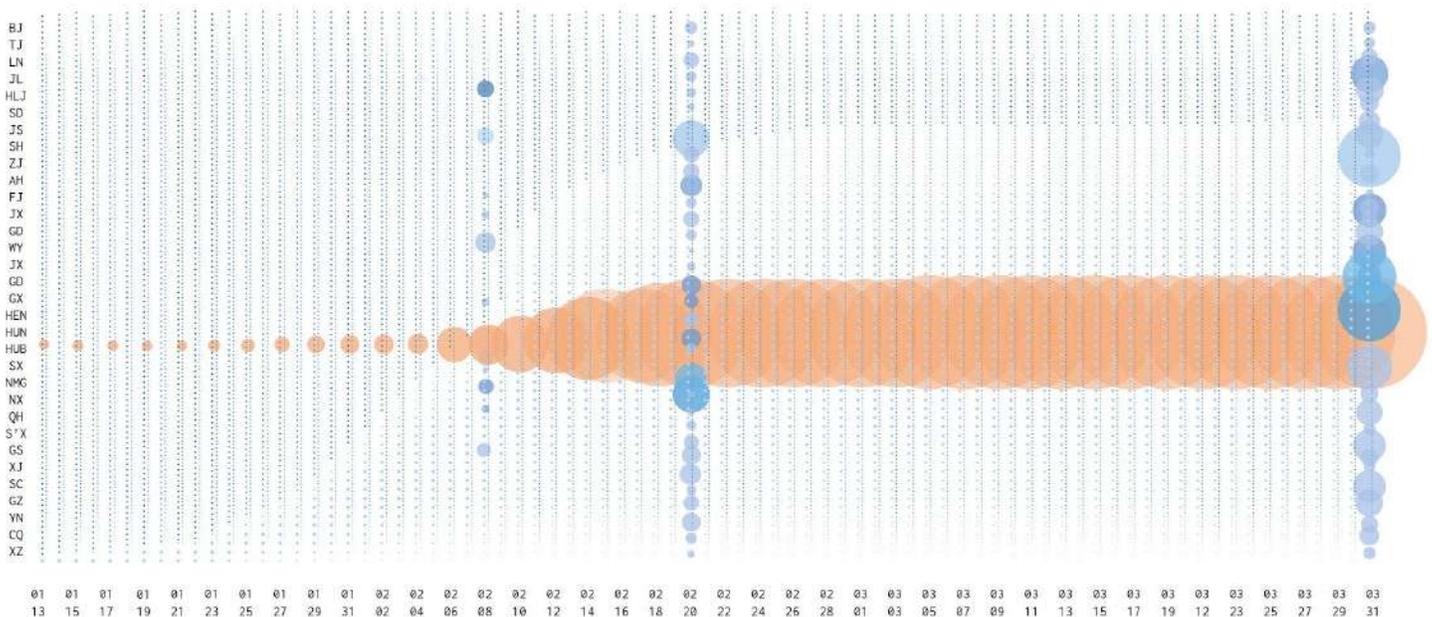
customized domestic design for people to  
document/speculate on life in quarantine time or  
post-pandemic living:

domestic space design (+ everyday life  
narrative)



# Official Announcement Timelines (C)

- Jan 11th The Wuhan Municipal Health Commission announces the first death caused by the coronavirus.
- Jan 13th Thai authorities report a case of infection caused by the corona virus. The infected individual is a Chinese national who had arrived from Wuhan.
- Jan 16th Japanese authorities confirm that a Japanese man who traveled to Wuhan is infected with the virus.
- Jan 17th Chinese health officials confirm that a second person has died in China.
- Jan 20th China reports 139 new cases of the sickness, including a third death.
- Jan 20th China reports 139 new cases of the sickness, including a third death.
- Jan 21st China Centers for Disease Control and Prevention releases reagent probes and primers
- Jan 22nd Chinese authorities confirm at least 547 cases in the mainland
- Jan 23rd Chinese authorities enforce a partial lockdown of transport in and out
- Jan 26th The China Association of Travel Services reports that all tours, including international ones, will be suspended.
- Jan 28th Chinese President Xi Jinping meets with WHO Director General Tedros Adhanom in Beijing.





CHINA



USA



## *Self Quarantine Life*

The next phase of our research is our main focus and will be further developed: they are Spatial analysis of quarantine zones and how China vs. the U.S. deal with social separation differently

The living environment for the two countries are quite different, with China having 4 stages of protective action from domestic to public spaces, it goes as followed: home - gated community - city - province, whereas the US, it depends on which state you are living in.

Self-isolation life seems to be similar. we try our best to stay at home and decrease the frequency to go out get groceries. In the US, some states right now require people to wear masks in public spaces. Chinese started the protocol from January 2020 and has more strict body temperature measurements at public entrances.

The differences are in how communities monitor the virus outbreaks: China utilizes members of community committees and volunteers to check upon their neighbors and uses drones to do public sanitization, whilst the US uses drive-through test centers and has sanitations at a more public scale.

There are definitely Social distancing practices in both countries. People are trying different non-physical contact methods in a creative way.

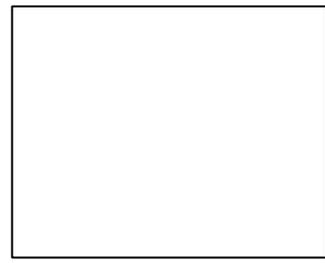
CHINA

USA



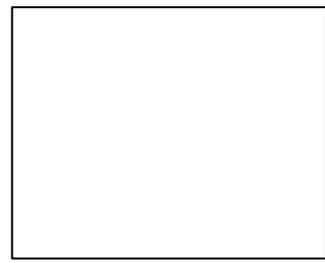
*Community Check*

*Drive-through Test*



*Community / Public Sanitization*

*Public Sanitization*



*Social Distancing*

*Social Distancing*



# Analysis



## Border at Different Scales:

[Gated Community]



[Domestic Space]

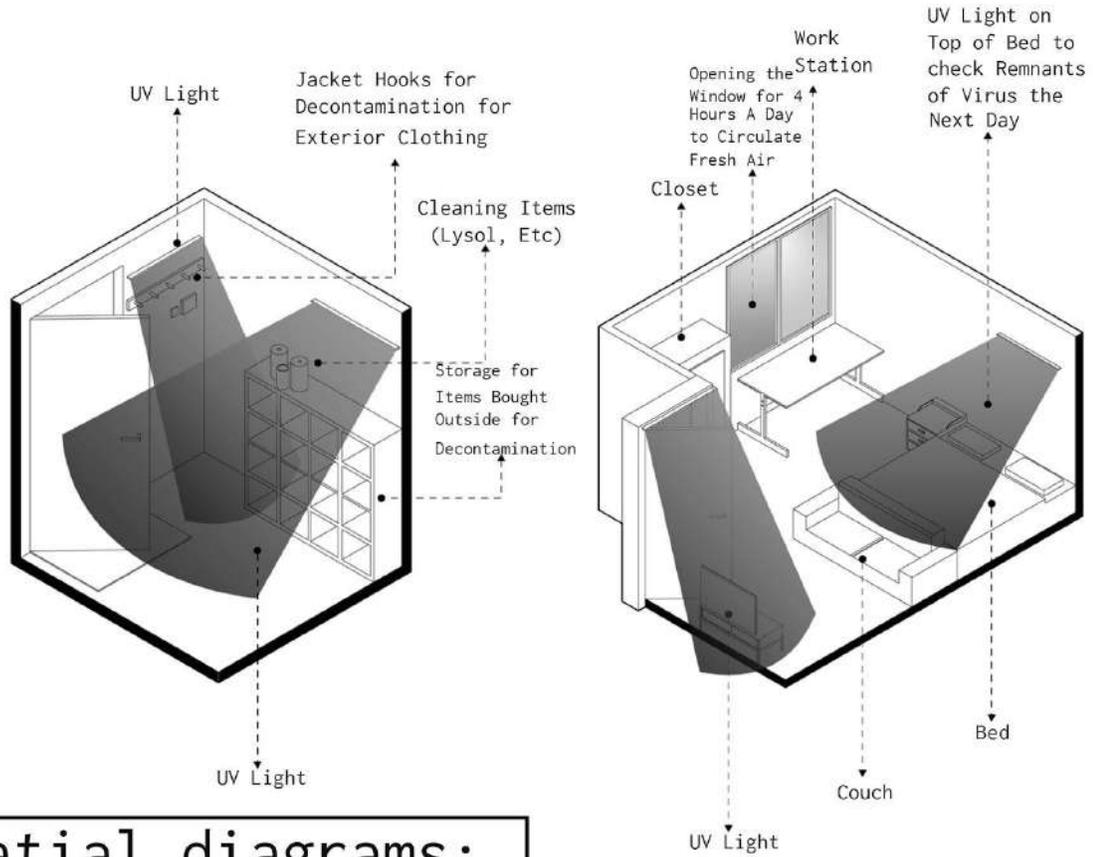


[Individual in Public]



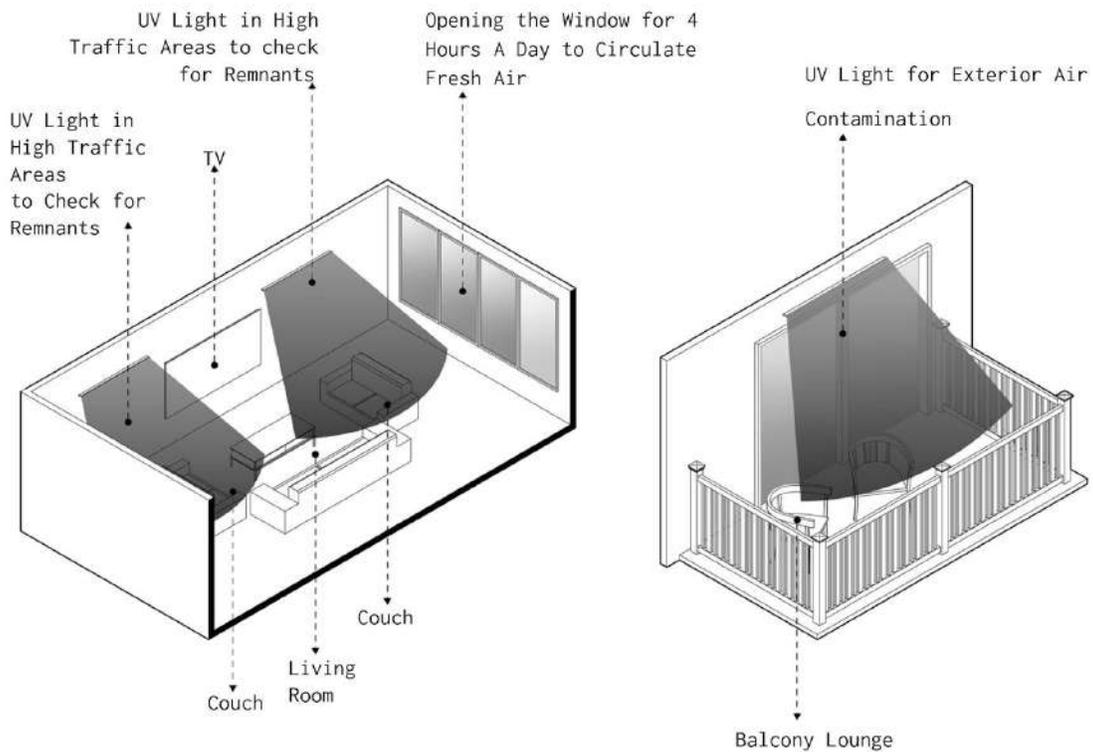
# Analysis

## Spatial diagrams: home in quarantine and its guideline model



Spatial diagrams:  
home in quarantine

Young Couples Dwelling



# Narrative

Due to our own group identity as international students, we wanted to think about how we could tell a story through our very own perspective.

Our inspiration for our story came from the many interesting photos surfacing on Chinese social media during the time of the outbreak, it all prompted us to think about a physical border at a different scale

During Chinese New Years in China, everyone needed to be isolated and quarantined, and during this time, domestic activities and spaces were constantly being changed and challenged.

Our story follows Da Wei and his journey as an international student that has come back to China for Chinese New Year, it will follow him and his family through 4 different types of family dwelling typologies.

## Story Charts of 4-family typologies:

ACTIVITIES POPULATION (Age)	Segregate d Sleeping	Tempature Check	Rotational Cooking	Restroom Disinfectio n	Grocery Shopping	Garbage Dispos al	Indoor Exercis e	Laundry	A-T-C Medicine	Community Check	Social Media	Pet Care
(1) Millienial Individual (28)		✓		✓	✓	✓	✓	✓		✓	✓	
(2) Young Couple (34,32)	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
(3) Middle-aged Couple (52,48) + Young Adult (19)	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
(5) Grandparents (62, 54) + Young Couple (32, 28) + Children (4)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

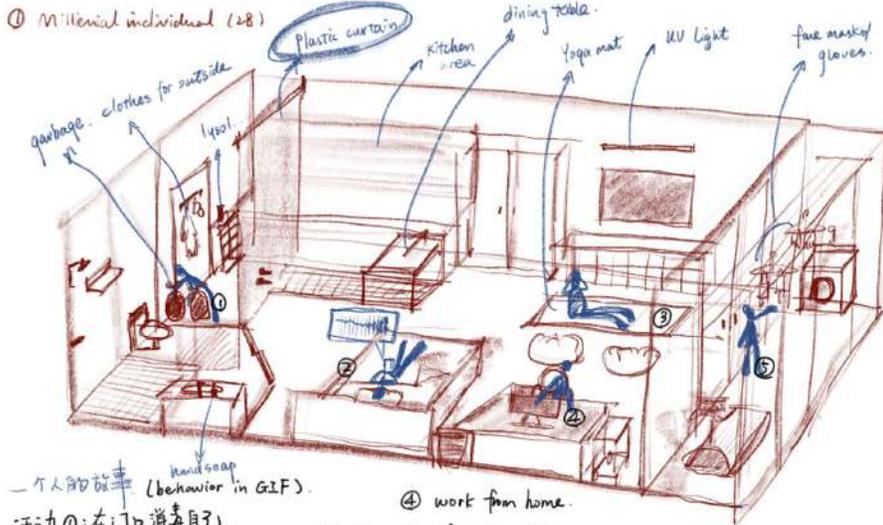
## DALIY ACTIVITIES

- 00:00 - 09:00 Segregated Sleeping
- 09:00 - 10:00 Temperature Check / Husband cooks for Wife
- 10:00 - 11:00 First meal of the day, separately / Work From Home
- 11:00 - 12:00 Rotating duties ( Washing dishes / cooking) / Work From Home
- 12:00 - 13:00 Grocery Shopping / Garbage Disposal
- 13:00 - 14:00 Grocery Shopping
- 14:00 - 15:00 Community Check / Disinfection
- 15:00 - 16:00 Restroom/ House Disinfection / Laundry
- 16:00 - 17:00 Indoor Exercise
- 17:00 - 18:00 Temperature Check / Husband cooks for Wife (Vice Versa)
- 18:00 - 19:00 Dinner, separately
- 19:00 - 20:00 Rotating duties
- 20:00 - 21:00 Work From Home
- 21:00 - 22:00 Work From Home
- 22:00 - 23:00 Separate Shower Time / Independent Social Media Time
- 23:00 - 00:00 Independent Social Media Time

# Narrative

## Story Boards of 4-family typologies:

① Millennial individual (28)

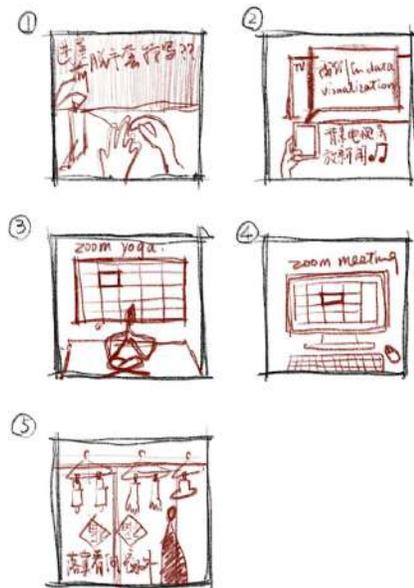


一个人的故事 (behavior in GIF)

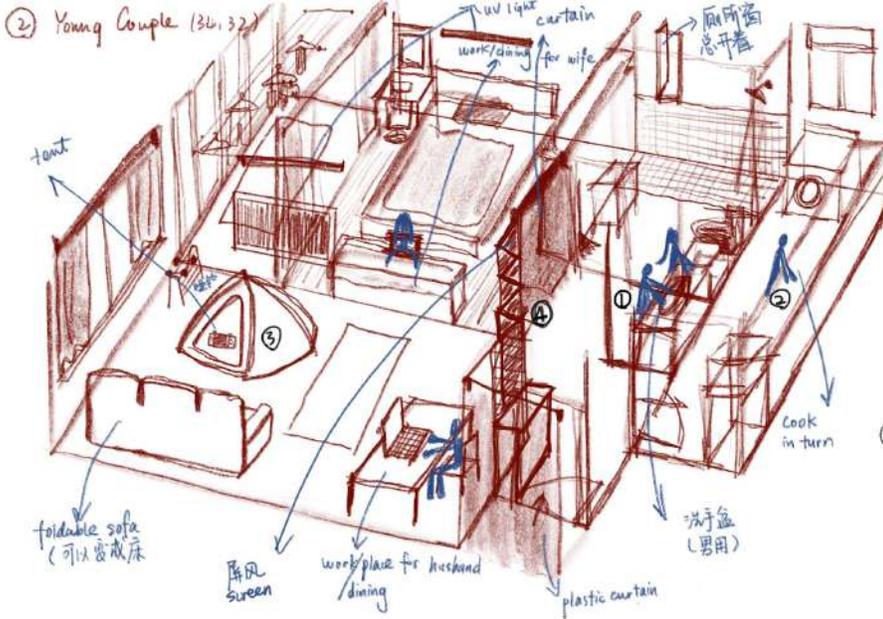
- 活动①: 在门口消毒自己。
- ②: 在床上刷手机看我们画什么教程。
- ③: (茶几搞掉) 换成瑜伽垫做运动

④ work from home.

⑤ 晾衣服、口罩



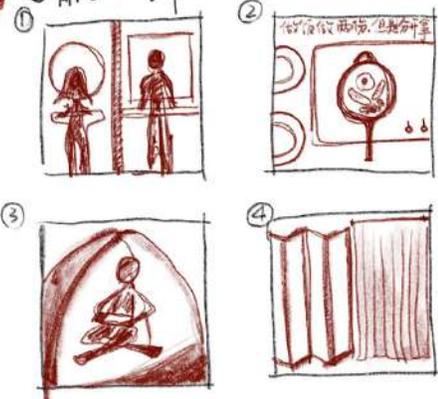
② Young Couple (34, 32)



夫妇基本上就是拼成2个单人间

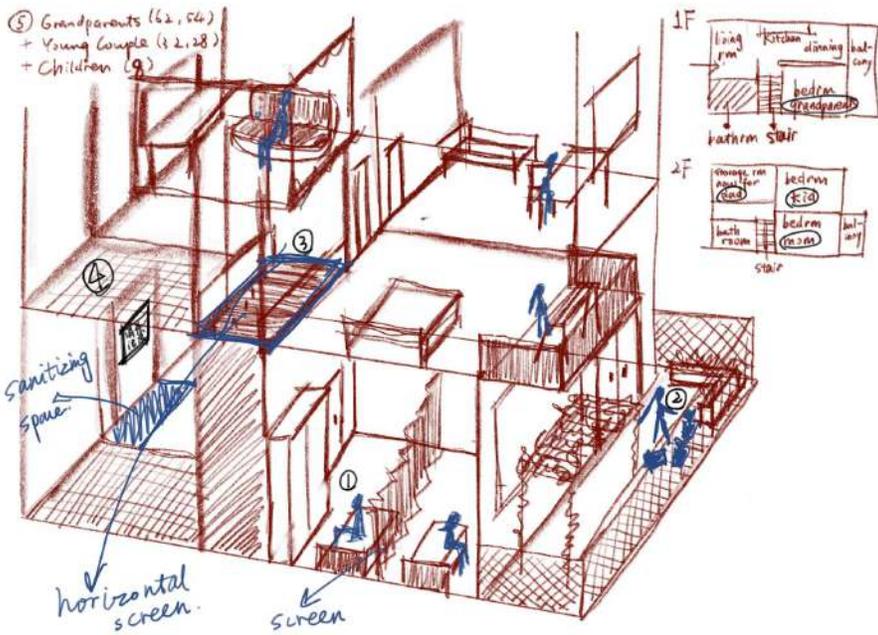
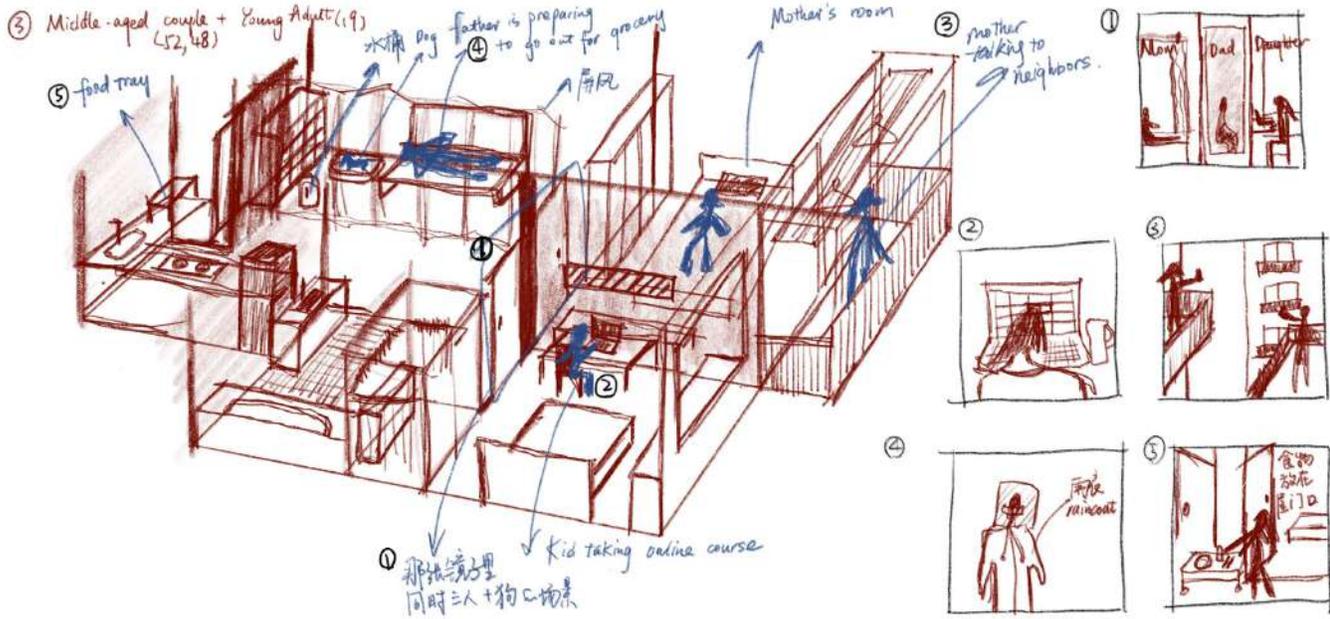
男:→客厅 女:→卧室

- 1.5 bathroom
- ① 并行洗手
- ② 轮流做饭
- ③ 男→在tent里打游戏
- ④ 屏风 vs. 窗帘



# Narrative

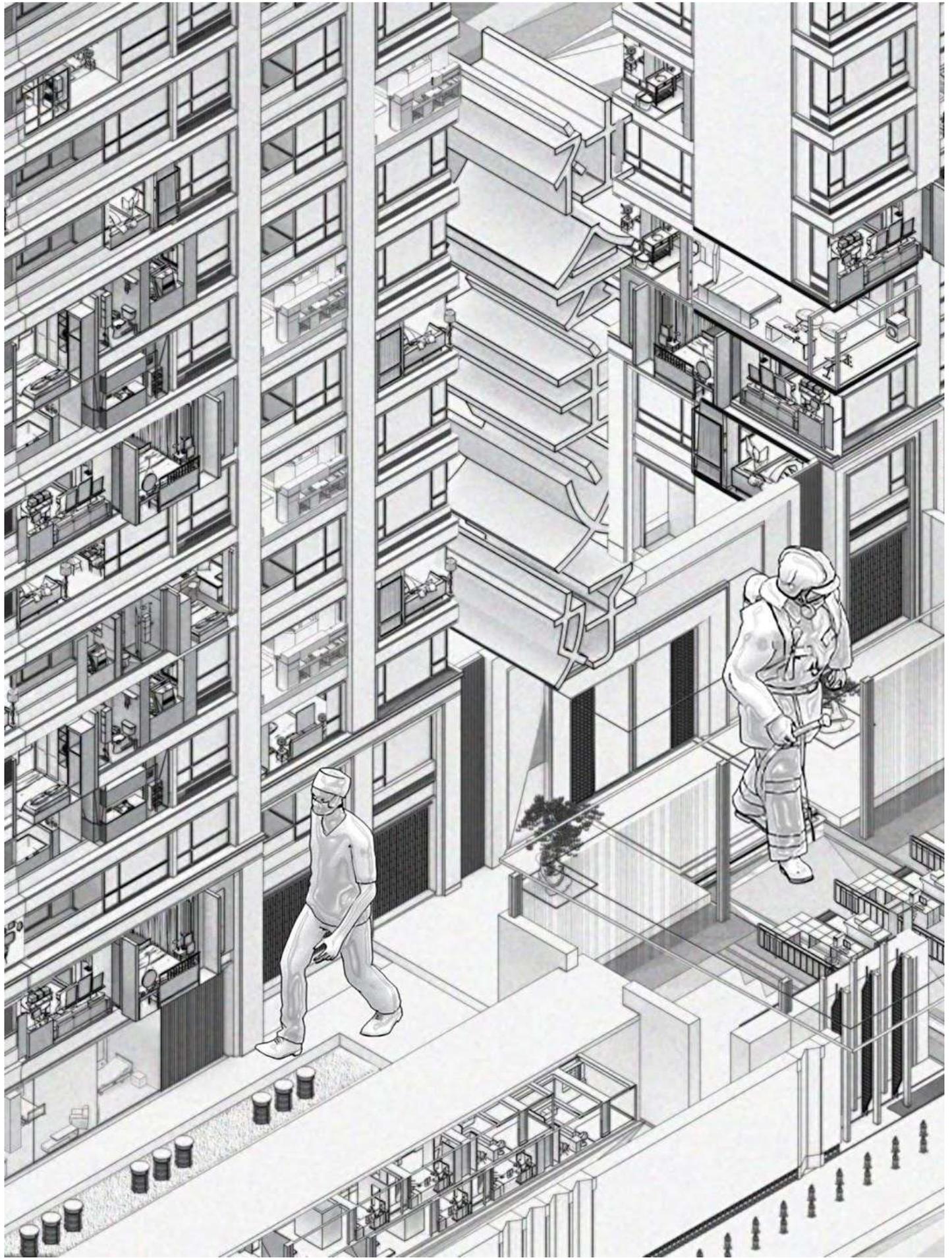
## Story Boards of 4-family typologies:



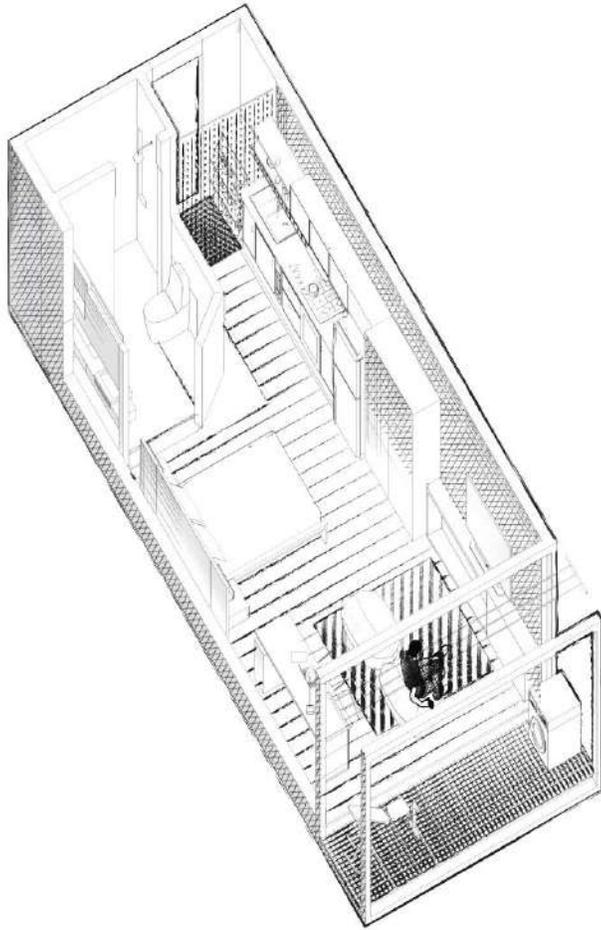
- ① 祖父母有一人身体不好, 不能完全隔离, 需一人看护
  - ② 母亲负责收包裹在花园消杀 [及做午饭]
  - ③ 楼梯间横向隔断
  - ④ 父亲负责打扫两层卫生间, 并记录每日消杀情况
- (more axons for hidden spaces)



# Narrative



## Individual's Studio

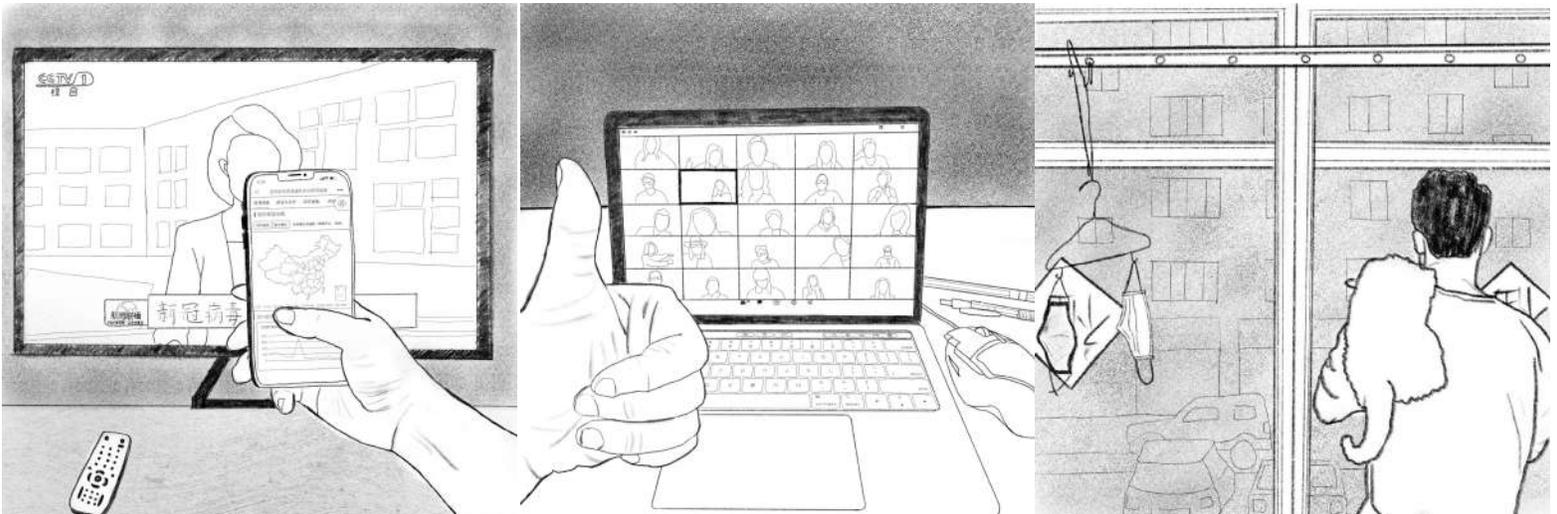


Da Wei comes back to his one-bedroom apartment. He takes off his gloves and does an inventory count.

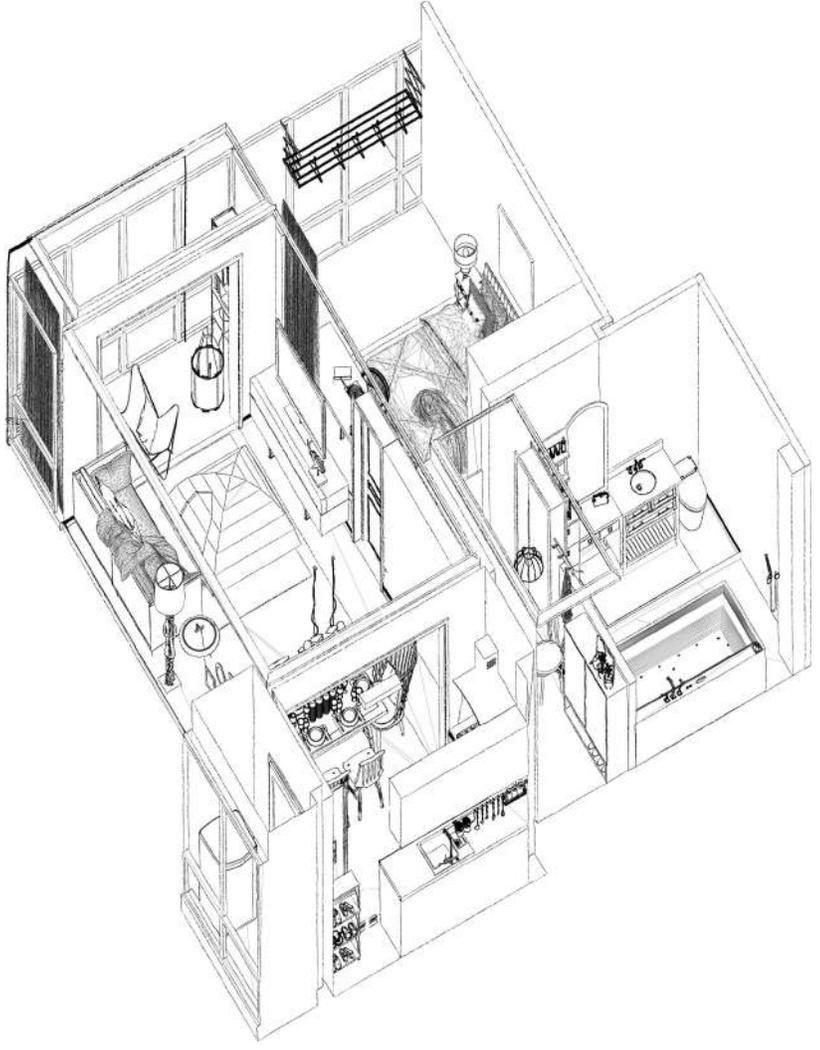
Once Da Wei finishes his sanitation process, he begins lounging and watches the news for live updates on COVID-19.

Da Wei leaves to the balcony to get some vitamin D and fresh air and attends a zoom meeting on his balcony.

After the virtual meeting, he stands up and looks down on the extremely quiet street for a long time.....



Young Couple's Dwelling

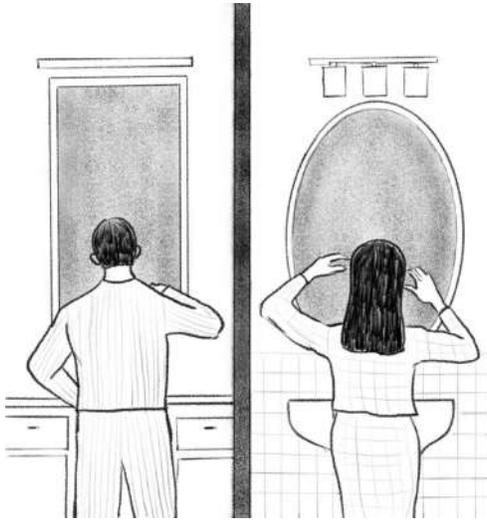


Da Wei travels to his parents' apartment, slightly bigger than his studio.

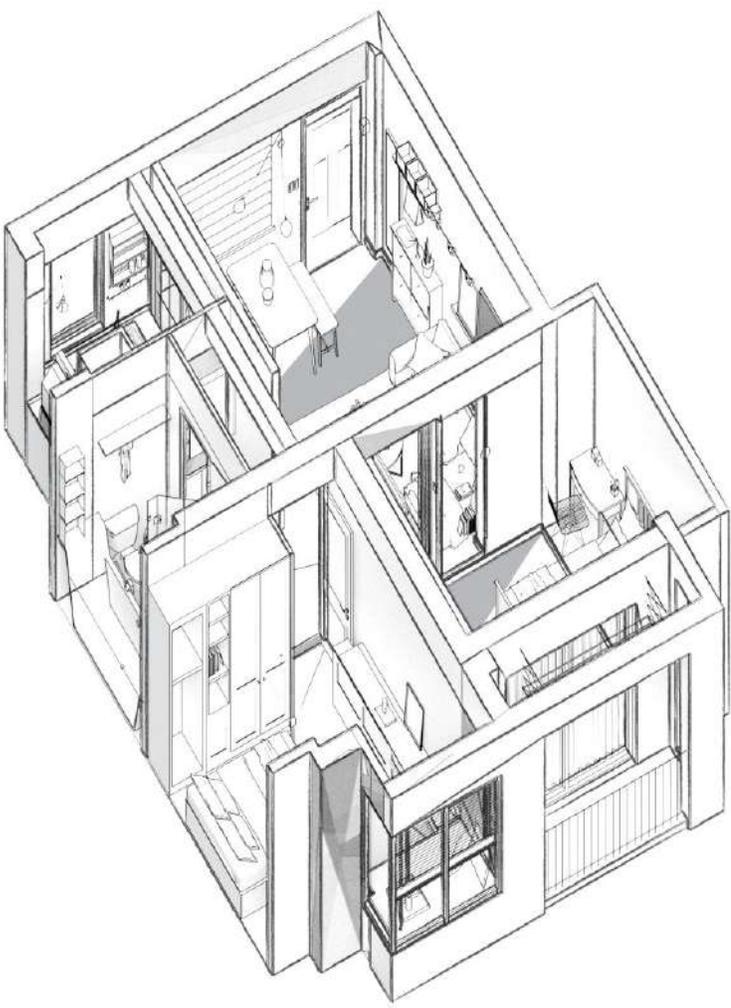
Da Wei observes his dad checking his mother's temperature.

Both Da Wei's parents are using different bathrooms to not cross infect each other.

His father believes he may be infected and self segregates himself in a tent inside the living room.



# Single Family's Dwelling

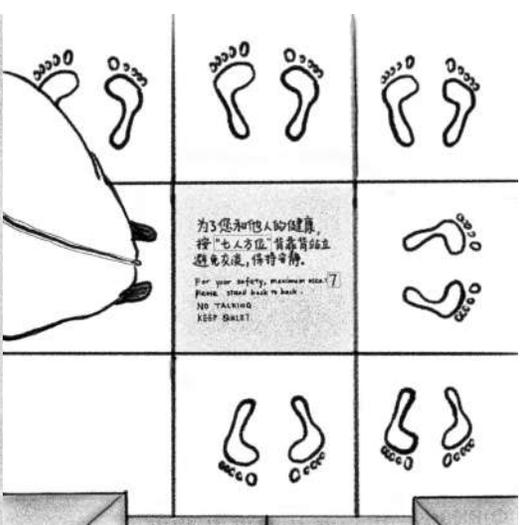
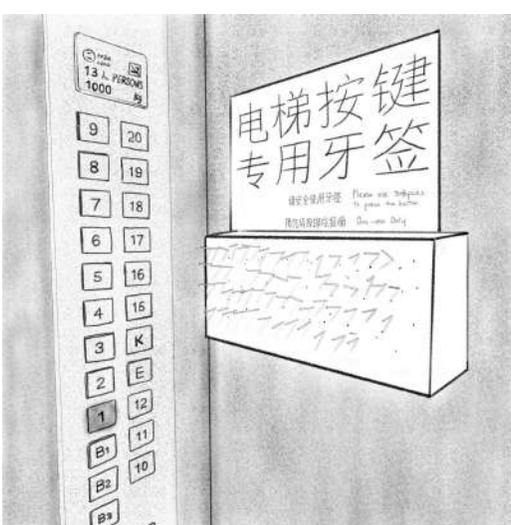


This is Da Wei's girlfriend's apartment layout.

Da Wei's girlfriend sends him a photo of what her family quarantine looks like.

The elevator in her apartment is now utilizing toothpicks as a way to be touch-free of any objects in the community.

The elevator also enforces people to stand facing different directions so there won't be overspray from individuals nasal or mouths.



# Narrative

## Multi-generation Apartment

The multi-generation home Da Wei's cousin, uncle, and nephew are living in consists of two stories.

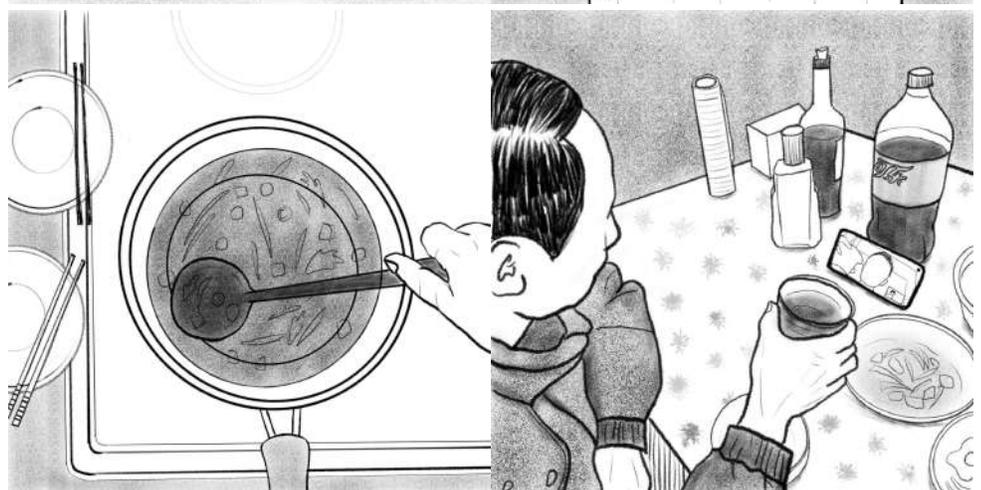
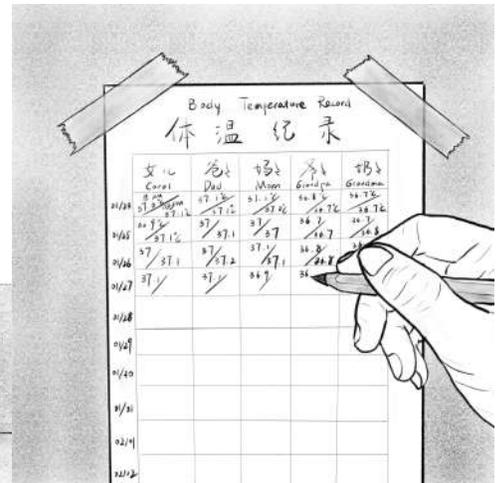
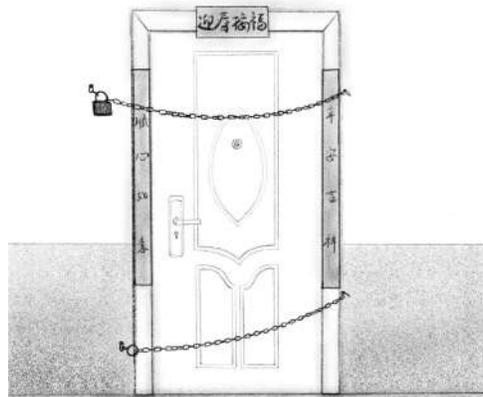
Da Wei's aunt goes out for groceries wearing full protective home-made gear.

Da Wei's relatives' home is under mandatory lockdown from their community, the protective chains are taken off by the security when the family needs to go out for everyday essentials.

Da Wei's uncle records every family member's temperature twice a day.

Da Wei's aunt cooks New Year's eve family dinner.

Unlike in past years, they sat down by the table and celebrated together. The family members take their own dishes into their rooms and drink a toast over video chat.





# Speculation



In history, diseases and public health have significantly influenced on architecture, especially domestic design...



*Space, as it relates to infectious disease epidemics, isn't just about quarantine; it's also a design problem. If you look around most neighborhoods today—in cities and suburbs—you'll see evidence of how humans have responded to infectious disease by redesigning our physical spaces.*

\_ Diana Budds, "Design in the Age of Pandemics" (2020)



industrial time: cholera and typhoid → modern sanitation and water system  
civil war time: healthier living environment → (Frederick Law Olmsted)  
central park

1918-1920 Spanish Flu

**1880s and 1920s: germ theory → sanitary reform movement**

**1920s and 1930s → modernist sanatorium design** (large windows, balconies, flat surfaces that wouldn't collect dust, and white paint)

**1930s and 1970s: infectious disease → housing reform and the urban renewal**

2014: Ebola outbreak inflatable → working hospital with ICU capacities

.....

more concerns on health issues that transform our built environment:  
bad air condition/ pollution / gas poisoning → ventilation/ insulation of buildings (EIFS)/ facades



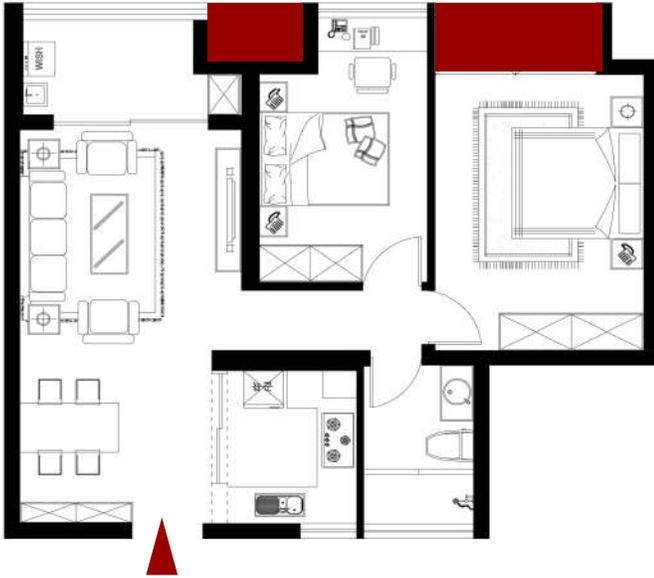


# Speculation



There are huge design potentials on balcony or gate in post-pandemic era...

If we look at most neighborhoods today, we will see evidence of how humans have responded to infectious disease by redesigning our physical spaces. Regarding to the history of architectural discipline, which has been influenced by health issues for so long, As designers, we can think of ways of how we can use our expertise to respond to this pandemic and future pandemics.



We believe the gate of domestic spaces like community gates in China & the balconies of each families dwellings are important. The threshold at different scales serve as the border for many people living in China & the balcony, perhaps the least used space in China before the pandemic breakout, now becomes the most used & creative space to express oneself and communicate with the outside world.



	before the pandemic	quarantine time	<i>post-pandemic</i>
<b>balcony</b>	laundry/planting/storage (least activated area)	dining/exercising/ filming/ talking (new social area)	?
<b>apartment entrance</b>	one or two-layered threshold (fast/spontaneous)	sanitization space (slow / cultivated)	?
<b>community gate in China</b>	metal fence gate for security	multifunctional space: security, thermometer check, itinerary registration, pick-up/delivery, recycling...	?

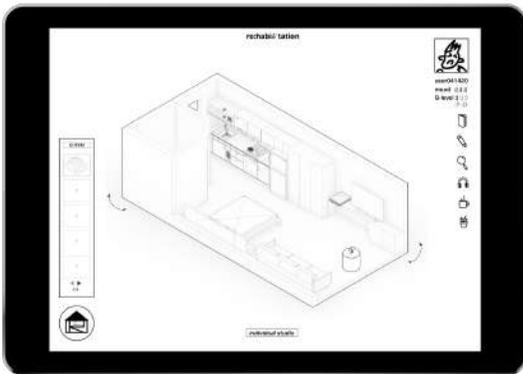
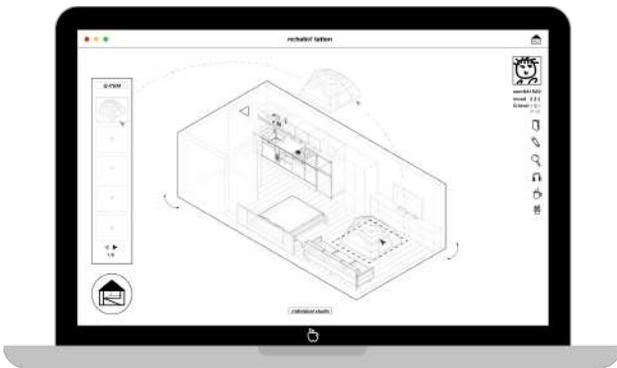
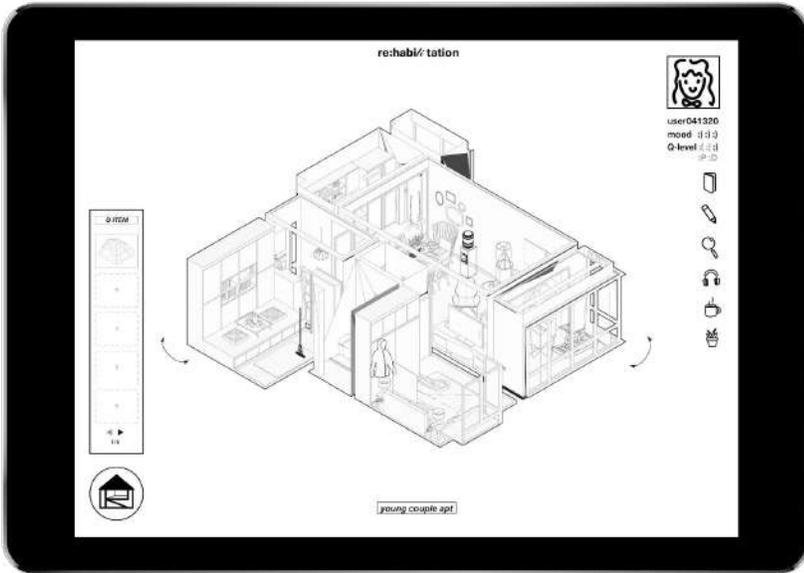




# Engagement



## Learning From Stimulation Life Game

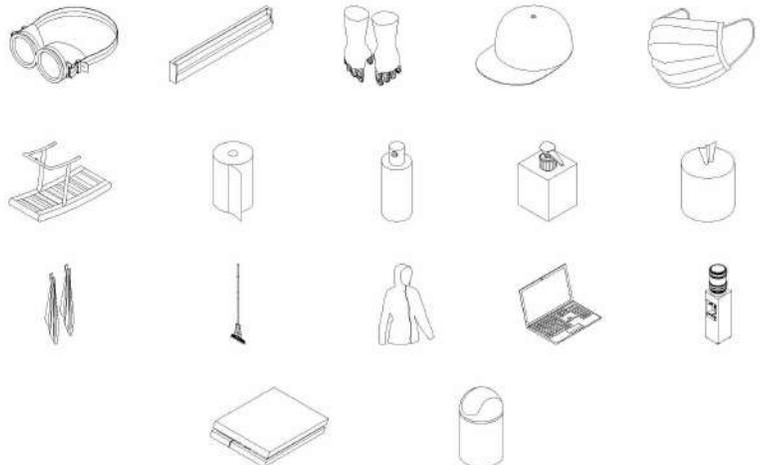


Since our project paused temporarily at the stage of documentation and fictionalizing daily life scenes during the pandemic time, to move forward, we'd like to establish a customized domestic design game for people to document/speculate on life in quarantine time or post-pandemic living:



We hope our users' data could collect unlimited concepts of domestic space design and everyday life narrative from public.

Through this relaxing interaction format, our users are establishing a 'new' (virtual) community. Together, we are figuring out new design possibilities in the future.



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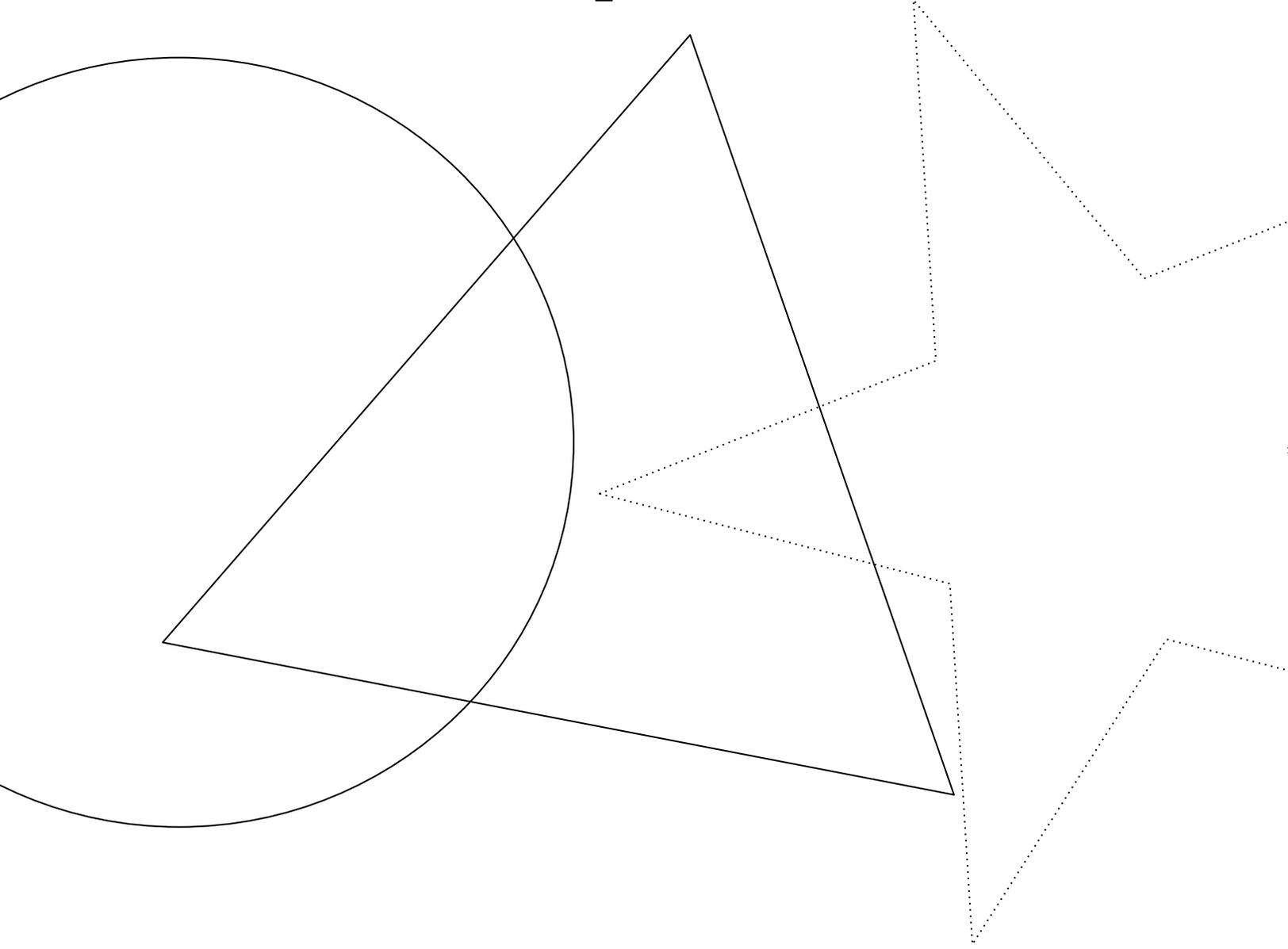
Design in the age of pandemics.  
<https://www.curbed.com/2020/3/17/21178962/design-pandemics-coronavirus-quarantine>



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