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Do we live in a world where we help each other? When was the last time you gave or received assistance? Networks of care are embedded within the spatial boundaries of our society. But, not everyone has equitable access to this network - some do not have a nuclear family to rely on, some do not have access to medical care due their immigration status, and some are oppressed by spatial accessibility limitations.

In addition, through the use of undeveloped sites, we have developed a competition to disseminate the concept, Normalizing Networks of Interdependencies, and develop a platform and requirements to solicit effective ways to reach a broader group of designers.

We imagine these Care Units constantly distributed throughout the community. They could contribute to a radical change in the cultural perception, even transforming the ways in which children imagine assistance vehicles.

Once the Mobile Care Units are in motion, we envision new scenarios where local initiatives like La Casita de la Salud, a run clinic, can hold checkups and pedagogic activities open to all residents in East Harlem in a new regime of caring and assistance focused on a preventative fashion.
East Harlem is taken as a platform to rehearse this approach, and started our research following individuals involved in the current neighborhood’s networks of care.

Myra was a high school teacher. After a bicycle accident, his head injury affected his memory and ability to carry out some everyday tasks.

Michael, 55 years old. He stopped working as a carpenter because of his Degenerative neurological condition.

Beatriz is an immigrant from Costa Rica who works at La Marqueta. She is an aspiring sous chef who trained at Hot Bread Kitchen in 2018.

Bob was a high school teacher. After a bicycle accident, his brain injury affected his memory and ability to carry out some everyday tasks.

The urban garden center is a nonprofit that creates economic opportunity through urban agriculture and education programs.

La Marqueta is a social and cultural hub functions as a space of thriving and selling products, distributing food, and creating a space for community connection.

Investigation

Independent Living

“Independent living” originated in the 1960s, in a movement fighting for equal rights for people with disabilities. Welfare was expanded in the 1990s and currently includes Medicaid and Supplemental Security Income for those who need it.

Opportunities

The job opportunities of disadvantaged groups are not only related to their livelihood but also to the realization of personal value. The fight for jobs has always been an issue.

Women Empowerment

Within East Harlem, there are cultural hubs that impact the community positively, especially the gendered experience of women attempting to establish and maintain independence and stability. Many of these women are not only immigrants, but also experiencing the world intersectionally as women of color.

Immigrants Equality

There is a large immigrant community, with about 43% of Latinx making up the population. Immigrants still face many difficulties when it comes to accessing assistance. But, undocumented immigrants are not eligible for these benefits.
The City gives Guideline in three different but relevant aspects.

- **Guideline**: The City will use all kinds of methods to notify everyone in communities, including brochures, newspapers, flyers, etc.
- **Advertising**: Official website can be approached for getting details of each topic.
- **Portal**: A series of meetings, including experts' workshops and participatory workshops with residents, will be held to get feedbacks toward design details.
- **Discussion**: Final Design and documents will be finished.
- **Feedback**: The city gives Guideline in three different but relevant aspects.
Housing
Housing renovations integrate communal ground floors and activated rooftop gardens to promote inclusive housing for all people to give and receive assistance. This occurs through the installation of elevators and the update of ALL units to be ADA accessible. These renovations introduce a new regime of ADA accessibility standards and networks of care. Rooftop infrastructure, communal living spaces, and balconies all promote expanded networks of care and spaces of communal living.

Prototypes of Townhouse Renovation Floor Plan
In townhomes rented to different tenants, the city will subsidize the transformation of every floor to gain communal spaces. We re-organized every floor to create a dynamic communal space at the center with more units to account for displaced first floor residents.

Prototypes of Townhouse Renovation Perspective Section
Rooftop lets people can plant seed and sprout from the Center for Food Access. The Middle floors show people interacting in communal space. The bottom story is transformed to communal space, a specific function following residents’ consensus.
Care

The city will provide specific zones for the mobile care units like parking lots to host activities. These Care Units constantly distribute throughout the community. They could contribute to a radical change in the cultural perception, even transforming the ways in which children imagine assistance vehicles.

Food

Centers for Food Access will be placed in empty lots that the city will buy. GrowNYC and other organizations have the opportunity to manage the building's nursery, composting and educational facilities. GrowNYC already plays an active role in this community in relation to Fresh Food Box distribution.

This building will emphasize accessible circulation through a diagonal elevator, a visible water circulation system, and a biofilter air system. Therefore, Centers for Food Access will become a living learning experience for users.
After researching the water-related disasters of climate change and, we wanted a design to house the same potent emotions that come out in an emergency.

The Defeated Flood

"ISLAND"

Instructed by Bernard Tschumi
Collaborated with Rourke Brakeville, Vasco Li
Sep-Dec, 2021

Conflict

Indifference

Reciprocity

Under Water

On Water

Above Water

I

II

III

Started with the three relationships between water and human
Imagery & Space

Our narrative explored the emotional potential of the on-water spaces: these are meant to evoke feelings of neutrality, reflection, and contemplation, a kind of “Lingering.”

Emotionally, the experience was designed to begin with discomfort and shock that directly reflects “Suffering” in flooding.

The second chapter has no special function, consisting of a courtyard-style scene, more of a transitional role.

Space and function were unified in the third chapter, which is also the core of the whole building. People feel the symbiotic relationship with water here, and enjoy the convenience that water brings to people.

Above-water the narrative sought to bring out emotions of hope and wonder, which is a spiritual rising.

The narrative of Underwater was constructed with an entrance that passes the visitors to go under water. Functionally, it mainly performs the service-oriented task of building entrance.
Dimension

Site Plan

Massing Generating Concept & Transverse Sections

Under Water
On Water
Above Water

Concept & Transverse Sections
Plan Generating

Programs

Theater
Exhibition
Courtyard
Tanks
Boards
Cafe

Floorplan and section of Chapter III
The first chapter is located underwater, where visitors can experience the overwhelming emotions of the disaster. The scenes speak of suffering and reveal the unpredictable future brought about by climate change.

The second chapter takes a neutral attitude to let visitors feel the objective existence of water as an element. It also serves as a transition space connecting the core third chapter, where calmness is the key word.

The narrative ends on a high note, here revealing the way in which man harnesses water resources and also serves the visitor with practical functions. The symbolism is that with inspiration, people unite to overcome all difficulties and finally come to a happy ending.
Inconsistency in the consistency
Everything Must Scale

Instructed by Michael Bell
Jan–Apr, 2022

Inconsistency in the consistency and chaos needs to be seen. And the real radical innovation is from the underlying logic, for the real-time expression of individual will, on shaping space, whether for reasons of equality, justice or the objective law of development.
Motion

Motion refers to the change of position from here to there. All motions of people have purpose/meaning.

Space

Entities Occupy space, cannot overlap each other, which forces people to go through intermediate, to get the purpose. Motion is the tool, which shows its Methodology wise.

Evolution in the philosophical sense

Emphasize classic proportions, pursue completeness and perfection, whether in terms of firmitas, utilitas, venustas. In fact, Perfection is a metaphor for the motion of a closed loop.

As development speeds up, the closed-loop circular motion collapses towards the flow of time, the vector shows. The so-called sustainability, the dynamic construction planning, free plan free facade all are concrete form of that vector.
The result emphasizes the overall direction and ignores the inconsistencies in it. This inconsistency refers to the different expression of “me” for space.

The real radical innovation is from the underlying logic, for the real-time expression of individual will/personal will, on shaping space, whether for reasons of equality, justice or the objective law of development.

The task of column and beam becomes Transportation. Frame becomes rails. Space can flow along them along the XYZ dimension.

Maglev EMS allows the system to work at any speed condition, and there is an intermediate component transfer motion between two entities.
humans have been somewhat detached from natural selection. The so-called evolution has been its environment, which includes the quality of space, equipment, light and other architectural elements. Architecture has become the new vehicle of evolution. Therefore, the boundaries of the so-called "individual" concept have been extended, and the inconsistency of the individual's behavior includes the inconsistency of the space to which it belongs.

Simultaneous motion allows space to be organized dynamically. All motions are inconsistent. All the will can be part of the decisive power of shaping space. In such an utter motion, the nature of substances can be liberated.

Schedule becomes the key. A very important part of people's growth is learning to make schedules, and everyone agrees that a clear and organized schedule is the cornerstone of achieving free will.
Generative Design
Pavilion design

Instructed by Danil Nagy
Collaborated with Lichong Tong, Ningyuan Deng, Haotong Xia, Jiaying Qu
Sep~Dec, 2021

This project aimed to generate optimized model by given context variables.
The algorithm seeks to maximize the usable area while pursuing the minimum total road strength length, and finally automatically obtains a set of optimal results. We then artificially select the most suitable one among them.

Based on the results of the previous step, we then seek to maximize the capacity.
Re-thinking BIM

The project aimed to explore more possibility building complicated adaptive Revit components by Grasshopper according to context data.

1. Extract the first 4 vertices of the facade base panel.
2. Set a quarter of this side as the fifth point. Rotate the plane based on the axis of this edge also with a one to one angle data.
3. Connect the center point of the top edge and the two vertices of the bottom edge. Rotate this surface around the bottom edge with a one to one angle data.
4. The triangle and the plane intersect at two points, which are the sixth and seventh points.
5. With these two and previous points, we can get three surfaces.
6. These three faces need to be offset inwards.
7. These three curves and the bottom edge intersect to generate four points.
8. The three new surfaces intersect with the facade panel base plane to get another two new points.
9. The intersection of these three surfaces and the inner face of the facade panel, with the four vertices of the inner facade panel face, we got 21 points.

Define an adaptive spatial logic by which points can be generated.

Grasshopper defined all relative positions of adaptive points

Revit generated entities according to given points

Multitudinous Panels

Instructed by Mark Green
Collaborated with Ke Zhai
Sep– Dec, 2021
Section of the Little Island