[redacted]

I am a curious and idealistic thinker, much like a child who loves to explore and is slow to judge. I'm drawn to imagining new futures and creating unbuilt spaces where people can connect and interact in unexpected ways. My projects often begin with open-ended questions, gradually taking shape through real and imagined explorations. I enjoy visiting the sites I'm working with, sketching ideas, and bringing them to life through woodworking or 3D printing.

As a thoughtful and sometimes conflicted creator, I'm fascinated by the balance of opposing concepts. My work often strives to hold dualities in tension, embracing both sides rather than choosing between them. Each project is as much about exploring ideas and asking questions as it is about finding solutions. I love taking my time to think through multiple aspects of a problem and seeking interconnections between ideas.

The projects presented here are made during my four years of study at the University of Chicago. They have helped me understand the city, explore ideas with my hands, and learn more about myself along the way.

TABLE OF CONTENTS

BLOCKS & HOLES

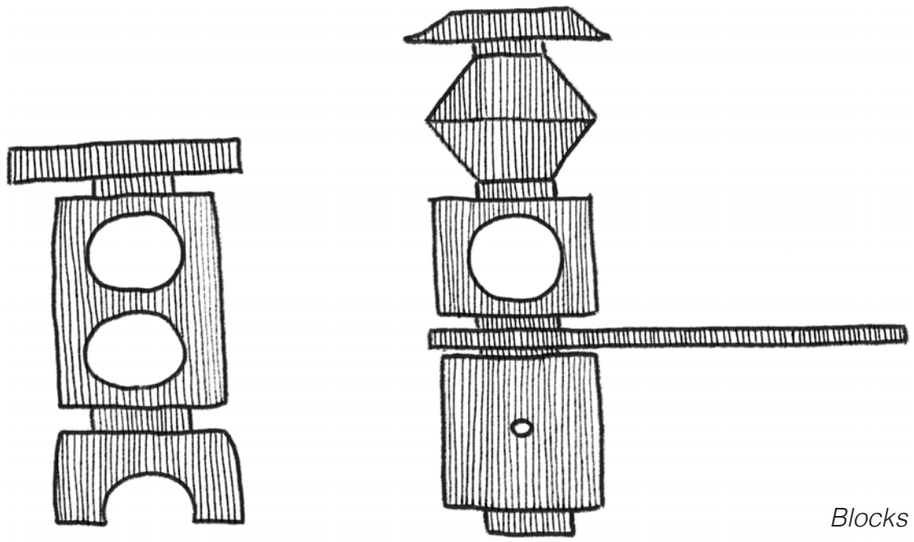
CHILDREN & ARCHITECTURE
SPRING 2024

These are a set of playing blocks designed for first and second grade students at the University of Chicago Laboratory School. The initial inspiration for these wooden childrens' blocks came from a traditional lantern sculpture that I spotted in the background of a Meiji-period Japanese print. But the project quickly evolved around a more abstract goal: a set of blocks that maximizes children's creativity and imagination, a system that can hold many possibilities at once.

To achieve this, I set out to balance the substantial physical forms with the hollow empty space that invites imagination. I hoped that these blocks can serve as both the foreground and background of play.

This set of modular blocks, therefore, is crafted to embody both form and counterform, stillness and movement, friction and lack of friction, the built and the imagined.

The blocks were hand-crafted using recycled and scrap wood found in Chicago.

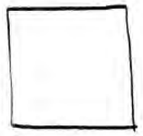


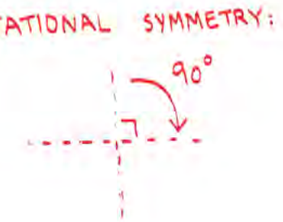
Blocks at the foreground of imagination.

Blocks at the background of imagination.

SQUARE:

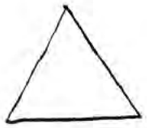
DEFINED, STABLE, RELIABLE, CONTAINED





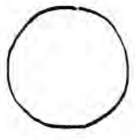
EQUILATERAL TRIANGLE:

UPRIGHT. BALANCED. PRIMAL. CONVERGENT.

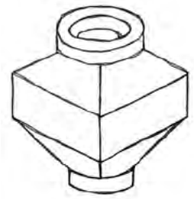


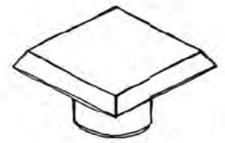
CIRCLE:

CONTINUOUS. DYNAMIC. BOUNDLESS. PERPETUAL.

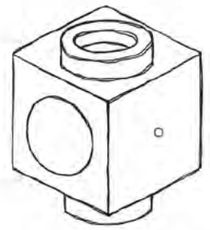


Forms

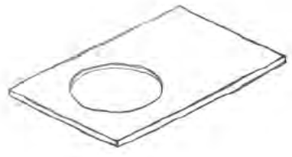


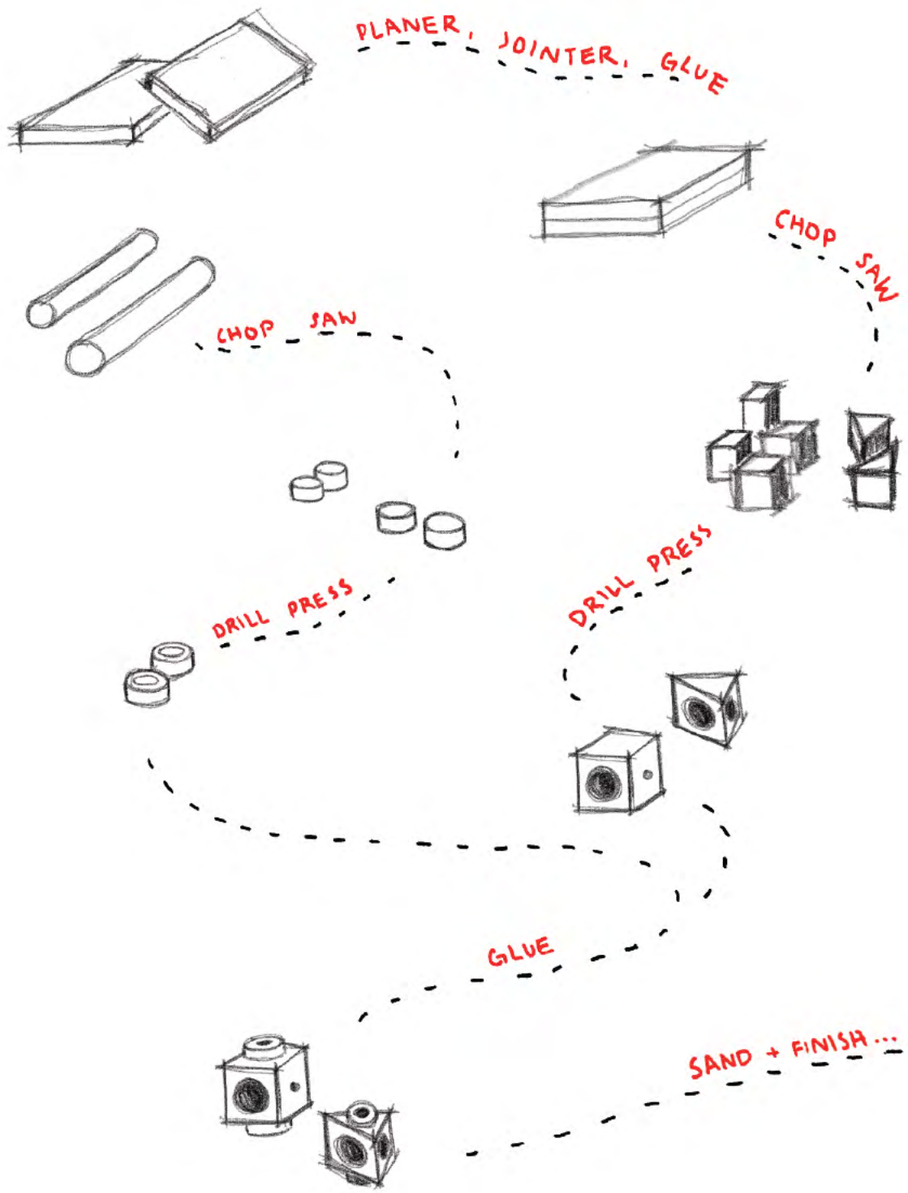


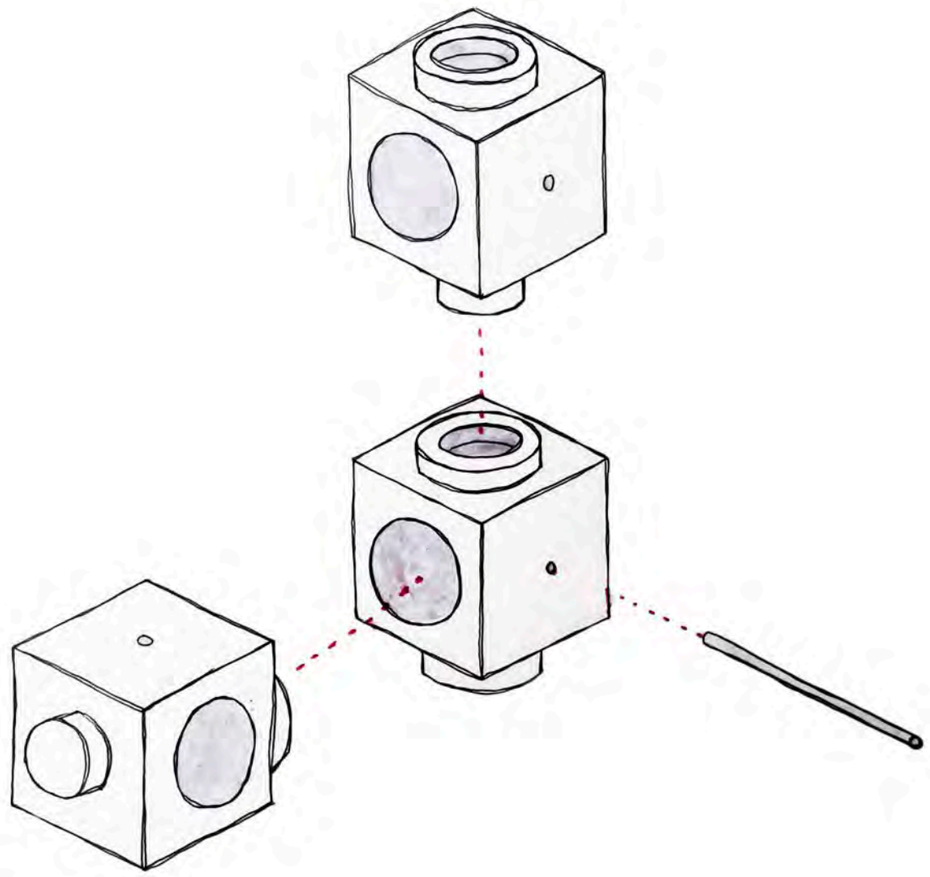
Counterforms



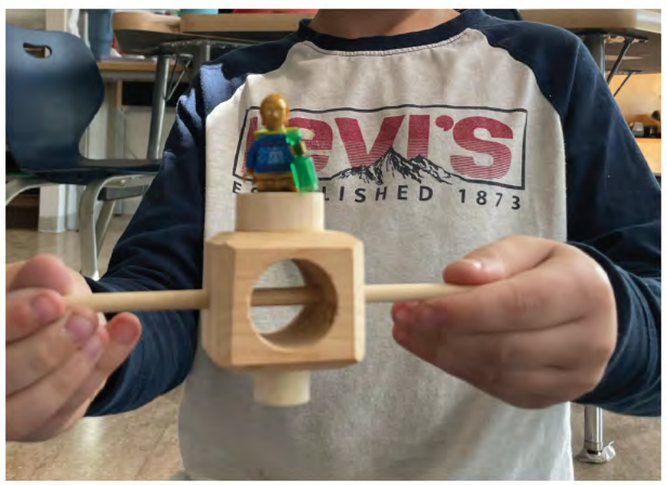
Planes, Posts




PLANER, JOINTER, GLUE
CHOP SAW
CHOP SAW
DRILL PRESS
DRILL PRESS
GLUE
SAND + FINISH ...



PHOTOS FROM PLAYTESTING WITH FIRST AND SECOND GRADE STUDENTS AT THE LAB SCHOOL

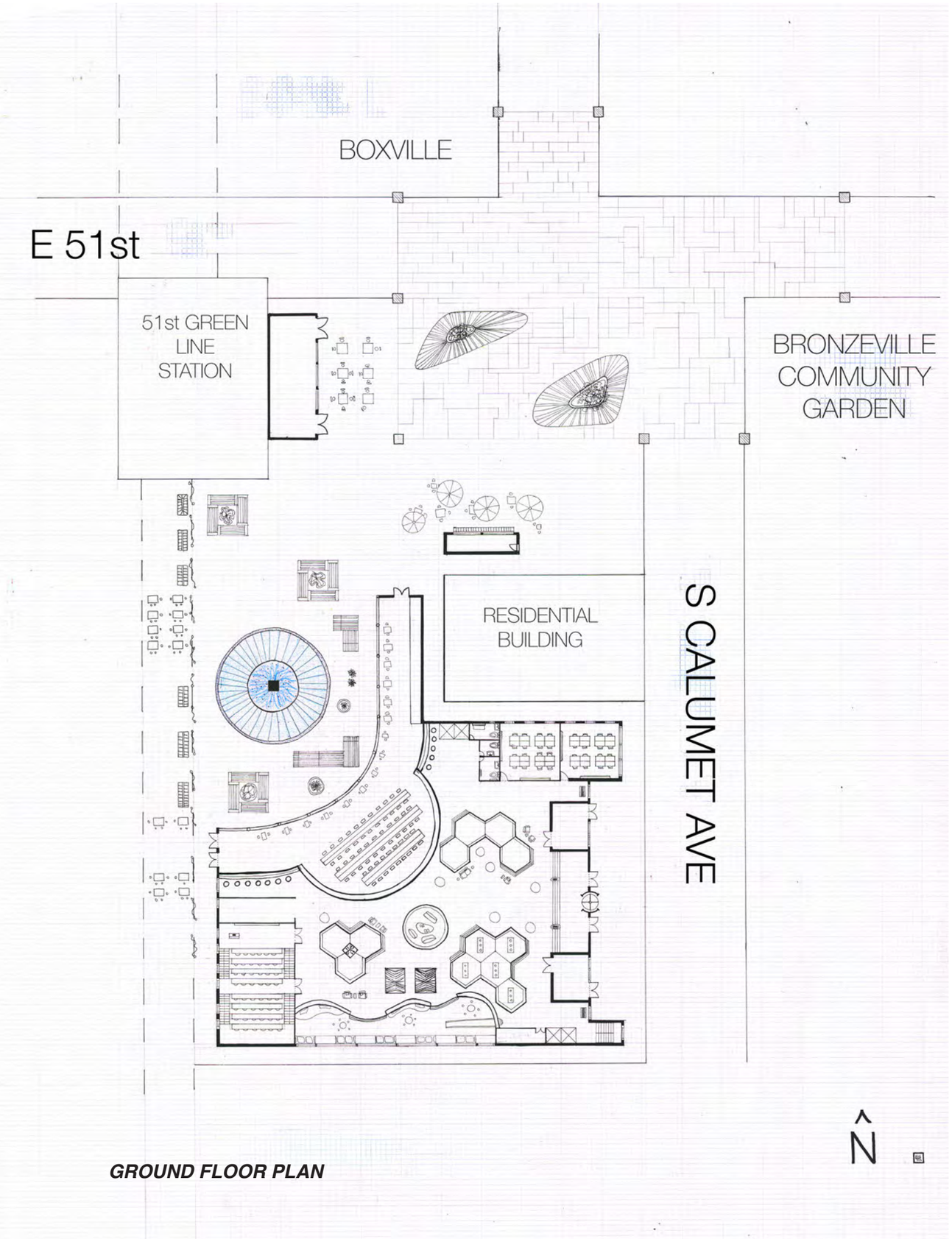


51st GREEN LINE COMMUNITY LIBRARY

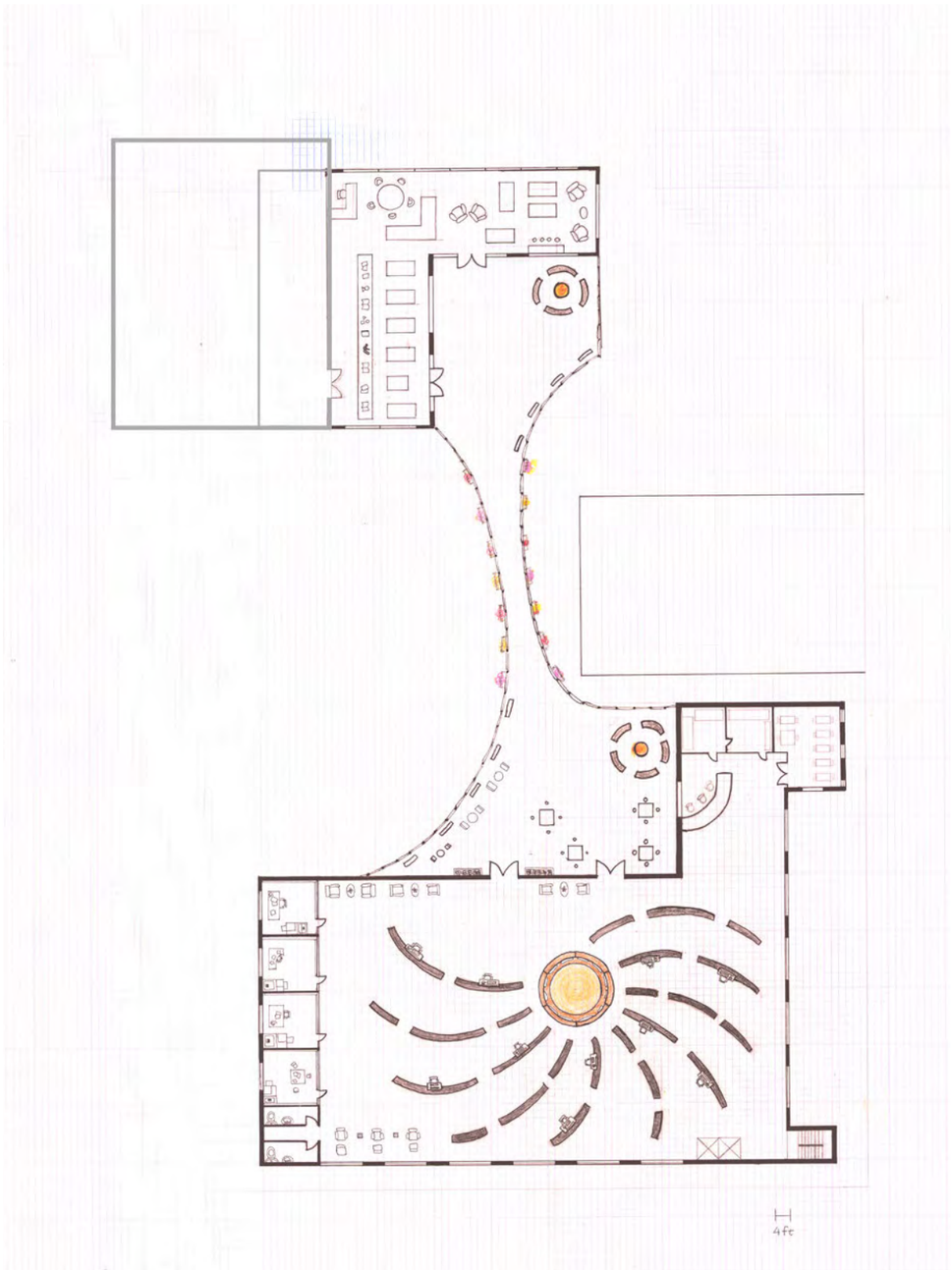
ARCHITECTURE OF PUBLIC LIBRARY
COLLABORATOR: YUROU LI
SPRING 2023

(Work in progress) Situated between Washington Park and Bronzeville in Chicago, the 51st Green Line Community Library stands amid a vibrant array of community spaces, including Boxville—a lively cluster of colorful shipping-container shops—the Bronzeville community garden, and the 51st CTA Green Line station. This project began in Spring 2023 as part of a class called Architecture and the Public Library, during which I visited the site, researched the history of the neighborhood, and developed plan drawings that envisioned the library as both a repository of knowledge and a welcoming community space. The design emphasized accessibility, aiming to make knowledge more approachable and digestible for the public.

Now, in Fall 2024, I am revisiting this project with a focus on balancing movement and repose. How can the library's design harmonize with the neighborhood's dynamic rhythms? How can a space celebrate community and social interactions while also providing a secure place that invites private exploration? Through conceptual diagrams and sketches at urban, site, and human scales, I aim to uncover specific patterns of flow at this site and test different design solutions through iterations of plan and section drawings.

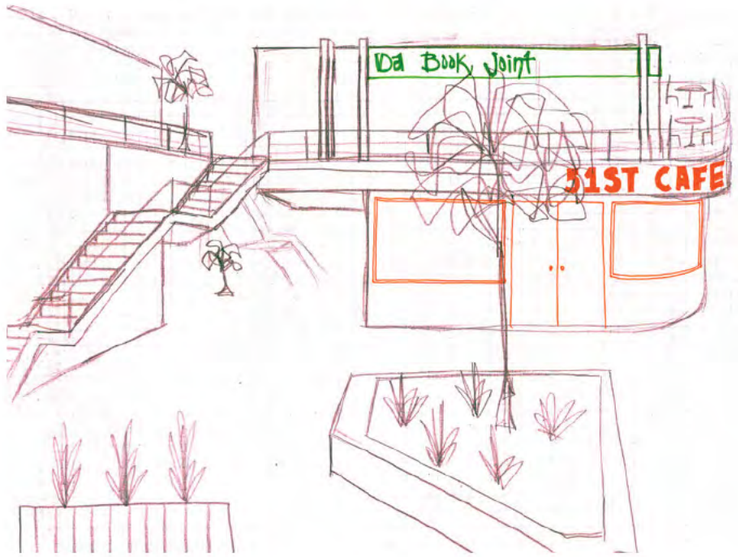


GROUND FLOOR PLAN

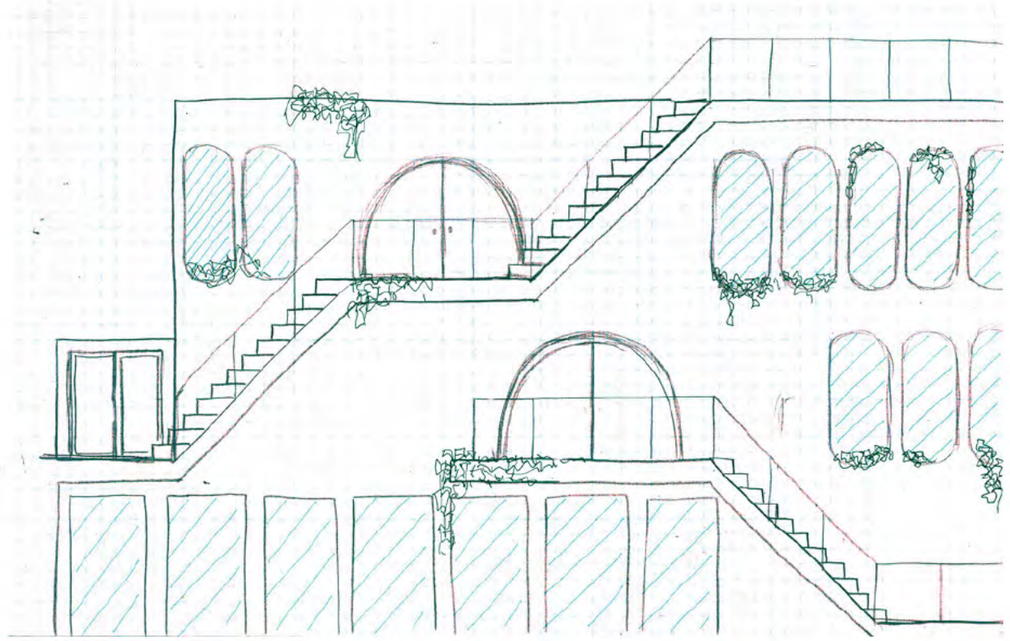


SECOND FLOOR PLAN

PERSPECTIVE SKETCH



ELEVATION SKETCH



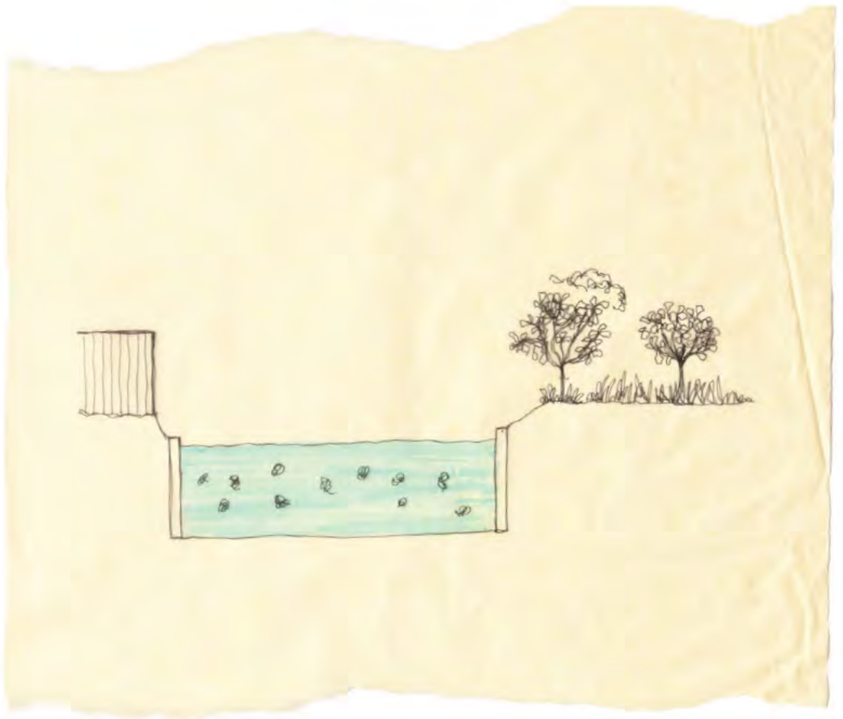
PERSPECTIVE SKETCH

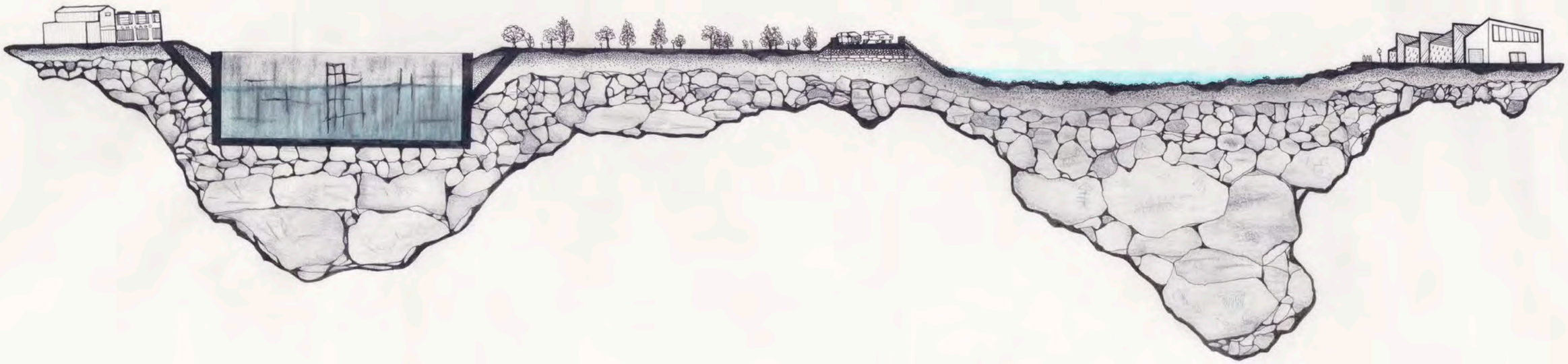
TOPOGRAPHY OVER TIME: CHICAGO'S SOUTH BRANCH RIVERS

SKILLS & PROCESSES
WINTER 2023

Chicago is known for being incredibly flat, so I set out to find a place in the city that wasn't—and understand why. I chose the intersection between Sanitary and Ship Canal and Bubbly Creek. Visiting the site and digging into its history, I found that the canal was entirely man-made to reverse the Chicago River's flow, sending pollutants away from Lake Michigan and toward the Mississippi. Meanwhile, Bubbly Creek was once so polluted by the nearby meatpacking industry that it bubbled with decaying waste. Inspired by these stories buried beneath the surface, I created a section drawing of the canal and creek, showing the contrast between what's natural and what's man-made and documenting the impact of Chicago's industrial past on the environment.

Top row from left to right: Bubbly Creek in early 1900s, Sanitary & Ship Canal 1895
Bottom row from left to right: Bubbly Creek in 2024, Sanitary & Ship Canal in 2024



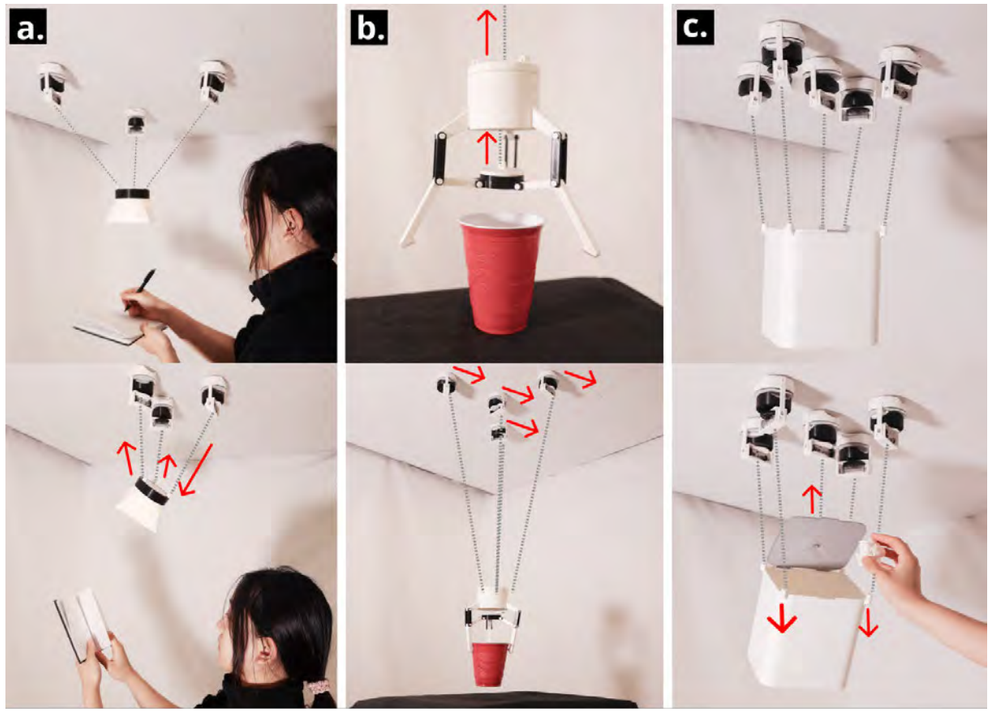


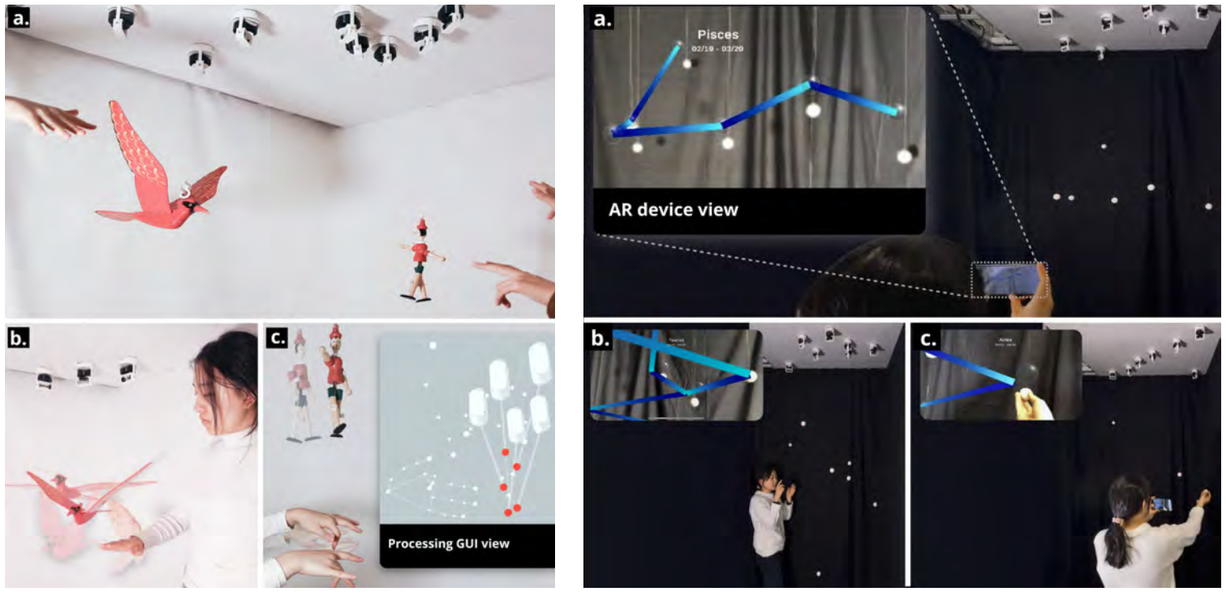
AERORIGUI

Human-Computer Interaction Research

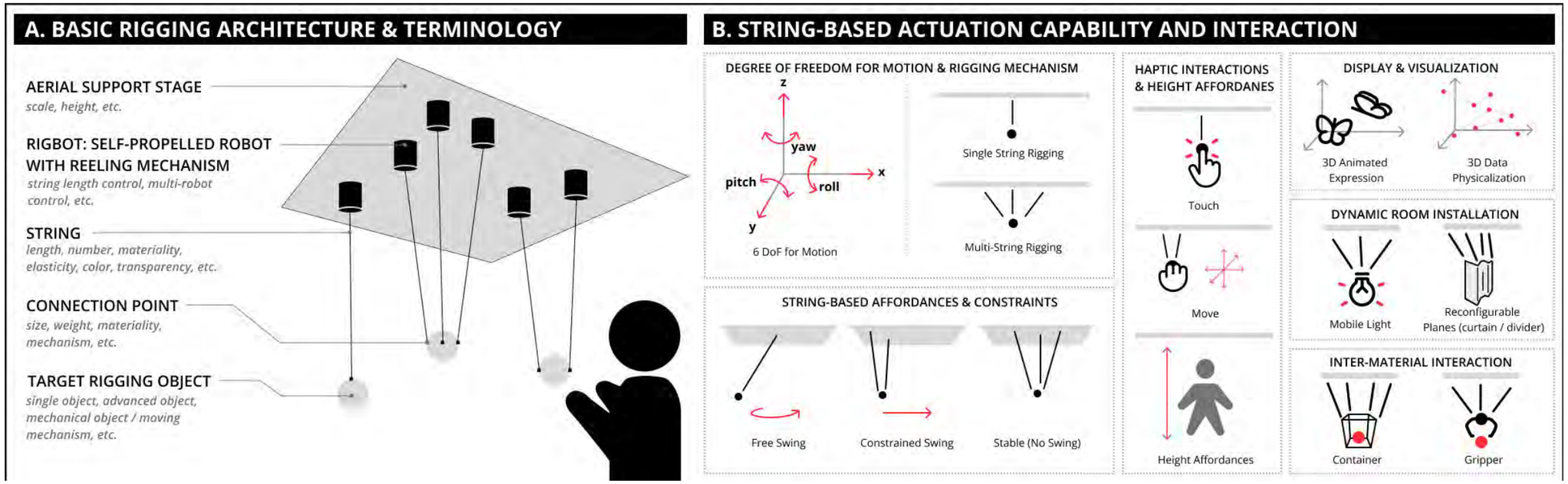
Collaborators: Jesse Gao, David Wu, Ken Nakagaki
Research paper published at CHI 2023 conference

AeroRigUI is an interactive system that uses strings controlled by a group of small robots on the ceiling to move and position objects in mid-air, creating highly adaptable 3D interactive spaces. Inspired by theater rigging techniques, AeroRigUI lets users control an object's position and orientation in six degrees of freedom. This creates new ways to interact with objects in space—such as dynamic room layouts, physical displays of digital data, and animated art installations. By using the often-overlooked ceiling space, AeroRigUI opens up possibilities for a new way of designing smart spaces by fully utilizing the verticality of spaces. We developed a proof-of-concept prototype of AeroRigUI, including a magnetic ceiling structure, RigBots–Sony's toio robots encased in 3D-printed shells–, as well as software to control the robots based on user input.





Example use cases: dynamic room, animated art, data physicalization



Design space of AeroRigUI

SPECIFICATIONS

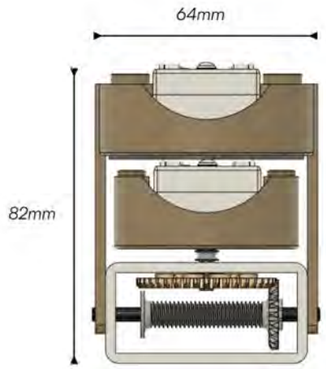
diameter: 64mm

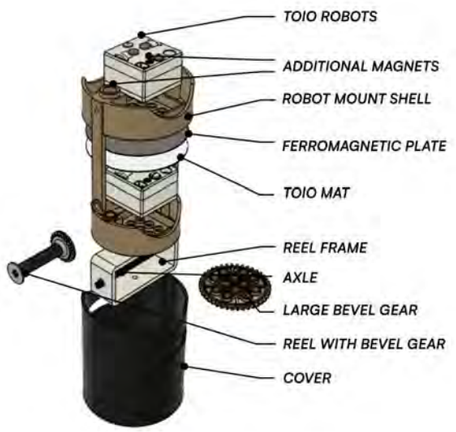
height: 82mm

weight: 0.15kg

payload capacity: 0.94kg

rigging capacity: 0.72kg



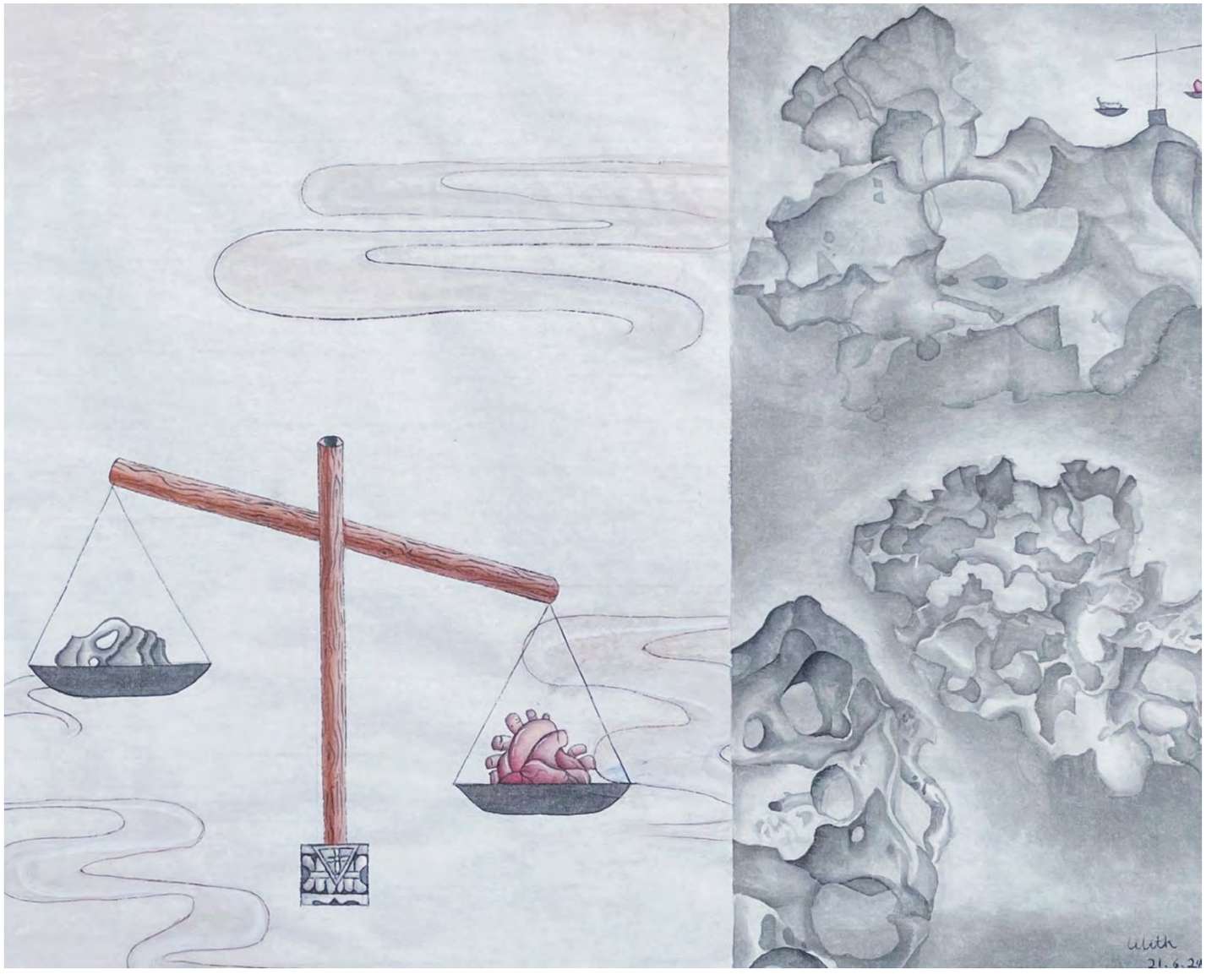


RigBot Specifications

NON-DUAL MEDITATIONS

PERSONAL PROJECT
2021

“Non-dualism” is a series of paintings that explores self-discovery through Buddhist philosophy. In this project, I experiment with juxtaposing concepts—lightness and weight, darkness and illumination, reality and imagination, life and death—, breaking them from their traditional connotations as a way to reflect on non-dualism and move closer to a truth beyond binary thinking. I use traditional Chinese gongbi painting techniques, drawing aesthetic inspiration from Tibetan Thangka and Chinese Shan-Shui paintings. Each painting process became a meditation in itself.



THANK YOU FOR VIEWING!