YONSEI Architectural Design Studio 2, Fall 2023
MO, TH, 2:00pm - 8:00pm
Joon Ma,
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Unit 4 by / Joon Hyuk Ma

Nursing Growth:

Architecture as an environmental medium for both humans and plants.



Milan Expo Austrian Pavilion 2015

about instructor:

Joon Ma is a designer, educator, and co-founder of one-aftr. He received a Bachelor of Arts in Anthropology from Davidson College and a Master of Architecture from Princeton University, where he was awarded the Suzanne Kolarik Underwood Prize for his thesis. His work has been recognized internationally, most recently winning the Seoul Maru competition 2023, placing 2nd on the Europan 15 Vienna, shortlisted for the Dubai World Expo Korean Pavilion, and exhibiting at the Venice Biennale. His written work has been published in Rumor (Princeton), Paprika!(Yale), and Pool (UCLA). Prior to finding one-aftr, he worked at OMA/AMO Rotterdam. As an educator he taught design studios, seminars, and option studios at Virginia Tech and Syracuse University.

Overview:

In recent years trees have emerged as a global remedy to combat climate change. Between 2016 and 2022, Seoul planted 30 million trees to counter pollution and reduce our carbon footprint. The city aims to double this number within the next 4 years. However, despite these efforts, we are currently enduring one of the hottest, most humid summer in our lifetime.

While trees undoubtedly play a crucial role in cutting down carbon emissions and cooling urban areas, their effectiveness and survival hinge on how, what, and where we plant them. Sink holes, heat island effect, frequent flooding, landslides, and erratic forest fires are destroying our ecosystem. These extreme weather conditions are not only threatening the livelihoods of trees and plants, but also humans, particularly the youth (1,270,000 households are unable to provide climatized space during summer holidays).

Now more than ever, our young population and trees require a fresh approach to care, both in terms of physical space and cultural considerations, to coexist amidst humans, structures, and nature during the era of global warming. In anticipation of a surge in tree planting in Seoul and the heightened necessity for additional childcare facilities during extreme weather, each student will be tasked with designing a hybrid nursery that integrates the functions of an urban tree nursery and a childcare center.

The studio aims to prompt a distinct architectural proposition that transforms an abandoned building into an environmental medium that can house both trees and humans. We will explore programmatic, tectonic, and formal configurations to design a building that provides a new interface among trees, humans, and the built environment.



Methodology

The studio is organized into three sections, CONTEXT, HYBRID, and PROJECT. The first two sections are organized with short exercises to help develop our understanding of the site and formulate the initial findings into designing the project. In PROJECT, students will synthesize and further develop the elements into a fully formed architectural proposal.

CONTEXT (4 weeks)

For the first three weeks of the studio, we will develop a deeper understanding of the site through research and analysis. The work produced during this phase of the project will be compiled into a booklet.

CONTEXT_historical (2 week)

We will start our semester by studying modern and contemporary built projects to expand our sensibility towards:

1. Working on an existing building.
2. Generating a new human-to-nature interface.
3. Designing a learning and nurturing environment for the youth.

Each group will study a precedent from each of the three categories listed below (adaptive reuse, a tree-architecture and a learning space.)

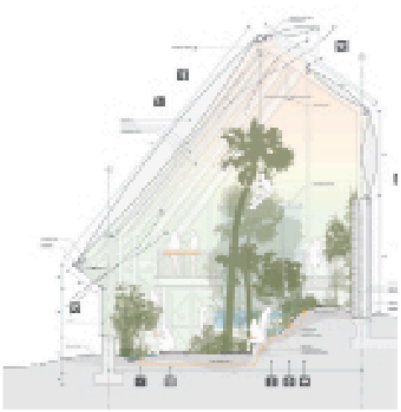
Adaptive Reuse DVVT – pc caritas Assemble – Granby Winter Garden H-arquitectes – The Lleilat Santsenca Civic Center H-arquitectes – Cristalleries Planell Civic Center James Wines – Frankfurt Museum of Modern Art Alison Peter Smithson – Upper lawn pavilion Lacaton Vassal – FRAC Dunkerque Lacaton Vassal – Grand Parc, Bordeaux Carmody Goroarke – Two pavilions Office KGDVS – Ghent Library Bast – M26 réhabilitation et extension Bast – M03 Maison de fauborg Davidson Rafailidis – Together Apart Davidson Rafaildilis – Big Space, Little Space BrandlHuber + – Antivilla	**Trees** James Wines – Forest Building Adamo Faiden – Once Building Max Nunez – Casa de Vidrio William Chambers – Palm House Junya Ishigami – Art Biotop Water Garden Kevin Roche – Ford Foundation Kazuo Shinohara – Tanikawa House KVA – Global Floral Conservatory 조선온실 **Learning Space** Jan Duiker – Open Air School Herman Hershberger – Montessori School Aldo Van Eyck – Amsterdam Orphanage James Stirling – Brunswick Park Primary School Vo Trong Nghia – Farming Kindergarten Toshiko Mori – Fass School and Teacher’s residence Giuseppe Terrangi –Sant’Elia Nursery School Roger Boltshauser – Allenmoos Schoolhouse II Oscar Niemeyer – Obra do Berco

CONTEXT_Physical (2 week)

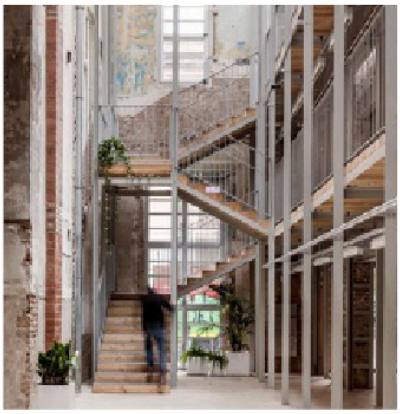
In week 2, we will observe and analyze our site, the vacant building, and the adjacent parking lot. Before visiting the site, each student will build a structural model of the existing building to understand the structural logic of the vacant building. Then we will visit the site to document the spatial and material makeup of the building and the adjacent lot.

CONTEXT_Ecological (1 week)

In week 3, we will research how urban forests are designed sustained; what are the processes of remediating a brownfield site into green space? What type of trees are meant to be planted in Seoul, and how?



KVA - Global Floral Conservatory



H-arquitectes – The Lleilat Santsenca Civic



Max Nunez – Casa de Vidrio

HYBRID (4 weeks)

In Hybrid, we will explore programmatic and tectonic combinations through series of model making and drawing exercises. The objective of HYBRID is to establish a strategy and ideas behind our architectural operation. We will work on the tectonic and the programmatic hybrid in tandem.

Tectonic

Through model making, we will explore ways to formalize our research into a design. We will add and subtract volumes, planes, and lines to configure the spatial organization and program and reconfigure the relationship between the inside and outside.

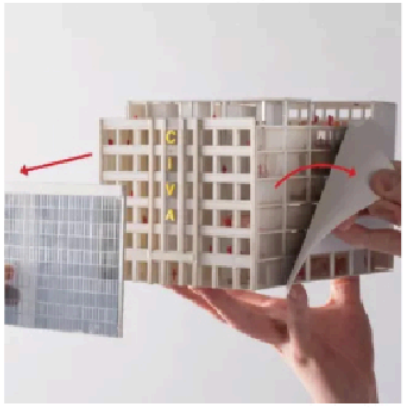
Operations

Subtractive:
Delaminate
Demolish
Peel
Crush

Additive:
Insert
Wear
Repair
Overlay



Ludwig Leo - Circulation Tank



OMA- KANAL



HAUS RUCKER CO

Programmatic

As we develop our tectonic operation, we will establish a spatial organization based on the hybrid program of an urban tree nursery and a childcare center. What are the necessary environment for the nursery and the childcare center, what kind of spatial qualities can we create, and how should the programs be organized? Rather than creating two distinct spaces for two programs, the objective of the exercise is to create a holistic hybrid that can offer new spatial and programmatic relationships through the design proposal.

Tree Nursery:

Trees, just like buildings, require a great amount of care and design to sustain themselves. Based on our research from the Ecological CONTEXT, consider the ground, air, heat, and light conditions needed to operate an urban nursery.

Childcare Center:

From the open-air school to the Montessori school, we looked at the role architecture can provide in forming our learning space. Given our dual program with an urban nursery, how can we take advantage of the two programs to facilitate a nurturing and learning environment?

PROJECT

In PROJECT, we will develop our first iteration of the design from the midterm into a fully developed architectural project. We will work through weekly pin-ups to refine and develop the projects.

The last week of the semester before the final review will be dedicated to REFINE the design work and to produce for the final review. Here, each student will focus on working on their models and drawings.

Evaluation

Attendance/Participation/Design production for studio meetings: 50%
Assignments : 25%
Final Review: 25%

Attendance

Studio will run on Mondays and Thursdays, promptly from 4:00 pm to 8:00 pm. Students must be present and work in studio during these hours. Students are also expected to be present during all the reviews and pin-ups. Email the instructor as soon as possible if you cannot attend due to illness or excused absences. Absences from studio meetings and reviews will affect the final grade, and three or more unexpected absences will result in course failure.

Participation

Apart from the final outcome of the reviews and assignments, student's effort, participation and evolution during the semester will be taken into account for the final grade.

Design Production

Students are expected to revise their work for each session in response to earlier feedback from the instructors. Consult with the instructor if you need additional assistance in progressing the work. Failure to make revisions will affect the final grade.

** 첫주에 이 모든 내용을 한글로 설명해드릴 것이니 걱정하지마세요 **

Studio Calendar

Week 1 – Intro_CON_historical
Monday 09/04
Thursday 09/07

Week 2 CONTEXT_historiocal
Monday 09/11
Thursday 09/14

Week 3 CONTEXT_physical
Monday 09/18
Thursday 09/21

Week 4 CONTEXT_physical
Monday 09/25
Thursday 09/28 - (No Class)

Week 5 CONTEXT_ecological
Monday 10/02
Thursday 10/05

Week 6 Hybrid
Monday 10/09
Thursday 10/12

Week 7 – Hybrid
Monday 10/16
Thursday 10/19

Week 8 - Hybrid
Monday 10/23
Thursday 10/26

Week 9 - Hybrid
Monday 10/30
Thursday 11/02

Week 10 - Project
Monday 11/06
Thursday 11/09

Week 11 - Project
Monday 11/13
Thursday 11/16

Week 12 - Project
Monday 11/20
Thursday 11/22

Week 13 - Project
Monday 11/27
Thursday 11/30

Week 14 - Project
Monday 12/04
Thursday 12/07

Week 15 - REVIEW
Monday 12/11
Thursday 12/14

Week 16 - REVIEW
Monday 12/18
Thursday 12/21