Architectural Fantasies

Portfolio
for internship application

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Portrait study from Xenia Hausner 2017
Medium: Oil paint on canvas paper
This project is based on the notion that fashion and architecture are incredibly similar. Two scales of site were analyzed, one at the level of the human body, and the other at the level of the building plot. My interest stems from investigation into the influence of aperture on pedestrian circulation. I designed several garments in aims of testing the relationship between the perception of pedestrians and their body movements. Then, based on my observations regarding the garments I created, I built an array of architectural models. The final architectural forms, which are based on previously designed modules derived from the garments, can adapt to any given site.
Analysis drawing of the new garment: the degree of leg movements of the subject will be revealed by the changing shapes of apertures of the pants.

Medium: pencil on vellum

Photographs of the fabric design and the fabric modules.

Medium: muslin

Prototype model: modules arranged in a successive way as the base unit for the viewfinder in Met Cloisters.

Medium: watercolor paper.
Viewfinder for the Met Cloisters: grow from prototype model
Medium: drawing with watercolor paper model

Exploded axon of the model for Metropolitan Museum: showing the density of circulation created by different modules and the gestures of people experiencing each program
Medium: pencil and printed figures on vellum

Collage of seeing and being seen: showing the relationship of seeing, being seen, and people's gestures
Medium: pencil on vellum with photo collage underneath

Circulation diagram: binary between circulation typology versus people's tendency to follow other people's attention on nearby stores or scenes: the binary between circulation typology and the specific module that is able to hold the circulation.
Medium: pencil on vellum

Details of the finale model transforming the stairs in front of the Metropolitan museum
Medium: photography
Circulation map after the installation of the project on Fifth Avenue: the stairs in front of the Metropolitan Museum

Plan of the model: cut from 2.5 feet and see from below to above
Medium: pencil on vellum

Finale model and circulation diagram
Medium: pencil on vellum

Section for the model
Medium: pencil on vellum with photo collage in the back
The housing scheme is confronting the challenge of severe air pollution in Melrose community by imagining a habitable forest which filters air contaminated with allergens, pollutants, carbon and nitrogen dioxide. The modular prefab housing units are organized within a natural air and sound filter (Forest) as well as artificial & mechanical filters as a radical scheme pushing in the future of architecture that improves way of life in the built environment.
This project responds to the uneven distribution of water resources and water application of the current site. It is also a response to the more and more extreme climate with dry spring and soaking summer. As it is one of the reserved areas of the native Americans and contains a sacred site, so the project will be a light plug-in considered for future expansion. It proposes that buildings as infrastructures storing water above ground from wet summer and redistributes water in dry spring, preparing for future climate changes. This project stores water from higher lands, preventing them from disappearing from their journey to lower lands. It also offers a possibility of a modular future where accommodations for humans/plants and animals are easily replicated and environmentally friendly. Structurally, it references the form of a native wigwam structure and the semi-permanent nature of its structures. It is because that the specific areas responses to climate changes may vary year by year. So the structure should be moveable and easy to plug in on-site for adapting to changing reality.
Precipitation study from present to future

Local Crop Yield 3D Mapping (R programming language)
The site is an abandoned building that is getting rebuilt into a school. It is punctured all around after its first life. It situates in East Village, NYC. The program of my project is an architecture school that is accommodating for future curriculum changes. As the architecture education is getting more and more interdisciplinary and faster in changes, the school is designed to be a shell that holds different replaceable programs. These programs are modular plug-ins like bubbles and the interdisciplinary aspects are reflected through the intersections of bubbles. In considering future possible changes, the concrete and wood structure is kept intact while adding wood plug-ins of bubbles.
From 80th to 120th street Broadway is the subject of study. This project is based on a sequence of observations from these forty streets of Broadway, New York. The site choice and the architectural interventions are based on the critique of the excessive presence of big private companies like banks throughout these streets. These forty streets, pressed from private space (private business or residential space) and public space (streets) share the same feature, which is a lack of common space. My project proposes to take the corner banks particularly the ATM banks throughout the forty streets and transforms their lobbies into common space for new community economic activities. My approach is to transform banks' frontage, which is more of a propaganda than an enclosure these days into a gallery for community funding. Theoretically, this project challenges the threshold between public and private space giving room for common activities.
The plan of 109th street where there is a Chase bank in the corner and an area of visibility (cars cannot park within 15 feet from both sides of a fire hydrant) due to the presence of a fire hydrant. This condition, saying the presence of a corner bank and a corner fire hydrant is occurring repeatedly throughout 40 streets and thus becoming a typical condition for a sequence of sites.

Bank interior typology 1

ATM Bank interior typology used in this project

Bank interior typology 3

Bank interior typology 4
Above is the drawing showing the night scene after the transformation of the bank frontage. The mirror helps reverse the activities in the gallery and turn them into public experiences.

The interior view after the transformation of the bank frontage where the innermost space is for atm machines as it was and the space in between public streets and atm area is transformed for common use.
CBE has long been disputed for the air and noise pollution to the surrounding neighborhood. This project is based on the assumption by Professor Peter Muenning from Columbia Public Health that the most cost-effective way to solve the long-term problem of bronx is to cap the below ground CBE. Intending to restore the balance and vigor between the north and south Bronx long separated by CBE, we propose to offer a weaving string of commercial activities offsetting by major public destinations on top of CBE and generate on-site taxes for the imminent neighborhood. These taxes could be utilized for improving conditions of these public space. At the same time, two of the underground lanes are transformed into train lines offering a public pathway across Bronx for residents nearby. The tensegrity structure is chosen especially as an expression of the precarious conditions of life here.
OTHER WORK

Individual

Paintings and drawings from class

Architecture models from GSAPP

2014-2020

Included are various fragments, final products, and experiments with model-making materials and architectural forms.

Tree study

Medium: charcoal on canvas paper
Tree study
Medium: charcoal on canvas paper

Rurouni Kenshin inspired Collages
Medium: ink on acrylic paper