COUNTER COLLAPSE
Maintenance in Public Housing

UNDOING CLEANLINESS
From 'Lever House' to 'Luffa House'

SPIDER CITY
New Orleans 2050: Let's Disentagle from Floods

NIGHT MISSION
Parking Lot As Homeless Shelter

EXTERNAL INTERIORITY
Renovation of Nursing Home Network

LISHUISIS
An Alternative Urbanization Proposal

PROFESSIONAL EXPERIENCE

OTHER WORKS
Public housing should be an instrument to fight against systematic inequity. However, due to the lack of adequate funding for maintenance, public housing is becoming a deteriorating environment that breeds social, economic, and racial segregation and a tool that exacerbates inequity.

We are taking as a case study the Manhattanville Houses, in which there are ongoing individual interventions, group action, collective organization, and some government projects being developed.

With such a well-organized community, we can’t help to imagine the bright future if the federal government would invest more budget in the maintenance of public housing, building on the ongoing work of its residents.

The community will be able to thrive while the buildings are maintained by its residents.
What Happened in Pruitt-Igoe:

1956-Completion

1960s-Decay

Defunding

1971-Demolition

What is Happening in NYCHA:

NYCHA has failed to fix nearly 60,000 mold complaints

NYCHA’s Lead Paint Crisis Explodes as Known Number of Apartments Where Kids Risk Exposure Triples

Accessible Homes? Not Really, Say Disabled Residents

Behind the Elevator Doors: The Great Unknown

NYCHA’s Mold Makes Everyone Sick

Newser: Staten Island woman sues NYCHA after waiting eight years for wheelchair-friendly apartment and never receiving it

A Bronx Grandmother Complained Repeatedly to NYCHA About Elevator Outages, Now She’s in a Coma After Falling in the Stairwell

Older Renters are increasingly living alone

Senior Housing Shortage is Getting Worse

This Bronx Grandmother Died Alone in Her NYCHA Apartment.
Manhattanville Houses also has an active Community Center that is able to continue to serve the community by providing programs for teens, seniors, and services that enrich the lives of those residents.

A number of residents are dedicated to transforming the limiting living conditions in the building. Instead of giving up, they are actively seeking help from outside in terms of living environment problems.

WEACT: Solar Panel Program

Nycha itself is also carrying out different projects, such as Lead-Safe Housing Policy, or the Cooling Assistance.
We invited architects to work with our ongoing mission to transform the technical systems of buildings and warranty their environmental sustainability. Furthermore, we provide skill training and job opportunities to have residents involved in our project and help us to install those technical systems.
I only need a single room, but I want it to be close to the entrance. Since my daughter is still very young, I can share a bedroom with her, but I also hope to have a living room. My two sons need separate rooms, so I guess I need three bedrooms and one living room. We only need one bedroom and one living room. A single room is enough for me. I hope to have a living room for my cat as a play space.

Because of this highly adjustable system, redistributing interior domestic spaces become easier than ever and will be negotiated through participatory processes. We encourage residents to redistribute rooms by themselves through a spontaneous group meeting, where they can talk about their needs. We know that this process might be a little bit difficult, but we hope that residents can negotiate through the group meeting and get a relatively perfect result.
Lever House was the headquarters of the Lever Brothers company, a British cleaning product company. This project did research on the this building, but in a totally unique perspective: details, and how they enact cleanliness.

Through research, the popularity of soap, the history of Britian colonization, and racism soap advertisement together founded the base of the birth of ‘cleanliness’, which indicates social segregation and environmental injustice inherently.

Instead of solving these problem that created by capitalism, we imagine a future that luffa is taking over this building since luffa is an alternative explanation to ‘cleanliness’.
Before we start to talk about Lever House, we need to look at the soap industry started in 1885, when the soap company Lever Brothers Company was just established, in the context of colonialism. To sell more soaps and expand their business, Lever Brothers invented cleanliness in 1885. However, cleanliness is not about clean. It is about imperial colonization. It is about corporate expansion. It is about exploitation. It is about racism to Asia, Black, and minorities. They say soap is civilization. It is also about environmental inequality. It’s plastifying the world.

The details of lever house built in 1952, similar to all advertisements we saw above, are crucial enactors of cleanliness. Lever Brother company chose NYC to be the site because “the price one pays for soap is 89 percent advertising [...] and the advertising agencies of America were there.” It implies that designers are totally aware of the power of advertisement, publication, and propaganda. So this building was actually made to “teach the virtue of “cleanliness”.

How does the details of the Lever House enact cleanliness?

First, by sealing the curtain-wall. Through this action, the inside and the outside of the building are clearly separated. Exterior, representing dust, dirt, and pollution was insulated by this layer of thin glass. While the interior is considered purely clean. The mullion details ensure no moisture can get in. This small edge directs exterior water downward, prevent water from entering the mullion and break the sealants. At the same time, This slot allows condensation from inside to escape, instead of collecting and rusting the steel.

To further cut off the exchange between inside and outside, sealant in the window frame was attached great importance here. These polysulfide sealants deteriorated quickly, and damaged the curtain wall.

Also, this building created the picture of cleanliness through purifying the air. In the background of air pollution in the 1950s. Charles Luckman even claimed, “employees didn’t have to breathe the same air as New Yorkers”. With no operable windows, Lever House is rigorously obsessed in controlling the supply of clean air inside the building through the HVAC system.

Window washing is a way of self-promotion. This T-shape track is crucial. It made it possible that this hermetic building, which cannot be cleaned from inside, can be cleaned from the outside. This equipment became a wonderful stage for the performance of cleaning in such a bustling city center. As the most essential part of this cleaning show, 2 window washers are hired to wash the facade every 6 days. They are alienated, they are suffering from mental and physical pressure, and their lives are threatened by fatal accidents.

Cleanliness was expressed through transparency. The high-pressure AC system reduced ductwork size, and therefore reduced the floor plates thickness, increased the transparent parts. But this high pressure system produces greater noise. So the architects used fibre-glassacoustic ceiling panels to decrease the sound level and conceal the messiness of ducts and wires. However, the material is toxic in production, and it is plastifying our world.

With the help of cleanliness, colonization, racism, social segregation, environmental injustice, and labour exploitation are either rationalized or concealed.
Colonization

The explosive growth of the soap industry was based on the colonization of tropical regions.

Racism

In order to promote the soap to obtain higher sales, a lot of racist elements are used in soap advertising posters.

Environmental Injustice

Excessive use of soap causes chemical pollution of water bodies.

Social Segregation

Excessive use of soap causes chemical pollution of water bodies.
Elements such as the office desk, rope and HVAC duct are removed from the interior. The whole exterior system of luffa house is the combination of these elements. Vertical cylinder ducts are used for storing and composting office daily waste. Office desks are used to support these ducts. People throw waste through the long tubes and after one year, waste in the duct will become compost.
By 2050, the rising sea levels of New Orleans would pressure on the levee and make it more prone to collapse, which may result in perpetual flooding.

As ground level will also continue to sink, flood damage to New Orleans will be quite fatal. Under this situation, the government decided to tackle the higher-ranked problems regarding rivers and flood from their perspective and requested a removal for local residents.

Our project is aimed to maintain the habitability of local residents by utilizing our architectural design, which would alter their orthodox lifestyle; however, it would specifically resolve the contradiction between governments decision, natural status quo, and our objectives.
Rising sea level will put more pressure on the levee, making it more prone to collapse, which may result in more frequent flooding. And ground level will continue to sink. As a result, flood damage to New Orleans will be more deadly compared to those previous ones such as Katrina and Ida.

How to deal with floods? Spiders provide an answer. They build their webs higher to avoid floodwaters; they build their webs bigger to expand their range.
In this self-help operation proposal, the power of the neighborhood will be crucial since it connects the block as a whole. To some extent, it breaks the boundaries of the original private living and offers a possibility for collective living.
Los Angeles is not only famous for its large number of cars, but also has an equally large number of homeless people. The two seem to be not directly related. In fact, the number of parking lots is also huge due to the large number of vehicles. The construction of parking lots takes up a lot of land, which leads to higher land prices. As a result, the price of housing also varies. It has become higher, and eventually the number of homeless people continues to rise.

In this design, I tried to find a gentle and effective solution to the contradiction between the parking lot and the homeless. In this self-reinforcing cycle, the extremely unbalanced day and night utilization rate of the parking lot has become a breakthrough point.

My suggestion is making parking spaces at night shelters for homeless people; use a vertical automatic parking system to improve the efficiency of parking and living.
There are many places for cars to park but no place for (homeless) people.

There are 5,484,606 automobiles in Los Angeles, so Los Angeles also uses a lot of land for PARKING...

There are numerous automobiles, but there is no place for (homeless) people. In 2019, there were 567,715 HOMELESS people in the U.S., of which Los Angeles had 58,936. The homeless people in Los Angeles mainly gather in the downtown area. Except for a small number of people living in cars and shelters, most of them sleep on the streets, bringing endless consequences.

The utilization rate of parking spaces changes over time. At night when the parking lot is almost unused, but the homeless people still live in the streets. Workers flood in and this parking lot starts to work. Workers get off work and the parking lot begins to empty. Cars drive away and the parking lot is empty.

The Automatic Parking System can build a multi-storey parking lot, increasing parking spaces and accommodating more homeless people.

1. Move The Homeless To Empty Parking Spaces
2. Adopt Automatic Parking System
3. Add Infrastructures For The Homeless
4. Expand The Public Life Of Homeless People

Skid Row is located in the heart of Los Angeles and has become notorious for having a large number of homeless people. Here the contradiction between parking lot and homelessness is concentratedly reflected.

The utilization rate of parking spaces changes over time. At night when the parking lot is almost unused, but the homeless people still live in the streets.

Workers flood in and this parking lot starts to work.

Workers get off work and the parking lot begins to empty.

Cars drive away and the parking lot is empty.

Adopt Automatic Parking System

The Automatic Parking System can build a multi-storey parking lot, increasing parking spaces and accommodating more homeless people.
By using simple mechanical devices, homeless people can raise the curtains after resting, reset the bed, and open the facade.

When all sides of the curtain fall, the bed descends from the top, and the facade is closed at the same time, this module is an enclosed residential unit.

When the curtain and bed are fully raised and the facade is opened, there is a parking space.
Homeless people wait outside the storage room to pick up their luggage.

Dinning hall, parking, flea market and atrium performances.
A tramp is setting up his room.

Continuous spaces created by hanging rooms.

Hanging public spaces.
Renovation of Nursing Home Network

Spring, 2020

Instructor: Hao Ruan

Sham Shui Poo District is the area with the most elderly people in Hong Kong, and there are many private nursing homes here.

Due to the high urban density of Hong Kong, these private nursing homes are usually small in scale. The lack of public space and outdoor life has caused these elderly people to be trapped indoors. As a result, the elderly in Hong Kong have a high incidence of depression.

Through the statistics of the nursing homes in Sham Shui Po District, I found that they are actually adjacent to each other. Therefore, my proposal is to connect several adjacent nursing homes into a network, and each nursing home undertakes different public functions in this area. The elderly can share these functions.

In the innovation of each nursing home, I adopt the method of rotating and folding, blur the boundary between the indoor and outdoor. The purpose is to guide the elderly to go outdoors, soothe the mood, and reduce the prevalence of depression.
The number of the aging will grow from about 900,000 to 2.1 million by 2030.

Among these depressed elderly...

- 21.1% Living alone
- 49.1% Dissatisfied with neighborhood
- 52.9% Dissatisfied with the family
- 26.1% No group activities

The most common negative self-report among them are...

- 64.6% I feel useless
- 62.3% I feel I have no energy
- 59.9% I feel very dull

Geriatric Depression Rate

15%
In the selected network, each level of nursing home is regarded as a unit. Each unit has a different function that is indispensable to the life of the elderly, which promotes the flow of the elderly in this network. To a certain extent, this approach not only increases the diversity of life, but also enhances communication between the elderly.
07:00  Getting up
07:00  Getting up

08:00  Sunbathing on the corridor
08:00  Sunbathing on the corridor

09:00  Reading
09:00  Reading

12:00  Having Lunch
12:00  Having Lunch

15:00  Playing Cards & Chess
15:00  Playing Cards & Chess

17:00  Watching Movie
17:00  Watching Movie

21:00  Enjoying charity performances
21:00  Enjoying charity performances
Towards Devolution: An Alternative Adaptive Urbanization Proposal

The 2nd Prize
'Future ShanShui City International Urban Design Competition'

Fall, 2020
Instructor: Olivier Greder
Team Work with: Jingwen Luo, Jiaxian Peng, Fan Xia

In 1975, Lishui was still a rural society, and now it is fully urbanized territory within a half urbanized society.

In the last decades interventions were made:
- At the expense of environment
- Colonizing precious alluvial farmland plan
- Destroying the ancient city and villages

... Urbanization is no longer the solution of our problems but the main cause. It’s time to reflect on this way of development.

Our proposal is to protect farmland plains and villages. Take a step back and build towns on the hills, abandon the rigid network of undifferentiated urbanization, and explore an urban layout based on a mountain shape.
According to the government planning documents, rural villages and farmland on the river bank will be destroyed due to urbanization.

Driven by economic interests, the government and real estate companies sacrifice nature and the diversity of lifestyle. Undifferentiated urbanization will swallow all land.

In a mountainous region we need a mountainous territorial strategy. It is time to think developing the territory with its specificities.
[ Problem | A Typical Relocation and Urbanization Process ]

Original network of rural villages.
Villagers are self-sufficient in food by farming.

A newly-built residential resettled all villagers.
Villagers are turned from producers into consumers.

The government earns a lot of money by selling these land, but the expanding urban grid swallowed all villages and farmlands.

Real estate developers also make big money, but urbanity and diversity of lifestyle are suffering a huge loss.

[ Proposal | An Alternative Relocation and Urbanization Process ]

Original network of rural villages.
Villagers are self-sufficient in food by farming.

A newly-built residential resettled voluntary villagers.
Villages won't be demolished, villagers can still live here.

This newly-built residential would be converted into a mixed-use community center.

Building towns on the hills to preserve and rejuvenate villages and farmlands, which brings about the symbiotic relationships of rural nature and urban society.
The public space of Baiyan is dominated by the hilltop plaza, with a large space and a wide range of radiation.

The public space of Baiyan is dominated by the hilltop plaza, with a large space and a wide range of radiation.
The public space in Sidu is dominated by the center of each small community, with a small radiation area but a large number.
PROFESSIONAL EXPERIENCE

San-Yan Bookstore

Xiaowei and Dona’s House
Zai-Zao Architect
Hangzhou, China 2017

Project Type: Retail Interior
Supervisor: Deli Zhao
Status: Completed
Role: Architectural Assistant
[ Xiaowei and Dona’s House ]

Devolution Architect
Xiamen, China 2021

Project Type: Residential Interior
Supervisor: Jiansong Tang
Role: Architectural Assistant
OTHER WORKS

Elastic Nodes Pavillion

Birdcage

Painting
The literati in ancient China had an almost fanatical obsession with ShanShui, limited by the distance of the journey, they reproduced the imaginary ShanShui on daily necessities.

Based on this, this design uses the bird cage as the carrier to create an object that condenses the ShanShui.

The traditional round bird cage is divided into four evenly, each of which is designed to be very different but interconnected. This division also gives this object the possibility of transformation. Each form corresponds to the imagery in traditional Chinese culture.