

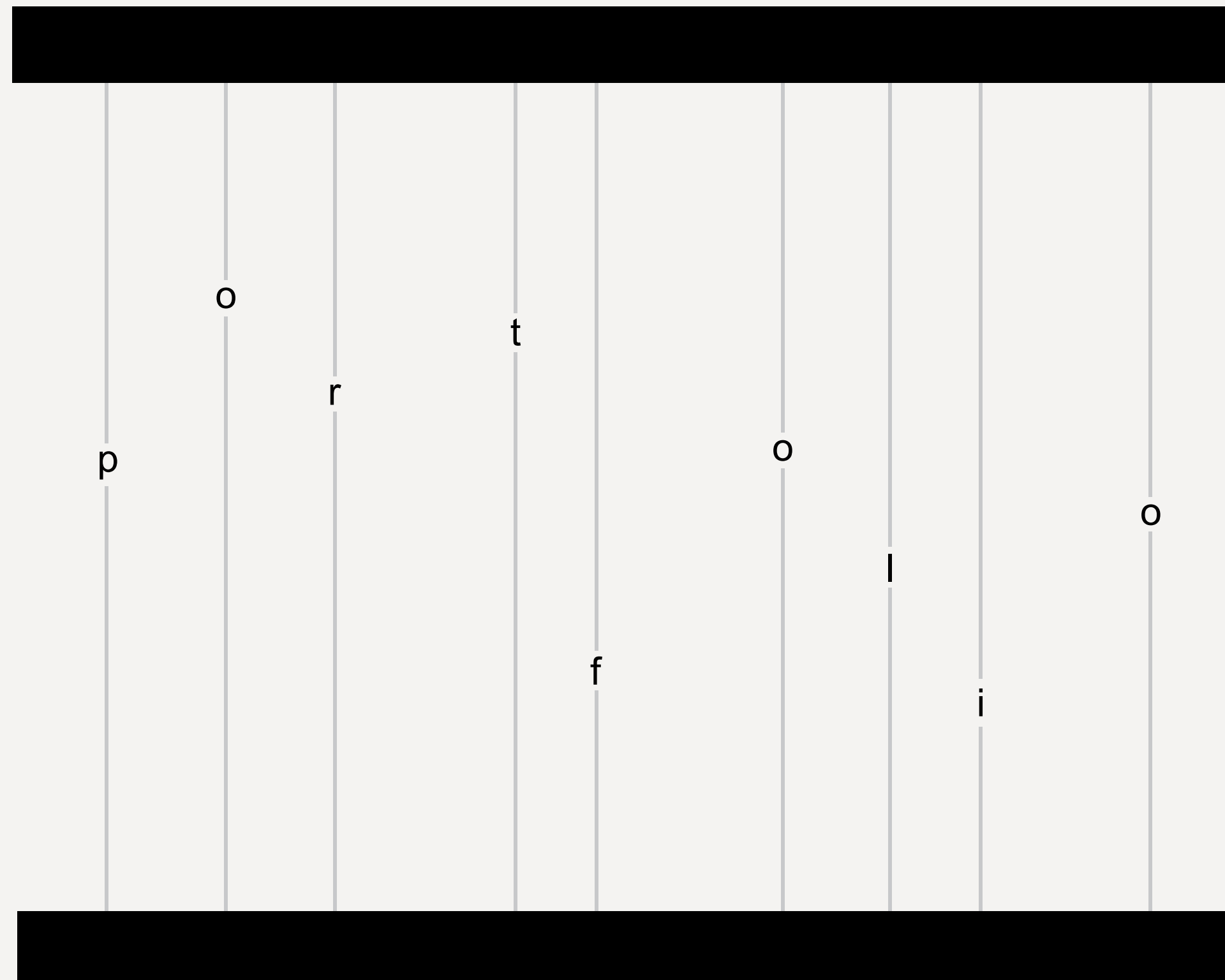
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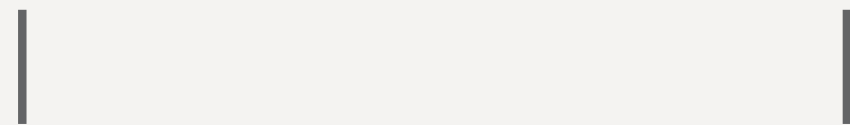
Product and Interaction Designer
2026



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ABOUT ME

What does the future of technology hold in a moment so rife with fear, skepticism and addiction? This is the question that has become my north-star in developing a world where robots are designed for human sensibilities, rather than the opposite.



Over the past few years, I have become increasingly concerned with the role of technology in our lives. Giant corporations are incentivized to replace human jobs, maximize profitability and keep us addicted to algorithmic machines. My design ethos has been informed by these factors, leading me to not only question the current paradigm, but to prioritize design with human senses.

My design comes from a concept first approach. With a background in Economics and Politics, I am first concerned with the social impact of design. The projects presented in this portfolio touch on many social issues and focus on creating objects and devices that enrich the human experience.

01

Obelisk

PRODUCT

02

GRAPH

PRODUCT

03

CONTENT EXOSKELETON

CONCEPTUAL

04

Semiotics & Understanding

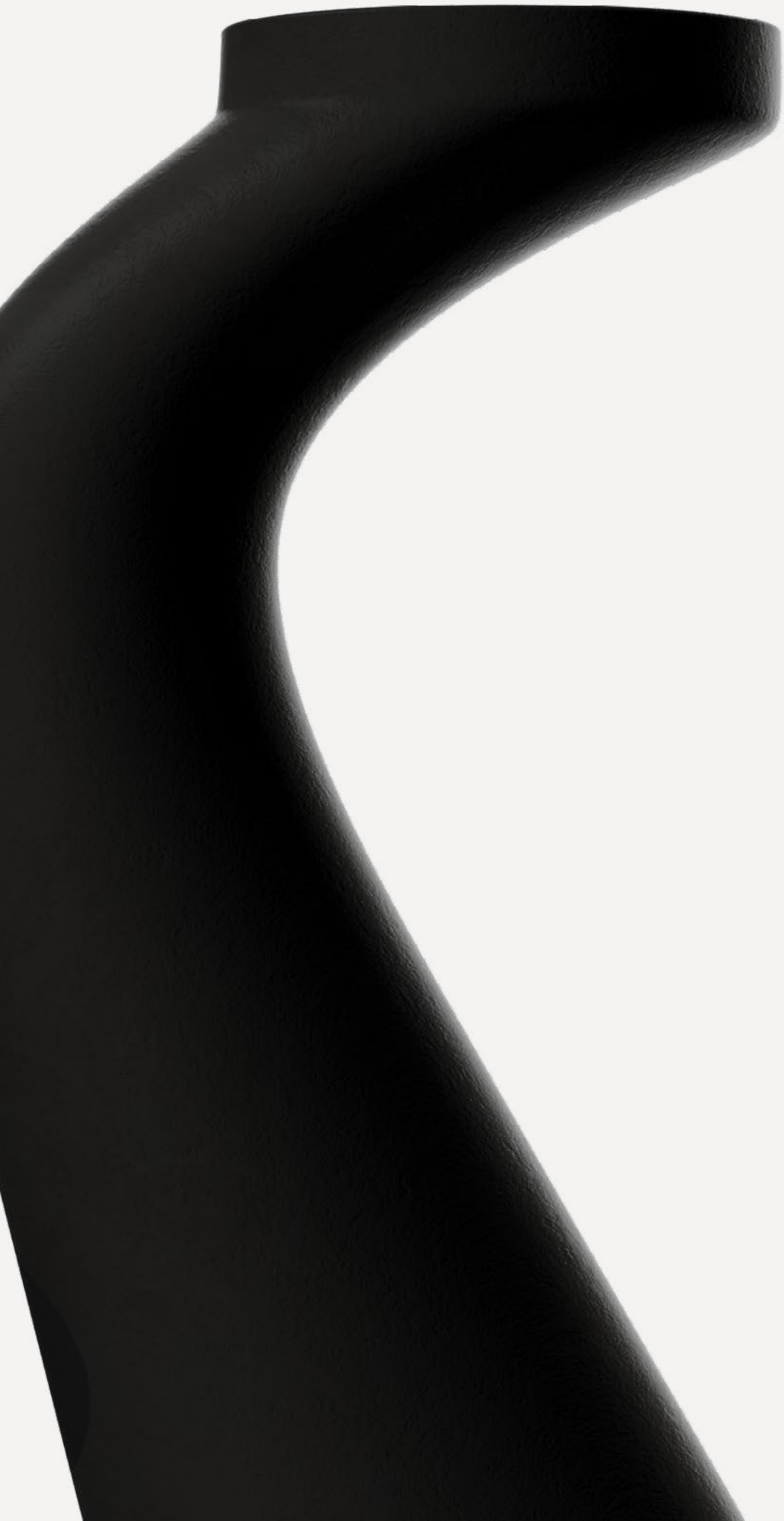
CONCEPTUAL

05

Other Works

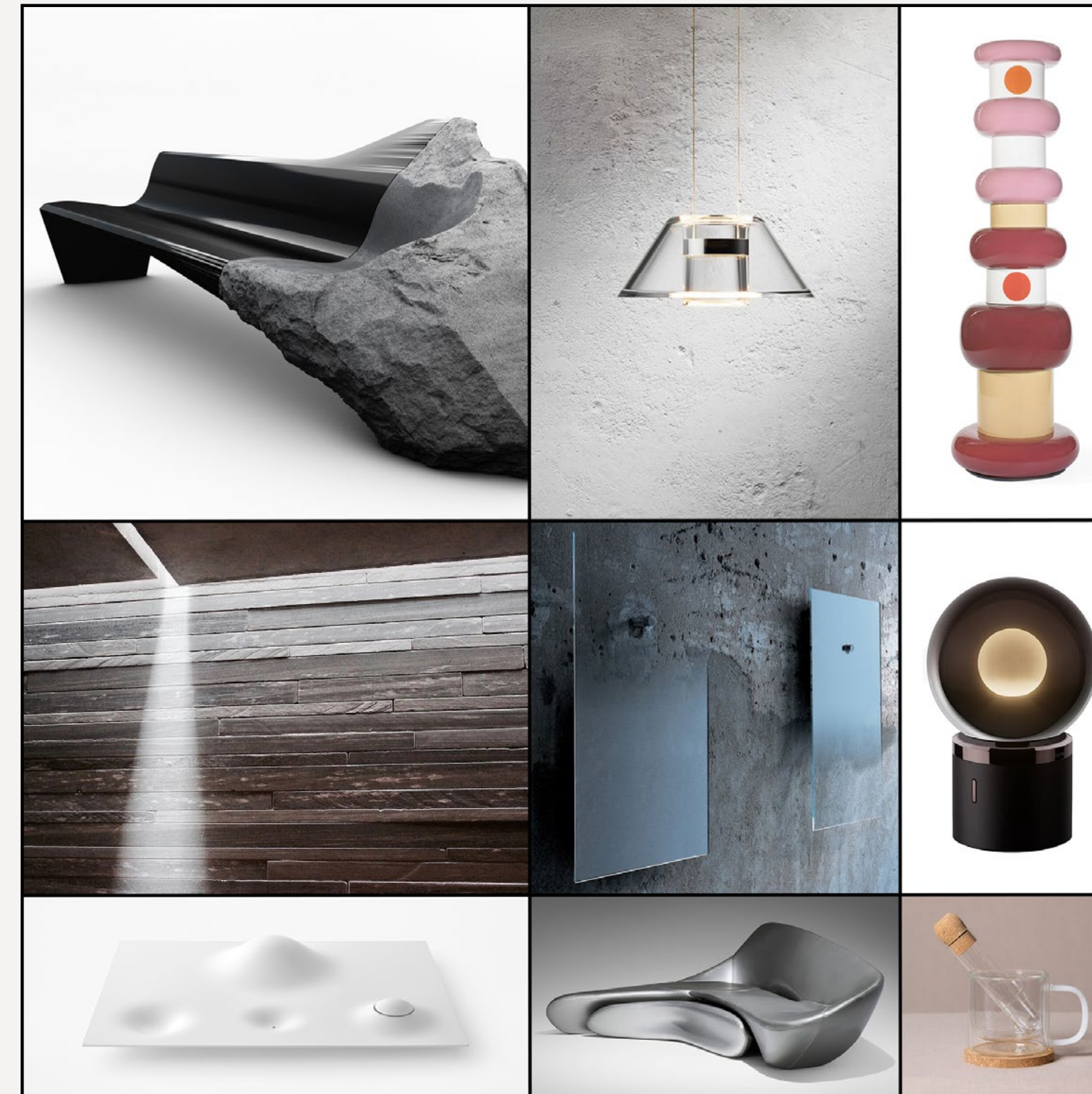
Obelisk

More Than a Morning Routine



In so many of our lives, stillness is missing. The weekday morning is a rushed process: throwing on clothes, a quick cup of coffee or tea and out to start one's day. Obelisk aims to bring back a careful moment of rest.

Obelisk is more than a morning routine, it is an innovative use of robotics that brings together the ceremony of tea drinking with meditation.



Tea is inherently spiritual, both in substance and practice. The beverage is consumed by an estimated 2 billion people everyday in countless ceremonies. As the revered Buddhist monk Popchong Sunim puts it, "Tea is a path to the universe."

Obelisks too are paths to the universe; totems, spires and obelisks were built through millennia by disparate cultures, often with the intent of asking for or offering something. Egyptian, American Indian and Aztec culture, all constructed these objects to bring them closer with their deities.

Throughout the design process, I held the great minimalists in mind. The goal was to create a device that doesn't demand attention, in size or form, that fits perfectly into the user's space. Below are some of my design references.



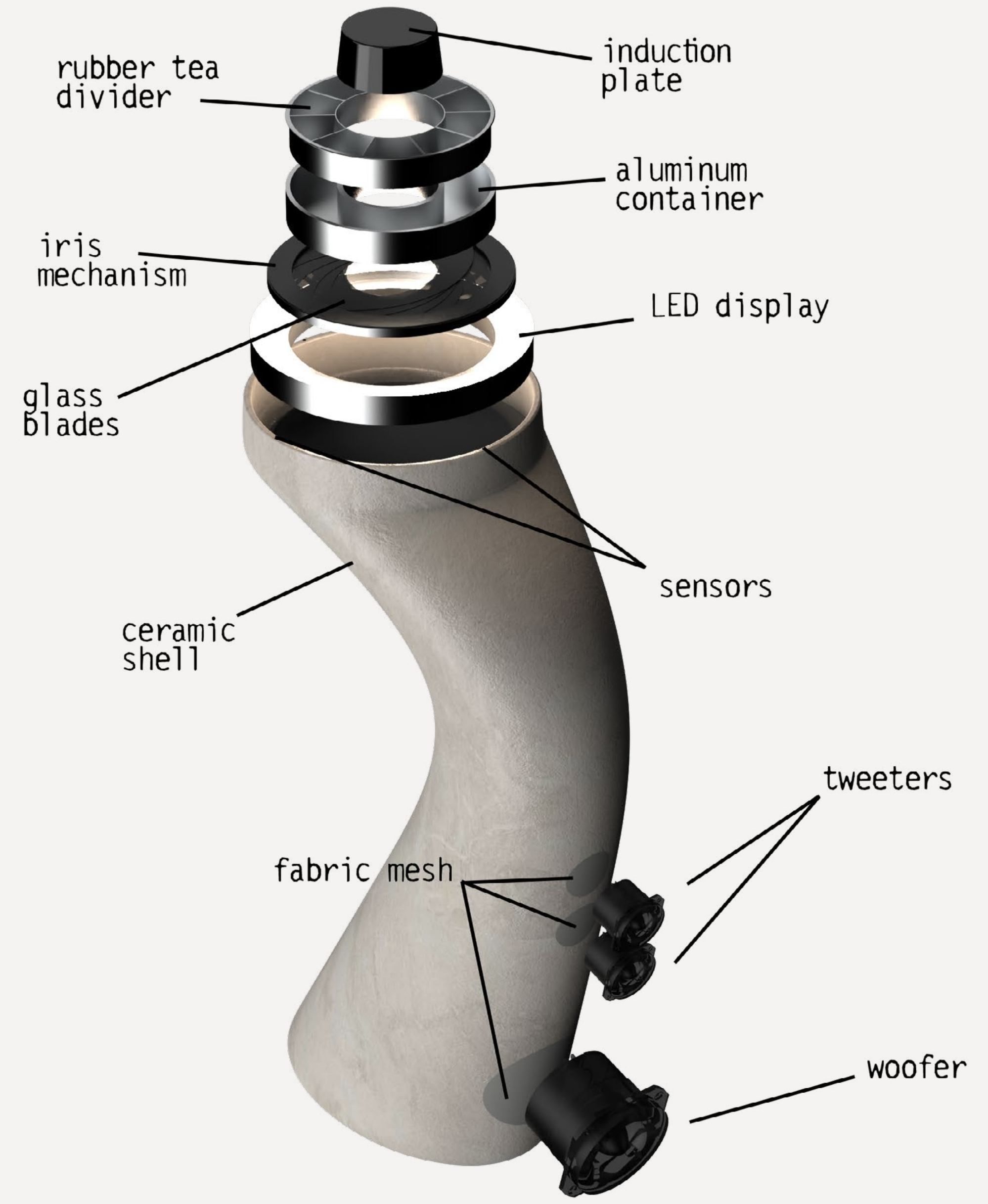
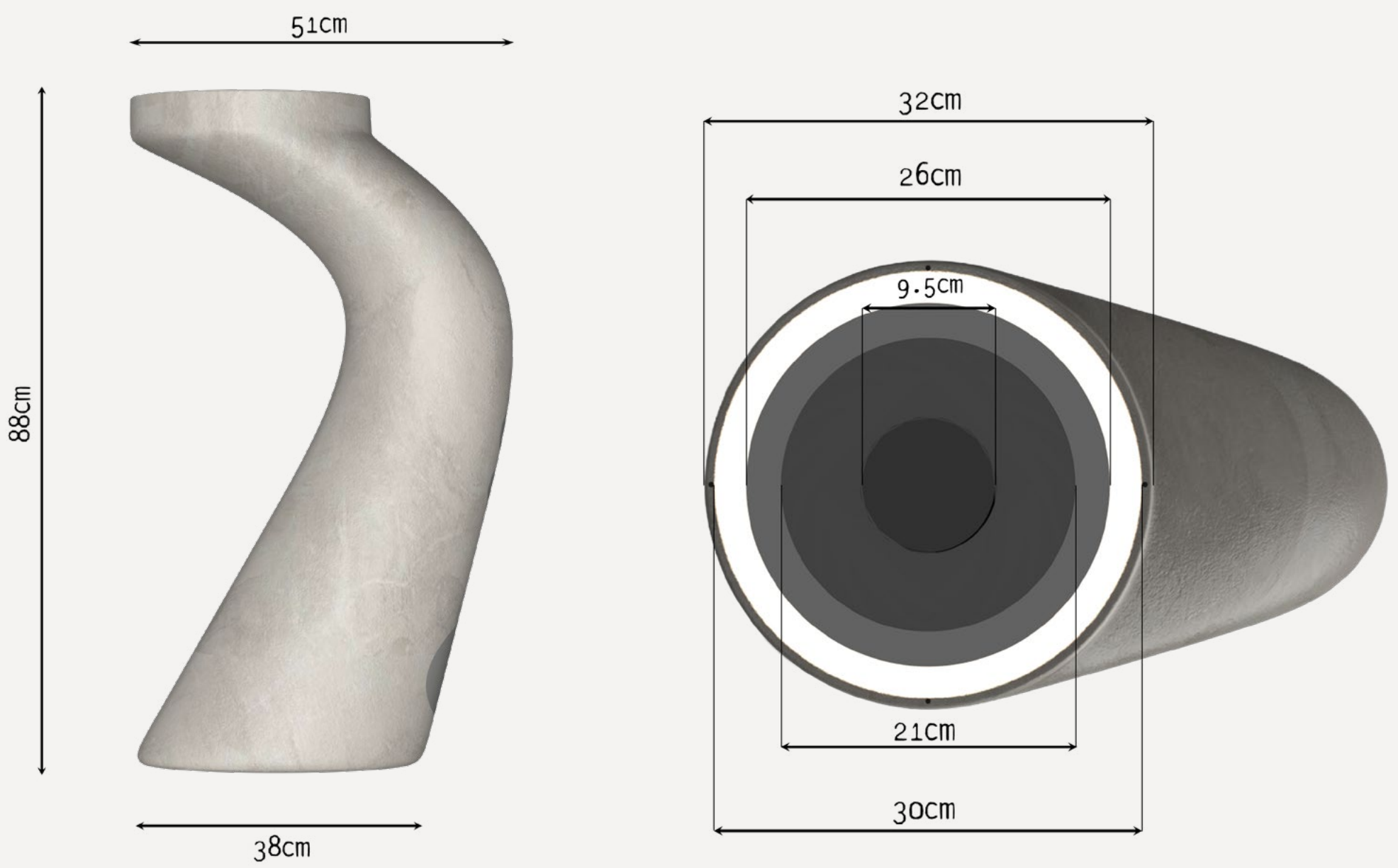


To open the aperture ring, a user rotates their hands above the LCD display. 'Shadows' are cast on the screen, demonstrating a connection with the device. A 360 degree rotation reveals the teas below. Placing a cup of water on the plate and holding your hands above the device begins the process of boiling.



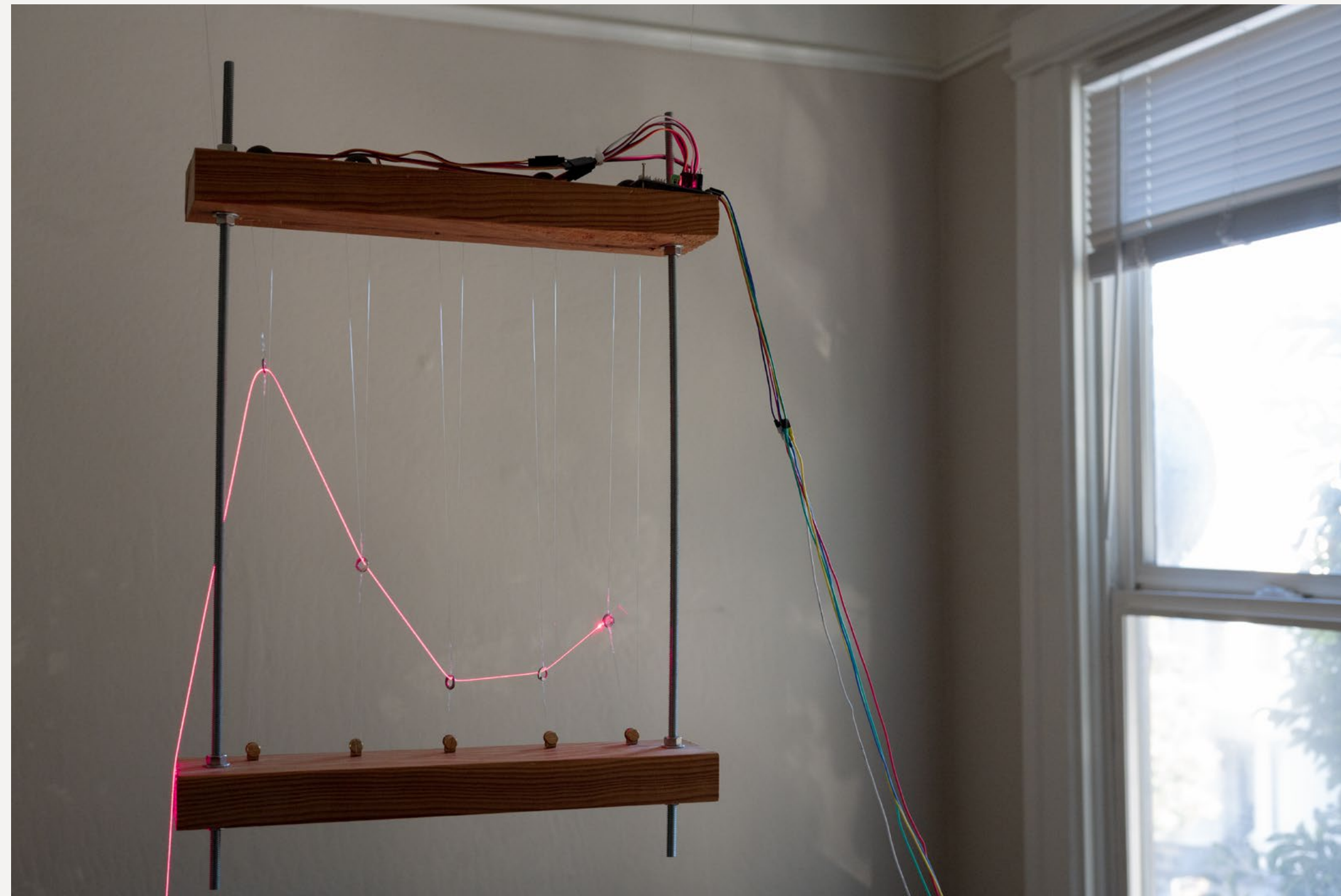
As the water comes to a boil, dynamic and unique animation sequences play while sounds guide you through a meditation.





GRAPH 02

Live Data in Analog Frame



```
"""
S&P 500 Servo Control System for Raspberry Pi
=====
Controls 5 continuous rotation servos to display S&P 500 price movements
as a physical line graph using fishing line and fiber optic cable.

CALIBRATION INSTRUCTIONS:
1. Run the program and manually position each servo at center
2. For each servo, measure:
   - Time to reach TOP from center (up_time)
   - Time to reach BOTTOM from center (down_time)
3. Enter these times in SERVO_CALIBRATION below
4. Fine-tune values based on observed performance

Hardware: Adafruit 16-Channel PWM/Servo HAT
Servos: Continuous rotation servos on channels 0-4
"""

import time
import threading
import yfinance as yf
import numpy as np
from datetime import datetime
import pytz
import os
import sys
import random
import matplotlib.pyplot as plt
import pandas as pd

# Add this conditional
try:
    from adafruit_servocontroller import ServoKit
    HAS_HARDWARE = True
    # Initialize the ServoKit
    kit = ServoKit(channels=16)
except (ImportError, ValueError):
    print(f"Running in software mode")
    HAS_HARDWARE = False

# Stock settings
TICKER = "SPY" # S&P 500
WINDOW_SIZE = 5 # Number of days

# Update intervals
LIVE_UPDATE_INTERVAL = 10 # seconds
REPLAY_UPDATE_INTERVAL = 10 # seconds
REPLAY_COMPRESSION = 6 # days

# Servo settings
SERVO_CHANNELS = [4, 3, 2, 1, 0] # Servo channels
CENTER_THROTTLE = -0.05 # Servo center throttle

# Movement settings (time)
MIN_MOVEMENT_TIME = 0.1 # Minimum movement time

# Per-servo calibration
# 'up_time': seconds to go from center to top
# 'down_time': seconds to go from center to bottom
SERVO_CALIBRATION = {
    0: {'up_time': 7.5, 'down_time': 4.0}, # Rightmost - measure and adjust these
    1: {'up_time': 9.0, 'down_time': 6.0}, # for each individual servo
    2: {'up_time': 9.0, 'down_time': 5.0},
    3: {'up_time': 6.0, 'down_time': 4.2},
    4: {'up_time': 5.0, 'down_time': 3.5} # Leftmost
}

# Global variables
timestamps = []
prices = []
servo_positions = [0.0] * WINDOW_SIZE # Current positions (0.0 = center, -1.0 to 1.0 = range)
last_update_time = None
running = True
market_open = False
replay_mode = False
replay_data = None
replay_index = 0
data_updated = False
```

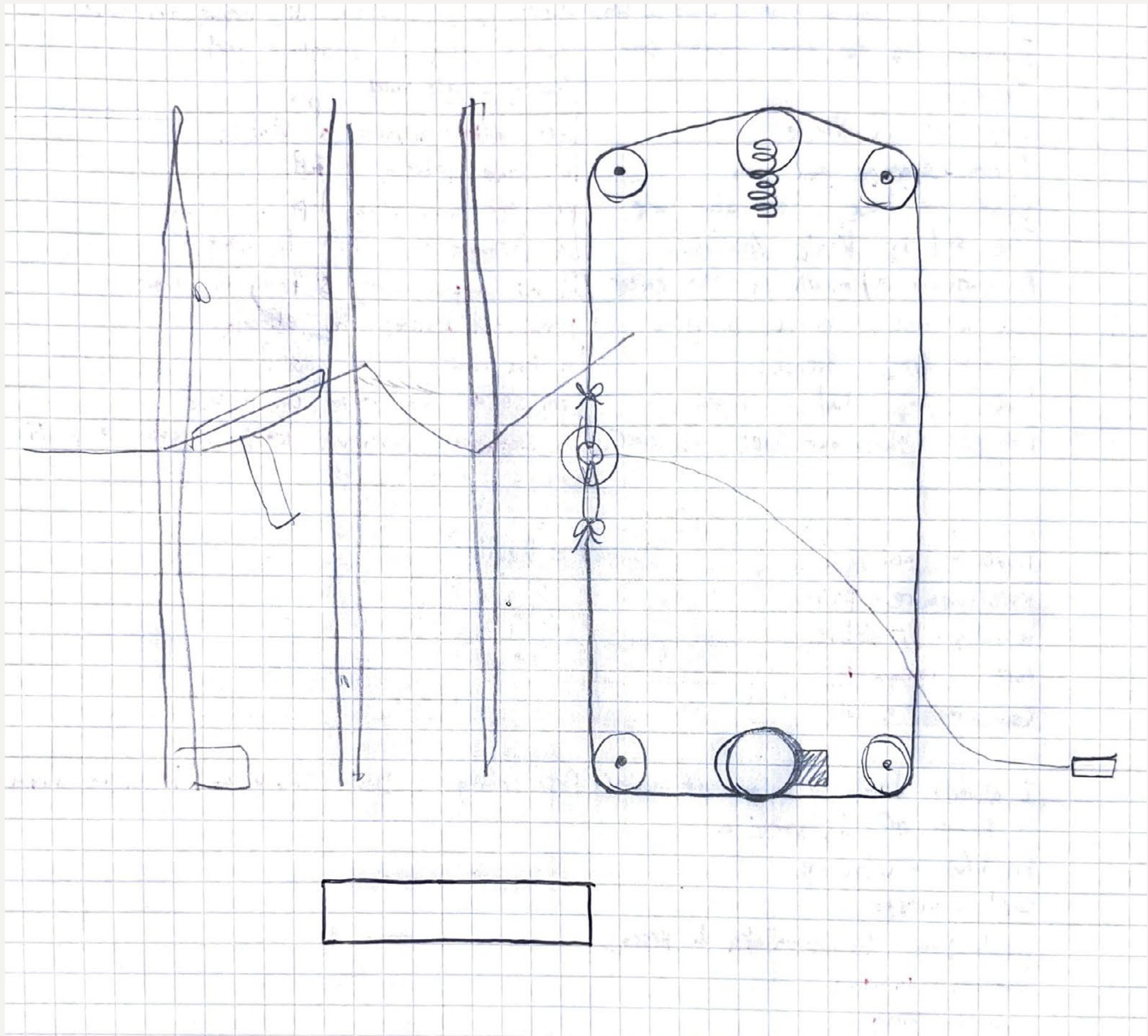
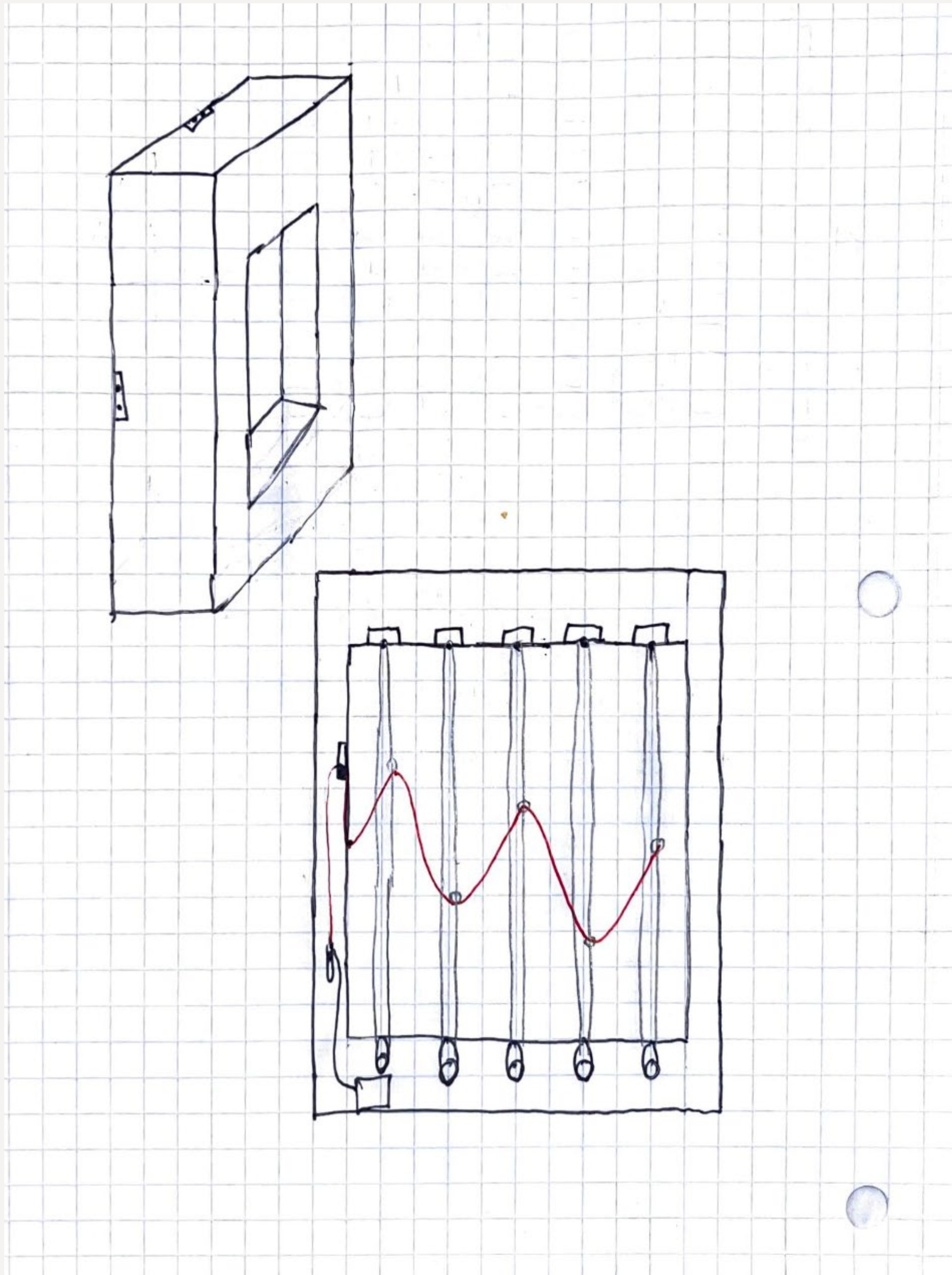
Stock charts and corporate profit are oft removed from the physical world. Numbers in spreadsheets and lines on a screen do not capture real world consequences. When given a materiality, graphs become an interactive, immersive, almost sentient being.

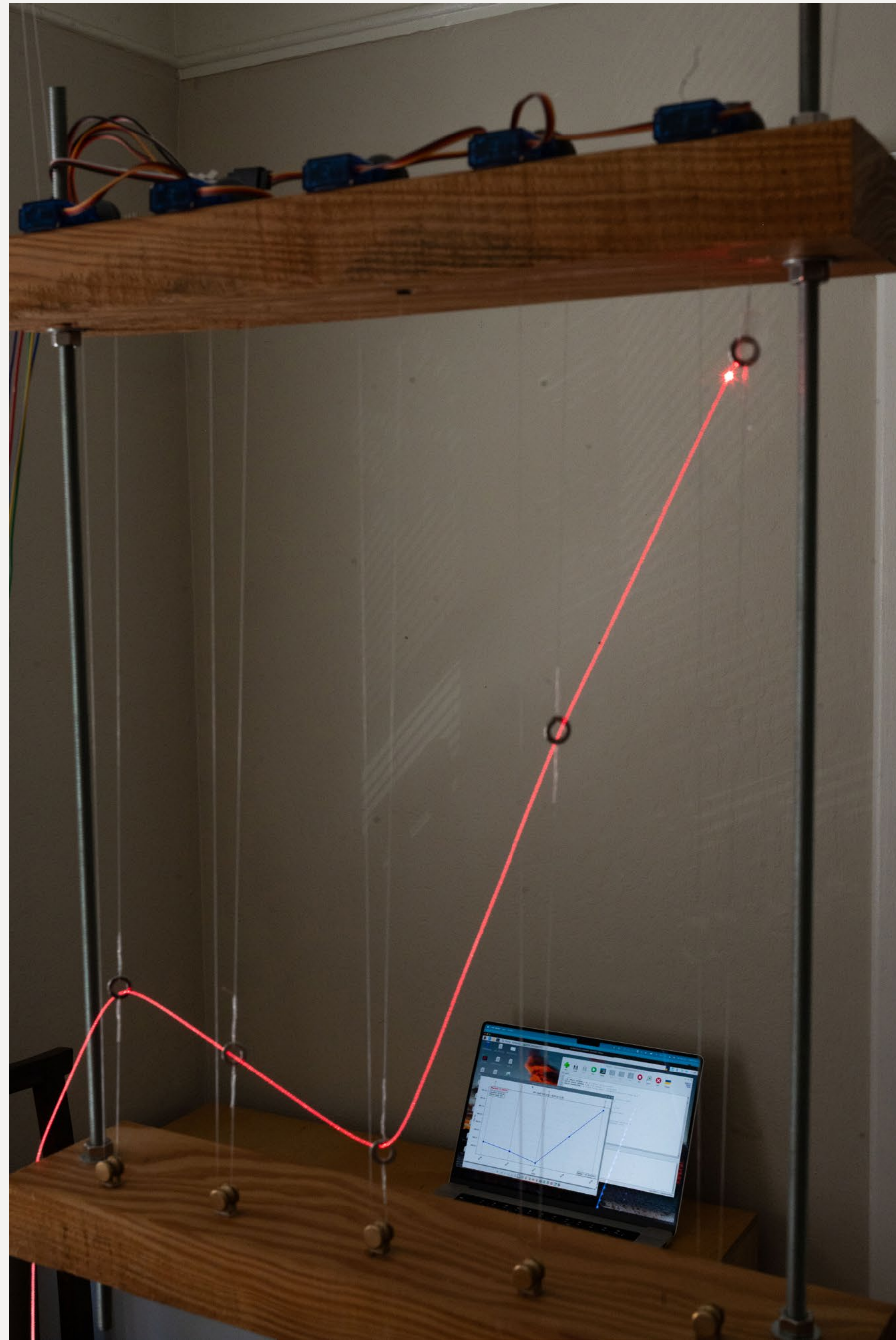
Give graphs context and they become something else. Place Graph 01 alongside images of Boeing's infamous and negligent crashes and feed it live-time stock price data and it begins to tell a visceral story.

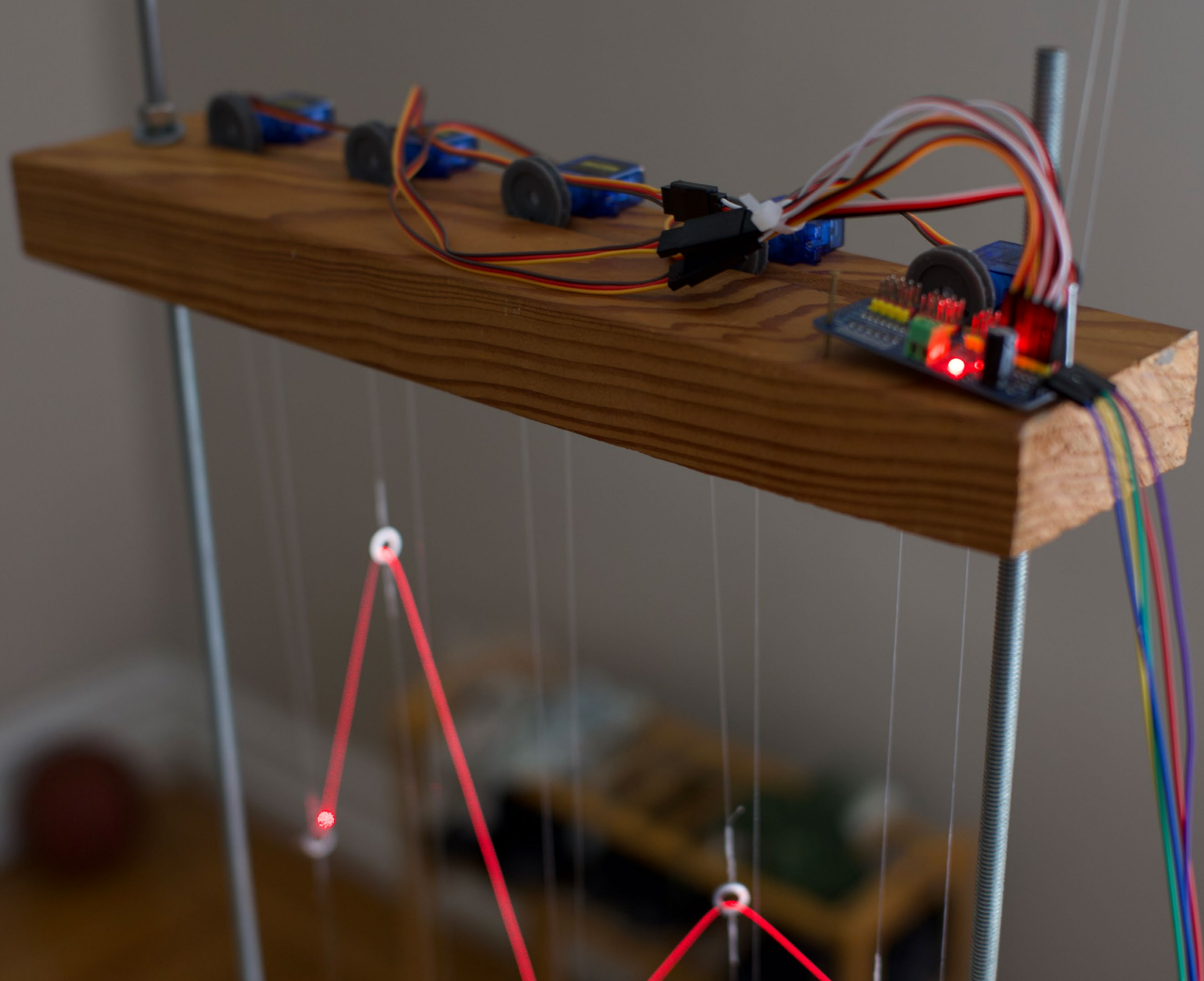
Graph 01 is composed of found scrap wood, threaded bolts, washers, nuts, brass pulleys, fishing line, 5 SG90 servos, a powerful light diode and fiber-optic cable. Powered by a RasPi 4, servo controller and a portable battery.

Any live stock data can be imported from Yahoo Finance and represented on the graph. Updating every 10 seconds, viewers are kept up to date on market dynamics and breaking news.

Graph 01 is a reflection of the owner's intentions. Hung in a corporate office, a wealthy man's penthouse or Miami palace reflects the importance he places on material wealth.





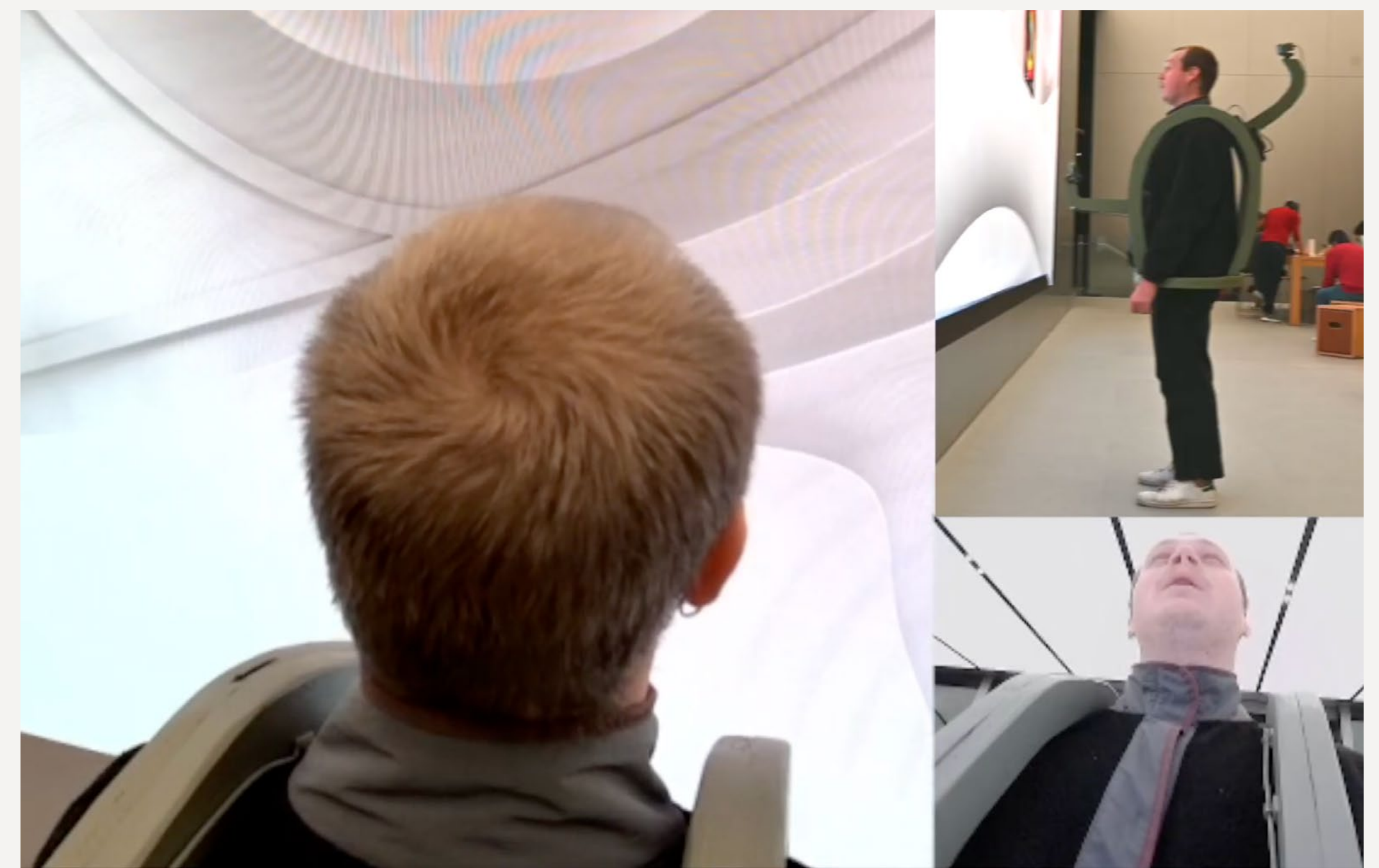
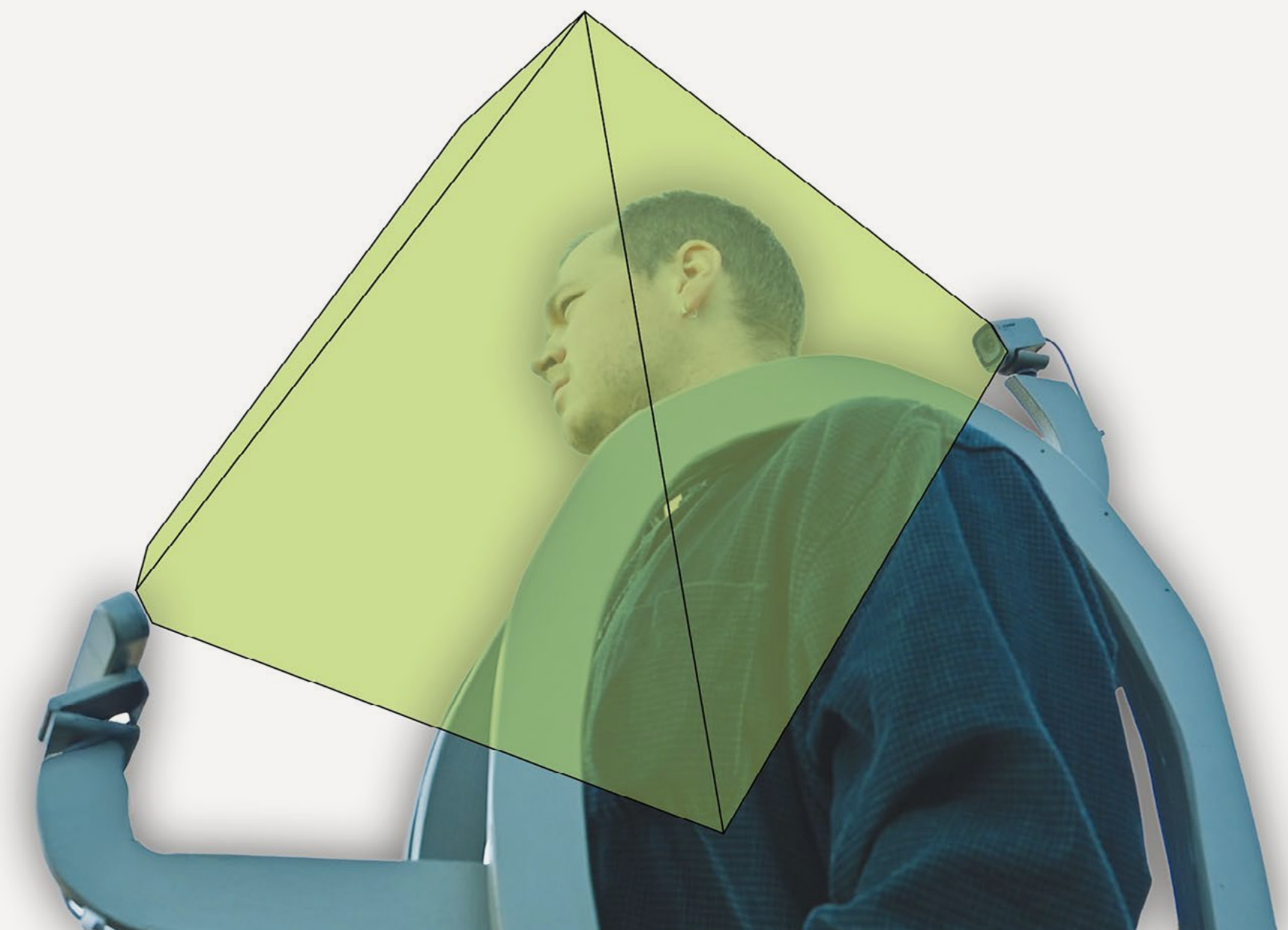
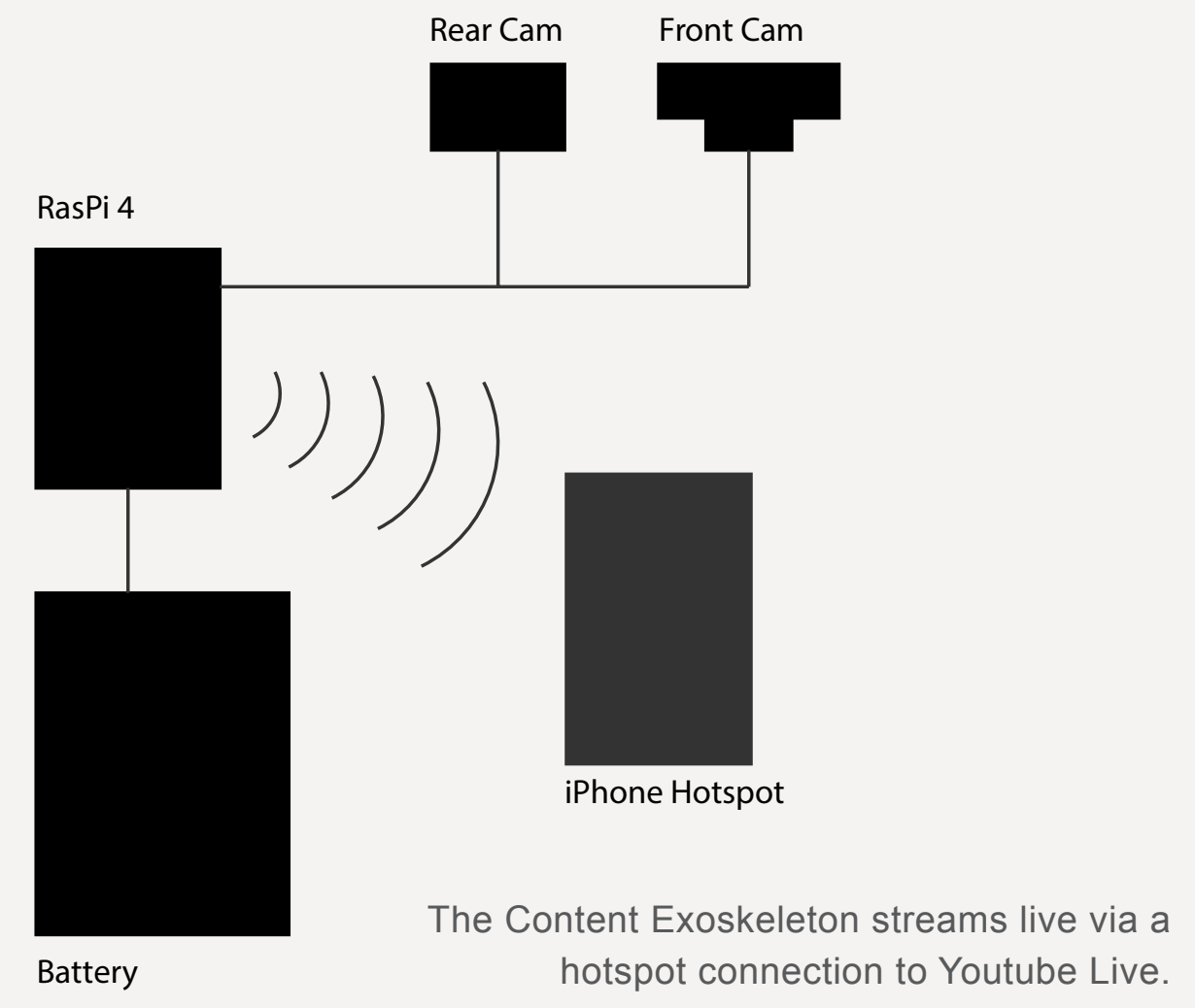
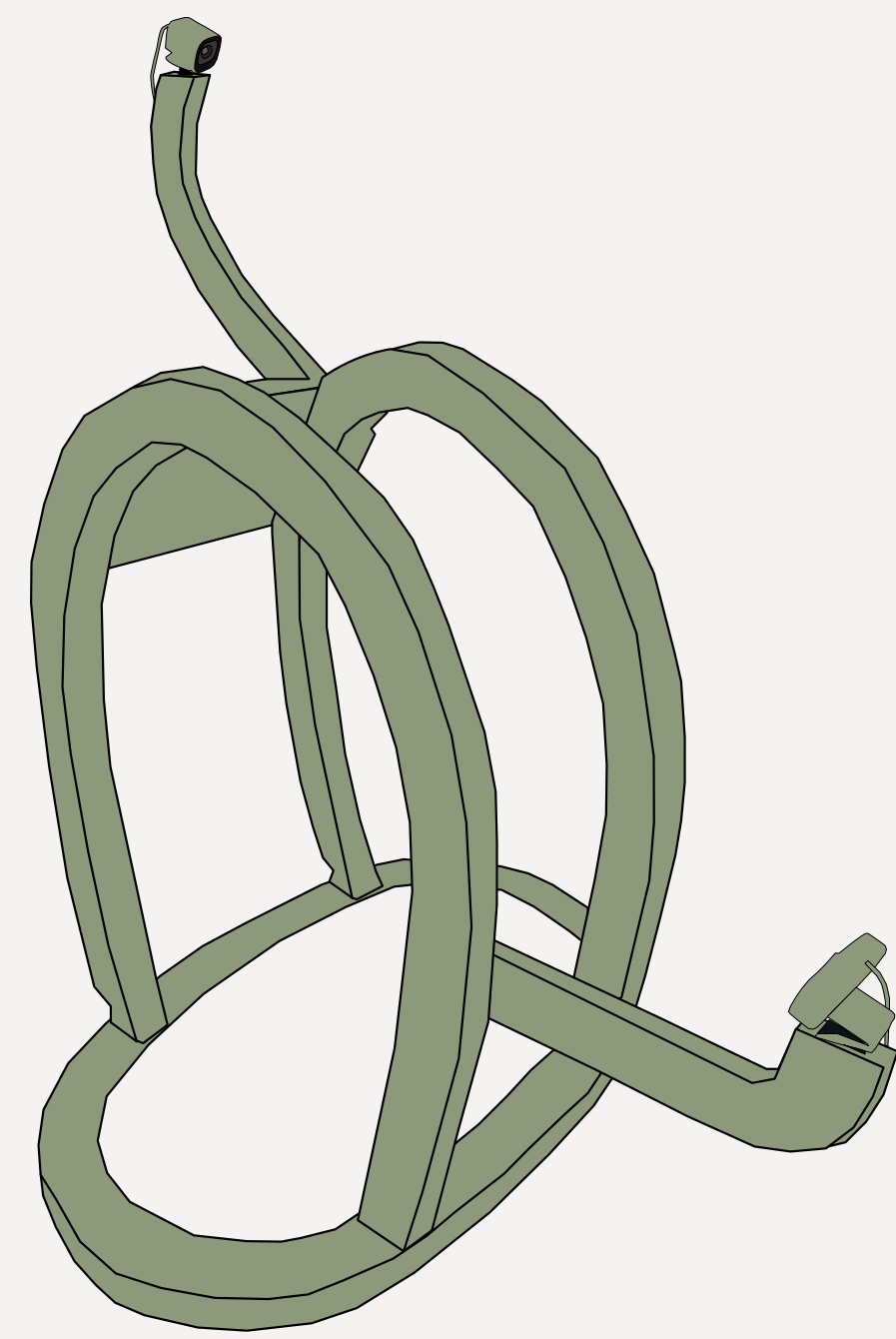




Content is everywhere. It is the new currency.

Money is important, yes, but content is the engine of human productivity. People still want things, of course, but all in service of human attention. There are still real problems on earth, no doubt, but the wealthy top 20% have settled their desires. That is entertainment. The newest content product serves to blend the physical with the digital. "Why make content when you can be content?". The [Content Exoskeleton](#) was designed in the year 2052, when people's lives entirely revolve around producing and consuming entertainment. The design was inspired by a long extinct creature: the praying mantis. This aesthetic was chosen to keep an intuitive, natural feel to the use of the device.

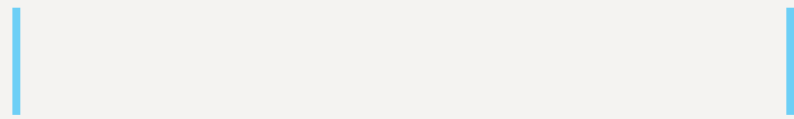
By filming the subject from both the front and top down perspective, nothing is lost in the subject's lived reality. Audiences are allowed to experience the subject's life as closely as possible, not missing a second of thrilling content! In this project, I engaged with the public in large public squares, parks, storefronts and at parties. Most were receptive, though some were put-off by the idea of being recorded in public. Other's commented that the form of the Exoskeleton might be cumbersome for daily use. In wearing the Content Exoskeleton for hours, I have taken away that neither society nor the user is quite ready for a life singularly dedicated to content production.





Semiotics & Understanding 04

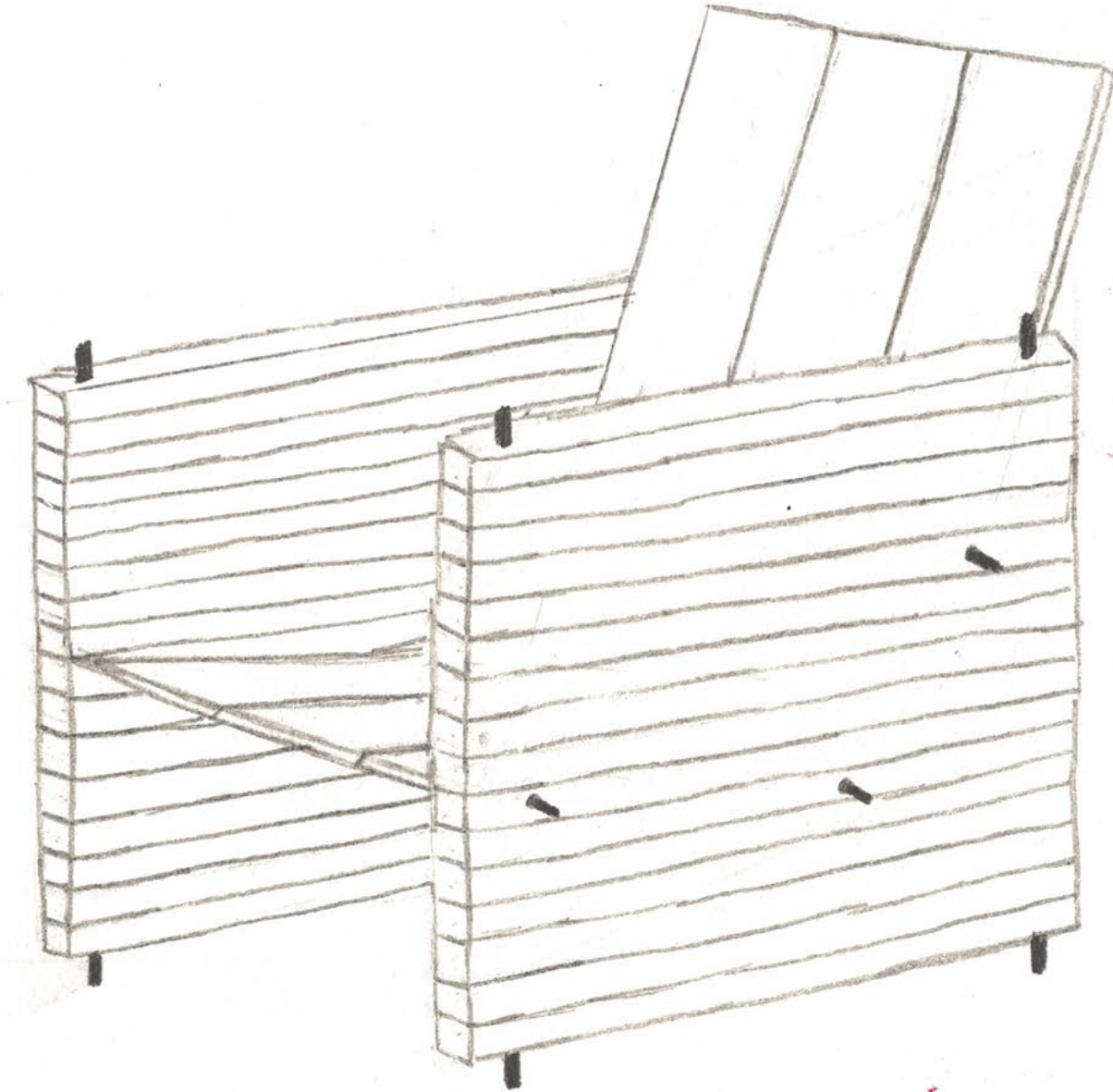
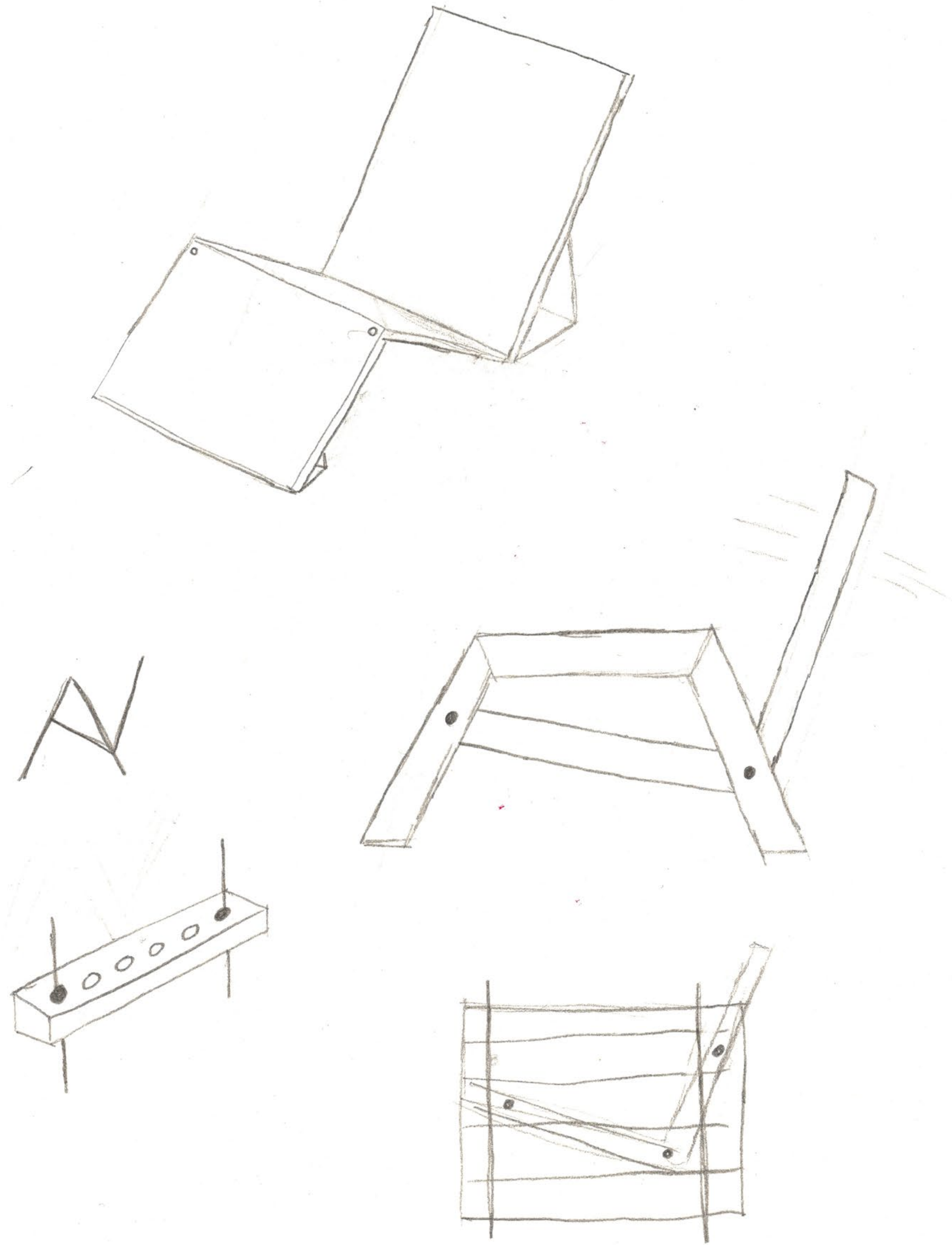
this is the text describing one of the projects in this portfolio. the portfolio is done by and in service of aidan williams. inherent in this text are signals and symbols in the attempt to convey a sophistication in design thinking. pay attention to these signals for both what they mean to the writer as well as the reader.



There is a magical line in perception, distinct to the individual, where a chair no longer can be considered a chair. Pulled apart, contorted, exploded, bent, broken, thrown out to sea, shot into space; there is a single point in time and space in which an object loses its status. Semiotics is the study of symbols and in how signals and references are used in communication with others. In the context of a dismantled chair, it's "chair-ness" is understood by the individual, and dependent on one's experience, understanding and even mood.

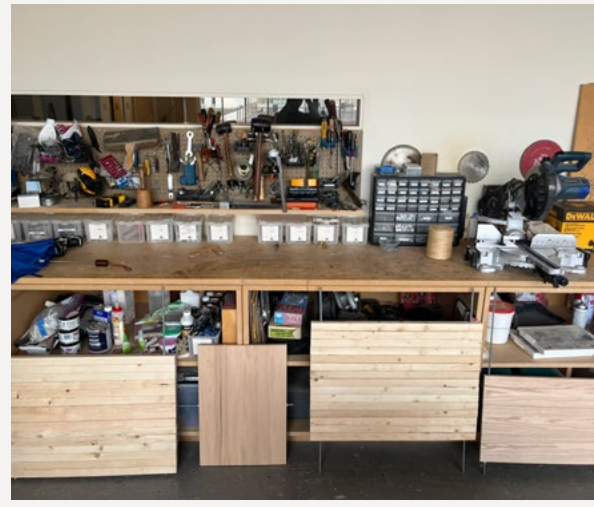
The issue of identity and understanding arises when two people perceive the same object to be two different ones. This dichotomy opens for an uneasiness that can be extended and manipulated into fear and anger. When dealing with something trivial, like "chair-ness," it is comical to imagine conflict arising, but less so when it comes to religious symbols, cultural artifacts or political happenings. In the 21st century, the abundance of mass-media and instant communication has dulled our senses to new information, blurring the lines of what is real and not. In attempts to yield truth, powerful people across geographic and cultural lines manipulate information for personal or political gain. To counteract bad-actors in our world, it is good to practice analysis of the mundane – to slow down and ground us in perception.

HERO IMAGE

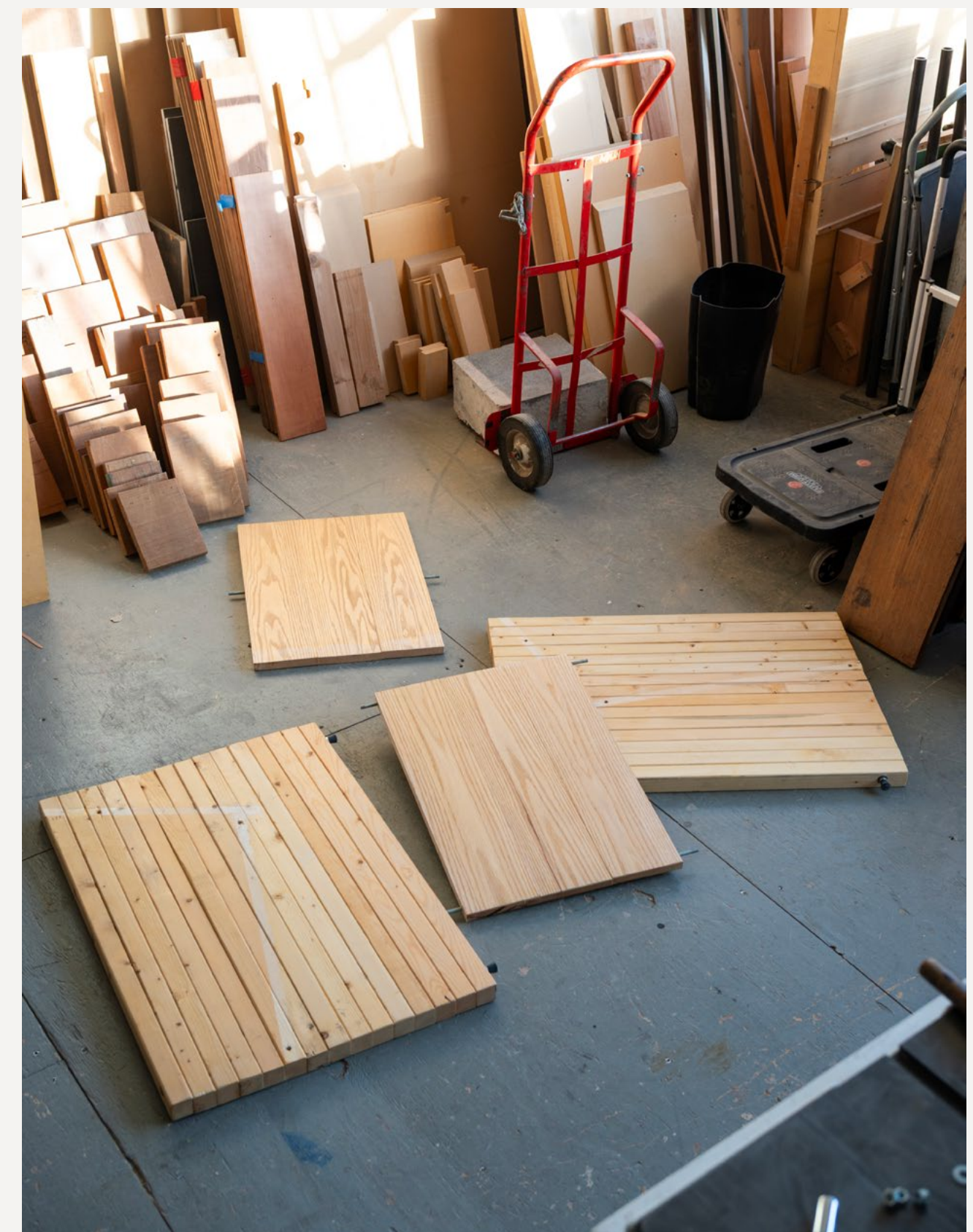
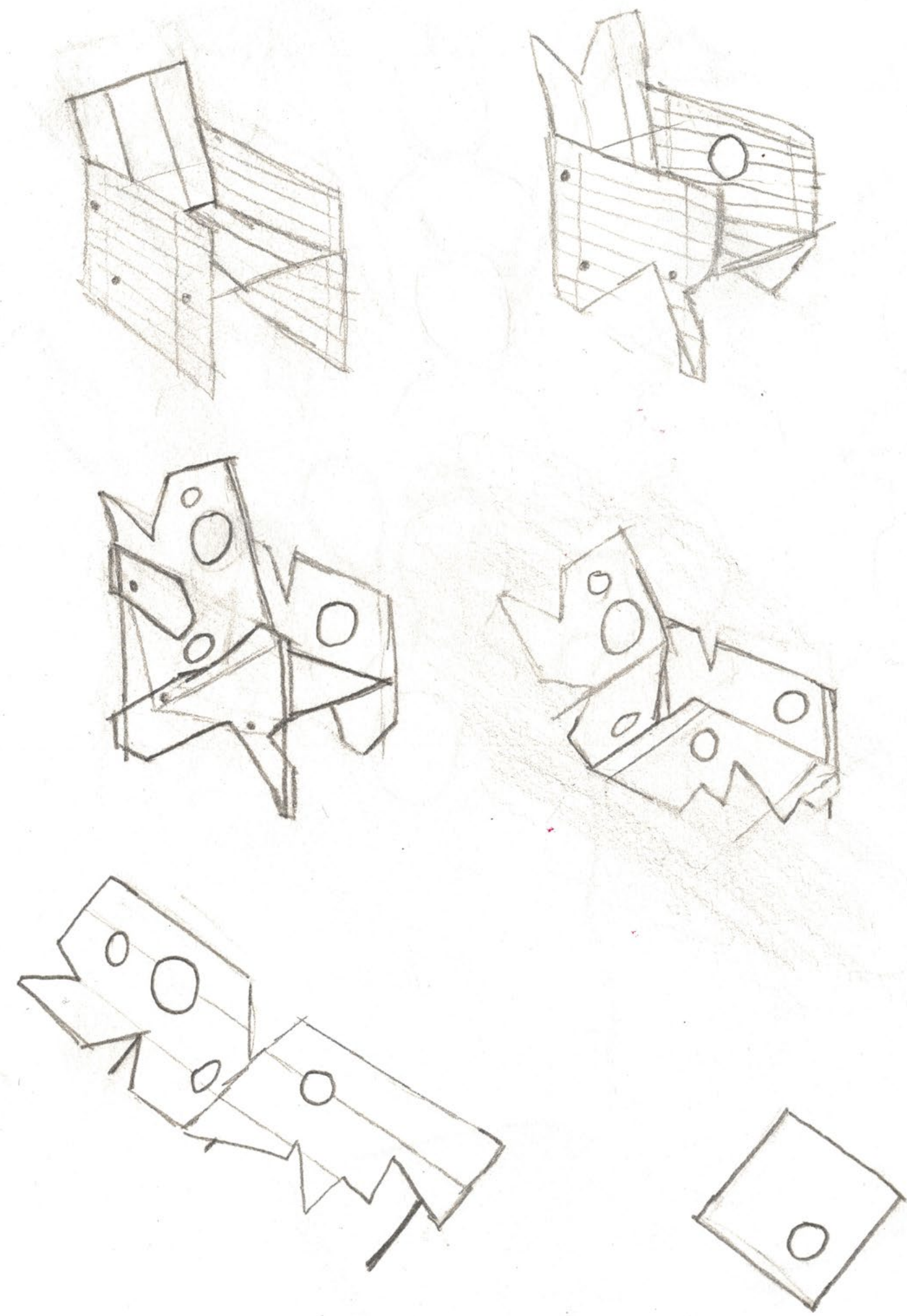


Here is an object in it's sketched conception. It reflects what the designer wishes it to be, as best as they can visualize.

The designer here has an understanding of it's object in a way that is entirely unique. Other's may grasp at understanding through observation, notation or critique, but are never able to capture what it is the designer intends. However, the designer is no more illuminated. Conception and creativity are often the domain of the subconscious. Subliminal messages can be caught, if lucky, through repetition.



Semiotic Behavior



05 Other Works



nantelòu

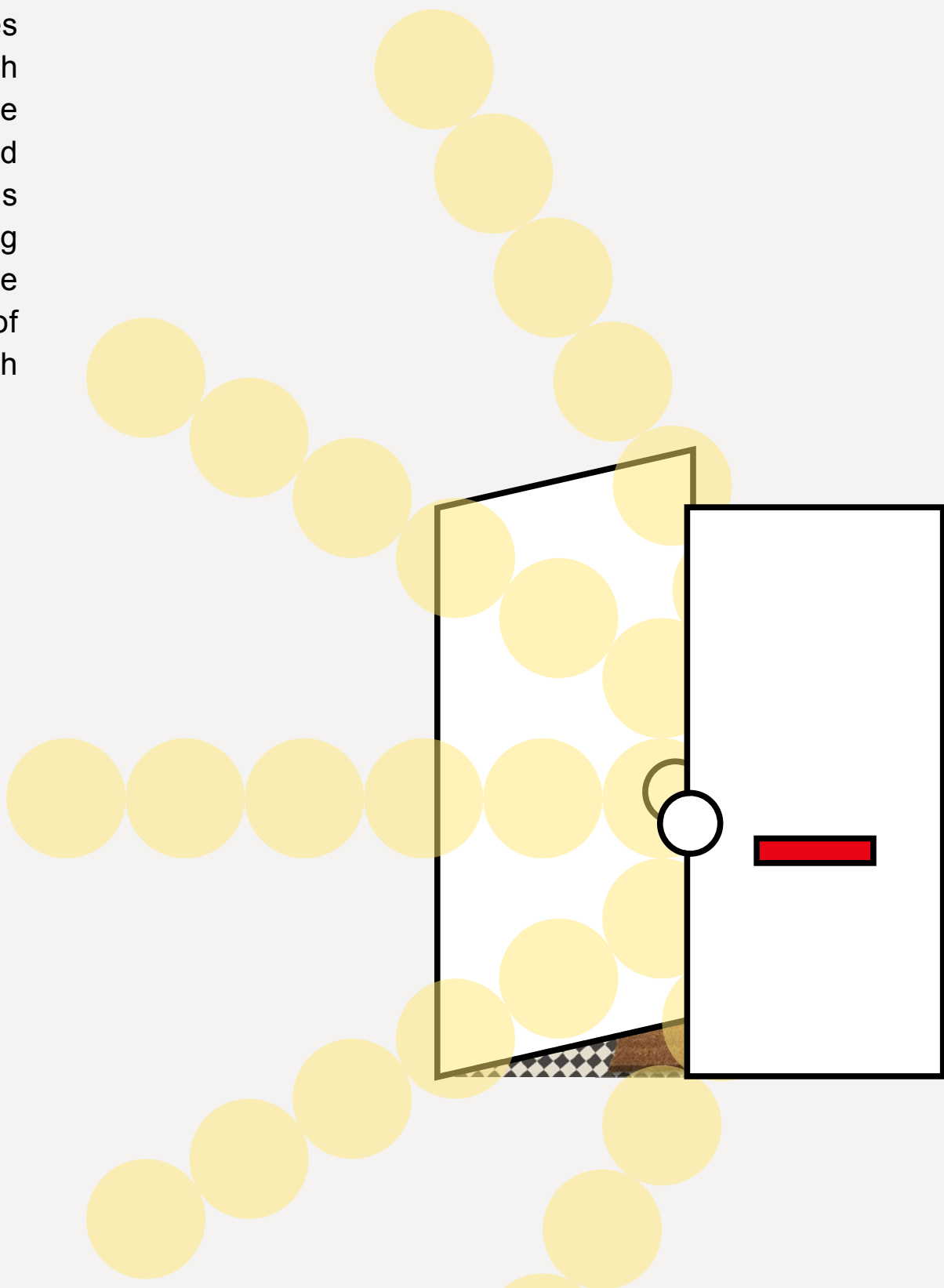
Nantelòu, in the Cadore dialect, is the name of the second highest peak in the Dolomites, known as the “King of the Dolomites,” for its massive size and prominent peak.

These sunglasses were designed for the 2026 Sergio Cereda competition.

Camper

MAGAZINE

Completed in combination with designer Jake Kaliszewski, the Camper magazine is a collection of artists, writers, researchers and thinkers all producing thought-provoking works under one tent. The magazine has featured articles written about conspiracy theorists, a research biologist catching bullfrogs, fiction pieces about future automatons and writers with magical powers as well as more subtle explorations with recipes, paintings and live events. The Camper Magazine aims to bite large and chew big by capturing the many aspects of lives lived fully. The second issue was released in Winter of 2024 and featured a release party with contributors and consumers alike.



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