01 GREEN CAPITAL
GSAPP Summer 2022
ARCHA4853
Instructor: Ersela Kripa, Stephen Mueller
Individual work

02 RICE ECOLOGY 2030
GSAPP Fall 2022
ARCHA4105
Instructor: David Benjamin
Group Work With: Ze Meng, Renwen Yu

03 ATYPICAL MONUMENT
GSAPP Spring 2023
ARCHA4106
Instructor: Karla Rothstein
Group Work With: Weiheng Zhao

04 ADVANCED CURTAIN WALL
GSAPP Fall 2022
ARCHA4634
Instructor: Daniel Vos
Individual Work

05 MISCELLANEOUS
GSAPP 2022-2023
Shade can be recognized as a luxurious amenity that brings a touch of peace to this heat-laden forest of concrete and glass. But with the growing heat island effect accompanied by the frequent 100-degree heat waves it brings, we need to consider shade as a useful public resource. However, at least for now, this resource is not equitably distributed. In different cities across the United States, we can find evidence that the density of the tree canopy correlates with income or racial distribution, due to a complex set of historical factors, and it is up to us now to remedy these inequities as best we can.

New York has long been considered to be at the forefront of urban greening. New York’s “Million Trees” project reveals the government’s commitment to addressing environmental injustice. In the government’s presentation of the results, we can see that areas that were environmentally fragile have been well compensated with new trees. However, if we take a closer look at the actual condition of the trees, we can see that the situation is not as rosy as we thought.
Due to the complex and demanding environment, tree growth in the city requires care, and in the 2015 tree count, trees in the Museum Street area registered the most stewards, and therefore the growth of trees in this area is ideal. But as is inevitable between data and reality, there are many well cared for trees that are not registered as stewards. There are many such invisible stewards in the city, and they are an integral part of the urban forest ecosystem.

As for the reasons for canopy decline, there are certainly environmental factors other than lack of human care. So if we want to think about how to protect and increase the urban canopy, we need to consider both environmental factors and invisible stewards. By zooming in on the map to the Lower East area—an area that has shown anomalies in canopy decline—we can clearly see how the canopy is declining. I selected one of these sites for study and proposed a prototype neighborhood-scale tree protection system.
Landsat 8 is the latest installment of the U.S. Landsat satellite series, operated by National Aeronautics and Space Administration (NASA) and United States Geological Survey (USGS). The Landsat program represents the world’s longest continuously acquired collection of spaceborne data in history and since late 2008, all data were made available to all users free of charge. Each of these channels has been designed to perform certain tasks, e.g., retrieving atmospheric aerosol properties and detect cirrus clouds for corrections of atmospheric distortions.

Since the 1970s, grassroots activists have been fighting against air pollution, toxic facilities, the lack of trees and green spaces. But their environmental struggle has now also become a housing struggle. With the “One Million Trees” plan, some of those neighbourhoods suddenly became green, and quickly gentrified, attracting other sectors of the population that want to live there because it is now a desirable atmosphere. Now that these activists have trees, they are forced to fight back to stay in place, because of trees. That is one of the paradoxes that emerged in NYC.
Since the 1970s, grassroots activists have been fighting against air pollution, toxic facilities, the lack of trees and green spaces. But their environmental struggle has now also become a housing struggle. With the “One Million Trees” plan, some of those neighbourhoods suddenly became green, and quickly gentrified, attracting other sectors of the population that want to live there because it is now a desirable atmosphere. Now that these activists have trees, they are forced to fight back to stay in place, because of trees. That is one of the paradoxes that emerged in NYC.
The world is suffering a food crisis these days. Undoubtedly, rice is the most suitable role to end this disaster. But now we are facing two problems. Firstly, to relieve inventory pressure and increase the unit price, the food suppliers prefer to burn the rice into biofuel with no carbon-saving benefit. Secondly, rice production is always regarded as a high carbon emission process. Whoever started the trouble should end it. So how to solve this deal of trouble with rice ecology?

We propose to build warehouses to store more rice. And more importantly, we think about how to make the carbon emission into the carbon sink with architectural methods in this proposal.
The world is suffering a food crisis these days. Undoubtedly, rice is the most suitable role to end this disaster. But now we are facing two problems. Firstly, to relieve inventory pressure and increase the unit price, the food suppliers prefer to burn the rice into biofuel with no carbon-saving benefit. Secondly, rice production is always regarded as a high carbon emission process. Whoever started the trouble should end it. So how to solve this deal of trouble with rice ecology? We propose to build warehouses to store more rice, and more importantly, we think about how to make the carbon emission into the carbon sink with architectural methods in this proposal.
System

Containers
The straw chopped to a certain
length is stored in different con-
tainers. These containers are con-
ected to different plant modules as needed
in produce various products.

3. Milled Straw (10-20mm)
- Silo Filler
- Paper
- Straw Briquettes

2. Chopped Straw (50-150mm)
- Precast Concrete Board
- Horticulture Products
- Packaging

1. Cut Straw (300-500mm)
- Building Straw Bale
- Animal Feed
- Composite Wood

0. Raw Straw (800-1000mm)
- Thatch Roof
- Bedding
- Rope

Straw Preparation System

STONE
1. Cut Straw
- Straw is broken up and straw
- Stems are blended out

SAND
3. Milled Straw
- Straw is milled to fine
- lengths with a mill

4. Blender
- Straw is milled to fine
- lengths in a blender

Cyclone/Filler
- Straw is sieved and processed

Briquetting Press
- Straw is briquetted

Biogas Power Plant
- Although carbon emissions are gener-
ated at this step, we do not generate
carbon stores indefinitely. Instead, full
use of these biological materials is a
more appropriate option.
As a waterfront island city, New York suffers from both intensifying storms and sea level rise. The current drainage system is insufficient to address these challenges. For instance, Hurricane Sandy’s extensive flooding destroyed large swaths of the electrical system, damaged public infrastructures, stranded, displaced, and made thousands of residents vulnerable. The infrastructure in this city is old, inadequate, and hard to rebuild. It is urgent to develop new, resilient systems which have the potential to re-balance a changing ecosystem.

The subway is an integral part and symbol of New York – quotidian, yet materially and emotionally living in the collective memory. As such, abandoned stations should be commemorated, repurposed and re-valued. As the subway network expanded, some stations were forsaken and turned into underground ruins. As evidenced by the Hudson Yards project, New York is a city that exploits every inch of land. We are repurposing these undervalued subway spaces – currently dead, functionally and memorially – to perform necessary and socially desirable functions.

Opening the stations, inviting in light, air, water and creatures, controlled decay can develop into resilient wetlands installations which provide an oasis for urban dwellers and an interwoven absorptive system for the city. Functioning as an urban moderator as well as the pocket parks, these relics are redefined to receive and provide new vitality from a discarded past. To address city-level flooding we linked a network of pipes through the subway tunnels to connect to the city's sewer system and to a series of constructed reservoirs located underneath the abandoned subway stations. Collectively, these operations on New York’s existing infrastructure and bedrock foundation provide the city more resilience and a capacity for new life.
1. Building information
The owner of this building is ZTE Corporation. This building is located in the Nanshan District of Shenzhen, a subtropical region. On the other hand, Nanshan District is home to many well-known technology companies. In recent years these companies have been promoting their green determination in various ways. So ZTE decided to transform the façade of this old research center into a green plant wall.

2. Inspiration for the painting
Many random and vibrant curves constructed this painting. And the additional transparency of curves gives the painting a sense of space. As a façade design, I wanted the façade to have a different resolution. And like the painting, this façade is spatial. So, I chose to use free curvature steel pipe in a larger scale to imitate the form of the painting. In addition, the façade is planted with natural-growth vines. In this way, the green mass of the vine can give the steel pipe different transparency like the painting, when viewed from a distance. The lines of the vines themselves are also organic like the painting, when viewed from a short distance.

3. System Description
The work of this Section shall include, but is not limited to the following:

4. List of special features of the facade
a. The plants planted on the façade can shade the sun in summer.

5. Definition of principal materials
a. All visible aluminum is silver anodized.
ZTE Research & Development Building Upgrade

28 Gaoxin Ave 4 S, Nanshan, Shenzhen, Guangdong Province, China

22°32'12.6"N 113°56'48.7"E
This raucous and abstract prologue, Marshall Plan in the aftermath of World War II, with as much as $1.2 form on function. Of course, this was also related to the economic superconsumption, superinduction to consume, the supermarket, explains, towards homogeneity. The concept of functionalism and the space of the modern movement is of the chair, made of chrome-plated steel, rubber and cowhide, from the modernist architect Mies van der Rohe, is more of a replica. Superarchitettura

However, there is such a group of people, they choose to silently watch all this, and do not rush to action, seems to have some maintenance of the city.

6. Superarchitecture

In 1966, Archizoom and Superstudio organized the Superarchitecture exhibition in the Jolly gallery in the small town of Pistoia, featuring the work of these radical architectural groups. The exhibition is an overwhelming of centuries of concerted art vision, with ironic furniture designs on display. The "Maia Chair" (Figure 1), borrowed from the modernist architect Mies van der Rohe, is more of a replica of his Barcelona chair. However, it is clear that this evolved version of the chair, made of chrome-plated steel, rubber and cowhide, is not for human use but a product of the extreme absurdity of a commodity that is both for use and as decoration. It is a powerful, strong popular flavor, and it is obvious that no home can tolerate the existence of such an object. It is through such a Katydid design that the commodity form and the space of the market have been magnified and significantly understood. But I think we should pay more attention to the way that superarchitects reshape to fit in with the surrounding environment in various forms. These works that there is a sense of social responsibility arising from a concrete analysis of the Italian social interior with Marzani thought at its core. In terms of values, the architecture of this new period of the dilemmas architecture faces in the coming consumer age and a strong focus on the relationship between theoretical and design issues of architecture and contemporary social and cultural realities. In the face of all the dilemmas, the structures brought about by modern society, they also feel the gluten of the earth, being swallowed up by technology. People are in a situation where they are the passengers of the environment and not people used to being "the dead," but also people are going to die. However, both as sensitive intellectuals and as practical students, they hope to be able to find ways that can guide society to self-reflection and lead it to a healthy development. Their work is filled with the exploration of the language of architecture that is contradictory and morose. They believe that the traditional symbols have disappeared and slowly formed as if by divine power. It is a series of allegorical icons the confusion and anxiety of sensitive European intellectuals about contemporary culture and society in order to fit in with the surrounding environment in various forms.

The two protagonists of this exhibition, Archizoom and Superstudio, are two representative groups of this radical design movement. Although, according to a new argument of the 1960s, the architecture was an event of a new technological world (Figure 7). The studio argues that the city that was pace in flood and the flood disappeared as if by divine power: "In the beginning, God created the heavens and the earth..." (Figure 2). The continuous monument. After the basic "cube", a montage of geometric volumes simultaneously disregard the internal spatial order of things. This section is interspersed with some of the content of the previous part. The continuous monument. After the basic "cube", a montage of geometric volumes simultaneously disregard the internal spatial order of things, it is a metaphor for traditional architecture facing a critical crisis [8].

Between 1965 and 1968, the studio began an exploration of a specific architectural language in an attempt to find a pure and integral language and prototype of the tens of thousands of self-built houses in Italy. In a series of works exploring this "architectural event," they have established the basic "black cube" (Figure 3), consisting of forty paintings, is a narrative of the creation of the "Cubes" and its universality. (Figure 6).

This section is interspersed with some of the content of the previous part. The architecture was an event of a new technological world. The continuity of the "black stone" will lead that stage of humans to a more advanced form every time it appears. (Figure 7).

In the first act of the dawn of humankind, the ancestors of humankind created the architecture of the superconsumption, superinduction to consume, the supermarket, in the sense of architecture. The superconsumption, superinduction to consume, the supermarket, in the sense of architecture. The black stone, an ape suddenly learns to use tools in the seamless battle space with the natural landscape (Figure 2). In these scenes, the superconsumption, superinduction to consume, the supermarket, in the sense of architecture, is in some sense, a symbol of technological rationality. The continuous monument. After the basic "cube", a montage of geometric volumes simultaneously disregard the internal spatial order of things, it is a metaphor for traditional architecture facing a critical crisis [8].

The Continuous Monument is the studio’s most successful and ultimate experiment with rational architecture. Here, the "Monuments" consist of basic cubic elements that pass through the city, the countryside and nature like nobody’s business, trying to fit in with the surrounding environment in various forms. The continuous monument, which consists of basic cubic elements, is a bridge between the "black stone" and the "black stone", using tools and develop them to improve and create their own living environment. However, the best product of rationality, the
Hal 9000 (a supercomputer in the ship), rebelled and tried to kill the crew.

Kubrick may believe that humans were activated by the light of enlightenment brought by the Black Stone (the 18th century Enlightenment) and with the advantage of reason, evolved and dominated the Earth over other species. However, the highly developed material civilization developed by relying on reason will lead to the spiritual alienation of individual human beings. The social system constructed by strict scientific reason will also lead to institutionalized consequences, which will eventually lead to the spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment). The spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment).

Hal 9000 (a supercomputer in the ship), rebelled and tried to kill the crew.

Kubrick may believe that humans were activated by the light of enlightenment brought by the Black Stone (the 18th century Enlightenment) and with the advantage of reason, evolved and dominated the Earth over other species. However, the highly developed material civilization developed by relying on reason will lead to the spiritual alienation of individual human beings. The social system constructed by strict scientific reason will also lead to institutionalized consequences, which will eventually lead to the spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment). The spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment).

Hal 9000 (a supercomputer in the ship), rebelled and tried to kill the crew.

Kubrick may believe that humans were activated by the light of enlightenment brought by the Black Stone (the 18th century Enlightenment) and with the advantage of reason, evolved and dominated the Earth over other species. However, the highly developed material civilization developed by relying on reason will lead to the spiritual alienation of individual human beings. The social system constructed by strict scientific reason will also lead to institutionalized consequences, which will eventually lead to the spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment). The spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment).

Hal 9000 (a supercomputer in the ship), rebelled and tried to kill the crew.

Kubrick may believe that humans were activated by the light of enlightenment brought by the Black Stone (the 18th century Enlightenment) and with the advantage of reason, evolved and dominated the Earth over other species. However, the highly developed material civilization developed by relying on reason will lead to the spiritual alienation of individual human beings. The social system constructed by strict scientific reason will also lead to institutionalized consequences, which will eventually lead to the spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment). The spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment).

Hal 9000 (a supercomputer in the ship), rebelled and tried to kill the crew.

Kubrick may believe that humans were activated by the light of enlightenment brought by the Black Stone (the 18th century Enlightenment) and with the advantage of reason, evolved and dominated the Earth over other species. However, the highly developed material civilization developed by relying on reason will lead to the spiritual alienation of individual human beings. The social system constructed by strict scientific reason will also lead to institutionalized consequences, which will eventually lead to the spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment). The spiritual death of human beings. Or the death of civilization caused by the Black Stone (the 18th century Enlightenment).
The city is on a hill and consists of a continuous cube with a side length of 4800 meters.

The city is a dazzling sheet of crystal between woods and green hills. On approaching it, one realizes that it consists of 10,044,900 crystalline sarcophagus covers.

The city consists of a series of parallel buildings of 10 meters, with a 10-meter tunnel inside each building.

Reference:


<The End>