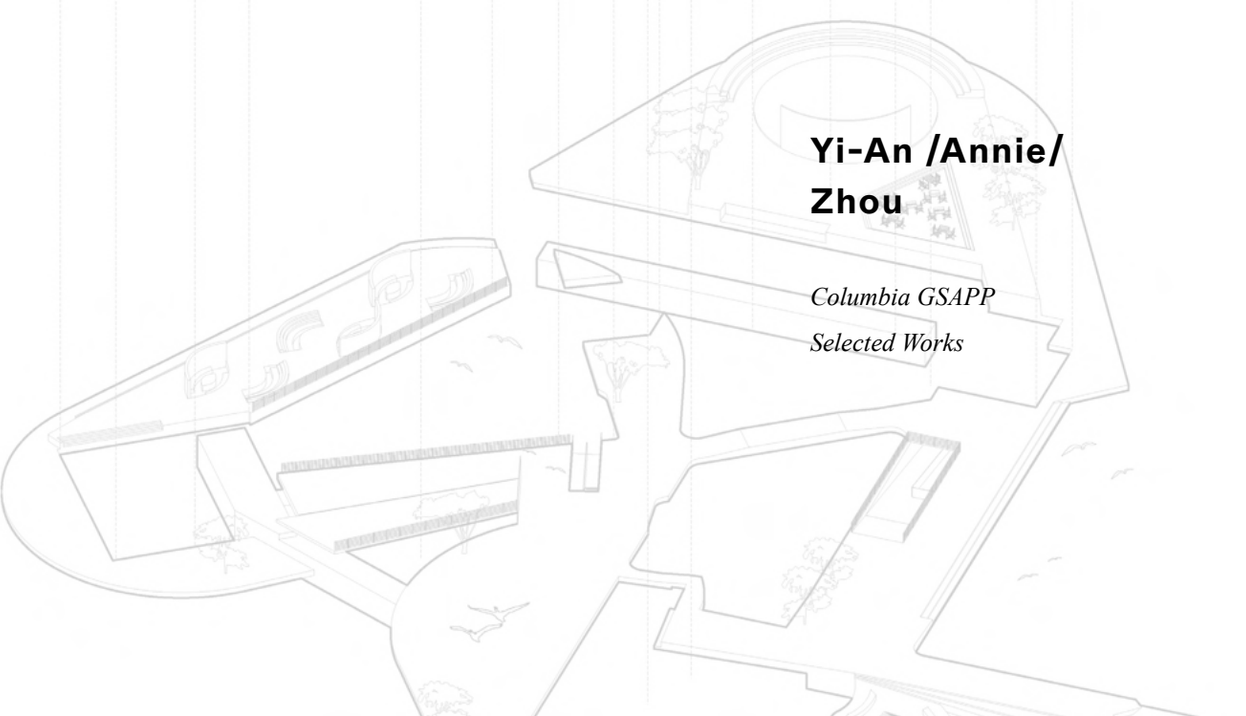
Y-A.Z



Yi-An /Annie/ Zhou

Columbia GSAPP

Selected Works

2022 – 2023

This portfolio exhibits a comprehensive collection of work completed at Columbia GSAPP's Master of Science degree in Advanced Architectural Design program. The works reflect my outlook and interests on architecture and design as an interdisciplinary practice.

CONTENTS

FRINGE COLLECTIVES

01 *Pubic Plaza* 04
2022

QUEENS *NOT A* MUSEUM

02 *Post-Plantation Museum* 12
2022

MERCADO DE LA CULTURA

03 *Layered Urbanism* 24
2023

ARGUMENTS

04 *Collection of Questions for Guest Speakers & Paper Response* 40
2022

TRANSSCALARITIES

05 *Collection of Commentaries on Readings & 2 Case Studies* 46
2022

VIRTUAL DISRUPTION

06 *Intimacies of personal spaces* 52
2022

SPECTACULAR PEDAGOGIES

07 *Research on Airport Audiovisual Technologies* 56
2022

GAP 1: DESIGN+TYPOGRAPHY

08 *Typographical explorations on composition and design* 68
2023

Yi-An /Annie/ Zhou

Selected Works

Fringe Collectives

speculative city, projections on the 7 line

MS.AAD SUMMER STUDIO

CULTURA PLAZA | BELMONT ISLAND, MANHATTAN NY

New York is known as a place of diverse communities, however, the contemporary NY has widened the gap between the rich and poor, thus further marginalizing minority populations: homeless, lgbtq+, disabled, etc.

Belmont Island, an island left abandoned for wilderness to take over. A wasteland created as a result of the Steinway Tunnel construction in the 1890s that was then used by the UN Peace Mediation group to maintain and plant greenery until the 1990s when access to the island was revoked. The island is known as a reef, a site of industrial intervention and ingenuity, a place of both protest and contemplation during the early years of the United Nations, and now a nature sanctuary seen by New Yorkers and tourists as the city's waterways become a place of both transit and entertainment once again.

Fringe Collectives,

brings light to minority groups that New York turns a blind eye to using this island as an anchor for conversation with the UN and NYC as it sits between Manhattan and Queens.

Critic

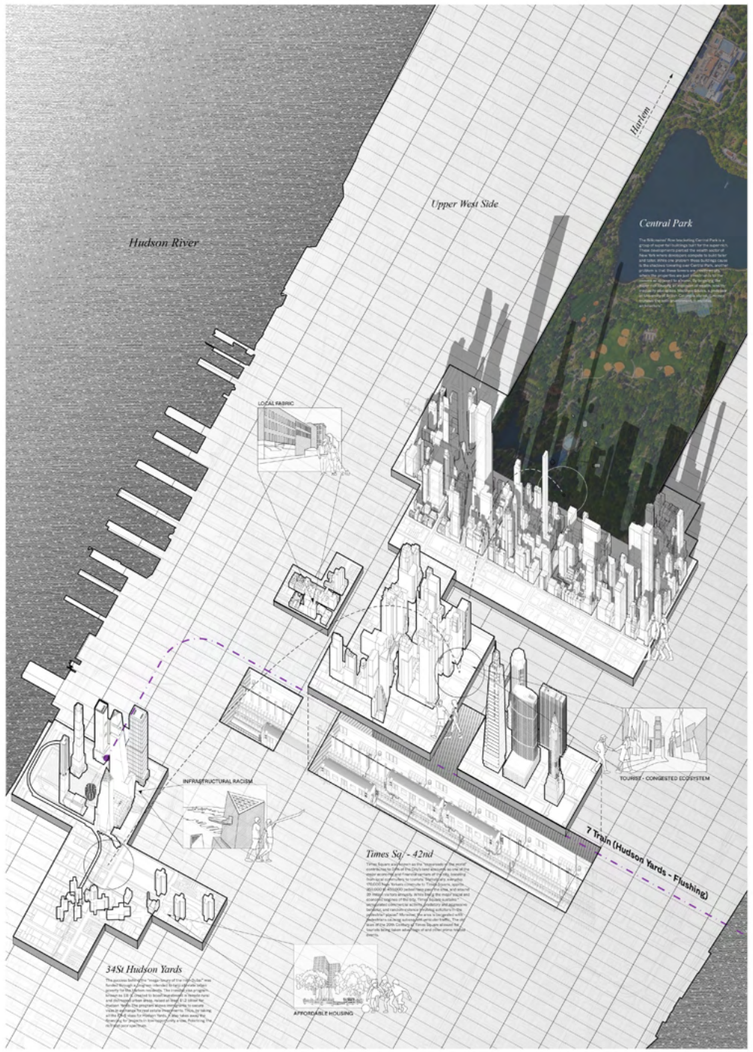
DAVID MOON (NHDM)

Semester

SUMMER 2022

Partners

JULIA MAEVSKI
XI JIN


Hudson River
Upper West Side
Harlem
Central Park
LOCAL FABRIC
INFRASTRUCTURAL RACISM
TOURIST - CONGESTED ECOSYSTEM
Times Sq - 42nd
7 Train (Hudson Yards - Flushing)
34St Hudson Yards
APPROPRIATE HOUSING

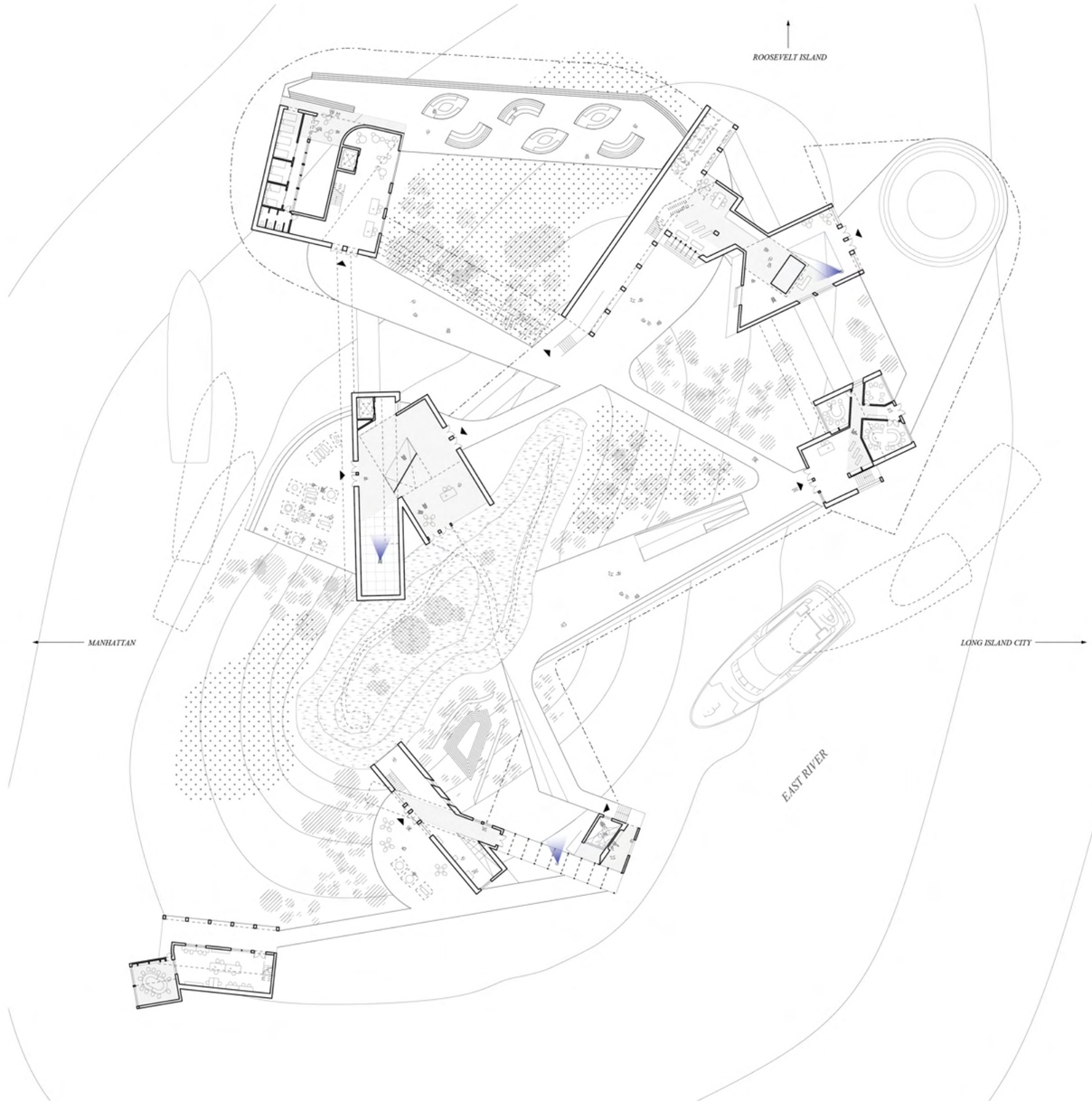
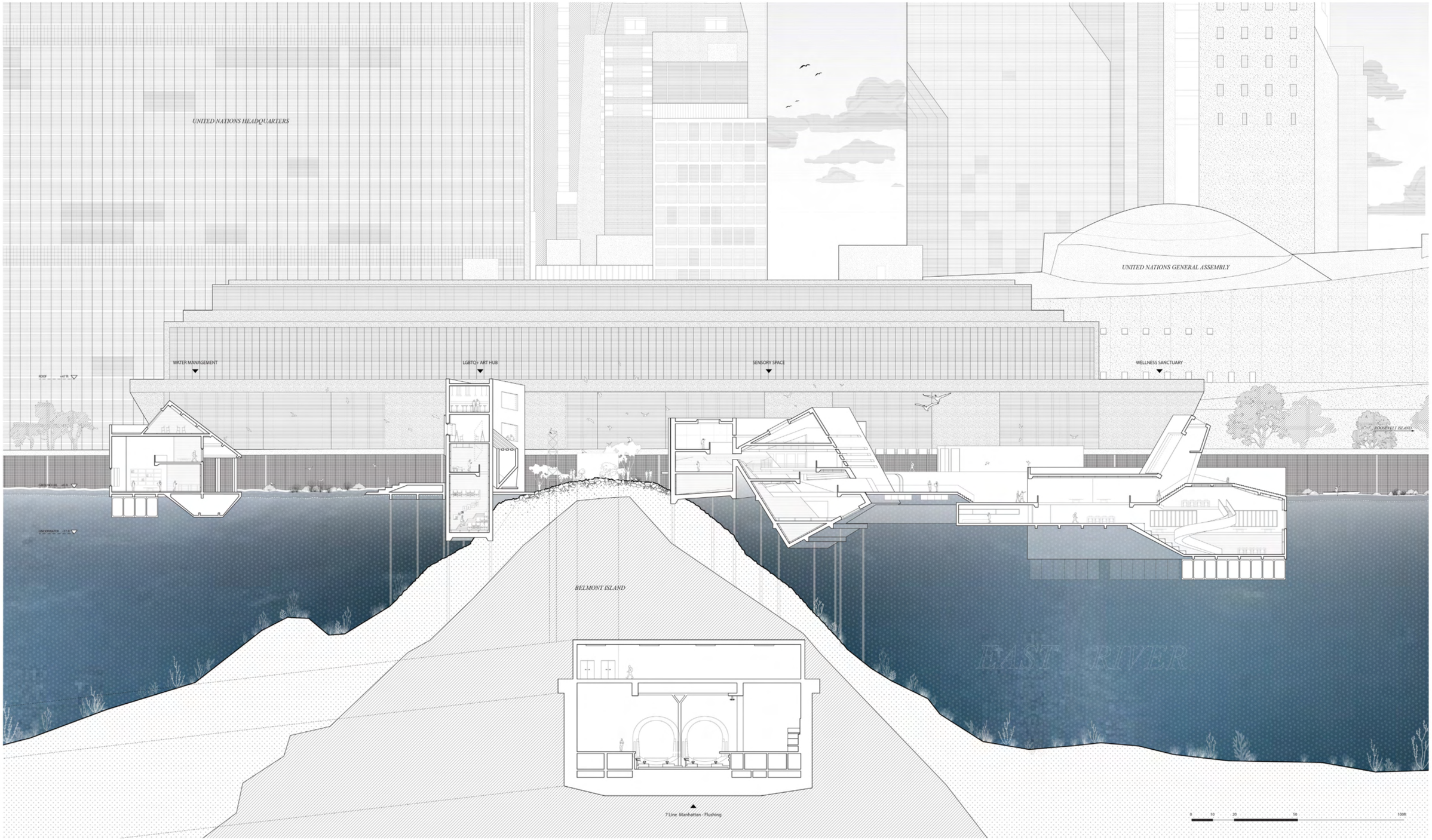

ROOSEVELT ISLAND
MANHATTAN
LONG ISLAND CITY
EAST RIVER

Fig. 01 site plan

Fig. 02 model - section


UNITED NATIONS HEADQUARTERS
UNITED NATIONS GENERAL ASSEMBLY
WATER MANAGEMENT
LGBTQ+ ART HUB
SENSORY SPACE
WELLNESS SANCTUARY
ROOF +47 ft
GROUND +0 ft
UNDERWATER -27 ft
ROOSEVELT ISLAND
BELMONT ISLAND
EAST RIVER
7 Line Manhattan - Flushing
0 10 20 50 100ft

Queens *not a* Museum

post-plantation museum

ADVANCED STUDIO V

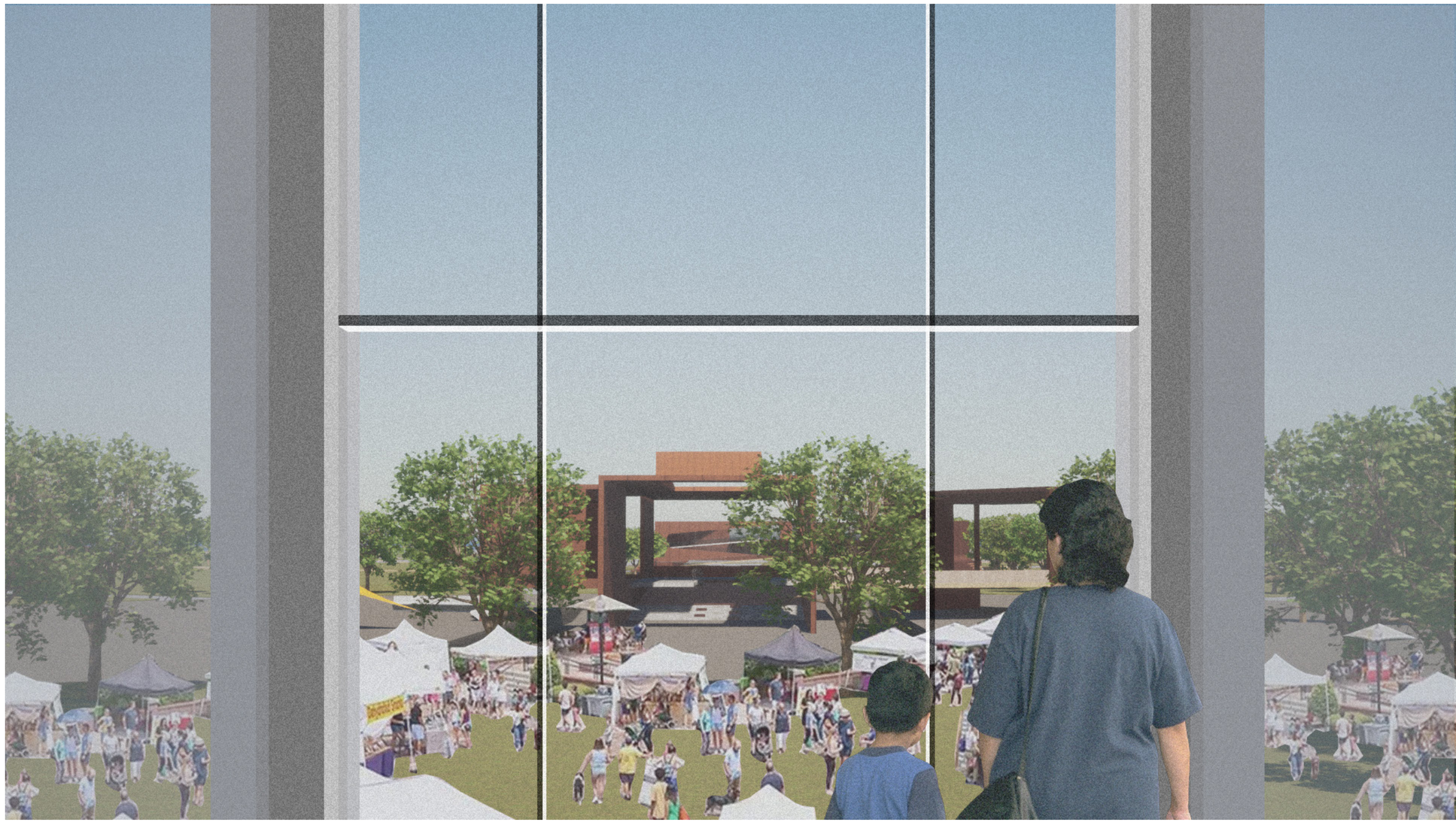
MUSEUM | FLUSHING MEADOWS CORONA PARK, QUEENS NY

*Queens *not a* Museum* is a post-plantation museum that decentralizes and decolonizes the museum as an institution. It disrupts the organization of its rigid past to situate its identity towards the future of the community.

The Queens Museum, a site of many generations that transcended through history to live up to its new model of resistance, decolonizing the historic paradigm of a museum. The building was first erected for the 1939 World's Fair as a part of Robert Moses' urban renewal project, which accompanied the development of highways, exercising racial and cultural violence to the immigrant neighborhoods in Queens. Serving multiple identities throughout the years from the New York City Building to the UN to an ice rink and the Queens Museum today, despite the prominent efforts of morphing towards a community based museum, its ties with Moses' work is still its central drive. Cultivating the history of it as a commodification for profit while advocating for the community maximizes a cultural identity crisis as a result of urbicide that stems from plantation logic that calls for our attention today.

*Queens *not a* Museum,*

de-anchors the big house, the Queens Museum, and magnifies the already present efforts for community engagement.



Critic

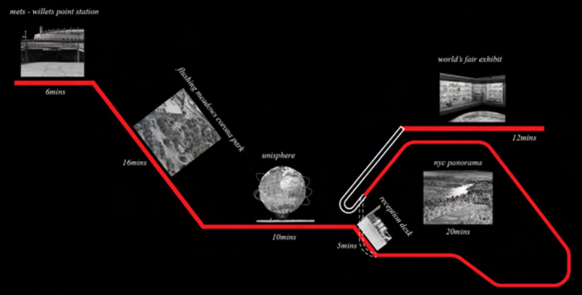
MABEL O. WILSON
JORDAN CARVER

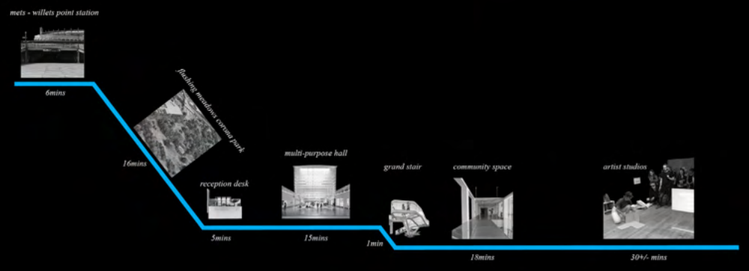
Semester

FALL 2022

Partners

JULIA MAEVSKI





EXISTING PROGRAMS

- English language for art history
- Spanish for Mandarin speakers
- Music
- Computer Literacy
- Social practice
- Nutrition
- Childcare
- Bicycle Maintenance
- Construction safety
- Immigration law
- Counselling
- Classical music
- Screen printing
- Art classes
- Gift shop
- Cafe

EDUCATION

- English language for art history
- Spanish for Mandarin speakers
- Music
- Computer Literacy

SERVICE

- Food
- Social practice
- Nutrition
- Childcare
- Bicycle Maintenance
- Construction safety
- Immigration law
- Counselling

ART

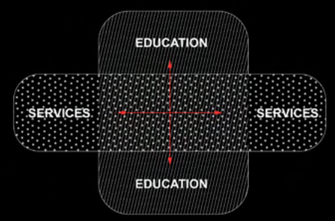
- Food
- Performance
- Digital collection / archive
- Classical music
- Screen printing
- Studio in the park

EVENT

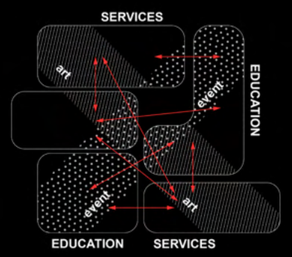
- Gallery for youth/student programs
- Dance
- Art classes

BUSINESS

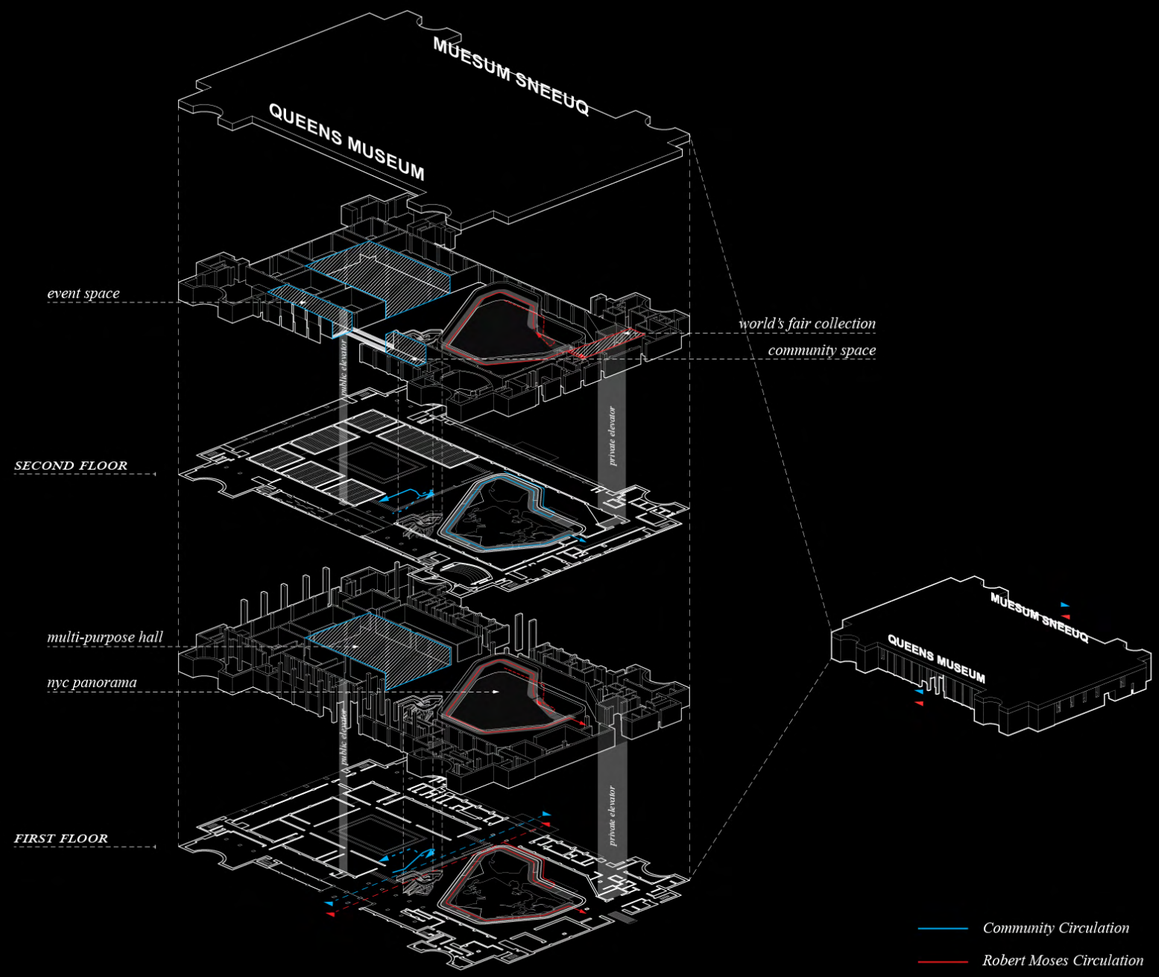
- Gift shop
- Cafe

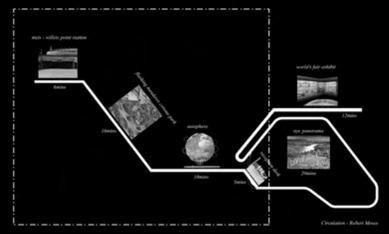


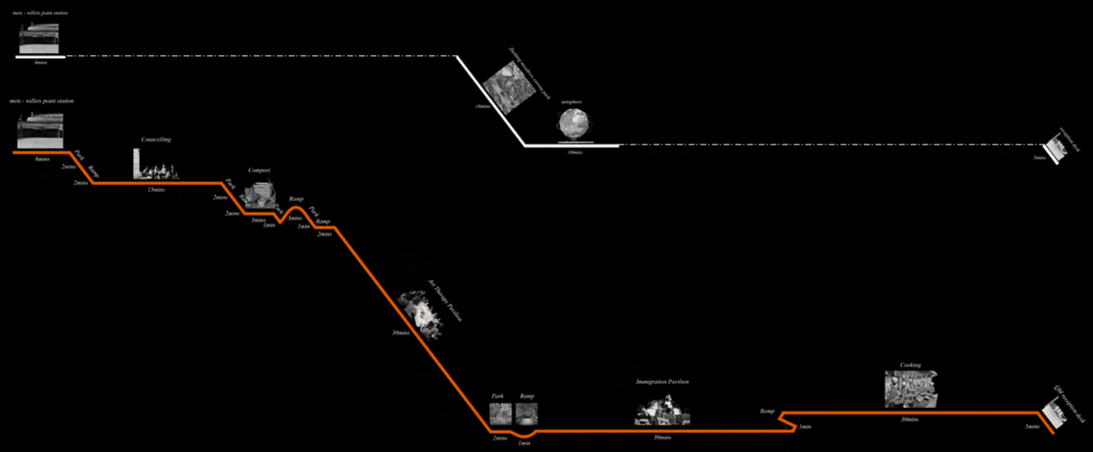
Queens Museum Focus



Proposed Program Organization







proposed additional connecting park pathways

grid extraction via existing park circulation

*Queens *not a* Museum*

Unisphere replaced with Food Pavilion

Flushing Meadows Corona Park

Queens Museum

TRAIN STATION

ENTRANCE

HEALTH
Fitness Playground

FOOD
Eating Pavilion

HEALTH
Councelling

HEALTH
Urgent Care

FOOD
Composting

FOOD
Greenhouses

Landscape Artist

Landscape Artist

Landscape Artist

Landscape Artist

field #1

field #2

field #3

field #7

FOOD
Cooking Pavilion

EDUCATION
Immigration Pavilion

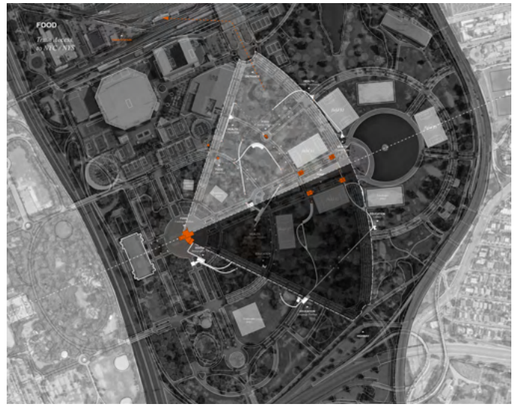
HEALTH
Art Therapy Pavilion

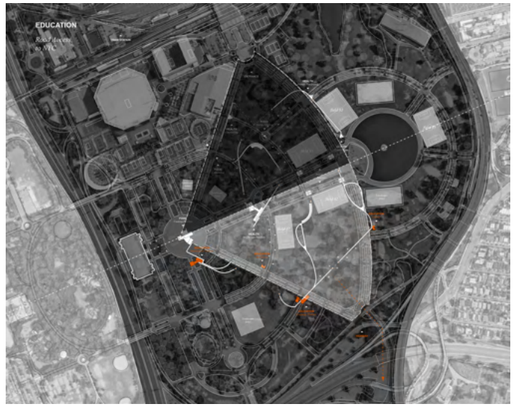
EDUCATION
Art Classes

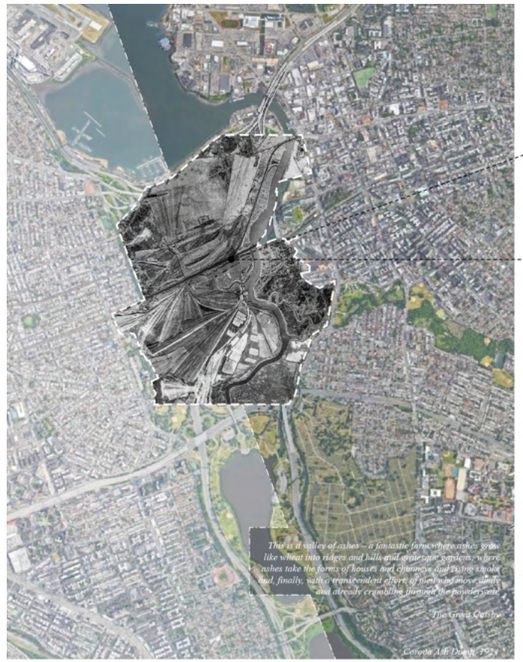
EDUCATION
Library

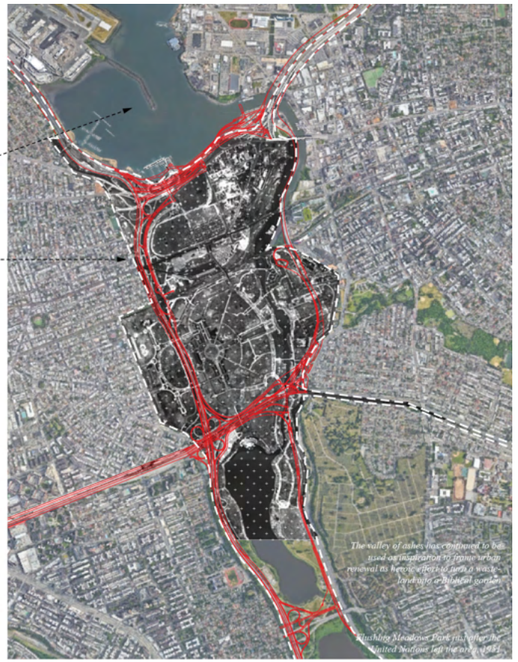
EDUCATION
Language Pavilion

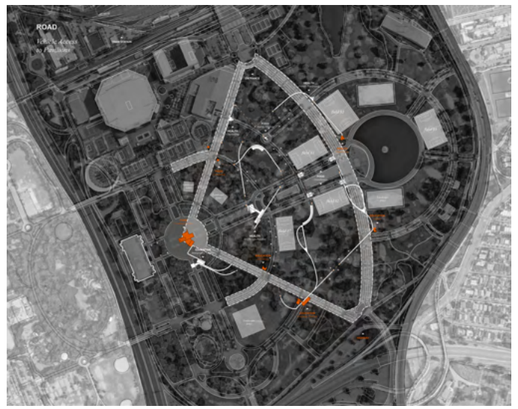
HIGHWAY

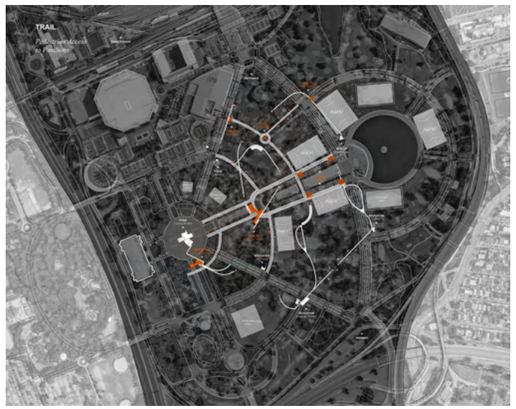


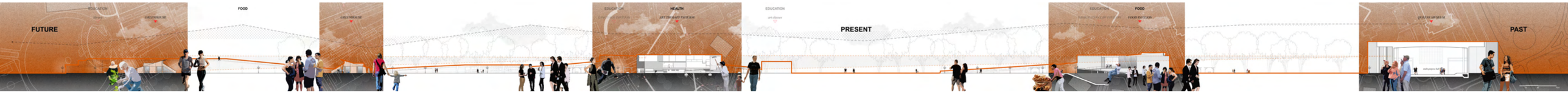


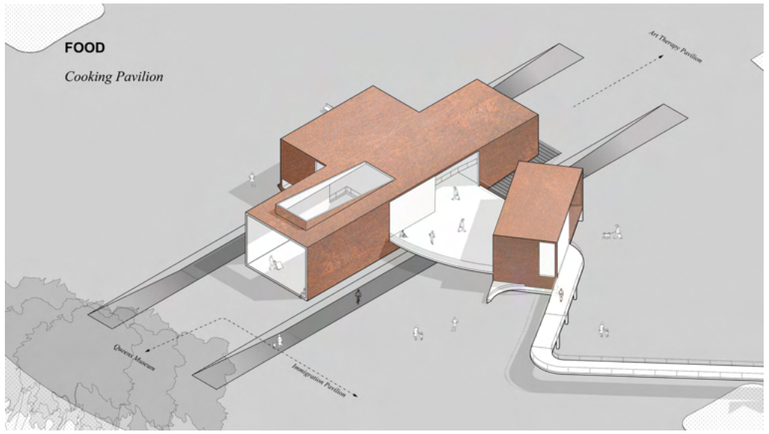


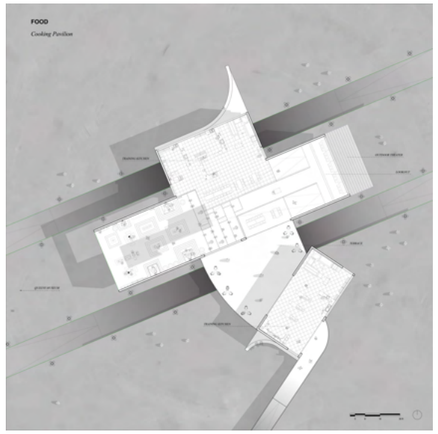


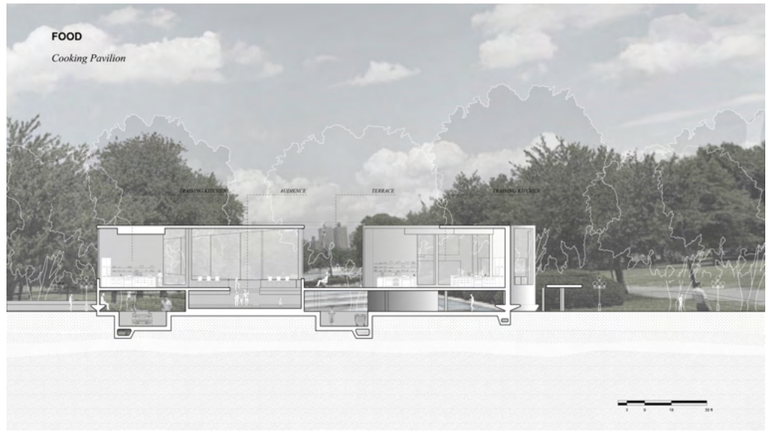




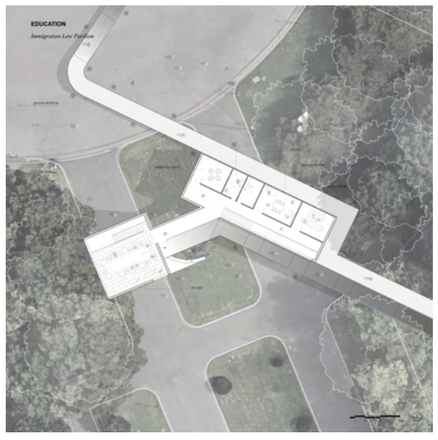

FUTURE
PRESENT
PAST


FOOD
Cooking Pavilion
Art Therapy Pavilion
Queens Museum
Immigration Pavilion

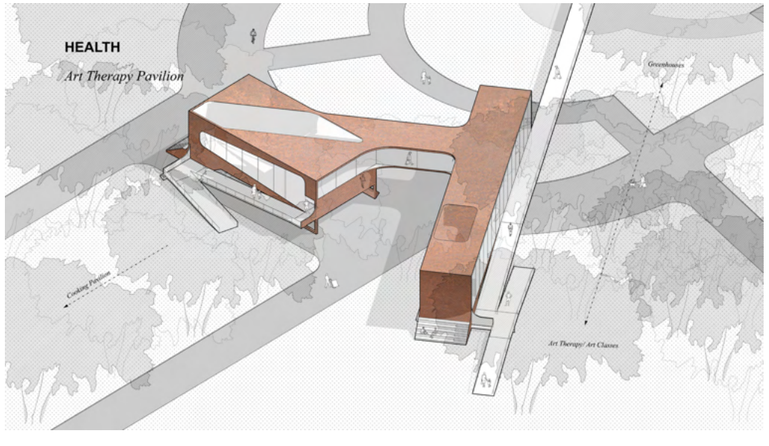

FOOD
Cooking Pavilion


FOOD
Cooking Pavilion

Cooking Pavilion
Immigration Pavilion
Art Classes
Language Pavilion
EDUCATION
Immigration Pavilion

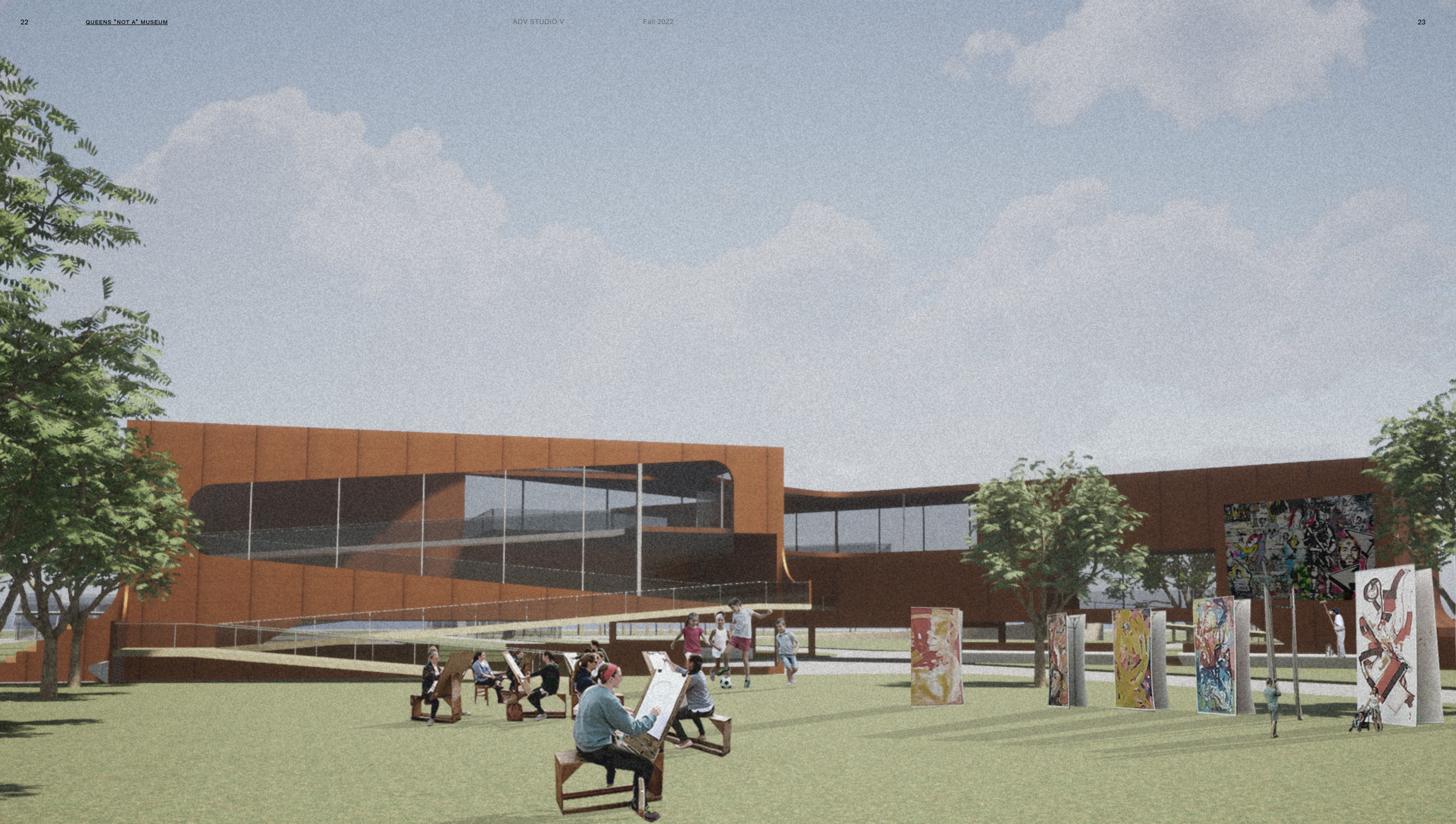

EDUCATION
Immigration Law Pavilion

HEALTH
Art Therapy Pavilion
MURAL STUDIO
EXTERIOR MURAL
ART THERAPY


HEALTH
Art Therapy Pavilion
Greenhouses
Cooking Pavilion
Art Therapy/ Art Classes

HEALTH
Art Therapy Pavilion

EDUCATION
Immigration Pavilion
ARTIST STUDIO



Mercado de la Cultura

layered urbanism

ADVANCED STUDIO VI

BUENOS AIRES, ARGENTINA

Mercado de la Cultura is an incubator that curates arts and civilization of contemporary Buenos Aires through active civic engagement both morphologically and programmatically, enacting the building as a living species. Buenos Aires being a city renowned for its art culture, Edificio del Plata is located in the prime location of the celebration for arts, yet the building sits underutilized. With Avenida 9 de Julio also being the main street protesters use, the building is unsustainable in its current state.

Mercado de la Cultura

proposes a multitude of programs that support the city center's needs for public civic gatherings and to emphasize the importance of its location as a key point in the route of festivities and protests. Therefore, Mercado de la Cultura brings art and civilization together through new programmatic and formal manifestations to heighten civic engagement.

Critic

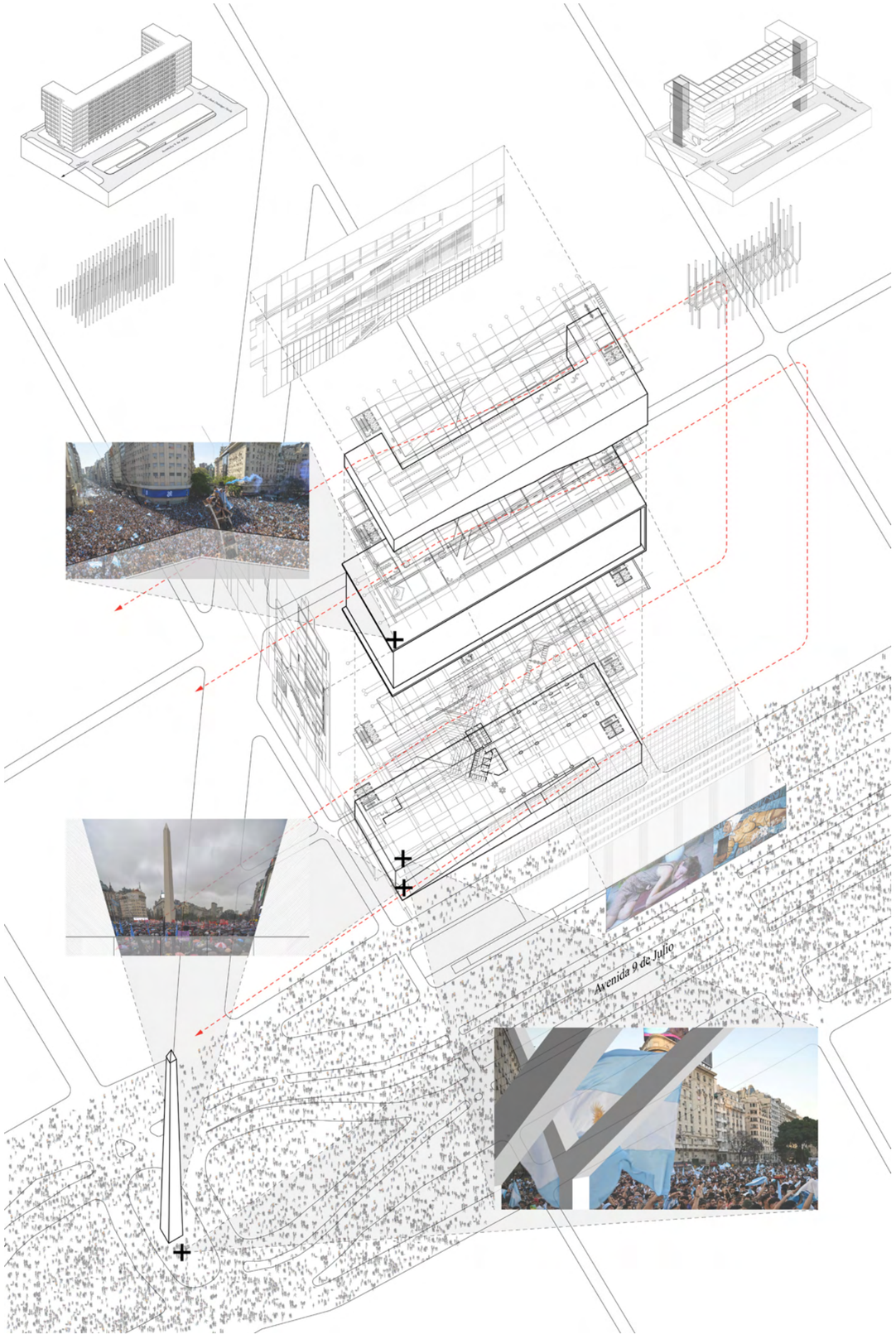
Galia Solomonoff
w/ Oscar M Caballero

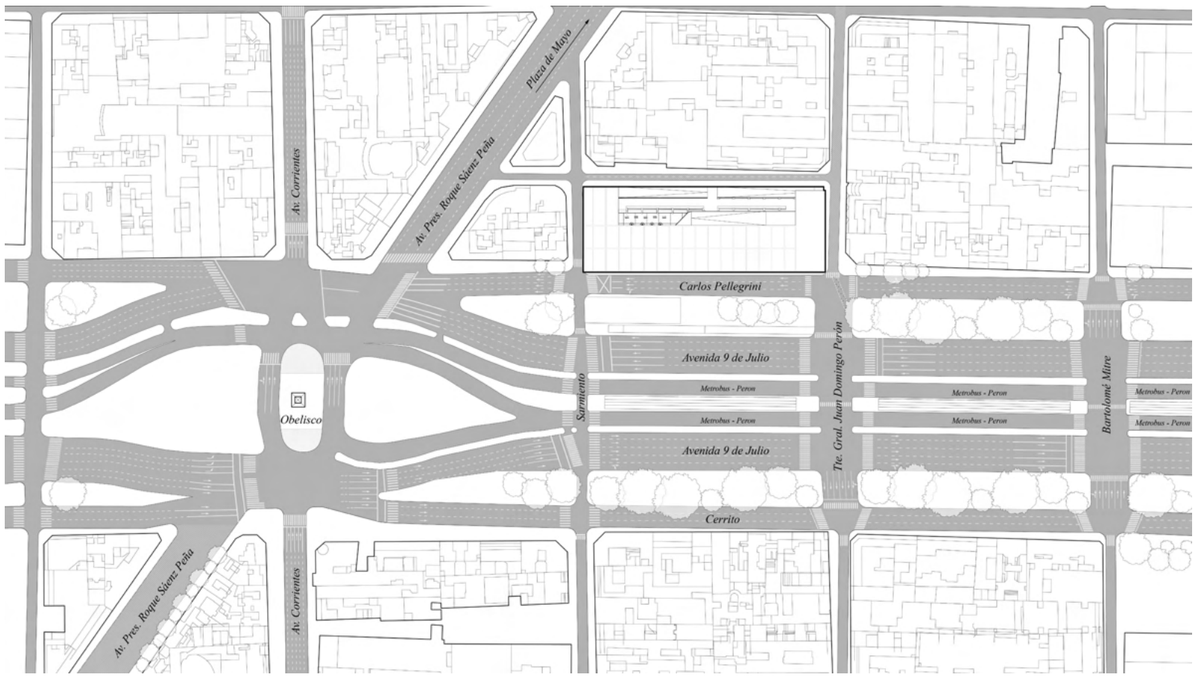
Semester

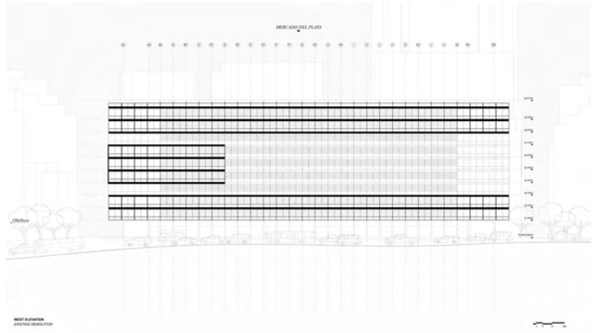
spring 2023

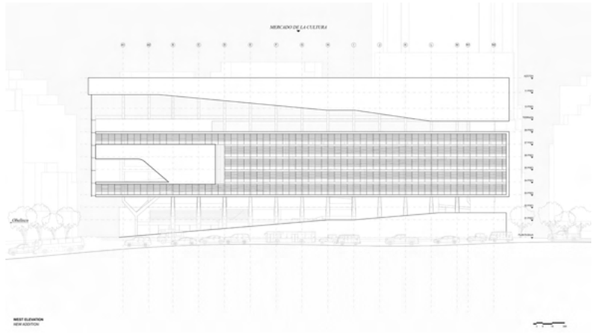
Partners

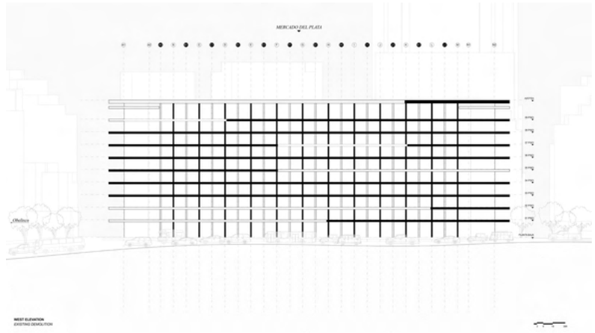
Julia Maevski
Aiden Ko

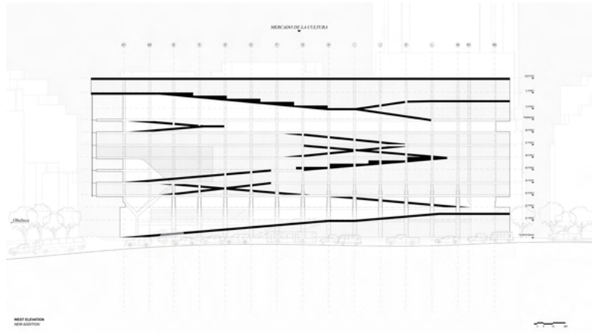

Avenida 9 de Julio

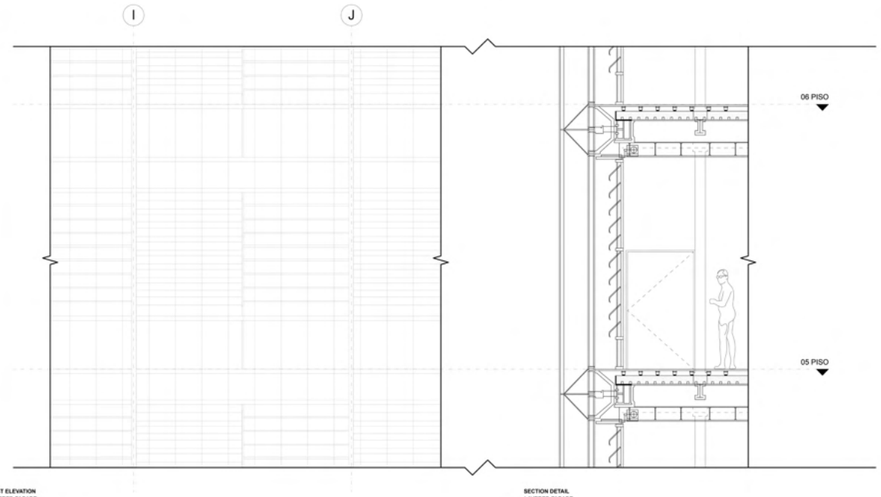

Av. Corrientes
Av. Pres. Roque Sáenz Peña
Plaza de Mayo
Carlos Pellegrini
Avenida 9 de Julio
Metrobus - Peron
Sarmiento
Obelisco
Tte. Gral. Juan Domingo Perón
Bartolomé Mitre
Cerrito





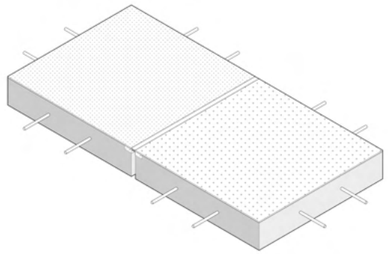


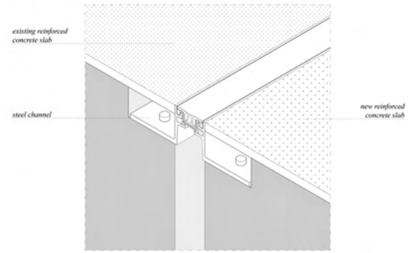




WEST ELEVATION
LAYERED FACADE

SECTION DETAIL
LAYERED FACADE

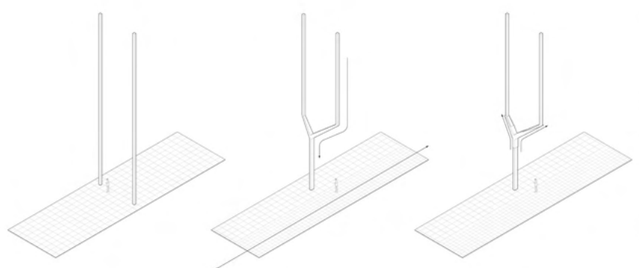




proposed floor slab - existing to new

floor slab existing to new connection techtonics detail

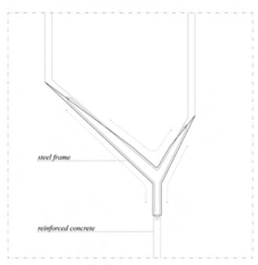
PROPOSED FLOOR SLAB DETAIL



existing

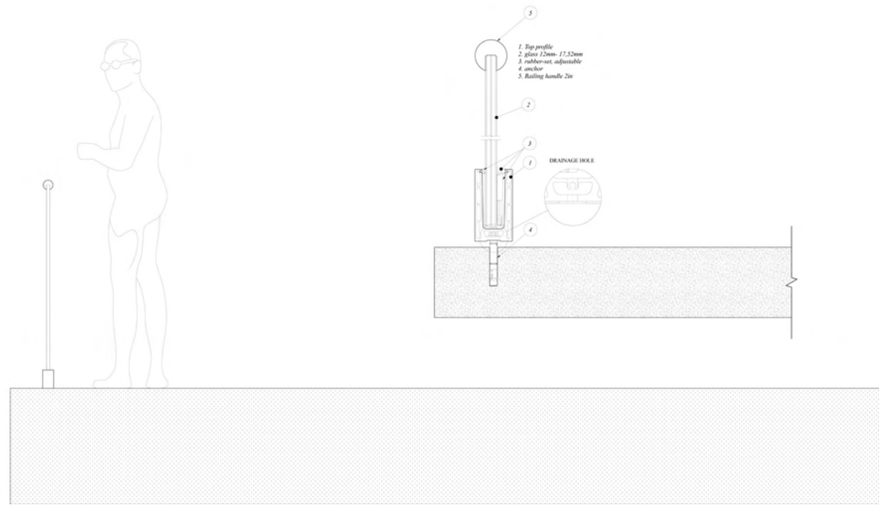
merge at ground lvl opens up pedestrian sidewalk

steel frame reinforces verticality

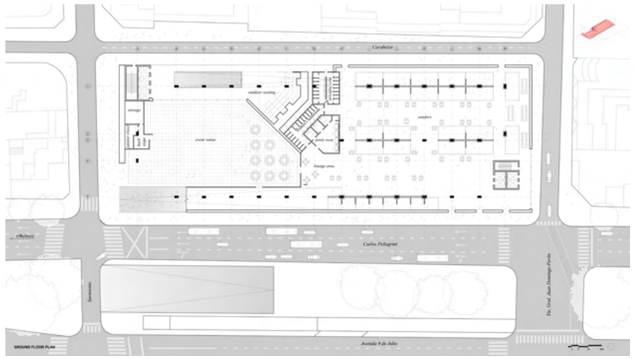


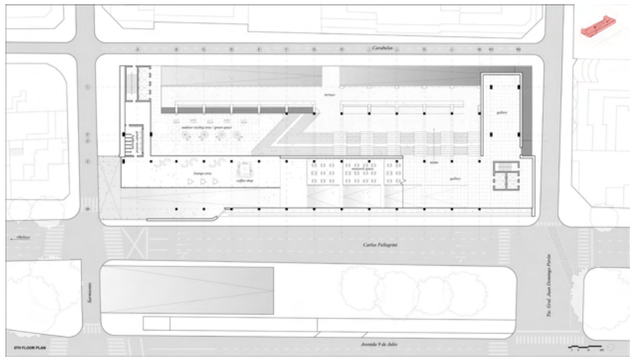
proposed column detail

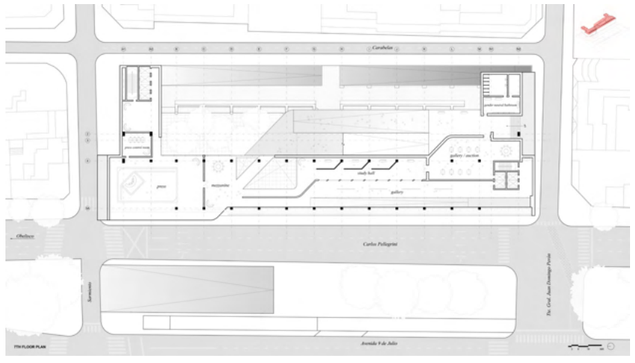
PROPOSED COLUMN DETAIL

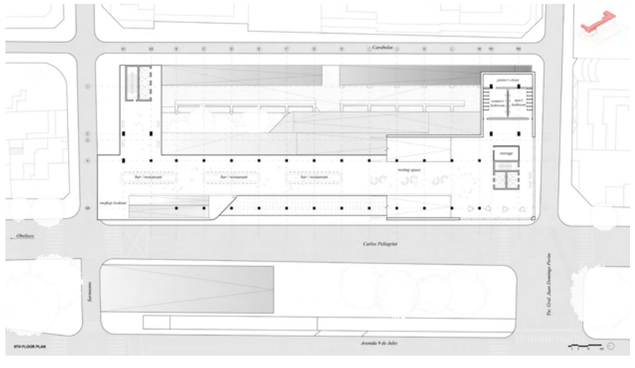


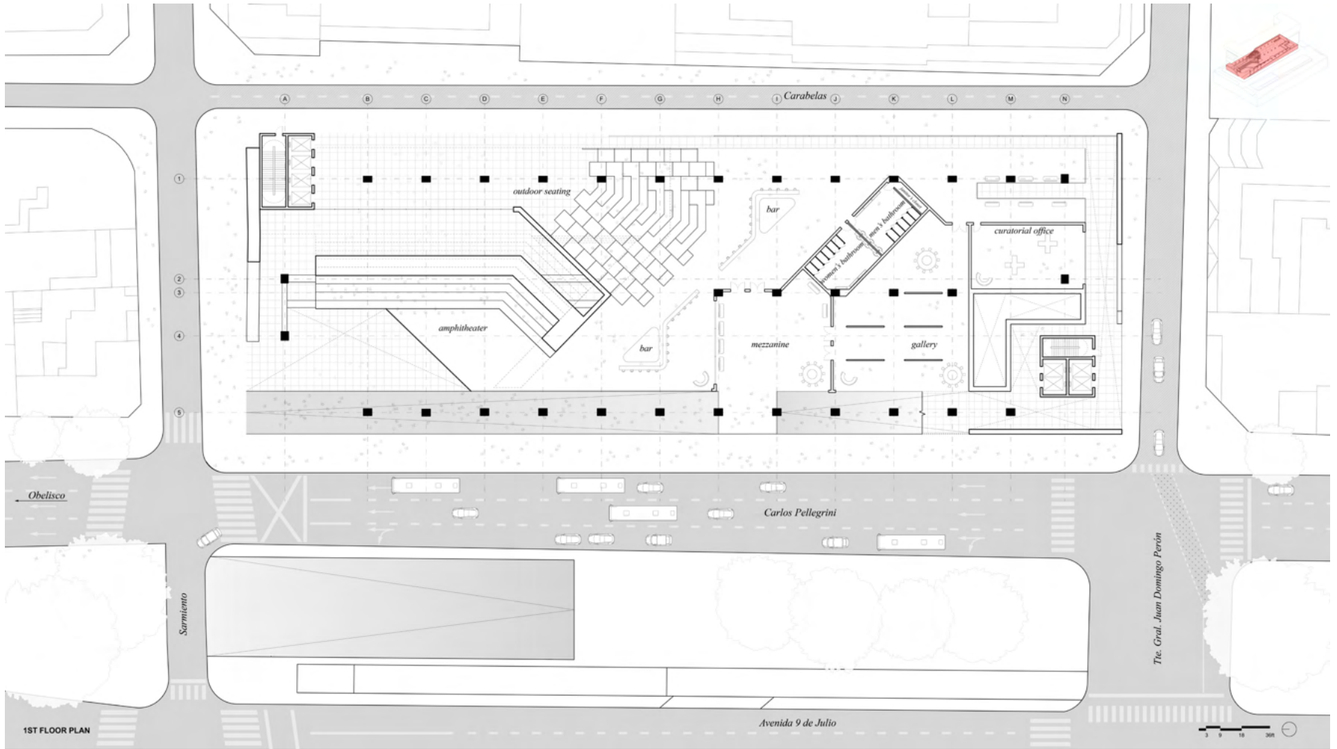
RAILING DETAIL

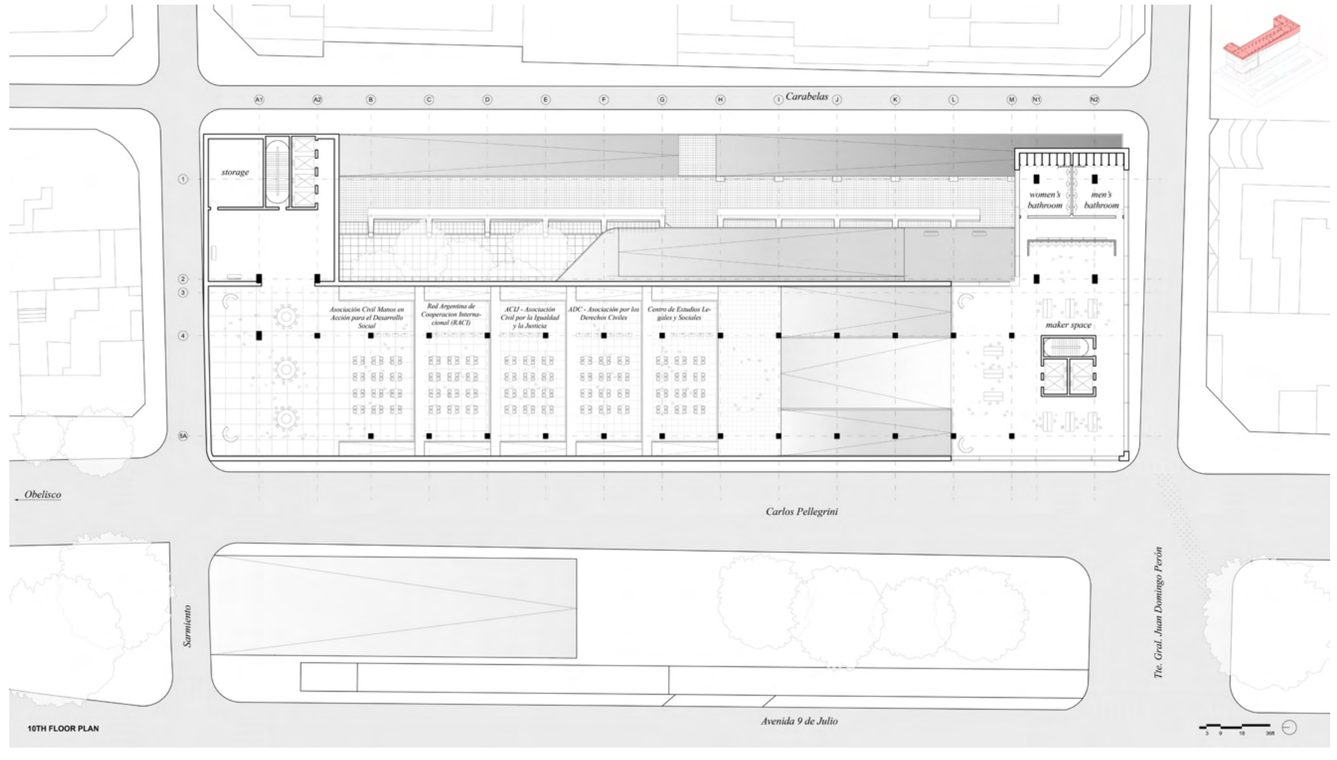


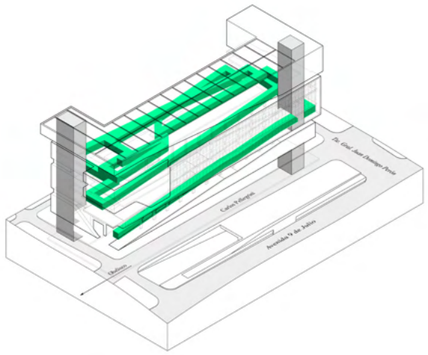


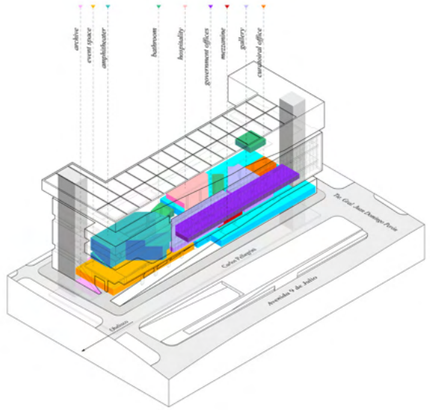


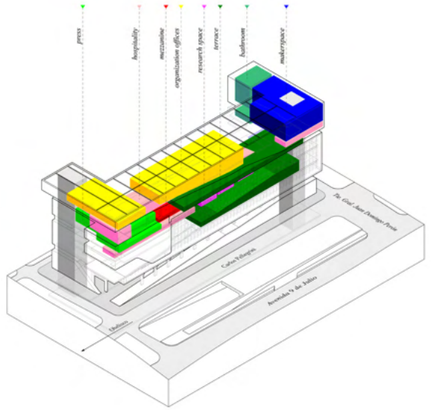


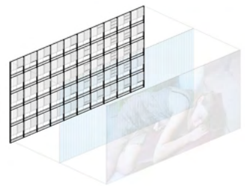

Carabelas
outdoor seating
bar
curatorial office
amphitheater
bar
mezzanine
gallery
Obelisco
Carlos Pellegrini
Sarmiento
Tte. Gral. Juan Domingo Perón
Avenida 9 de Julio
1ST FLOOR PLAN

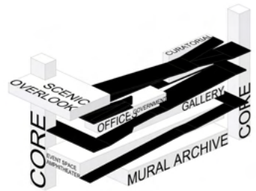

Carabelas
storage
women's bathroom
men's bathroom
maker space
Obelisco
Carlos Pellegrini
Sarmiento
Tte. Gral. Juan Domingo Perón
Avenida 9 de Julio
10TH FLOOR PLAN



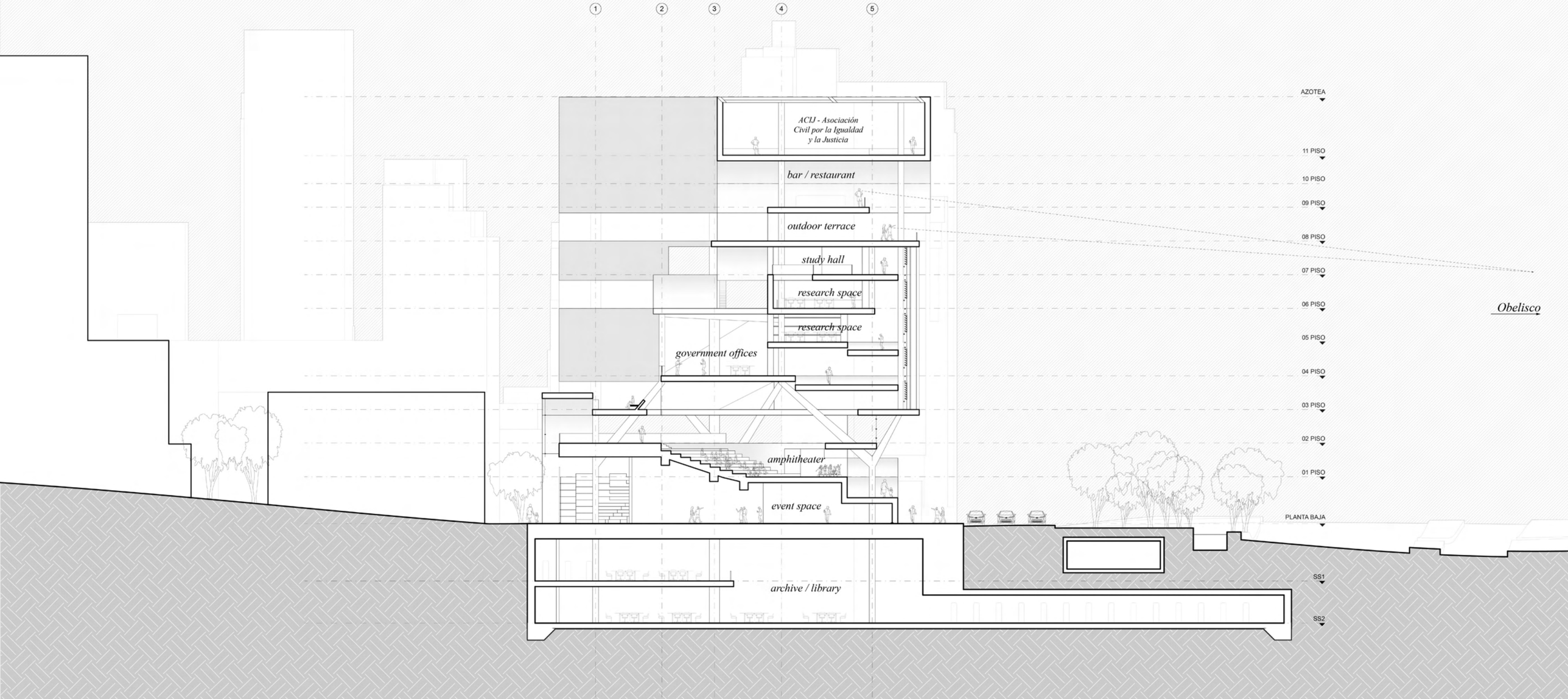


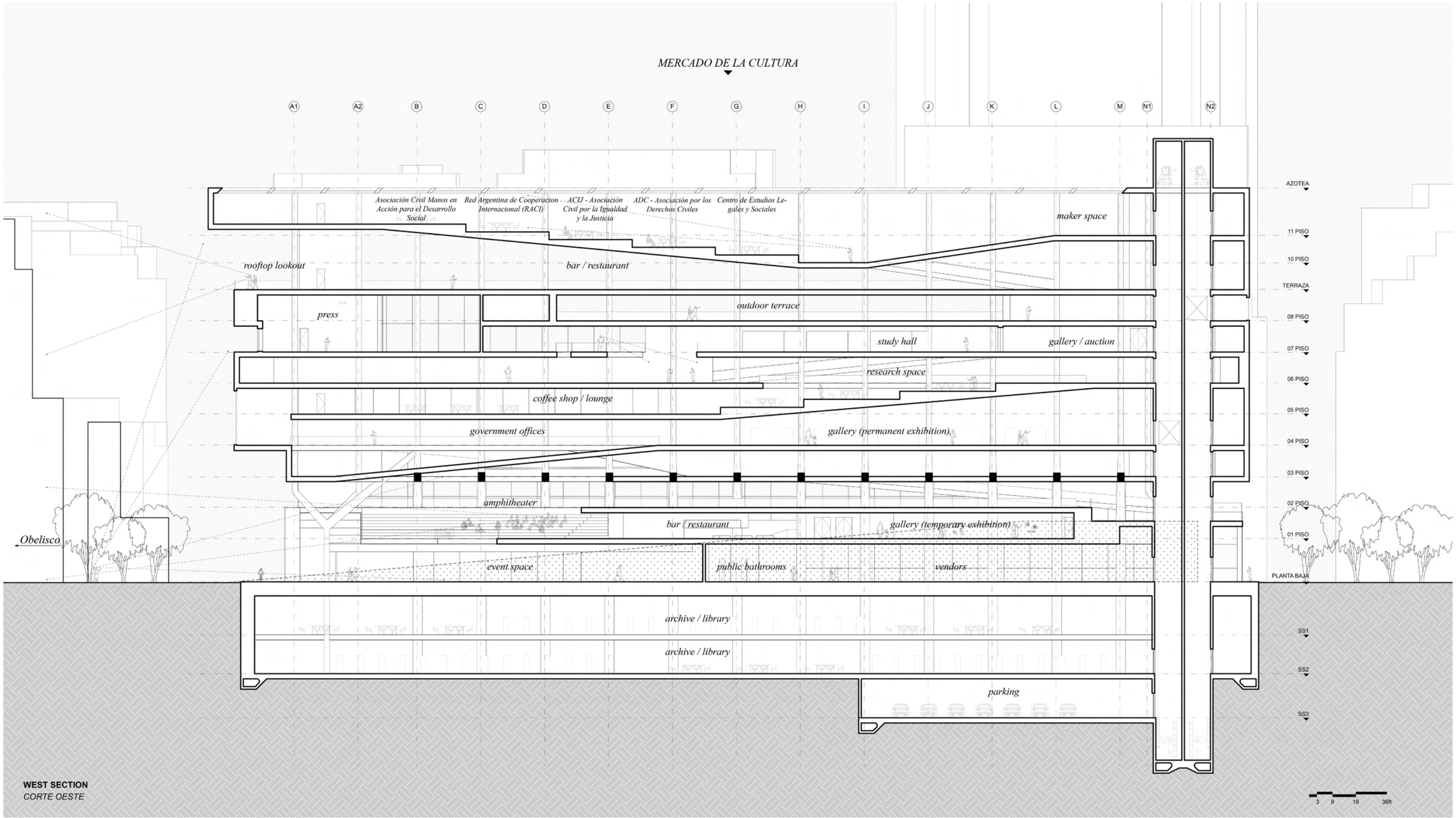




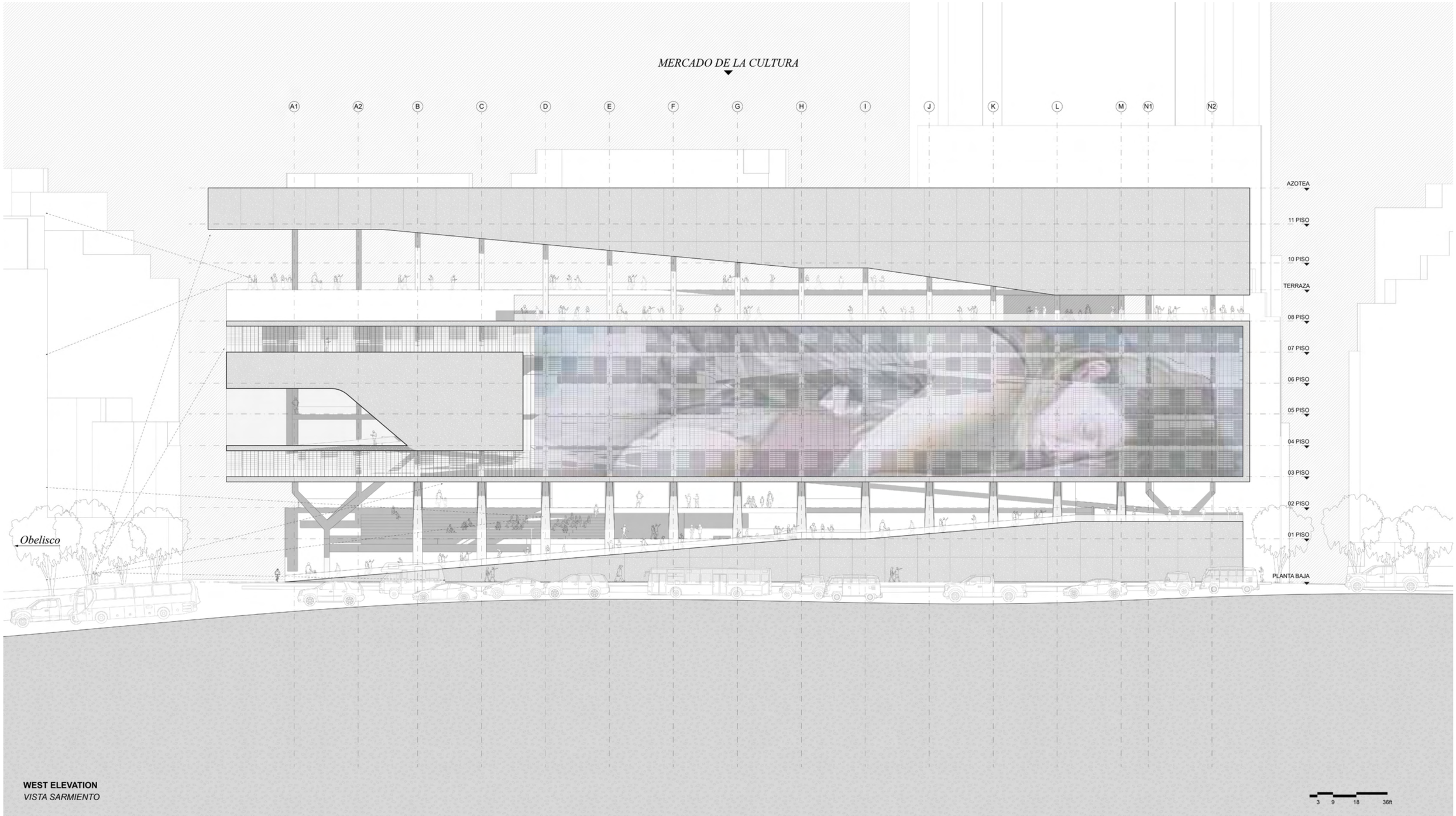

SCENIC OVERLOOK
OFFICE
GALLERY
CORE
MURAL ARCHIVE
CORE

REBELLE
CULTURE
HISTORY
SPORTS
JUSTICE


1
2
3
4
5
AZOTEA
11 PISO
10 PISO
09 PISO
08 PISO
07 PISO
06 PISO
05 PISO
04 PISO
03 PISO
02 PISO
01 PISO
PLANTA BAJA
SS1
SS2
ACIJ - Asociación Civil por la Igualdad y la Justicia
bar / restaurant
outdoor terrace
study hall
research space
research space
government offices
amphitheater
event space
archive / library
Obelisco



WEST SECTION
CORTE OESTE



WEST ELEVATION
VISTA SARMIENTO

BUENOS AIRES

A LA REPUBLICA

EN EL IV CENTENARIO DE LA FUNDACION

DE LA CIUDAD POR

DON PEDRO DE MENDOZA

II DE FEBRERO DE

MDXXXVI

Arguments

Collection of Questions for Guest Speakers & Paper Response

SUMMER 2022

Week 01: Marco Ferrari & Elise Misao Hunchuck

Week 02: Daniel Barber

Week 03: Ines Weizman

Week 04: Joan Jonas

Week 05: Emanual Admassu

Week 07: Ani Liu

Week 08: Frida Escobedo

Week 09: C. Riley Snorton

Critic

Dean Andrés Jaque
Ruo Jia

Semester

summer 2022

Daniel Barber

QUESTIONS:

1. Designing for the comfort is a natural instinct for humans as to seek comfort is to seek self assurance. However, in the case of using technology to support that need for comfort, it poses the threat of enlarging the social divide between the rich and the poor as time evolves. Designing for the discomfort provides opportunities for new spatial explorations, but in a world that is constantly changing in its environmental, climatic, political, and social state, how do we design for the discomfort of the unpredictable events of the future?

2. “Problems of climate and comfort” is the resulting “cultural and political agitation”, the continuation of investigations and investments spent on developing more advanced mechanical elements to replace the “older and less comfortable” devices continuously create a more rigid divide between us and the climate, “The space of the thermal interior, in both domestic and commercial environments, is enacted and emphasized in order to reimagine an embodied relationship to climate.” (Modern Architecture and Climate), the highly conditioned environment strips us away from opportunities to engage with the “reality”. How can design inform cultural awareness while at the same time, utilize the ever-changing climate as part of the architecture?

Ines Weizman

QUESTIONS:
1. Despite losing hearing abilities, Adolf Loos’s fascination in music and theater was not hindered. Through architectural expression, Loos was able to translate acoustics into architecture and language. Amplifying details of sound not through forms but materials, thus using design as a form of communication of memory and emotions. Loos puts emphasis on defining spaces through material manifestations, however, where is the balance between material and formal strategies and expressions?

2. In Dust Data Book - Bauhaus Modernism Across The Sykes-Picot Line, there is also an emphasis on material of the architecture where instead of depicting acoustic emphasis, it reveals memories of histories. “The depth of the wall is the building’s “unconscious”, where to analyze the layers is to tap awake the histories that were stored away. The renovation of the Max Liebling House is like gentrification of history, where the importance of the tragic past is being packaged and almost seems to deem less importance. What is an effective way of bringing historical awareness through architecture with an appropriate level of maintenance?

Joan Jonas

QUESTIONS:
1. Joan Jonas uses many tools to communicate the urgency of algae bloom and overfishing and their threats to the environment. The acoustic of her work is important in that it reflects the environments of different species. In Moving Off the Land video, at the timestamp of 16:34 to 18:00, different pitched bells were rung, perhaps referring to creatures at different depth, water conditions, or different ways of biological interactions. For those who are perceptible to sound, how could acoustic and space be used as a tool to raise awareness about our climate crisis?

2. While Jonas' performances are provocative ways to tell the story of the relationship between the land and the sea, human evolution, origins of birth, and the threats of the sea environment and its creatures, what are the next steps in terms of taking action to address the issue? How do art representations reach a larger audience in addressing pressing issues such as climate change?

Emanuel Admassu

QUESTIONS:
1. With the goal of designing space untethered by enclosure and borderization, allowing the Black community to embrace togetherness, creating a space for invitation instead of exclusion, what does this mean for the white community? Is it possible to create a space where racial inclusion doesn't mean a comfort space for predominantly Black lives but a blurred boundary between the different races where there is a spatial embracement for the multicultural?

2. "The measurement of land is predicated on the containment and disposal of human and non-human beings." Is the idea of immeasurable space transferable to the boundaries of politics and the institutional property lines where notions of information and security need to be considered?

Ani Liu

QUESTIONS:
1. While gender awareness in today's society has slowly taken out the notion of identifying individuals with the hard lines of female and male, appropriating mundane objects as directing for "female" and "male", the value has not really transferred to nurturing the young. What does it mean to design gender neutral toys? Perhaps the less rigid use of colour?

2. While Liu's exhibition Ecologies of Care exhibits the importance of labor, "reflecting the material culture of infant and childcare" and describes the intense labor that goes into nurturing a newborn, which highlights the notion of labor being made invisible and taken for granted. The exhibit puts an emphasis on feminist ideals to embrace women's role in labor of care, however, feminism does not limit to the female participation but all genders, what are other forms of participation and contribution to the labor of care from other genders?

Frida Escobedo

Questions
1. Frida Escobedo defined social architecture as "architecture without architects" which includes family organization, economy, and the bodily relationships. It is related to the experiences rather than the architecture as an object. However, a lot of times, buildings are designed from the given spatial needs. How do we as architects design through experience and desire rather than assumed experiences based on programmatic choices?

2. In Domestic Orbits, the projects' spaces are analyzed through diagrams using different scales of circles, depicting spatial and social relationships. For instance, in Condominio Varsovia, while the two towers are physically separate, they are connected visually. Thus working out a fluid circulation. What does it mean to have offices and residential programs to co-exist? How does the presence of offices and workers affect the private residents socially?

C. Riley Snorton

Questions:
1. The "narratives of black people - born free or into captivity - in the era of slavery's formal transition" (pg 57) relates to the narratives of trans people, where one is born into a body of restraint and limitedness. What does it mean to have freedom with the body both politically and socially? What does society have to do in order to achieve that sense of freedom?

2. "The rise in lithographic production altered the imagistic landscape of slavery." (pg 62) where the "interchangeability of gender figured one aspect of blackness's capacity, as it transversed captivity." (pg 62) The power of imagery and text of lithographs were a form of communication and expression in the 1830s, what are forms of representation in our contemporary society that could start to shape the way we approach gender, sex, and racial issues? How can space making be a tool to inform the notion of interchangeability of bodies?

Arguments

Final Paper: Response to Joan Jonas on Inter-speciality

How does inter-speciality influence us (humans, animals, objects, spaces, etc.) in our interactions as individuals and collectives? In Moving Off the Land series, Joan Jonas constructs her performances around the issues of climate change in relation to our ocean space. Criticizing the ignorant presumption of humans viewing water as a permanent resource. Through different usage of mediums of artistic expression, and interaction between the digital and the physical, Jonas' performance questions the notion of inter-speciality with regards to the relationship between us humans and the species around us, and the relationship between us and our environment on a more holistic view. By dissecting the layers of Jonas' performances allows us to understand the ecology of the artworks and the spectators, the performers and the digital contents, and the ecology of land and water.

Before diving into the discussion of the importance of inter-speciality in Jonas's works, it is important to define what "inter-speciality" is and what it entails. Reading it superficially, inter meaning in between, species' dictionary meaning, "a class of individuals having common attributes and designated by a common name", then the "-ality" suffix is to give meaning to the characteristic of something. Hence, inter-speciality meaning the in-between of species. Species does not only belong to animals, it also belongs to things. Hence, in Joan Jonas' performance Moving Off the Land I and II, species, does not stop at the sea creatures nor at her interaction with the sea creatures. The notion of inter-speciality can be divided into layers of interactions from animals to things to sounds.

The interaction of the spectators with the exhibition stations nurtures an ecology of its own, situated within the larger space of the room, away from the noises of the real world, and simultaneously engaging with each other. Creating a part to whole experience for all that participates. "From multiple layers of projections emerge video alterations of previous performances, drained by footage of water and its fauna - in nature or contained in aquariums In the transition from stage performance to performance for video—and finally autonomous video works—the layers of projections morph into watery masses that fill My New Theater to its edges. Upon entering, spectators add yet another layer with their own bodies."[1] Up above, watercolor paintings of fish are hung in a staggering manner in an attempt to mimic the ocean waves. To be immersed in the environment is to be immersed in a physical reedition of Jonas' video works. Inter-speciality presents itself in the spatial explorations of the context of the exhibit and the interests of the audiences. Through enclosure, Jonas was able to reconstruct an artificial environment of her performances, reinforcing the work through spatial constructs, amplifying the notion of inter-speciality.

During the performance, Jonas often allows herself to become part of the canvas, overlaying her body on top of the digital screen, either becoming part of the narrative or mirroring the scene. Creating an ecology between the body and the artificial, the sensory and the nonsensory, and the present and past. The spiritual approach in her work engaging "with ethics and ecology" brings out the close relationship between humans and nature, however, her engagement with the projections being outside of the video also reflect on the disconnect between us and our environment. It almost comes off as a barrier that we put ourselves behind, which puts us on the surface of things, issues, problems, realities. The notion of inter-speciality becomes something almost intangible where the "inter" between us and our environment are evolving in parallel but not mutually.

In Moving Off The Land I video, at the timestamp of 16:34 to 18:00, different pitched bells were rung, perhaps referring to creatures at different depth, water conditions, or different ways of biological interactions.[2] A reflection of the ecologies within the ocean space, something that often is overlooked by humans. The condition is being brought out by the acoustic media where the multi layered artistic sensory reinforces the layers of information in what seems to be a very empty water space occupied by one creature at a time. The power of acoustics in this performance directly relates to the sensory again as in most of Jonas' works. Where the trigger of sensory motivation motivates one's perception of the space and the way one occupies the environment. In this specific example of the use of acoustic mediums, sound envelopes the spectator, allowing them to be more aware of the constructed and presented space both sensory and bodily. Amplifying inter-speciality of our body and the natural body through digital representation, furthering the ecology between land and water.

The idea of inter-speciality in Jonas' work can be extended outside of the realm of performance art into other pressing issues of our society. The amalgamation of events leading up to a point of non-binary space. When we engage this idea of inter-speciality with the discussion on blackness and trans people, it becomes a place for unity and disguise.[3] Snorton's text on the relationship between slavery and trans people talks about the unsettling truth of slavery and refugee survival. For one to reach solidarity, one gave up everything to become anything. The notion of an irreversible reset, where the conjunction between fungibility and fugitive in the uninhabitable became the way for redevelopment. To quote Snorton, "to sit with discomfort to anticipate new things to emerge", which the havoc of slavery and blackness turned trans identity into a form of escape and free ground for expression and growth.

Inter-speciality is a phenomenon that is both a presupposed and result of interactions between species. Species of humans, animals, things, spaces, and conditions and situations. It exists as invisible forces that either attract or repel. A complex network that influences us in ways we occupy and live, in ways we create and destroy, and in ways we neglect and care. Jonas' work sets a good example and outlook into the ecologies of inter-speciality, where the whole is a construct of a system of the bodily.

[1] *"Joan Jonas: Moving off the Land II." Art Papers, October 2, 2019. https://www.artpapers.org/joan-jonas-moving-off-the-land-ii/.*
[2] *Moving Off The Land. Vimeo, 2022. https://vimeo.com/558168767*
[3] *Snorton, C. Riley. Black on Both Sides: A Racial History of Trans Identity. Minneapolis, MN: University of Minnesota Press, 2017.*

Transscalarities

Collection of Commentaries on Readings & 2 Case Studies

SUMMER 2022

Reading & Commentaries

Latour - Technology is society made durable

Rob Nixon - Slow Violence, Neoliberalism, and the Environmental Picaresque

Paul Preciado - Testo Junkie

Vinciane Despret - What would animals say if we asked the right questions

ROTOR - A Reverse-Engineering Methodology and Practice

Alexis Pauline Gums+Astrida Neimanis

Mabel O.Wilson - Race Reason and the Architecture of Jefferson's Virginia Statehouse

Case Studies

01: BIOS 3

02: Housing Works

Critic

Dean Andrés Jaque
Alex Kim

Semester

summer 2022

Latour - Technology is society made durable

Starting with the title of the text "Technology is society made durable" gives an introduction to the big idea of the text where Latour talks about the interdependency of domination and power, actor and innovation, technology and society, in which it is not just one after the other, but rather one with the other and vice versa. To expand on the title, it can be understood that technological advancements' success depends on the society's environmental, political, social, and cultural state, and the needs for these. However, society also builds from technology, where if one were taken away, the system collapses. "Power is a chain of human and non-human", where there is a relative relationship between the human and the non-human. The path to innovation relies on the push and pull of the actors, to which they create relationships, transformations, sizes, and measure of time, as well as order of events respectively. "'reality' is not final", in the Kodak camera example, it is illustrated that the amateur and Eastman went through a process of translation. It is explained that the amateur market was flourished and sparked from heterogeneous social groups that was not precedented from Eastman, which one can conclude that the amateur and Eastman co-existed and co-evolved. This relationship again reflects the title "technology is society made durable" which describes the on-going relationship between the actors and innovation, where the AND dimensions and the OR dimensions displaces one another, thus reflecting the effect of domination.

Rob Nixon - Slow Violence, Neoliberalism, and the Environmental Picaresque

The Chernobyl disaster is not as simple as a nuclear accident. The consequences that followed are environmental, social, and political. The text explains that "it is space and not time that hides consequences from us". The disaster pulled the gap between the rich and the poor even larger than before. Ecologically, the nuclear radiation caused further degradation in the well-being of the less fortunate population. Moreover, the transnational corporations that use the disaster as an opportunity to use the free market puts a further toll on the society and class hierarchies. All of these are the indirect effects of the Chernobyl disaster which can be categorized as slow violence towards the social congregation. It also received more attention in the western media as the West takes it "personally" as an environmental and political disaster of their territories where they see the need to increase militarization and corporate forces. It deems as a global sanctity of the white body as "discrimination predates disaster". Attention are shifted away from the poor as a result of environmental racism and class discrimination. We see this from the Covid-19 pandemic as a more recent case of the slow violence of environmental racism, where those who are exposed to less resources are being neglected and given limited care while the rich are privileged to opportunities for health care, job, transportation, food, etc. Some are left to die because they are not exposed to the available resources while on the other hand, corruption in the society provides opportunities for the privileged.

Paul Preciado - Testo Junkie

In Testo Junkie, Paul Preciado wrote on the issues of sex, drugs, and technology where there is a intimate correlation between the development and transformation of sex and the social condition. The shift in sexual definition during the WWII and Cold War brought attention to the notion of homosexuality and the meaning of sex, which became the "main objects of political and economic activity". The context of the War presented opportunity for sexual exploration where technologies were used to address the change in sexuality. For instance, surgery and cosmetic surgery were developed to satisfy the sexual preference, Pills and Viagra used for pornography production, ways to control reproduction were introduced to intensify the notion of sex and pleasure. Other than technology on drugs, it was also a result of the social context and physical spatial context in which the War presented, through natural desire for sex as well as the spatial constraints and political state of the world. This brings

architecture and media into question where sex and space in interconnected in ways that defines masculinity and femininity. The spaces for production reflect on the result of production. If the body is rendered as a space for sex and desire, the space embodied by the body has an intimate relationship to it where, similarily to drugs and technology, also shape the social exploitation and expression on sex.

Vinciane Despret - What Would Animals Say If We Asked The Right Questions?

Animals in some ways are our equals, the book questions the social relationships between humans and animals. In the chapter D for delinquents: Can animals revolt?, gives the example of the coexistence of monkeys and humans on the beach, where they steal alcoholic drinks from humans, causing problems in both the human community and monkey community. Moreover, studies show they suffer just as much problems with alcoholism as humans do. Then, the example with elephants attacking villages due to the lack of presence of a leader shows similar societal organization as humans. “Accidents” in zoos and circuses are a form of revolt as they seek justice for their abuse and bad treatment. Chapters E and M, discusses the self-consciousness of animals and their awareness of themselves. Which raises the question that if they are aware of themselves, as prey or predator, as members of a herd or pack, and as an individual, they must have consciousness of their living environments. As equals to humans, when we design our built environment, how do we also be aware of the animal communities’ living environment? What can we do to be incorporative of other communities/societies? If animals share “ intentions, beliefs, and desires of others” (Despret, pg 32) with each other and with humans, then we have to be perceptive of our goals and desires when it comes to the built environment.

ROTOR - A Reverse-Engineering Methodology and Practice

In today’s world of constant development of buildings, we also deal with the question of demolition, renovation, and preservation. What gets to be thrown out, kept, or protected. Rotor’s methods of looking at the building from inside out, observing materials in relation to their cultural values, allows us to have a deeper understanding of the site, of what it entails, supports, or rejects. The idea of disassembly of components leading to preserving its cultural values also in turn increases its value even more as people see it as something more than just materialistic. The idea of reuse of materials also allows for a way to transfer cultural values onto related sites, where what is waste to one is valuable to another. It is also important to consider the occupant types of these materials when approaching it, for instance, in the example of reusing materials from ruins to build a more approachable landscape for visitors as a way to conserve landscape, puts more meaning into the material reuse as opposed to using it for some random house elsewhere. One could argue that materials are a way to seal memories, when being reused, the value of it can be emphasized in the correlation between its new destination and the old.

Alexis Pauline Gums Flows / Astrida Neimanis Flows

Both texts discuss the relationship between the emerging issues of our environment and the social and political impacts. In Self Portrait as Hurricane by Alexis Pauline, the notion of blackness, illness, and mental health issues is being talked about in relation to natural disasters. Oftentimes, these issues are the collective outcome of our natural and built environment and the social construct, where in times of disaster and crisis, the marginalized populations are being blamed on and neglected as the government is more concerned about the corporate side of things. While nature can heal itself in response to natural disasters such as Hurricane Hugo, the infrastructural destruction of us cannot. Racism and negligence of quality of life of the impacted populations are being abused to slow violence

of our capitalist societal values. Similarly in Neimanis’ text on feminism and our environment, the issue is further zoomed in to the bodily scale where we must recognize that all bodies are “racialized and gendered all the time”. The relationship of breast milk being tied to the discourse of race and discrimination, which not all bodies are being embodied. Both texts call attention to the idea of co-worlding where race, gender, and space should be a collaborative environmental responsibility rather than being abused by the toxicity of capitalism.

Mabel O.Wilson - Race Reason and the Architecture of Jefferson’s Virginia Statehouse

In the text Race, Reason, and Architecture, Wilson discusses how Thomas Jefferson’s design for the Virginia State House was inspired by the slavery history of America. The foundation idea for the design of the building is to represent “the people” of Virginia, whose moral, ethical, and social values are to be presented through architecture, organization, and form. The architecture took formal inspiration from Roman classical architecture in terms of the hierarchy of spaces related to politics, and the columns taken from Neoclassical buildings represent how the land is the fruit of the labors of African men, women, and children. The result of slavery in which the land of the wealthy white population is built upon. It criticizes the racist values that in a white person’s imagination that “whiteness as the ideal representation of the human” (Wilson, pg 85) as well as the notion that while living under the name of liberalism, in which “all men are created equal” (Wilson, pg 82), the way the society were structured were certainly not equal. The Virginia State House building reflects the state of the people at the time, in which the architectural hierarchy is parallel to the racial hierarchy at the time.

Transscalarities

Case Study 01: BIOS 3

BIOS-3 is a research facility by the Institute of Biophysics, Russian Academy of sciences that aims to study and experiment on controlled ecological life support systems (CELSS) to prepare for future long distance missions in space. It was in operation from 1965 to 1984 where ten manned experiments were conducted. The goal to create a micro Earth within an enclosed structure posed challenges to replicate the natural ecosystem in a restrained space. In The Architecture of Closed Worlds by Lydia Kallipoliti, the idea of closed worlds and the built environment is described as the relationship between "man and machine"[1], where human's ingestion and excretion are actants of the ecosystem that contributes to the balance of the whole.[2] However, failures of different closed world systems resulted from "sick building syndrome" where regulation of oxygen, carbon dioxide, and other vitals reached a state of instability. In the article Ecology and Space by Mark Nelson and John P. Allen, important contributors to Biosphere II, states that the failures from poor management of the system reflects on "the human's ignorance and lack of interest in the study of vital balances that keep our own biosphere operational" and that led to ecology being one of the main "remaining scientific constraints on the expansion of space activities". [3] The challenges of understanding and reproducing the complexity of biosphere I, the Earth, into enclosed spaces lies behind the understanding of how our biosphere operates, thus, the fundamentals of ecology.

Although BIOS-3 was recognized by other nations including the United States and China later in the late 1980s, the development of the facility and experiments were not collaborative between nations and institutions. The operation of BIOS-3 overlaps with the Cold War (1947 - 1991) and the Space Race (1955 - 1975) between the United States and the Soviet Union, where the Cold War was when the two sides wanted to prove superiority of their technology, military power, and political-economical system. The Space Race presented an opportunity for the two nations to have technological developments and experiments on space travel. Thus, for the development of BIOS-3 to be part of Space Race, information of such research was not shared and exchanged between competing nations, therefore, creating a disconnect between the social and political ecosystems. This phenomenon can be seen carried into the Biosphere II conducted by US scientists, where it was largely funded and led by John P. Allen who was a system ecologist. It was an above-ground structure as opposed to BIOS-3's underground structure. While the scale of it was significantly larger than BIOS-3, it was not able to sustain a balanced ecosystem, and failed due to ecological and social perturbations. [4] Whereas, BIOS-3 had in-depth research on the way oxygen was regulated in relation to human activities and vegetation growth, which was able to sustain the system without causing any illness to both humans and plants. It can be seen that while BIOS-3 is closely related to the larger natural environment, the success and failures and motivation behind the research was also social, political, and "sustainable development of humanity" [5] at the scale of within the closed worlds as well as globally.

[1] Lydia Kallipoliti, The Architecture of Closed Worlds Or, what is the power of shit? (Lars MÜLLER Publishers, 2018)
[2] Luke Tipene, "idea journal," inside the architecture of closed worlds, or, what is the power of shit? (2020): 51- 67
[3] Mark Nelson, "Ecology and Space," 1989 Volume 3 Issue 1: 38 - 44
[4] Mark Nelson, "Ecology and Space," 1989 Volume 3 Issue 1: 38 - 44
[5] J.I.Gitelson, G.M.Lisovsky, Man-Made Closed Ecological Systems (London and New York: Taylor & Francis, 2003)

Transscalarities

Case Study 02: Housing Works

Housing Works, a non-profit that works to raise awareness and fight for people living with HIV/AIDS and homelessness in New York State. Through the creation of a network of social infrastructure, the organization allows the public to be engaged with the community that is being neglected. While there are conversations on treatment and prevention, the issue of housing quality is often overlooked - an ignorance that could lead to the life and death of an individual. [1] Housing Works' business infrastructure, consisting of a network of bookstore cafes and thrift stores, provides funding for its chain of services including health care, housing, and job training. Through the networks of public leisure services, the organization starts to break the stigma of HIV/AIDS and its role in othering and ostracizing the LGBTQ+ community.

Historically, the disco and club scene peaked in New York City, becoming a venue of sexual freedom for the LGBTQ+ community until deaths began to mount from AIDS[2], thus negatively associating people of the LGBTQ+ community with diagnosis of AIDS. Housing Works' business aspect of engaging people in a casual social setting for the cause of HIV/AIDS blurs the boundary between and educates the public on the cause. Other efforts that counter that negative reputation of people with or living with HIV/AIDS are unsafe can be seen in the utilization of the spaces used as wedding venues and event spaces, which casts a friendly cultural experience.

However, when one visits these bookstores and thrift shops, there is a lack of direct communication that tells the visitor the correlation between the shop and the goals of Housing Works. This raises the question of why Housing Works isn't more confrontational in their marketing and branding. The organization has a total of twelve residences across Manhattan and Brooklyn, encompassing over 30,000 residents and 700 affordable housing units. The financial statistics and housing statistics show Housing Works' success in funding for both businesses and healthcare/housing operations, which may explain the lack of publicity as it values both its consumer community and its target marginalized communities separately to allow for both mutual support and privacy.

Housing Works argues that housing is healthcare. Therefore, while providing stable housing, job training, and secure healthcare accessibility for those already in the situation, how can it also expand their services for people in risk of going into homelessness? There is often a social, political, and economical stigma around individuals suffering from substance abuse and HIV/AIDS being people of poor areas or people of color, which also puts the entire neighborhood under the label of drug abuse, crime, and violence.[3] The next step for Housing Works may be providing public exposure to that stigma, and increasing awareness of the importance of housing and healthcare for marginalized populations.

[1] "Housing Works," Housing Works, accessed July 28, 2022, https://www.housingworks.org/
[2] Allan Tannenbaum, New York in The 70s, Abrams Press (2011), 6-9. 54-66
[3] Virginia Shubert; Mary Ellen Hombs, "Housing Works: Housing Opportunities for Homeless Persons," Clearinghouse Review 29, no. Issues 7 - 8 (November-December 1995): 740-751

Virtual Disruption

Intimacies of personal spaces

FALL 2022

Utlizing collages, 3D scanning, and artificial intelligence to render relationships of the spaces of one's personal lives, experiences, and awareness.

Critic

MARLON DAVIS

Semester

FALL 2022

ES, FRUIT & VEGETABLES

Spectacular Pedagogies

Research on Airport Audiovisual Technologies

FALL 2022

Abstract

Biometric identification is a form of technology that is now prevalent in people's everyday lives. According to the Department of Homeland Security, "[b]iometrics are unique physical characteristics, such as fingerprints, that can be used for automated recognition."[1] Unique as in attributes that belong to only one person, and serves as their personal identification. Biometric identification is ubiquitous in our modern society, from the cameras of smartphones to surveillance cameras on the streets as a crime regulation tool. It spans from fingerprints, facial characteristics, eye structures, DNA, speech, and handwriting. Facial recognition is one of the most used amongst those listed, a form of surveillance that taps into questions of privacy both physically and psychologically, the relationship between the surveillance technology and the body, and the analytical studies of the face and emotions.
One of the places that heavily relies on surveillance is airports. Airports are places fuelled by facial surveillance technologies to collect the faces of travellers to build databases that detect people with illegal or suspicious activities. The airport performs within a unique ecology of its own, where it serves as a buffer zone between arrival and departure. Surveillance cameras and kiosks with facial recognition technology monitor and scan the space without consent of the travellers. Users walk into the space with a preconceived understanding of their privacy being stripped away. The notion of being watched constantly influences one to act a certain way. The airport environment then creates a spectacle of imposed and restrained actions.

Facial recognition surveillance technology and its analysis of the face can be traced back to the study of Facial Action Coding System (FACS), a system originally developed by a Swedish anatomist named Carl-Herman Hjortsjö, which was later adopted by Paul Ekman and Wallace V. Friesen in 1978. It is a system based on study of anatomy to comprehensively describe all facial movements that are visually discernible. It analyzes facial expressions by breaking it down into separate parts and components of muscle movement, which are called Action Units (AUs).[2] FACS allows for a deeper understanding of the subtle and less discernible facial behaviours, which in turn can help surveillance technology with heightened accuracy in deception detection. Studies of micro facial movements in facial expression and emotions removes the biases of technology towards race, culture, ethnics, and religion, which is one of the major problems with facial recognition technologies.

Other studies of using facial recognition technology and FACS to understand behaviour is the Project Hostile Intent[3], later renamed as Future Attribute Screening Technology (FAST), which is a project carried out by the Department of Homeland Security (DHS), in an effort to study such technologies and understand human behaviour tied to "psychological and physiological indicators".[4] Its goal is to understand the human behavior which helps indicate crime in the real time as opposed to after the crime has been committed.

This paper will focus on facial recognition surveillance technology and the spatial implications on the surveillanced and the surveiller in the environment of an airport to understand its unique ecology and the relationship and hierarchy between surveillance and people in that environment. Investigate the privacy concerns linked to the presence and effects of facial recognition surveillance technology and the way it influences the way people interact and move through space, and using Facial Action Coding System (FACS) as an anchor to understand the basis of facial recognition. How such technology is used to drive the airport infrastructure and the problems with facial recognition surveillance psychologically and physically.

[1] *"Biometrics." Biometrics | Homeland Security. Accessed October 22, 2022. https://www.dhs.gov/biometrics.*
[2] *"Micro Expressions." Paul Ekman Group, October 21, 2021. https://www.paulekman.com/resources/micro-expressions/.*
[3] *"Project Hostile Intent," Wikipedia (Wikimedia Foundation, January 4, 2022), https://en.wikipedia.org/wiki/Project_Hostile_Intent.*
[4] *"Future Attribute Screening Technology," Wikipedia (Wikimedia Foundation, June 1, 2022), https://en.wikipedia.org/wiki/Future_Attribute_Screening_Technology.*

Critic MARK WASIUTA

Semester FALL 2022

Final Research Paper

Biometric identification is a form of technology that is now prevalent in people's everyday lives. According to the Department of Homeland Security, "[b]iometrics are unique physical characteristics, such as fingerprints, that can be used for automated recognition."[1] Unique as in attributes that belong to only one person, and serves as their personal identification. Biometric identification is ubiquitous in our modern society, from the cameras of smartphones to surveillance cameras on the streets as a crime regulation tool. It spans from fingerprints, facial characteristics, eye structures, DNA, speech, and handwriting. Facial recognition is one of the most used amongst those listed, a form of surveillance that taps into questions of privacy both physically and psychologically, the relationship between the surveillance technology and the body, and the analytical studies of the face and emotions.

Airports are some of the most surveillance dependent places. While airport surveillance has existed long before biometric surveillance took place, it would not have been at the level of robustness it is at now if it were not for events like 9/11 and other terrorist attacks. They are places fuelled by facial surveillance technologies to collect the faces of travelers to build databases that detect people with illegal or suspicious activities. The airport is a form of knowledge box which performs within a unique ecology of its own, where it serves as a buffer zone between arrival and departure. Surveillance cameras and kiosks with facial recognition technology monitor and scan the space without consent of the travelers. Users walk into the space with a preconceived understanding of their privacy being stripped away. The notion of being watched constantly influences one to act a certain way. The airport environment then creates a spectacle of imposed and restrained actions.

It collects data, information, and identification without consent, which raises the question relating to ethics. A lot of people are becoming suspicious about the idea of using facial recognition technology in airports as their privacy is being stripped away without consent. Which also raises the question of where these data are being collected, whether they are being retained or destroyed, what is specifically being collected, where they are being collected, as well as how these data are being used in the system.

As mentioned earlier, the airport environment is like a knowledge box, with a complex network within itself. Therefore, while airport security is dependent on the various machines to ensure security and safety of the passengers, aircraft, and the airport, the role of the human is still very much embedded in the system in conjunction with the machines, which adds another layer of surveillance to the already complex network of "visions". The agency of the eye is called to attention as it poses equal importance to the vision of the machine in this environment, where the human vision looks for potential threats through verbal communication and understanding of the human anatomy.

In the setting of the human gaze, the analysis of the face in relation to surveillance can be traced back to the study of Facial Action Coding System (FACS), a system originally developed by a Swedish anatomist named Carl-Herman Hjortsjö, which was later adopted by Paul Ekman and Wallace V. Friesen in 1978. It is a system based on study of anatomy to comprehensively describe all facial movements that are visually discernible. It analyzes facial expressions by breaking it down into separate parts and components of muscle movement, which are called Action Units (AUs).[2] FACS allows for a deeper understanding of the subtle and less discernible facial behaviors, which in turn can help surveillance technology with heightened accuracy in deception detection. Studies of micro facial movements in facial expression and emotions may or may not heighten the biases towards race, culture, ethnics, and religion, which is one of the major problems with facial recognition technologies.

[1] *"Biometrics." Biometrics | Homeland Security. Accessed October 22, 2022. https://www.dhs.gov/biometrics.*
[2] *"Micro Expressions." Paul Ekman Group, October 21, 2021. https://www.paulekman.com/resources/micro-expressions/.*

Other studies of using facial recognition technology and FACS to understand behavior is the Project Hostile Intent[3], later renamed as Future Attribute Screening Technology (FAST), which is a project carried out by the Department of Homeland Security (DHS), in an effort to study such technologies and understand human behavior tied to "psychological and physiological indicators".[4] Its goal is to understand the human behavior which helps indicate crime in the real time as opposed to after the crime has been committed.

This paper will dive into the intricacies of the relationship between facial recognition and human surveillance in the Ben Gurion Airport where both play a significant role in ensuring the security of the airport. Focusing on facial recognition surveillance technology and the spatial implications on the surveillanced and the personnel conducting the surveillance in the environment of an airport to understand its unique ecology and the relationship and hierarchy between surveillance and people in that environment. Investigate the privacy concerns linked to the presence and effects of facial recognition surveillance technology and the way it influences the way people interact and move through space, and using Facial Action Coding System (FACS) as an anchor to understand the basis of facial recognition. How such technology is used to drive the airport infrastructure and the problems with the human and machine gaze psychologically and physically.

Some of the most secure airports in the world are the Ben Gurion Airport in Israel (Fig. 01), the Zurich International Airport in Switzerland, Narita International Airport in Japan, King AbdulAziz International Airport in the Kingdom of Saudi Arabia, and Changi Airport in Singapore. Among those, the Ben Gurion Airport in Israel is known to be the most secure with at least five layers or "rings" of security from arrival to departure. No one has been killed or even injured as a result of terrorism at the Tel Aviv airport for the past 44 years. Nor has any departing plane been attacked during that time. Due to the rigid layers of security screenings, passengers are encouraged to arrive at the airport at least 3 hours prior to their flight departure time due to the multiple layers of security screenings.

Fig.01: "Ben Gurion Airport," Wikipedia (Wikimedia Foundation, December 17, 2022), https://en.wikipedia.org/wiki/Ben_Gurion_Airport.

As mentioned above, the airport security is dependent upon both the machine vision and the human vision, which both systems are interwoven into the network of the Ben Gurion Airport. However, they were not employed at the same time. In Ben Gurion Airport, the human vision surveillance system came a lot earlier than the technologies, meaning that the triggers for the employment of each system are different events in history, which overtime became a need for more rigorous security.

[3] "Project Hostile Intent," Wikipedia (Wikimedia Foundation, January 4, 2022), https://en.wikipedia.org/wiki/Project_Hostile_Intent.
[4] "Future Attribute Screening Technology," Wikipedia (Wikimedia Foundation, June 1, 2022), https://en.wikipedia.org/wiki/Future_Attribute_Screening_Technology.

As Ben Gurion Airport has been exercising their painstaking security long before technology took place. Being one of the long time target of Palestinian terrorist attacks, the first trigger to implement the layers of security was the hijacking of Sabena Flight 571 on May 8th, 1972 traveling from Vienna to Tel Aviv. (Fig.02) The attack was planned by Ali Hassan Salameh and carried out by a group of men and women from the Black September Palestinian terrorists, led by Ali Taha Abu Snina, along with Abed al-Aziz Atrash, Rima Tannous and Theresa Halsa, with the goal of having the Israelis release the 315 imprisoned Palestinian convicted of terrorism. As a result of the hijacking, the plane was forced to land and 90 passengers were trapped on the plane for over a day. As a result of the rescue, two of the male terrorists were killed and the two female hijackers captured and imprisoned, along with two passenger fatalities during the process. This event was a wake up call for the Israeli, which soon after the event, Tel Aviv-Lod International Airport, later renamed Ben Gurion Airport, after the first Israli prime minister David Ben-Gurion, started implementing their layers of strict and strategic human surveillance for airport security.

Fig. 02: TOI staff et al., "Theresa Khalsa, Hijacker of 1972 Sabena Flight to Tel Aviv, Dies at 65," The Times of

Israel, March 28, 2020, https://www.timesofisrael.com/theresa-khalsa-hijacker-of-1972-sabena-flight-to-tel-aviv-dies-at-65/.

The surveillance network at the Ben Gurion Airport focuses a lot of their screening process on what they call the "human factor", which heavily implies suspicion on specific races, gender, and religion. Throughout the entire process, the Isralies use a method called Racial profiling or ethnic profiling to identify "high-risk" travellers for further investigation and questioning. This is a method commonly used by Israeli security forces, which strongly relies on human biases based on passports, itineraries, reactions, and accents. It is a system of racial profiling techniques that have raised allegations of anti-Arab discrimination from Israeli civil rights advocates. As a result Palestinians and Arabs passing through are more likely to be stopped, searched, and questioned.

The human aspect of the surveillance process includes multiple interviews, asking passengers where they are traveling to and from, the reason for traveling, who packed their luggages, and what was packed. The questioning starts from before the passenger even enters the airport sliding doors, security officers approach the vehicles prior to check-in to conduct questioning and detect initial hints at potential threats.[5] The same questioning process then gets repeated throughout the passenger's entire journey at the airport until they have departed and in some cases landed at their destination. This process is where the Facial Action Coding System (FACS) (Fig. 03) takes place. A system developed by Paul Ekman, based on the study of anatomy to comprehensively describe all facial movements that are visually discernible. It analyzes facial expressions and more closely looks at the tenuous shifts in one's facial movements to call out the deeper emotional states of a person by breaking it down into separate parts and components of muscle movement, called Action Units (AUs) deconstructing the human facial expressions into micro and macro movements. There are a total of forty-four AUs, of which thirty of them are anatomically related to the contractions of specific facial muscles: 12 are for upper face, and 18 are for lower face. AUs can occur individually or in combination to produce very different emotions. From those 44 AUs, there are more than 7,000 different combinations that have been observed. While FACS does not indicate or predict a person's potential behaviour or intent, the reason why FACS is powerful is because it provides the descriptive power necessary to describe the details of facial expression, because they have the ability to communicate emotion and regulate interpersonal behavior faster than verbal communication. The face's muscle movements reveal emotions quicker than people can verbalize or even realize they are expressing their feelings. The use of FACS looks past the person's skin colour, race and religion, it could detect a person's emotions and in turn intents disregarding their background including how they dress, which may come off as a component tailored towards racial and religious bias.

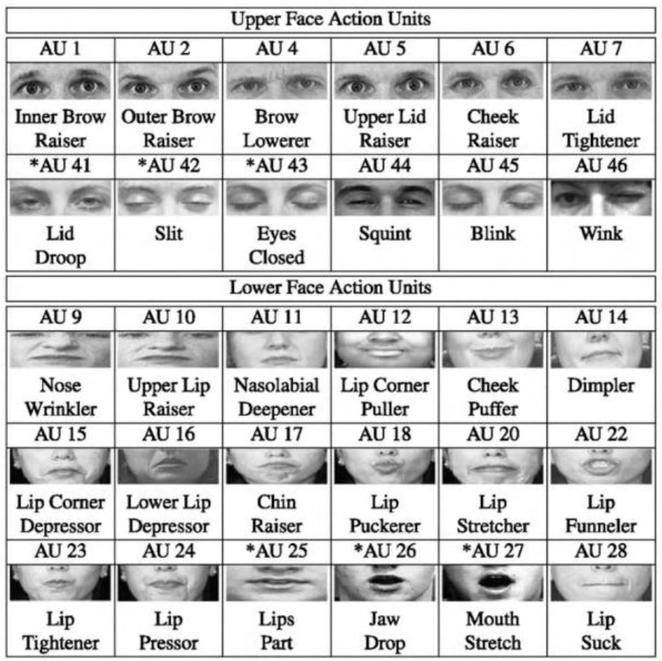


Fig. 03: "Facial Action Coding System," Paul Ekman Group, January 30, 2020, https://www.paulekman.com/facial-action-coding-system/.

Before delving into the details of the security procedure within the Ben Gurion Airport, it is important to mention the trigger for the implementation of the various technological elements exercising the machine vision in the airport. Prior to September 11, 2001 airport security in the United States was designed to be almost invisible and didn't interfere with the aircraft or airport operations. It was

[1] *Phil Sylvester, "Is Airport Security in Israel Really That Tough?," World Nomads (World Nomads, September 2, 2019), https://www.worldnomads.com/travel-safety/middle-east/israel/israel-airport-security-is-getting-in-really-that-tough.*

conducted by private contractors, with few federal standards in place. Due to these contractors being hired by individual airlines, they are also usually the lowest bidders, which are the most economical options. 9/11 was a turning point in history that changed the scene of aviation and transportation security. The incident was the trigger to the introduction of the Transportation Security Administration (TSA), implementing security checkpoints, boarding passes, screening for both checked and carry-on luggages, removing batteries, etc. to heighten security. Not only was the airport infrastructure altered in the US, but everywhere in the world. While the Ben Gurion Airport already had a rigid network of security checkpoints, and the post 9/11 nervousness is not applicable to it, 9/11 was the event that introduced the machines into Ben Gurion. Adding on top of the already stringent and tedious processes of the human surveillance security checkpoints, as well as elongating the passenger's time spent in the airport.

The Ben Gurion Airport performs within a unique ecology of its own, where it serves as a buffer zone between arrival and departure. With the two layers of surveillance systems, it performs under a collaboration between human and machine surveillance. Surveillance cameras and kiosks with facial recognition technology scans the space without the consent of the travelers. The airport fosters a spectacle of forced, discreet, and controlled actions.

After breaking down the processes, there are a total of eight checkpoints between arrival at the airport and departing. Upon arrival, the passenger arrives at the first checkpoint, an in-vehicle interview that takes about fifteen to twenty minutes. The officer approaches each vehicle and checks the car for potential threats and asks the travelers where they are traveling to and from, as well as the purpose of traveling. However, during this process, if the traveler is a Palestianian, the officers mark down the information and alerts the airport personnels, which means the passenger will already be facing more security procedures than an Israeli person. Along with the officers checking each arriving vehicle at the highway entrance, there are also multiple patrol officers and hidden surveillance cameras guarding the exterior of the airport ensuring the security of surrounding areas. After being cleared at the in-vehicle interview, the passengers arrive at the second checkpoint which is less than 100 feet away from the drop off point. As one enters the airport through the sliding doors, there are officers guarding the entrances watching each entry, if the travelers appear to be suspicious, they are faced with potential questioning upon entering. While the second checkpoint is short and does not affect most passengers, it still affects Palestinian travelers due to the terrorist biases towards them.

As soon as one enters the airport, the passengers face checkpoint number three where a line of kiosks awaits with facial recognition technologies to scan the passenger's facial identification to check in. This is the first direct human to machine checkpoint in the airport where the traveler's face is being recorded and tracked for their duration spent in the airport before passport control for departure.

The fourth checkpoint can be considered one of the most important checkpoints in the entire Ben Gurion Airport experience. This checkpoint consists of an interview that will determine the passenger's rest of their security checkpoint journey throughout the airport, and it takes place right before one approaches the check-in counter for boarding passes and checked bags. At checkpoint number four, all passengers are interviewed by security personnel trained by the Israel Aviation Authority in conjunction with Israeli intelligence and security agencies. Interviewers, who often are students with background experience in military combat. While conducting the interview, they are trained to look for warning signs such as nervousness, lack of a concrete reason for traveling into, out of, or through Israel, and suspicious travel history. [6] "Risky" passengers may be sent to private rooms for questioning and searches. If the officer deems a passenger suspicious they might also ask to check traveler's emails or social media pages for further inspection. After completing the interview, each passenger

[6] *Prashant Prabhakar, "Inside the World's Most Secure Airport – Ben Gurion • 100 Knots," 100 KNOTS • Indian aviation News - Discussions - Jobs - Statistics - Database, January 13, 2022, https://www.100knots.com/inside-the-worlds-most-secure-airport-ben-gurion/.*

is given a barcode on a neon yellow sticker to be placed at the back of each passport. (Fig. 04) The stickers came with a series of 10-digit number codes on it that starts with a number from one to six. If the number starts with “1” the passenger is categorized as “very low risk”, and if the code starts with a number “6” the passenger is considered a ”high risk” traveler and would be subjected to further more strict screening. Due to the numbers being determined by the security officers, the ranking is subject to bias based on skin colour, nationality, language, demographics, gender, and age. Exactly due to this reason, number one and two are reserved for diplomats, Israeli jews, and Israeli Arabs families; number three and four are usually for foreigners that does not deem suspicious, solo Arab travelers will receive a number five sticker; and number six stickers are known to be reserved for Palestinians and non-jewish populations.

Fig. 04: https://www.businessinsider.com/israels-ben-gurion-airport-security-uses-secret-sticker-system-2015-6

Prior to the year 2007, instead of using stickers of the same colour with different number codes, the Ben Gurion Airport used different coloured stickers for different “population sectors” and for different “security levels”. [7] After switching to singular colour stickers, the Israeli government claims to have rid of the racial discrimination in the security system. However, with the numbers ranging from one to six, given to specific groups of people, racial discrimination is unfortunately still a huge factor that influences the security decisions. Especially when the stickers are decided and given by the airport security personnels, their bias towards race, culture, and religion plays into the decision making process, making the process very much targeted.

After the passenger receives their sticker and completes the initial human conducted interview, they are free to move on to checkpoint five, the check-in counter for check-in, retrieve their boarding passes and check luggages. At the check-in checkpoint, the passengers complete a second human to human interview, repeating the process and questions. At this checkpoint, they are being analyzed again by the airport officials using the strategies of FACS, observing the facial muscle movements for signs of nervousness, deception, or irritation and uneasiness.

As the passenger moves along the airport in a linear fashion, they approach a line of checkpoint six, a line of E-gates awaits. These machines are the second machine checkpoint in the passenger’s journey through Ben Gurion. As one approaches the kiosk, their faces get scanned again to match the first scanning data collected at checkpoint three.

However, the challenges with facial recognition technologies is that they are designed to have bias built into its system causing identifications to be mismatched and unfound, leading to false accusations and additional screening. According to researchers, facial recognition technologies falsely identified Black and Asian faces 10 to 100 times more often than they did white faces. [8] Furthermore, a study conducted at National Institute of Standards and Technology (NIST) on the accuracy of facial recognition technologies revealed that it produces the least accuracy with dark-skin females, then dark-skin males, light-skin females, and with the light-skin male population with the highest accuracy. [9] Proving that while machines are advocated for its accuracy in detecting threats and void of biases, racial bias is still very much part of the system and design derived from skin colour, gender, age, facial structure, language, and ethnicity. Therefore, when the face scans do not match, due to these inaccuracies in the algorithms, people are subject to additional screening and inspection. Making the passenger’s journey through the airport even longer. This is not a result of the passenger being a person of threats but the inaccuracies of the biometric technologies. Another concern the collection of biometric identification raised around its use in the airport is that due to its non-consensual data collection, people do not know where these data are going to and what these data is being used for if it is used for more than the purpose of identification within the airport.

Facial recognition is a relatively new concept that is being implemented in airports, the United States Customers and Border Protection (CBP) has installed facial recognition systems in 27 airports in the United States, and by July of 2022, facial recognition technologies have been deployed in 32 US airports. [10] The implementation of facial recognition technology in airports is advertised for two different purposes, the first being able to replace passports and enabling faster security procedures, thereby shortening the time spent prior to departure; the second reason for utilizing facial recognition technology in airports is for the purpose of detecting criminals.

At Ben Gurion Airport, the deployment of facial recognition and other biometric identification technology asks the passengers to hold a biometric passport. A biometric passport has three parts to it that a regular passport does not have, it must contain a photograph of the passenger, a photograph embedded in the passport’s chip, and lastly a photograph the machines identifies during a facial scan. If the passenger does not hold a biometric passport, he/she will be asked to see a human inspector which goes back to the interviews and the use of FACS to identify the risk levels. At these kiosks, the Israel Defence Forces (IDF) also uses a technology called the Suspect Detection System (SDS) to identify potential criminals and suspects. [11] It is a machine driven technology that conducts interrogation and background checks for both passengers and airport personnels. The procedure works similarly to a polygraph machine where it identifies terrorists through using the same logics, it is “an advanced and automated filtering tool that can identify potential suspects from among tens of thousands of people.” [12]

In conjunction with human inspectors that carries out the security procedures, the SDS’s has s technology built into it called VR-1000, which looks beyond the wanted lists of the Interpol or Homeland Security. The technology while looking for these already assumed criminals, it also assumes that some of the “[most] sophisticated terrorists may not be on the wanted lists of Interpol police or Homeland Security.” [13] The SDS technology performs in a similar fashion as a lie detector where it searches for “the psychological and physiological fear of a terror suspect and to assuage Americans’ fears of being “profiled.” The test works like a robot, searching for cues that only terror suspects are likely to radiate.” [14] In a way it is very similar to the FACS method used by the human inspector and security personnels, where it performs analysis on the human emotions and uses the human face as a database for indication of suspicions.

[7] *Roee Nahmias, “MOFAZ: Airport Security Checks No Longer Discriminatory,” Ynetnews (ynetnews, June 14, 2011), https://www.ynetnews.com/ articles/0,7340,L-3434852,00.html.*
[8] *Natasha Singer and Cade Metz, “Many Facial-Recognition Systems Are Biased, Says U.S. Study,” The New York Times (The New York Times, December 19, 2019), https://www.nytimes.com/2019/12/19/technology/facial-recognition-bias.html.*
[9] *Patrick J. Grother, Mei L. Ngan, and Kayee K. Hanaoka, “Face Recognition Vendor Test Part 3: Demographic Effects,” NIST (Patrick J. Grother, Mei L. Ngan, Kayee K. Hanaoka, December 19, 2019), https://www.nist.gov/publications/face-recognition-vendor-test-part-3-demographic-effects.*
[10] *U.S. Government Accountability Office, “Facial Recognition Technology: CBP Traveler Identity Verification and Efforts to Address Privacy Issues,” Facial Recognition Technology: CBP Traveler Identity Verification and Efforts to Address Privacy Issues | U.S. GAO, accessed December 16, 2022, https://www.gao.gov/products/gao-22-106154#:~:text=U.S.%20Customs%20and%20Border%20Protection,for%20travelers%20entering%20the%20country.*
[11] *Nicky Blackburn, “Israel’s Top 10 Airport Security Technologies,” ISRAEL21c, September 14, 2012, https://www.israel21c.org/israels-top-10-airport-security-technologies-2/.*
[12] *Nicky Blackburn, “Israel’s Top 10 Airport Security Technologies,” ISRAEL21c, September 14, 2012, https://www.israel21c.org/israels-top-10-airport-security-technologies-2/.*
[13] *Nicky Blackburn, “Israel’s Top 10 Airport Security Technologies,” ISRAEL21c, September 14, 2012, https://www.israel21c.org/israels-top-10-airport-security-technologies-2/.*
[14] *Nicky Blackburn, “Israel’s Top 10 Airport Security Technologies,” ISRAEL21c, September 14, 2012, https://www.israel21c.org/israels-top-10-airport-security-technologies-2/.*

The level of profiling in the Ben Gurion Airport however does not only exist at these checkpoints. Any employee working in the airport, ranging from retail workers to security officers, could all be trained to conduct behavioral analysis to identify potential suspects. The experience of going through the airport is extremely unpredictable as one may be subject to additional questioning and screening at any point in their time spent in the airport.

In the case of Ben Gurion Airport, those of the non-jewish population are most likely to be victims and subjects of the security process and system, whether it is part of the human led security checkpoints or machine dominant checkpoints. In the report "Suspected Citizens" published in December of 2006, supported by the Arab Association for Human Rights and the Center Against Racism on the Racial Profiling against Arab Passengers by Israeli Airports and Airlines expressed views on the unequal treatment of Arab travelers in Israeli airports. It described a series of events that intentionally prolonged the experience of an Arab traveler compared to an Israeli traveler, despite being an individual posing no threats. For example, the article reported that *"The offensive treatment began when we traveled via Ben Gurion Airport. We, the Arab women, were taken to one side, while the Jewish members of the delegation were not. When they were stamping our passports, one of the clerks evidently used the wrong colored sticker on the passport, and the others said to her "Can't you tell the difference?!""* [15] detailing an Arab woman's experience at the first interview checkpoint, where it is clear that the stickers are premeditated protocols and pre-assigned to a certain race, appearance, and religion. It is also noted that when passengers are asked to identify themselves at the end of each checkpoint, Jewish travelers are gestured to proceed immediately while Arab travelers are almost always pulled aside for further questioning and baggage search, all done in public viewing. Also a form of violation and humiliation as if saying that all Arabs must be potential threats. This sense of humiliation is heightened when in the case of people traveling in groups that are mixed with Jews and Arabs, being separated from for the sole purpose of discriminatory inspection based off of stereotypes. They were also not only called out for additional questioning but also receiving a different and considerably worse attitude from the security officers as they are considered to be threats. Receiving the treatment not as a citizen but as a suspect. [16] The openness in the system's discrimination also poses a human rights and equality issue. It removes the right to equality, dignity, individual liberty, and privacy. [17] Unequal treatment not only can lead to having large margins of error, prolonging the security process and feeding less important information into the system that are unrelated to the list of wanted persons on the interpol list, it could also have negative effects on the passenger's mental health as they receive derogatory and unfair treatment compared to others with equal status but of the "accepted" religion.

Finally, after getting past the E-gates, the travelers arrive at checkpoint seven where one goes through the metal detectors and x-ray, carry-on baggage screening, and gets their sticker with the 10-digit number scanned. As a checkpoint with both the machine vision and the human vision working simultaneously, passengers that deem to be "high risk" are once again faced by intense inspection. Right before boarding, the passenger goes through the passport control kiosk for one final face scan to match identity.

In the Ben Gurion Airport ecology, the layers of security and scrutiny is the primary driving force for the spatial organization of the airport, the need for step by step procedure performed under strict surveillance and screening asks the space to be in a linear format. Even as one enters the gates sector of the airport, the notion of being surveillance under both the human and the machine vision is reinforced. Security network challenges the relationship between human to human, and the relationship between human to machine. While the machine learns and refines based on the data we feed into the system, and the human does not analyze situations with a formula coded system, both are still stemmed from racial biases that are deep rooted in historical events and the country's political relationships.

In Invisible Images (Your Pictures Are Looking at You), Paglen states that "[o]ur eyes are fleshy things, and for most of human history our visual culture has been made of fleshy things." noting that our eyes are clues to culture, emotions, and actions. Paglen described the human vision as something with vagaries. Meaning while it is largely tied to culture, it is also unpredictable and unique. Paglen then brings to attention the effects of machine reading in relation to our visual culture, where the involvement of machines has detached our visual culture from the human eyes and "largely became invisible". Questioning the relationship between human and machine vision.

In a world where images are made by machines, to be read by machines, the privileges and functions of the human eye have thus been taken away. He denotes the phenomenon of machine vision replacing the human eye as "the landscape of invisible images and machine vision". In this landscape, machines are being prioritized to read images, where the human vision is drastically limited. This large-scale automation of machine vision presents a problem with the technology of image processing and human cognition. As machine vision supersedes the human vision, the process of automation of vision also gains power over humans. However, while this is not the case in Ben Gurion, the conglomerate of machine and human vision that co-exists serves the same unjust purpose. The machine lacks precision in deciphering the complex structure and network of the human cognitive system, hence the gaze and micro facial movements, and the human lacks unbiased judgment.

The spectacle in the Ben Gurion Airport not only exists under the authorities and the machine's eyes, the "accepted" public's gaze victimizes certain population groups, making it a space of uncertainty and discomfort. If the human vision and the machine vision in the surveillance infrastructure both imposes violence on people of colour, different religion, and race, and subsequently creating a space of oppression, what is the solution to having a non-biased and non-discriminatory surveillance system?

[15] *Maureen Clare Murphy, "Suspected Citizens: Racial Profiling against Arab Passengers by Israeli Airports and Airlines," The Electronic Intifada, February 12, 2017, https://electronicintifada.net/content/suspected-citizens-racial-profiling-against-arab-passengers-israeli-airports-and-airlines.2 Allan Tannenbaum, New York in The 70s, Abrams Press (2011), 6-9. 54-66*

[16] *Maureen Clare Murphy, "Suspected Citizens: Racial Profiling against Arab Passengers by Israeli Airports and Airlines," The Electronic Intifada, February 12, 2017, https://electronicintifada.net/content/suspected-citizens-racial-profiling-against-arab-passengers-israeli-airports-and-airlines.2 Allan Tannenbaum, New York in The 70s, Abrams Press (2011), 6-9. 54-66*

[17] *Maureen Clare Murphy, "Suspected Citizens: Racial Profiling against Arab Passengers by Israeli Airports and Airlines," The Electronic Intifada, February 12, 2017, https://electronicintifada.net/content/suspected-citizens-racial-profiling-against-arab-passengers-israeli-airports-and-airlines.2 Allan Tannenbaum, New York in The 70s, Abrams Press (2011), 6-9. 54-66*

Bibliography

"Biometrics." Biometrics | Homeland Security. Accessed October 22, 2022. https://www.dhs.gov/biometrics.
"Micro Expressions." Paul Ekman Group, October 21, 2021. https://www.paulekman.com/resources/micro-expressions/.
"Project Hostile Intent," Wikipedia (Wikimedia Foundation, January 4, 2022), https://en.wikipedia.org/wiki/Project_Hostile_Intent.
"Future Attribute Screening Technology," Wikipedia (Wikimedia Foundation, June 1, 2022), https://en.wikipedia.org/wiki/Future_Attribute_Screening_Technology.
"Ben Gurion Airport," Wikipedia (Wikimedia Foundation, December 17, 2022), https://en.wikipedia.org/wiki/Ben_Gurion_Airport.
TOI staff et al., "Theresa Khalsa, Hijacker of 1972 Sabena Flight to Tel Aviv, Dies at 65," The Times of Israel, March 28, 2020, https://www.timesofisrael.com/theresa-khalsa-hijacker-of-1972-sabena-flight-to-tel-aviv-dies-at-65/.
Phil Sylvester, "Is Airport Security in Israel Really That Tough?," World Nomads (World Nomads, September 2, 2019), https://www.worldnomads.com/travel-safety/middle-east/israel/israel-airport-security-is-getting-in-really-that-tough.
"Facial Action Coding System," Paul Ekman Group, January 30, 2020, https://www.paulekman.com/facial-action-coding-system/.
Prashant Prabhakar, "Inside the World's Most Secure Airport – Ben Gurion • 100 Knots," 100 KNOTS • Indian aviation News - Discussions - Jobs - Statistics - Database, January 13, 2022, https://www.100knots.com/inside-the-worlds-most-secure-airport-ben-gurion/.
https://www.businessinsider.com/israels-ben-gurion-airport-security-uses-secret-sticker-system-2015-6
Roee Nahmias, "MOFAZ: Airport Security Checks No Longer Discriminatory," Ynetnews (ynetnews, June 14, 2011), https://www.ynetnews.com/articles/0,7340,L-3434852,00.html.
Natasha Singer and Cade Metz, "Many Facial-Recognition Systems Are Biased, Says U.S. Study," The New York Times (The New York Times, December 19, 2019), https://www.nytimes.com/2019/12/19/technology/facial-recognition-bias.html.
Patrick J. Grother, Mei L. Ngan, and Kayee K. Hanaoka, "Face Recognition Vendor Test Part 3: Demographic Effects," NIST (Patrick J. Grother, Mei L. Ngan, Kayee K. Hanaoka, December 19, 2019), https://www.nist.gov/publications/face-recognition-vendor-test-part-3-demographic-effects.
U.S. Government Accountability Office, "Facial Recognition Technology: CBP Traveler Identity Verification and Efforts to Address Privacy Issues," Facial Recognition Technology: CBP Traveler Identity Verification and Efforts to Address Privacy Issues | U.S. GAO, accessed December 16, 2022, https://www.gao.gov/products/gao-22-106154#:~:text=U.S.%20Customs%20and%20Border%20Protection,for%20travelers%20entering%20the%20country.
Nicky Blackburn, "Israel's Top 10 Airport Security Technologies," ISRAEL21c, September 14, 2012, https://www.israel21c.org/israels-top-10-airport-security-technologies-2/.
Maureen Clare Murphy, "Suspected Citizens: Racial Profiling against Arab Passengers by Israeli Airports and Airlines," The Electronic Intifada, February 12, 2017, https://electronicintifada.net/content/suspected-citizens-racial-profiling-against-arab-passengers-israeli-airports-and-airlines.

GAP 1: Design+Typography

Typographical explorations on composition and design

SPRING 2023

Topics:

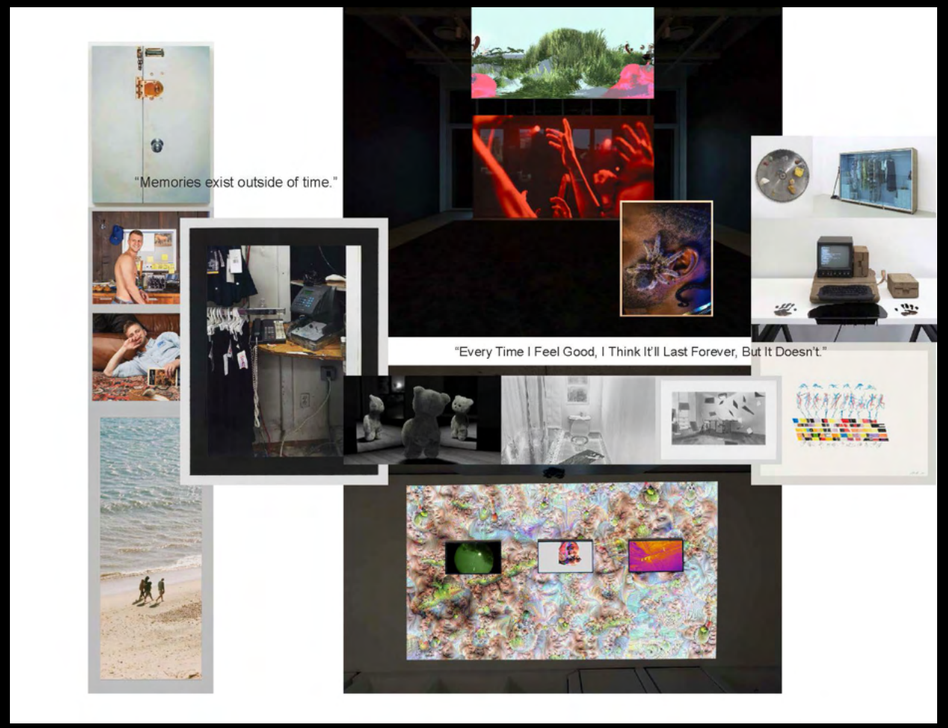
Image Composition

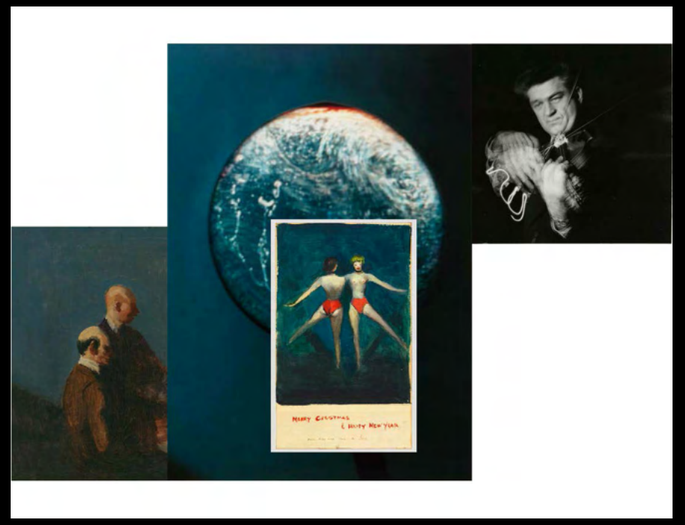
Table of Contents

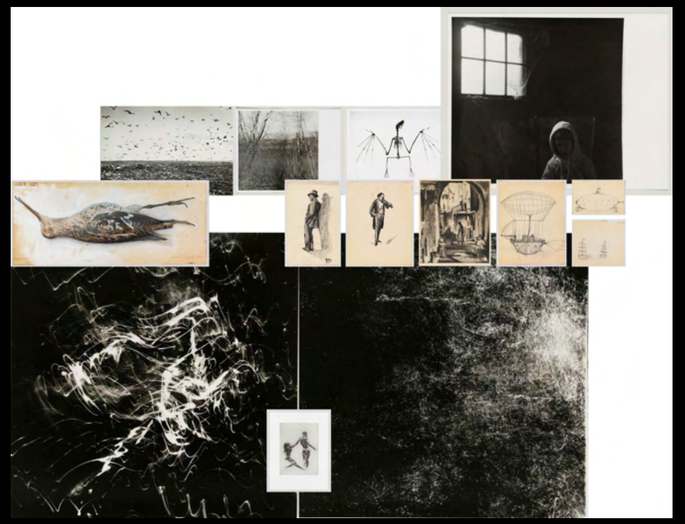
Cover Cover

Personal Statement

Visualizing the Abstract







Critic

YOONJAI CHOI

Semester

SPRING 2023

image composition

table of contents

THE MAID

Nita Prose

CONTENTS

PROLOGUE *03*

MONDAY
chapter 03 - 05 *07*

TUESDAY
chapter 06 - 09 *73*

WEDNESDAY
chapter 10 - 14 *117*

THURSDAY
chapter 15 - 25 *161*

FRIDAY
chapter 26 *259*

SEVERAL MONTHS LATER
chapter 27 *265*

EPILOGUE *279*

THE MAID

Nita Prose

CONTENTS

PROLOGUE

MONDAY
chapter 03 - 05

TUESDAY
chapter 06 - 09

WEDNESDAY
chapter 10 - 14

THURSDAY
chapter 15 - 25

FRIDAY
chapter 26

SEVERAL MONTHS LATER
chapter 27

EPILOGUE

THE MAID

Nita Prose

CONTENTS

PROLOGUE 03

MONDAY
chapter 03 - 05 07

TUESDAY
chapter 06 - 09 73

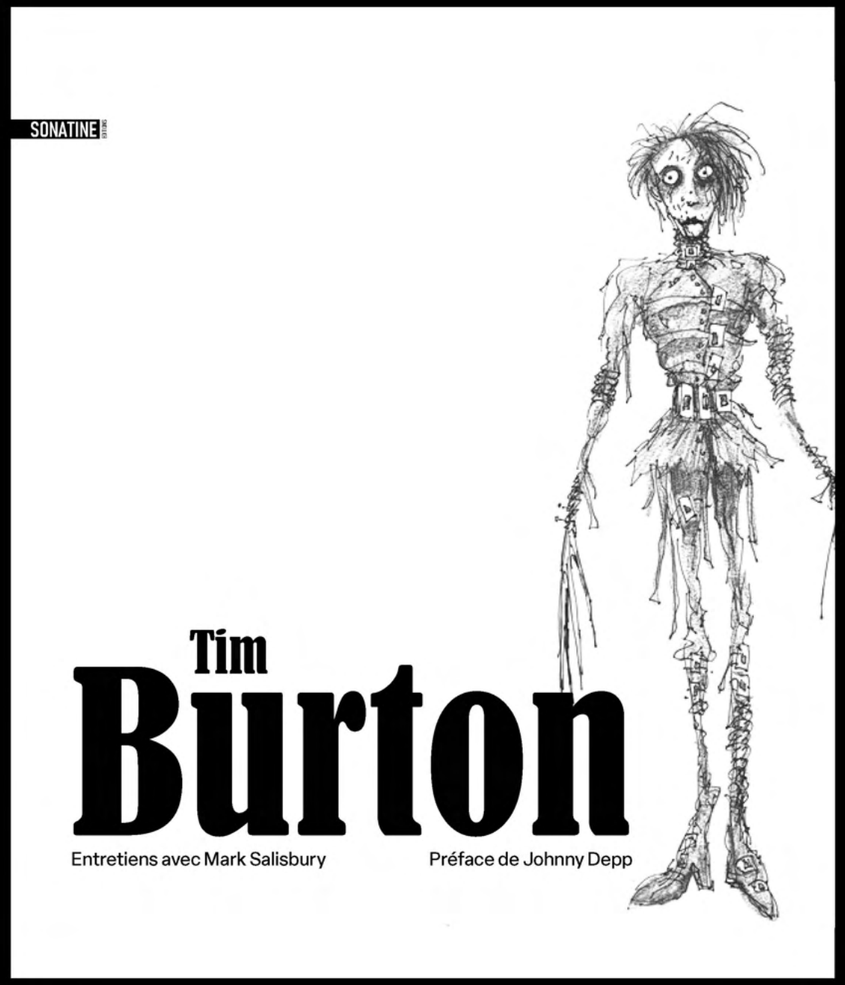
WEDNESDAY
chapter 10 - 14 117

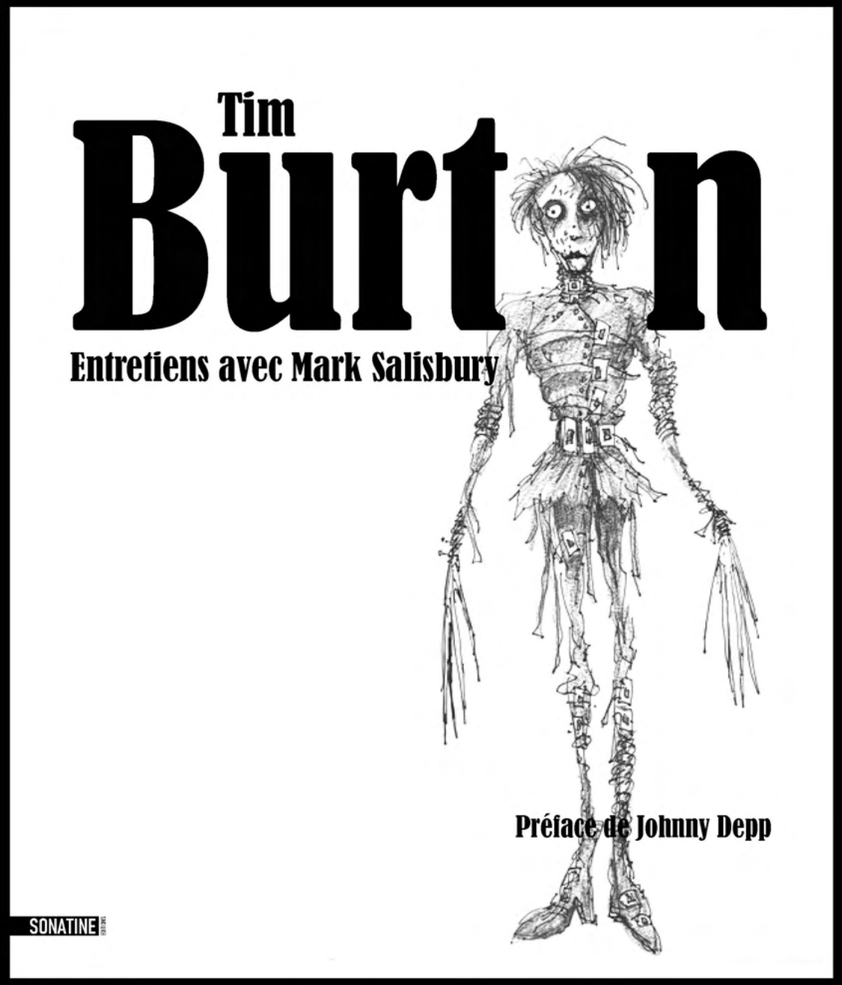
THURSDAY
chapter 15 - 25 161

FRIDAY
chapter 26 259

SEVERAL MONTHS LATER
chapter 27 265

EPILOGUE 279


SONATINE
Tim
Burton
Entretiens avec Mark Salisbury
Préface de Johnny Depp


Tim
Burton
Entretiens avec Mark Salisbury
Préface de Johnny Depp
SONATINE

cover cover

I was born and raised in Shanghai until the age of 11 when I moved to Vancouver, Canada. During my time in Shanghai, I watched the city go through rapid changes through technological enhancements and development in built environments. Moving to Canada further altered my perception of space as the landscape influenced a whole different type of architecture, in type, scale, and form.

Growing up in two very different and contrasting environments, where one is a place of constant change and the other, a place of ecological morphology have shaped my personal experience and understanding of architecture. It is a responsibility that goes beyond the scopes of design. I believe architecture should not only appeal to the public in its aesthetics but also engage with the people, to have a dialogue with the cultural, environmental, and social context surrounding us.

yi-an annie zhou

I am a designer based in New York City currently attending Columbia University GSAPP. I hold a Bachelors of Architecture with highest honors from Pratt Institute and will be graduating with a Masters in Advanced Architectural Design from GSAPP in Spring of 2023.

i am a designer

yi-an annie zhou //

based in New York City currently attending Columbia University GSAPP.

I hold a Bachelors of Architecture with highest honors from Pratt Institute and will be graduating with a Masters in Advanced Architectural Design from GSAPP in Spring of 2023.

I have participated in a variety of project types and scales and have a high interest in design with a social impact.

personal statement

designer based in new york city.

I was born and raised in Shanghai until the age of 11 when I moved to Vancouver, Canada. During my time in Shanghai, I watched the city go through rapid changes through technological enhancements and development in built environments. Moving to Canada further altered my perception of space as the landscape influenced a whole different type of architecture, in type, scale, and form.

Growing up in two very different and contrasting environments, where one is a place of constant change and the other, a place of ecological morphology have shaped my personal experience and understanding of architecture. It is a responsibility that goes beyond the scopes of design. I believe architecture should not only appeal to the public in its aesthetics but also engage with the people, to have a dialogue with the cultural, environmental, and social context surrounding us.

I am currently a designer based in New York City attending Columbia University GSAPP. I hold a Bachelors of Architecture with highest honors from Pratt Institute and will be graduating with a Masters in Advanced Architectural Design from GSAPP in Spring of 2023.

yi-an annie zhou

Thonet 811

Designer: Josef Hoffmann 1925
Dimensions: H820, D530, W440,
Materials: Seat H460mm Solid European Beech frame with hand woven cane seat and back

Description: Designed in the late 1920's this model features a hand woven cane seat and back which offers extra comfort and lightness. The attributed to architects Josef and Josef

No. 811 is Austrian Hoffmann Frank.

B3

Designer: Marcel Breuer 1926
Dimensions: Marcel Breuer 28 1/4 x 30 3/4 x 28" (71.8 x 78.1 x 71.1 cm)
Materials: Chrome-plated tubular steel and canvas

Description: The model for this chair is the traditional overstuffed club chair, but all that remains is its mere outline, an elegant composition traced in gleaming steel. The canvas seat, back, and arms seem to float in space; the body of the sitter does not touch the steel framework. Breuer spoke of the chair as his "most extreme work . . . the least artistic, the most logical, the least 'cozy' and the most mechanical." It was also his most influential piece of design, taking furniture in a radical new direction. Breuer had designed an earlier version in 1925, while teaching at the Bauhaus, the influential German school of modern art, architecture, and design in Dessau, and within a year designers everywhere were experimenting with tubular steel. Breuer claimed to have drawn inspiration from the tubular-steel handlebars of his bicycle, which were strong, lightweight, and mass-produced. He reasoned that if the material could be bent into handlebars, it could be bent into forms for furniture.

LC7

Designer: Charlotte Perriand 1927
Dimensions: H73, W60, D58, seat H50cm; 28.7" H 23.6" W 22.8" D
Materials: The swivel armchair comes in a fabric or leather coating, and is finished in polished chrome or painted in either grey, mud, light blue, green, ivory, brown or a colour called LC black.

Description: The design was first exhibited at the Salon des Artistes Décorateurs in 1928 and then at the Salon d'Automne in 1929, and is now part of the Le Corbusier®, Pierre Jeanneret®, Charlotte Perriand® Collection. The swivel armchair features backrest and seat cushion padded in polyurethane foam and polyester batting, with leather or fabric upholstery. Since 2016, the armchair has undergone a major structural update that led to obtaining Catas certification. Originally designed in 1927, Perriand created LC7 Siège tournant, fauteuil for her Paris apartment in the city's Place Saint-Sulpice, a public square. Perriand and was known for her commitment to designing products in the interest of functionality. The swivel armchair is built to be versatile, with a design that is suitable for a range of environments including restaurants and offices.

Barcelona

Designer: Mies Van Der Rohe 1929
Dimensions: 31 x 29 3/8 x 30" (78.7 x 74.6 x 76.2 cm)
Materials: Stainless-steel bars and leather upholstery

Description: The Barcelona Chair achieves the serenity of line and the refinement of proportions and materials characteristic of Mies van der Rohe's highly disciplined architecture. It is supported on each side by two chrome-plated, flat steel bars. Seen from the side, the single curve of the bar forming the chair's back and front legs crosses the S-curve of the bar forming the seat and back legs, making an intersection of the two. This simple shape derives from a long history of precedents, from ancient Egyptian folding stools to nineteenth-century neoclassical seating. The cantilevered seat and the back of the original chairs were upholstered in white kid leather with welt and button details. Mies van der Rohe designed this chair for his German Pavilion at the Barcelona Exposition of 1929. The Pavilion was the site of the inaugural ceremony for the German exhibits at the exposition, and the Spanish king was to preside. It had to be an "important chair, a very elegant chair," according to the architect. "The government was to receive a king. . . . The chair had to be . . . monumental. In those circumstances, you just couldn't use a kitchen chair."

B32

Designer: Marcel Breuer 1929
Dimensions: 32 x 18 x 21 3/8 x 18
Materials: 1/8" (81.3 x 45.7 x 54.3 x 46 cm) Chrome-plated tubular steel, wood, and cane

Description: The Cesca Chair has a rare, almost innocuous, simplicity to its design — linearity balanced by subtle curves; wicker caning punctuated by a wooden frame; and a cantilevered form that seems to float in thin air. Coincidentally, the story of Cesca — a chair known for being just about everywhere — is one of radical design thinking. Originally known as the B32, the chair's revelatory use of material and simple form made it an international sensation—nothing like it existed at the time. "Breuer simply changed the course of 20th-century furniture," commented J. Steward Johnson, Curator of the Museum of Modern Art's Department of Architecture and Design leading up to the 1981 exhibition.

Paimo

Designer: Alvar Aalto 1931
Dimensions: 26 x 23 3/4 x 34 1/2" (66 x 60.3 x 87.6 cm)
Materials: Bent plywood, bent laminated birch, and solid birch

Description: Admired as much for its sculptural presence as for its comfort, the Paimio Chair is a tour de force in bentwood that tested the limits of plywood manufacturing in the early 1930s. The chair's framework consists of two closed loops of laminated wood, forming arms, legs, and floor runners, between which rides the seat—a thin sheet of plywood tightly bent at both top and bottom into sinuous scrolls, giving it added resiliency. Inspired by the architect and designer Marcel Breuer's Club Chair of 1927–28, which was made of tubular steel, Aalto chose native birch for its natural feel and insulating properties, and developed a more organic form.

The Paimio Chair, the best-known piece of furniture by Aalto, is named for the town in southwestern Finland for which he designed a tuberculosis sanatorium and all its furnishings. Aalto's bentwood furniture had a great influence on the American designers Charles and Ray Eames and the Finnish-born Eero Saarinen.

Vitra Lando

Designer: Hans Coray 1938
Dimensions: 30 1/2 x 21 1/4 x 22
Materials: 1/8" (77.5 x 54 x 56.2 cm) Bent and pressed aluminum, and rubber

Description: The Landi Chair, designed by Hans Coray, is among the best-known examples of early European aluminum furniture. It was the official chair of the Schweizerische Landesausstellung (Swiss national exhibition), also called Landi, held in 1939 in Zurich. Corays design goal was to create 'a vertical stacking chair made entirely of aluminum'. The Swiss aluminum factory A.-G. supplied the material for producing the Landi, manufacturer P. & W. Blattmann became involved in the venture without having any previous experience creating chairs out of aluminium. In the end, they were able to produce Coray's design without implementing any changes. The 1,500 chairs were produced and delivered punctually for the opening of the Landesausstellung3 and were placed in the outdoor area. After the conclusion of the exhibition, they were sold for 15 Swiss francs apiece.4 Straight from the factory the chair cost 28 francs, in keeping with the designer's concept of an affordable product.

visualizing the abstract

visualizing the abstract

BKF

Designer: Bonet-Kurdan-Ferrari 1938
Dimensions: 34 3/8 x 32 3/4 x 29 3/4" (87.3 x 83.2 x 75.6 cm)
Materials: Painted wrought-iron rod and leather

Description: The B.K.F. Chair—also known as the Hardoy Chair, Butterfly Chair, Safari Chair, Sling Chair, or Wing Chair—was designed in Buenos Aires. Its name credits its three designers. The first two B.F.K. chairs to come to the United States went to Fallingwater, Edgar Kaufmann Jr.'s home in Pennsylvania (designed by family friend Frank Lloyd Wright), and to MoMA. Kaufmann accurately predicted that the lightweight and inexpensive lounge chair would become hugely popular in the U.S., particularly on the West Coast. Artek-Pascoe produced the chair from 1941 to 1948, sending royalties back to Argentina. Knoll Associates acquired U.S. production rights in the late 1940s and unsuccessfully pursued legal action against unauthorized copies, which continue to be produced to this day.

LCW

Designer: Charles & Ray Eames 1942
Dimensions: 26 5/8 x 22 1/8 x 24 3/4 inches
Materials: plywood with rosewood veneer

Description: The Eames LCW was hailed as greatest design of the twentieth century by Time magazine in its 1999 millennial issue. The name derives from the initials for Lounge Chair Wood.
The origins of the LCW lie in Charles and Ray Eames's experimentations with wood-moulding techniques of the 1940s. Their work in this field resulted in a commission from the US Navy to develop plywood splints, stretchers and glider fuselages for the war effort. Having perfected the technique of moulding of plywood under heat and pressure, once the war ended they applied this technology to the affordable, high-quality, mass-produced furniture.

Although they originally sought to design a chair with a single shell made of moulded plywood, the material proved incapable of withstanding the stresses at the junction of the chair back and seat. The distinctive form of the LCW evolved in response to this constraint, with separate moulded ply panels for seat and back linked by a moulded ply armature.

DAR

Designer: Charles & Ray Eames 1950
Dimensions: 31 1/16 x 24 1/2 x 22 1/2 in. (78.9 x 62.23 x 57.15 cm)
Materials: Fiberglass-reinforced polyester, steel

Description: Husband-and-wife designers Charles and Ray Eames met at the Cranbrook Academy of Art in the 1930s. Together, they worked to unite economy with quality and modernity in their furniture designs. This goal inspired their ground-breaking experiments with the inexpensive new materials plywood and plastic. In 1941, after learning of the military's need for a better leg splint, the Eameses applied their nascent plywood-molding technology to the challenge. The U.S. Navy accepted their prototype and between 1943 and 1945, the Eameses produced over 150,000 leg splints. Produced by gluing successive layers of plywood veneer, then forming them with heat and pressure in a mold, the life-saving devices were the Eameses' first mass-produced success.

After developing a series of molded plywood chairs, the Eameses turned to fiberglass. The "DAR" Chair was among the first plastic furniture to be truly mass-produced. Inexpensive, lightweight, and versatile, it was especially popular with young families in the postwar period.

Diamond

Designer: Harry Bertoia 1952
Dimensions: W33.5", D28.25", vH30", Seat H16.5"
Materials: Seat and base are constructed of welded steel rods with plated polished chrome or 18k gold finish, or white or black Rilsan® finishRilsan® finish and vinyl seat pad; chrome and Gold finishes

Description: The Diamond Chair is an astounding study in space, form and function by one of the master sculptors of the last century. Like Saarinen and Mies, Bertoia found sublime grace in an industrial material, elevating it beyond its normal utility into a work of art. Harry Bertoia's wire chairs are among the most recognized achievements of mid-century modern design and the Knoll part of heritage.

3107

Designer: Arne Jacobsen 1955
Dimensions: 30 1/4 x 18 x 20" (76.8 x 45.7 x 50.8 cm)
Materials: Chrome-plated steel tubing and molded plywood with black lacquer

Description: The Series 7™ chair is an icon in modern furniture history, designed by Arne Jacobsen in 1955. Its unique shape is timeless and incredibly versatile, displaying character without overpowering the eye. The chair is made from 9 layers of pressure moulded veneer for strength, flexibility and durability despite its slender form. This is the most popular design within Fritz Hansen's chair collection. The 3107 has slim yet strong steel-tubed legs that complement the shell's curved profile. Legs extend just beyond the edge of the seat, allowing chairs to be stacked for easily arranged in rows or discreetly storage. The base/legs are mounted to a circular disc beneath the seat further enhancing the clean, minimal aesthetic of Jacobsen's design.

Tulip

Designer: Eero Saarinen 1956
Dimensions: W26", D23.25", H32", Seat H18", Arm H25.375"
Materials: Seat shell is molded fiberglass, base is molded cast aluminum powder coat paint

Description: With the Pedestal Collection, Eero Saarinen resolved the "ugly, confusing, unrestful world" underneath tables and chairs. The collection is a defining accomplishment of modern design and a timeless addition to your home—a true classic. Pair Tulip Chairs with a Saarinen Table for the quintessential modern dining set, or mix and match for a statement in any room.

670 + 671

Designer: Charles & Ray Eames 1956
Dimensions: 33 x 33 3/4 x 33" (83.8 x 85.7 x 83.8 cm) .b (ottoman): 16 x 26 x 21" (40.6 x 66 x 53.3 cm)
Materials: Molded rosewood, plywood, leather, cast aluminum, rubber shock mounts, and stainless steel glides

Description: An icon of mid-century modern furniture, this pairing was designed by Charles and Ray Eames for HERMAN MILLER in 1956. Frustrated by complaints that modern furniture wasn't comfortable, the Eameses set out to prove the critics wrong. They succeeded in spectacular fashion with the 670 and 671 lounge chair and ottoman.

The design came about during an era of spare minimalism, but Charles insisted on building a chair with "the warm receptive look of a well-used first baseman's mitt." Wife Ray wrote in a letter to Charles that the chair looked "comfortable and un-designy." High praise. An instant hit with consumers, the 670 and 671 have been in continuous production since their introduction over 60 years ago. Other options have been available, but this black leather and rosewood combination will always be the classic choice. (Only available on the secondary market since 1992, when a ban on the import of rosewood, an endangered species, went into effect.)

Y-A.Z

Yi-An /Annie/
Zhou

Columbia GSAPP

Selected Works

2022 – 2023