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Zoe Leonard, Untitled Aerial,1988/2008

Creating Cycles

Master‘s Thesis
HS 2023

Core Program
Enough

ETHZ
DARCH

Creating Cycles

Architecture is about making spaces and habitats as diverse and multi-layered as possible.

With the increasing urbanization and destruction of natural habitats, it is crucial to actively design and build habitats that can support and promote biodiversity. In order to combat this decline, the goal is to create spaces where natural and built environments can coexist in harmony.
According to the Federal Office for Environment, *'Biodiversity losses are expressed in the increasing degradation of ecosystems, the functionality for nature and their services for the economy and society. On the other hand, rich biological diversity improves the capacity of ecosystems to respond to disruption such as climate change. This is termed resilience.'*

Landscape designer Gilles Clément writes about such possible spaces and their potential in his 'Manifeste du Tiers paysage' (2004): *'When one stops thinking of the landscape as the product of an industry, one suddenly discovers a multitude of undecided spaces without function for which it is difficult to find a name...they form a refuge for biodiversity that has been chased away everywhere else. Through their content, through the need to maintain this biodiversity or to keep its dynamics going, the third landscape takes on a political dimension.'*

Just as a tree creates a habitat for thousands of insects, we too should rethink our vision of planning in architecture. Circular thinking is essential and not just limited to construction materials, but which also extends to other elements such as water resources, energy production, and food production.
Creating cycles is the main objective of this thesis. Water, being the basis of all life on Earth, is a crucial element in shaping cities, healthy ecosystems, and production. Therefore, attention must be paid to the water cycles in houses, gardens, and landscapes, including collecting and reusing water, using water as a place of recreation and as habitats.

The thesis aims to create water-centric projects in Zurich that will operate in an existing context. Depending on the project, water can be integrated according to the needs of the program. By implementing circular thinking, the projects will promote ecological diversity and improve the resilience of the ecosystem.

Key-Words

Cycles
Water
Re-use
Working with the Existing
Elaboration of Drawings
Synthesis Drawing
Text Analysis
Photo Essay
Model Making
Storytelling

Ratio Grading

Preparation phase: 40%
Chair Maria Conen 50%
Chair Max Maurer 50%
Elaboration phase: 60%
Chair Maria Conen 70%
Chair Max Maurer 30%

Preparation phase

In the preparation phase, students will conduct extensive research on specific areas, paying special attention to the natural conditions and existing structures of the site. This will involve discovering and mapping existing cycles and illustrating them through various means of expression. The work will range from a broader understanding of the site and its context to a detailed analysis of its components, providing a strong foundation for the elaboration phase.

As part of this process, students will select a case study for in-depth investigation (one area and one structure), examining its history, material qualities, typology, construction, and social dimension. This research will be presented through drawings, including plans, sections, and facades, along with a synthesis drawing, photographic essay, and text.

To enrich the preparation phase, input lectures and texts will be shared and discussed among students.

Elaboration phase

Elaboration Phase:
The projects developed by students should engage with social, political, and sustainable visions. The architect‘s role is to create spaces for humans and animals while taking care of the urban fabric and nature. Students will not be given a program but will develop their own visions using the knowledge acquired in the preparation phase. Creating a story to guide the project is essential to its success.

To develop their projects, students will build study models using „found materials“ to investigate proposals and prove design decisions. In addition to model-making, students will use hand drawings to verify and develop their designs. Thinking in terms of re-use is encouraged, as structures are dismantled and destroyed every day, and materials and resources can find new life and purpose in architectural projects, prolonging their cycle. Architectural elements such as columns, windows, and doors can be repurposed and incorporated into the design.

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