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The city should be a place of collective spirituality. But it is always difficult for us to see where we will find the value of our existence in the future cities as a spiritual life during this huge urbanization and urban transformation.

Being in Moscow for years, as a person who had a minimal understanding of the land and the culture prior to arriving, I faced considerable challenges in studying and living here. These challenges came from many obstacles such as communication, differences in thought and behaviour. These difficulties provided me with a perspective to observe architecture and urban design differently, considering what kind of urban space can enhance the bond between members of society. I have explored how design can embrace this inclusion.

I hope to create urban accessible space that evokes a sense of place and culture. The space should be spiritual, since I believe that such a place can help citizens reshape the relationship between the individual and the city, where a human’s inner world cannot be engulfed by urbanization.
This is a brief documentary about how a rapidly deployable clinic is applied to the world. In 2020, the world has experienced an unprecedented crisis. Standing at this moment, we can barely say that we were initially prepared. The temporary shortage of resources may be able to be reloaded in wealthy places, but what about the rest of the places?
What crisis we are facing?

Nov. 17, 2020, drivers wait in long lines at a COVID-19 testing site in a parking lot at Dodger Stadium in Los Angeles. Source: 'Tired to the bone': Hospitals overwhelmed with virus cases. AP News

Mar. 31,2020, Inside a Brooklyn hospital that is overwhelmed with Covid-19 patients and deaths, CNN

What have we already done in reaction to pandemic?

Source: World Health Organization

Who is the user?
What do we touch/need/feel in a clinic?

- Sit on bench
- Stand on floor
- Touched by doctor
- Grab and hold a swab
- Lie on bed
- Interact with devices
- Use breathing machine
- Lie on CT scanner

- Cloth fabric
- Ceramic tile
- Polyethylene
- Bamboo wood
- ABS plastic
- Plexiglass
- Vinyl/plastic

Wuhan Leishenshan Field hospital

Source: Mar. 31,2020, Inside a Brooklyn hospital that is overwhelmed with Covid-19 patients and deaths, CNN
I. Utilizing the facility of car manufacture, mass production can be realized.

II. After the models have been released from factories in Asia, Europe and America, they will be shipping to the east coast of the Mediterranean, and other places of the world.

III. The prefabricated modules can be placed directly without on-site construction.

IV. The new clinic units can start the service once the staff is recruited.
After identifying the extent to which we rely on the facility and equipment, the design approach is to scale it down and maintain the minimal space we actually need in an emergency. This is an architecture consisting of chassis, pillar, steel, glass, and monocoque, which build up a negative-pressurized ward module with a toilet and anteroom. Different hierarchies of columns are welded together, providing support to different components.
Monocoque system makes the whole body weigh lighter and faster to assemble. Loads are supported by an object’s external skin, rather than attaching them to a frame. The pillars are united with the chassis and the other parts to hold the entirety. Without concrete or bricks, the structure becomes lighter and even stronger.
Ventilation and Airflow Design

To function the ward unit with airborne infection isolation and negative pressure, it’s necessary to choose the most efficient airflow design to protect the doctors, supported by research and lab reports. The vector-flow diffuser results in higher clean efficiency on the height of breathing, with lower air velocity, which creates a more comfortable environment for patients to recover.

According to the relation between air change time per hour and particle removal efficiency, they use 12 as the ACH in the ward, 10 in the anteroom, and 8 in the toilet. To limit the noise effect, set the appropriate duct air velocity.

Supply air comes to the room after passing through HRV, in which the exhaust warm air will transmit heat to supply air to cut energy consumption. After the heat recovery core, the supply air will come through a HEPA filter and AC. The usage of solar energy keeps its ability to work independently.

<table>
<thead>
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<tr>
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<td>c</td>
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<tr>
<td>d</td>
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Comparison of the concentration of pollutants at a height of 1.5m*

<table>
<thead>
<tr>
<th>Functions</th>
<th>Air pressure (negative to atmosphere) Pa</th>
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</thead>
<tbody>
<tr>
<td>Ante-room</td>
<td>-15</td>
</tr>
<tr>
<td>Ward</td>
<td>-25</td>
</tr>
<tr>
<td>Toilet</td>
<td>-30</td>
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</table>

<table>
<thead>
<tr>
<th>Functions</th>
<th>Area Sq ft</th>
<th>Height ft</th>
<th>ACH max</th>
<th>Exhaust volume cub ft</th>
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<tbody>
<tr>
<td>Ante-room</td>
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<td>10</td>
<td>5100</td>
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<tr>
<td>Ward</td>
<td>104.6</td>
<td>10</td>
<td>12</td>
<td>12552</td>
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<tr>
<td>Toilet</td>
<td>33.4</td>
<td>10</td>
<td>8</td>
<td>2672</td>
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</table>

<table>
<thead>
<tr>
<th>Airflow Measurement</th>
<th>Measured Flow Rate, l/s (cfm)*</th>
<th>ACH</th>
<th>Pipe size diameter inch/feet</th>
<th>Air Velocity in duct ft/min NR level 35</th>
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<tbody>
<tr>
<td>Exhaust</td>
<td></td>
<td></td>
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<tr>
<td>Ante-room Exhaust Fan</td>
<td>85</td>
<td>10</td>
<td>3.5/0.29</td>
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<tr>
<td>Ward Exhaust Fan</td>
<td>208</td>
<td>12</td>
<td>5.5/0.46</td>
<td>1280</td>
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<tr>
<td>Bathroom Exhaust Fan</td>
<td>46</td>
<td>8</td>
<td>2.4/0.22</td>
<td>1280</td>
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<tr>
<td>Total Exhaust</td>
<td>340</td>
<td></td>
<td>6.5/0.54</td>
<td>1476</td>
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</tbody>
</table>

| Supply              |                               |     |                             |                                        |
|---------------------|-------------------------------|-----|-----------------------------|                                        |
| Ante-room Supply Fan| 68                            | 8   | 3.2/0.27                    | 1280                                   |
| Ward Supply Fan     | 105                           | 6   | 3.9/0.33                    | 1280                                   |
| Total Supply        | 173                           |     | 5/0.42                      | 1476                                   |

Apart from a room for treatment, it’s a necessity to have a dedicated space to take tests more safely. This is one of the test units, each of them can receive 1 person to take the test. The doctors separated from test-takers will stand at the backside of the unit, having their arms wearing PPE cross the hole openings on the wall panel, and conduct a swab test.

Each of the unit can receive 1 person to take the test. The doctors separated from test-takers will stand at the backside of the unit, having their arms wearing PPE cross the hole openings on the wall panel, and conduct a swab test.

It uses similar tectonic pillars and chassis like the ward module with modified components and scale.
A recent design of the East River Houses was released on social media by a student of Columbia University Graduate School of Architecture, Planning and Preservation, and it was noted by the residents of East River Houses. Since it is a revision of the attention of other people including the press, media and of course, architecture critics. The feedback of it was controversy.

According to the designer himself, after his proposal was reposted widely, which was "out of his expectation," he had a short ZOOM interview with him. "Social house project was the effort of creating a single functioning area for dwelling, which was the representation of the initial innovation of living together, building up a new order, a heterotopian place. However it turned out to be an illusion, the will becomes more or less stupid that is not real."

Our journalist also reached Aron Aronson, who is an associate professor and architecture critic at the teaching at Aronson State University. "We're pleased to see the whole form as a cliché. It's an naïve imitation of the idea of vernacular architecture and symbolism addressed by Scott Brown and Ventruri."

According to a resident, Pablo Thompson, who has lived in East River Houses more than 25 years, said that he and his family would like to see this in real. "We need a better place to collaborate, I mean it. You all see this crime alert happening on the site. F**k, I love to cook and show my skill of Peruvian dish. It's simple structure, I don't see why not."

Another critical comment demonstrated by a guest professor of Columbia comes more straightforward. "We all know James Wines, so what's the point of plagiarism?"

The designer doesn't tend to defend too much. "I actually would like to see the debates around it. All I want is to bring a new mode of reconstruction, in a way of shifting and expanding the association of living, a moment of scenarios."

How this project will impact further, we will keep up delivering the following updates.

All we know is that the debates are still going on.
El Barrio, once upon a time

East River Houses

Flood Map of East Harlem

A structure must be elevated or floodproofed to meet code requirements for new construction or to receive reduced flood insurance premiums.
Insertion, Intervention, Integration

Gentrification is a colonialism to both the district and its residents. Social housing project was the effort of creating a single functioned area for dwelling, which was the representation of the initial intention of living together, building up a new order, a heterotopian place. Current image of buildings does not lead to the association of living and accommodation, it's more or less a frivolous overlap of modern style boxes. To add more explicit sense of uniting and living, the indication should deliver stronger by new symbols.

The symbolic house modules revoke the sense of living together. Various types of modules function diversified programs, which will be shared by a group of the NYCHA residents. Several floors of the building will be reconstructed to platforms, on which groups of the houses will be inserted, by which a provocative mode of life can be activated. At the newly generated space, daily activities are provided with the implication and association of montaging.
The Metropolitan Museum of Art of New York City is the largest art museum in the Western Hemisphere. Its permanent collection contains over two million works, divided among 17 curatorial departments. The main building at 1000 Fifth Avenue, along the Museum Mile on the eastern edge of Central Park on Manhattan’s Upper East Side, is by area one of the world’s largest art museums.

The Met is a collection of exotism, a colonial apparatus that relentlessly acquires, exhibits, and narrates fragments from nonwestern cultures. However, the inherent incommensurability of these fragments of the others is reduced, if not altogether erased, in convenience for a story of multiculturalism. To decolonize the MET in architectural terms is to discern the spatial syntax of the colonial institution that perpetually affords reductive story of historical differences.
The MET is never one building but an accretion of multiple buildings that have been annexed and extended within the history of the expansionist institution, while lacking the heterogeneity of architecture, the gigantic size and rigid circulative paths deliver a bad visitation experience. It aims to create an emerged atmosphere as an encyclopedia of artifacts, however, the notion of huge storage isn’t friendly to its visitors.

The main strategies of the project aim to generate the new circulation of visitation that overlays/disrupts/perforates the colonial institution and renew MET’s interstitial relationship with the urban context and the park. Deconstruction is never a purpose but an approach.

In order to rethink the responsibility of the world’s biggest art institute, with the world’s largest exhibition showcased, the Met should be also the world’s biggest hub to rewrite the history of exhibition, by challenging the superiority of being an art institute itself. The archive of the museum will be also exhibited, which will be integrated inside the archival towers.

The floor plans after the form generation and intervention. The new roof of the Met provides the rigid building with the variation of the space. It’s the new landscape, which breaks the hard borders and connects to nature. It’s also the tribune, that generates a new relationship between the museum and the park.
The new lobbies offer the first impression, which interconnects the 5th avenue, the body of the museum, and the central park. The transmission of the view becomes the new lobby to each of them. The cross lobbies enter from the street level and lead the visitors directly to the originally half-opened ground floor of the Met.

As the extension of the new lobbies, the events of visitation expand the footprints into the park, the landscape of the museum merges to the landscape of the park, which gradually turn the space to a botanical garden.

The platforms can arrive at different sections of the museum, which dissolve the volume of the original museum of the museums. They ease the pain of walking a Met Marathon by layering a dramatic experience to the transmission between the halls. The park and the city are montaged and reintroduced inside.

The towers stand on the very position from the Met’s non-public arts collection storage on its ground floor. And showcase layers of artifacts, shelves, and art maintenance tools to the visitors. They can be unprepared, unpolished, but they are given new meanings in this bizarre space.

Beneath the iceberg of the Met, an overflow tunnel for the reservoir was constructed in 19th century, which have already lost its function but remained its existence as an non perpendicular space in the Met building. It’s the infrastructural archive of the Met, and it will be reused as an exhibition space to evoke the memory of the city.

The Re-Met is a reunion. Between its visitor and their visitation. Between the artifacts and their origin.

The Re-Met lands on the context. And conceptualizes the new context. And contextualizes the concept of a museum.

A museum of contrast in transparency. An opposition to homiletics. The elegancy of affinity.
04 RENOVATION OF THE LEVERHOUSE

Architectural design
Group work
Haoran Xu, Ziyi Wang
September - December, 2020

Program: Lever House Adaptation/Intervention
Instructor: Jared Friedman
Course: Rethinking BIM
Columbia University, GSAPP
Site: Lever House, Manhattan
New York City
05 LINES NOT SPLINES

Course work
Haoran Xu
September - December, 2020
Instructor: Christoph Kumpusch
Course: Lines Not Splines
Columbia University GSAPP
06 RANGER'S HOME

Haoran Xu, Qiwei Sun

2021 Fall

Instructor: Phillip Crupi
Course: Techniques of the UltraReal
Columbia University, GSAPP
07 THE LEAP

Visual Study
Group work
Haoran Xu, Xueyin Lu, Steven Gan
2022 Spring
Instructor: Joshua Jordan
Course: Model Fictions
Columbia University, GSAPP