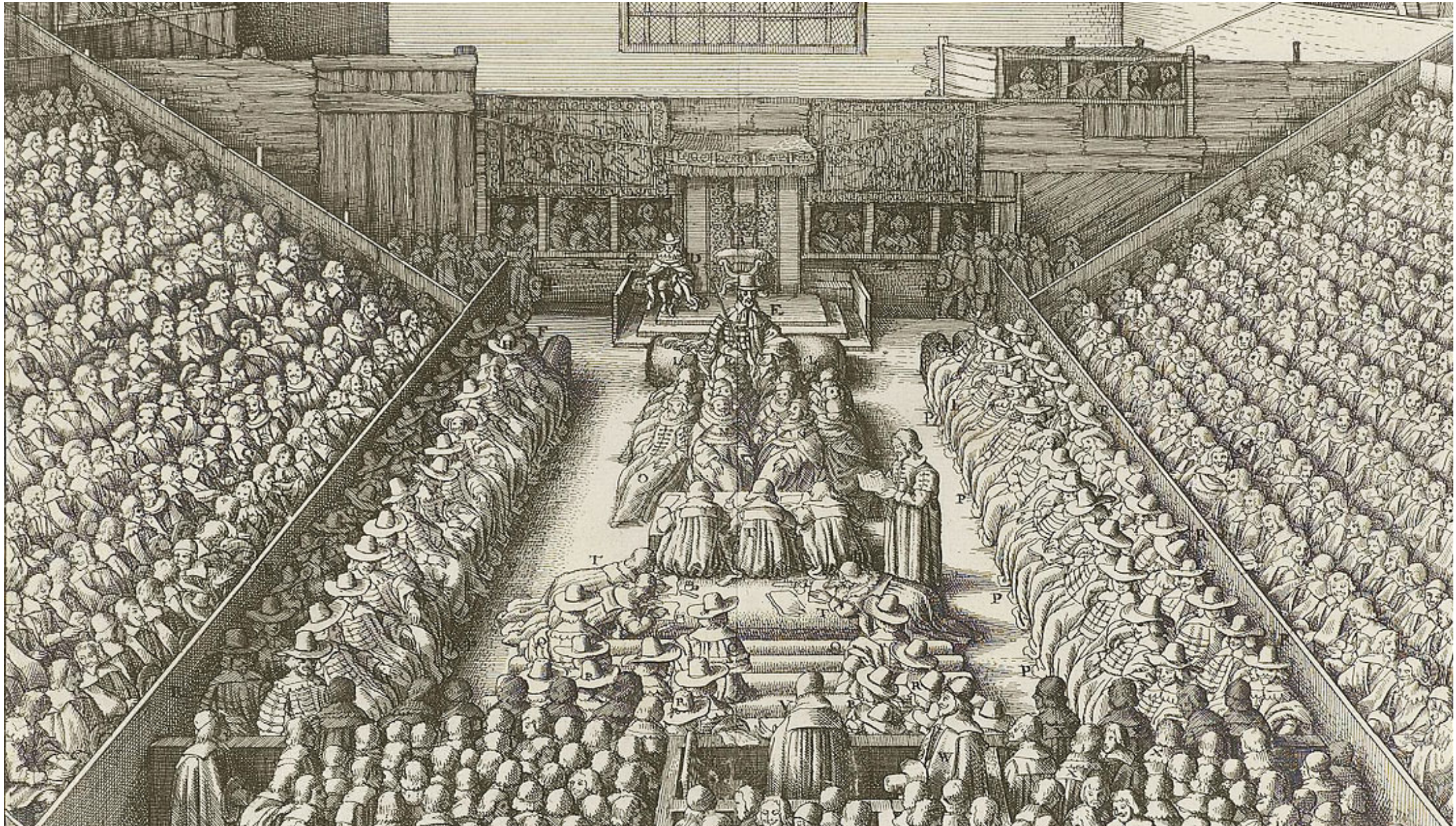


VIRTUAL PARLIAMENT

RETHINKING THE ARCHITECTURE OF DEMOCRACY



ATELIER HUANG SPRING 2021

In October 2018, Christie's auctioned "Portrait of Edmond Belamy," a first AI artwork created by the arts collective Obvious, composed of three 25-year-old Parisian students. The painting, which sold for \$432'500 after a protracted bidding war, was generated by a type of machine learning algorithm known as GAN (generative adversarial network). A manifesto, printed on a small pamphlet, accompanied the artwork: "creativity is not only for humans".

With the recent advances in AI and deep learning, machines have been suspected (and proven) to not only play a hand in creating paintings, but also infiltrating contemporary creative culture – e.g. in writing award-winning scripts for blockbuster movies in Bollywood, inventing catchy melodies for billboard topping k-pop music, and generating trend-setting haute-couture fashion for the runways in Paris.

Architecture has also been the object of AI and deep learning. Well known examples include automatically generated floorplans and dreamy interior views that resemble buildings like the Sagrada Familia in Barcelona. AI has the potential

to not only capture the essence of a set of images, accurately depicting the mood and style, but also uncovering subtle details that would otherwise be overlooked by human eyes.

In this studio, AI will be our „telescope“ through which we will rediscover our built environment. We will critically question the role of artificial intelligence and deep learning in architecture. Is creativity in architecture only exclusive to humans? Can machines automatically learn and generate meaningful architecture? Can they go beyond quantifiable data and optimization and enter the realm of architectural quality? Can machines capture and generate something as fragile and elusive as "genius loci"? What are the dangers and dark sides when we let the machines loose?

Following on our studio last semester where we looked at the primitive hut in the swiss alpine context, this semester we will look at the city of Zürich and explore the idea of „Home“ in post 2020, after the rise of the first waves of pandemics and confinement. We are interested in the home not only as the shelter for domestic life, but also in the notion of „Heimat“ and the identity a house

can produce. Images are powerful vehicles for these ideas, and we will use AI to process images to capture, collect, and learn the architectural DNA of the local identity and the visual characteristics that constitute the genius loci, in our case the identity of Zürich Altstadt. What is Zurichness?

While images of house exteriors (street-views, facades, axons) convey the identity of a place and neighborhood, they also reflect the functions inside the house, such as domestic life-styles, societal status, internal organizational hierarchies. Here architecture provides the structural framework.

The recent confinement during the Covid -19 crisis has uncovered the limits of today's housing typologies, highlighting an increased misalignment between their affordances and emerging life styles - where living and working converge, and everyday social activities, such as shopping, learning, entertainment have moved from the city into the intimate confines of home. This studio asks students to rethink a typical housing unit in the Altstadt of Zürich and explore the possible transformation of the urban house as a typology where increasingly (almost) everything takes place.

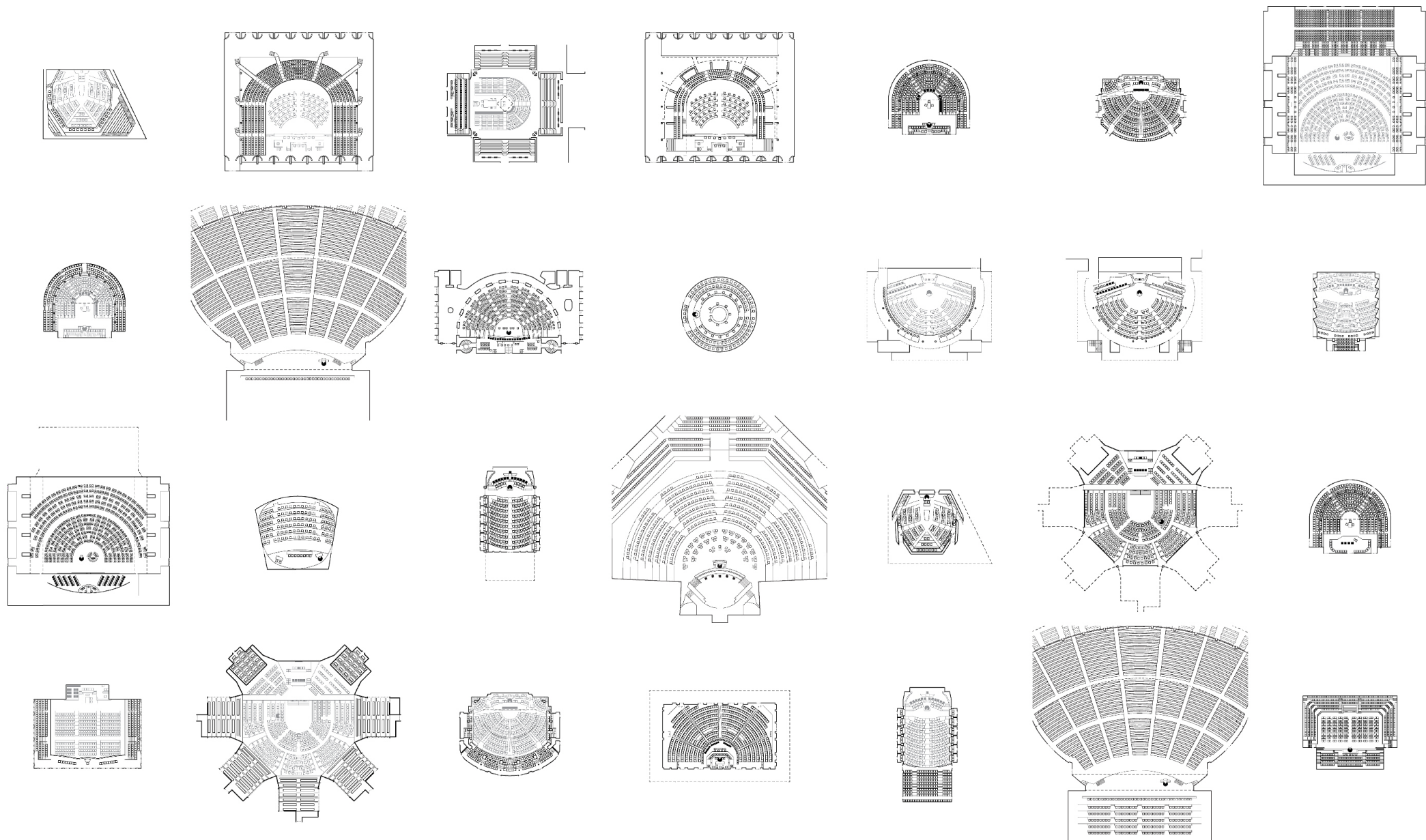
The first part of the semester will consist of curating data and manipulating a GAN to generate variations of housing units by learning from the Altstadt Zurich. The collection of façades will serve as samples for the algorithms. Students will select and interpret the output generated by the algorithm, and, through a process of inverse geometric projection, transform the machine-generated images into 3D architectural forms.

During the second part of the semester, students will confront the architectural forms generated by the GAN algorithms with imagined scenarios of domestic life post 2020, emphasizing spatial and temporal flexibility. This creative confrontation will result in a series of proposed Zurich Altstadt housing “proto-typologies”, presented as schematic, axonometric drawings.

The studio will culminate in a personal interpretation of the post 2020 house on a precise, specific site in Altstadt Zurich, as a final project: a privileged, virtually public and flexible, yet physically private and intimate space, amidst a changing world and confused ecology.

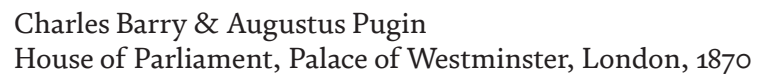


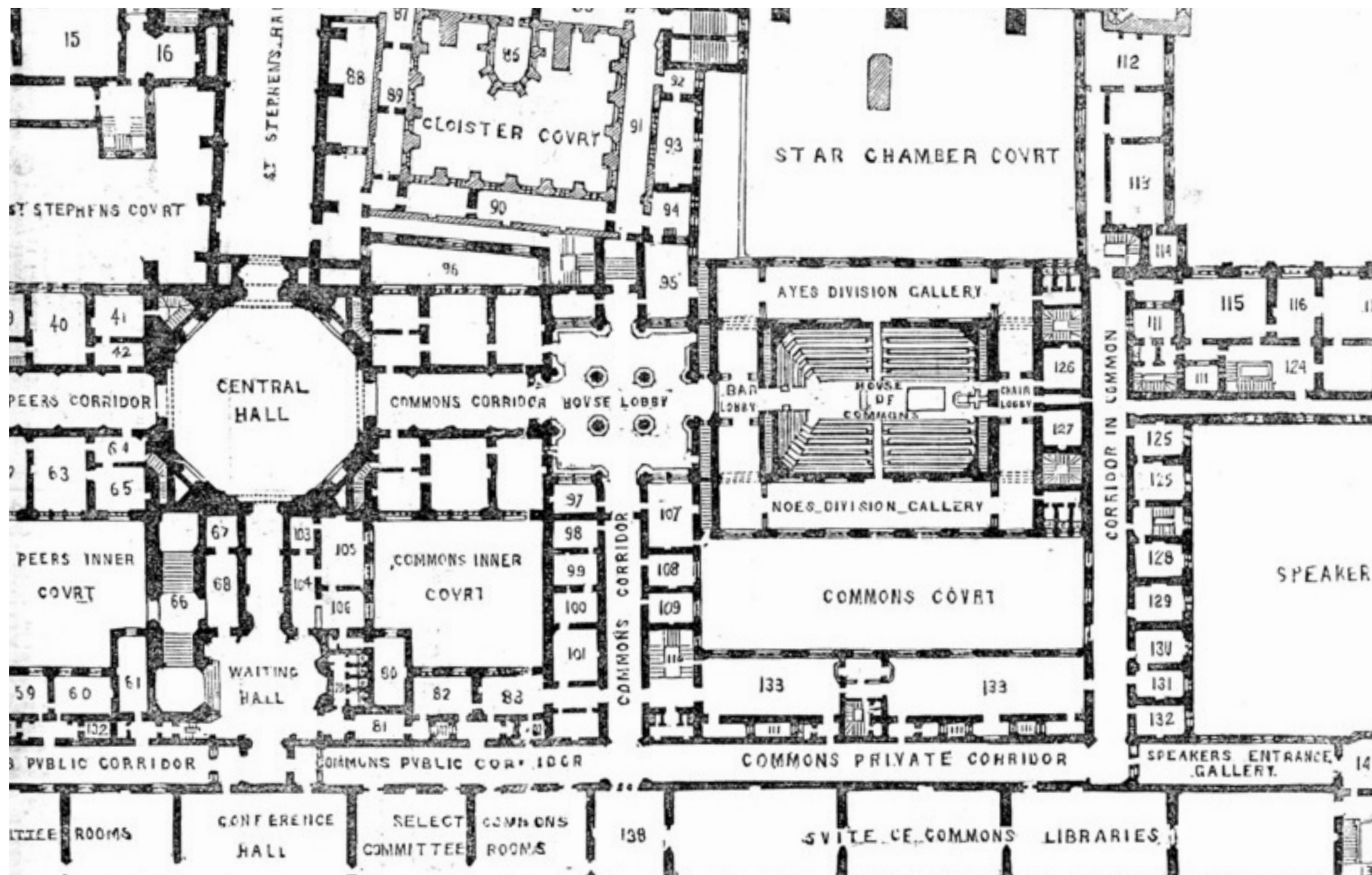
Christian Kühn & Harald Trapp
Plenum - Places of Power, Venice Biennale Austira Pavilion, 2014



Christian Kühn & Harald Trapp
Plenum - Places of Power, Venice Biennale Austria Pavilion, 2014

Plan of Principal Floor

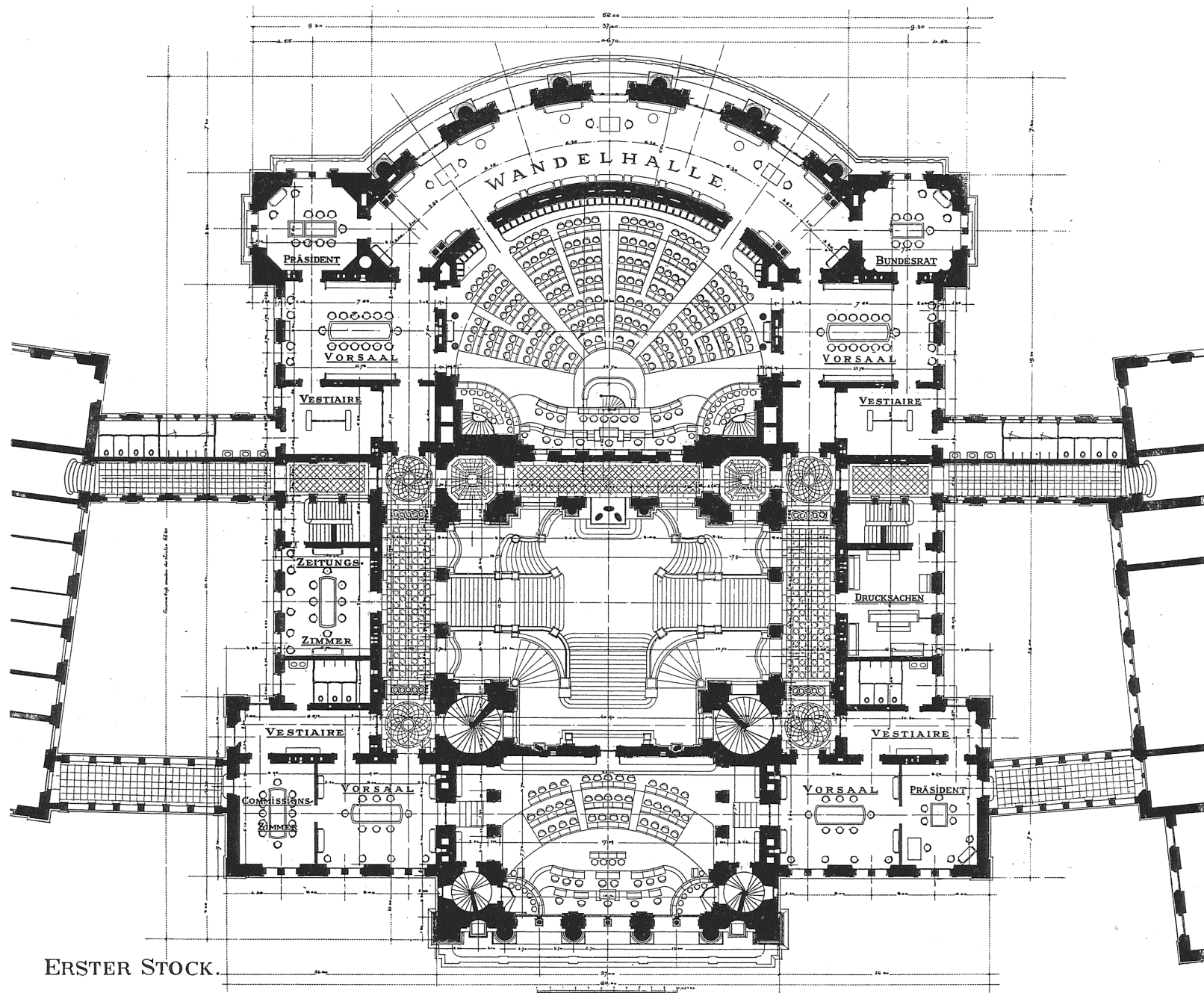




Charles Barry & Augustus Pugin
House of Parliament, Palace of Westminster, London, 1870



Hans Auer
Federal Palace of Switzerland, Bern, 1902



Hans Auer
Federal Palace of Switzerland, Bern, 1902



Hans Heinrich Holzhalt
Rathaus Town Hall, Zürich, 1698



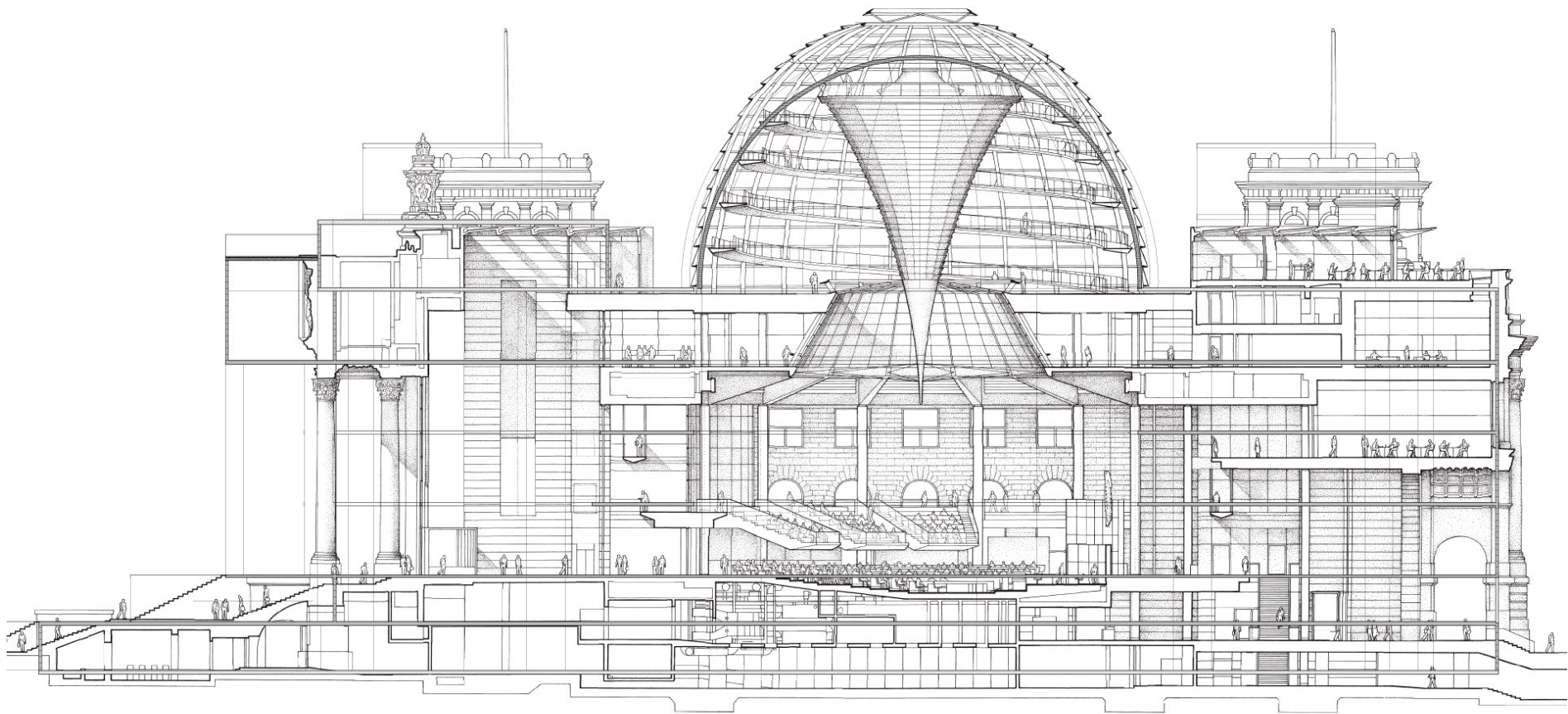
Fabrice Coffrini
Election of the members of the Federal Courts in Swiss Parliament, Bern, 2015



Remco Livain
Direct democracy, Landsgemeinde, Glarus, 2017



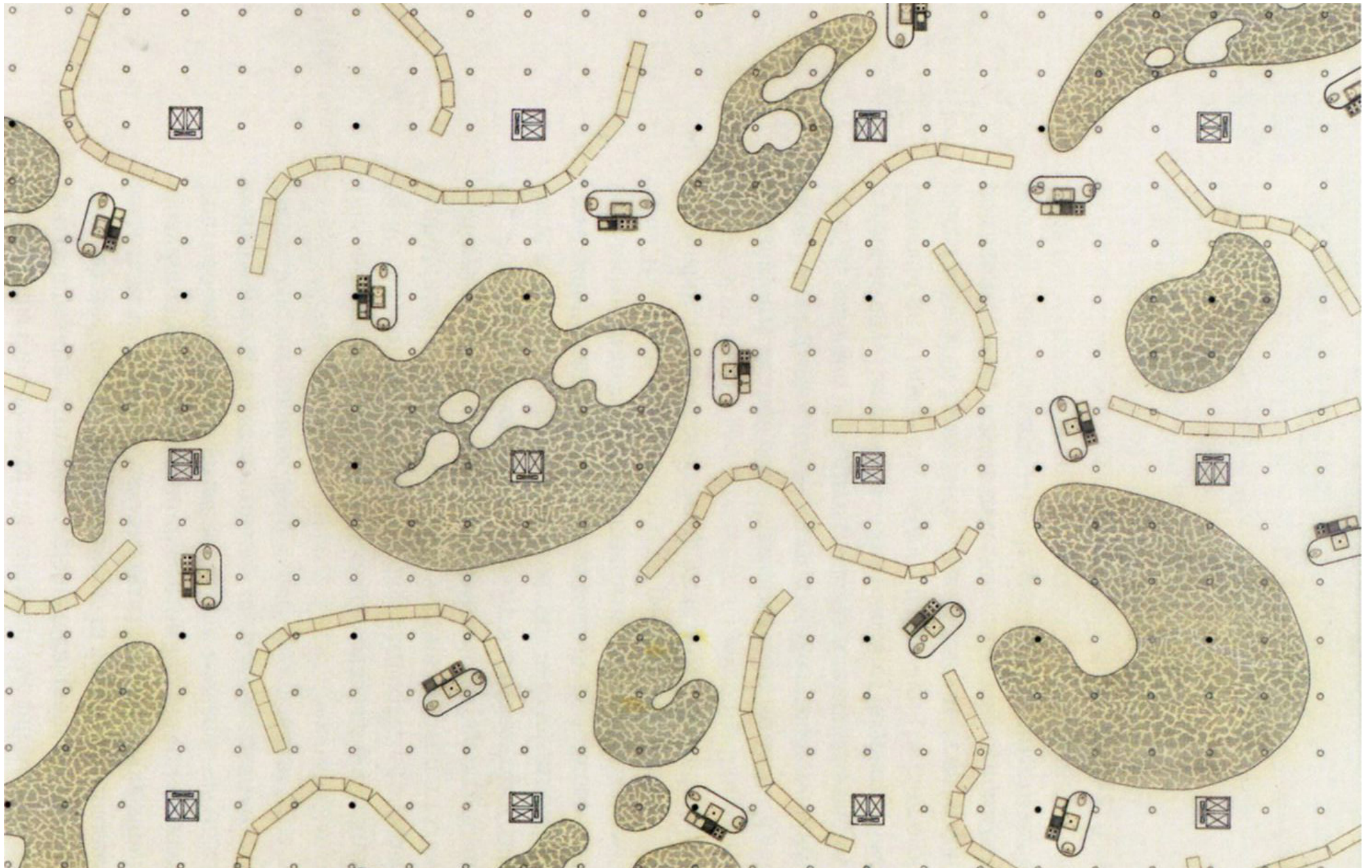
Harold Cunningham
Direct democracy, Landsgemeinde, Appenzell, 2012



Foster + Partners
Reichstag, New German Parliament, Berlin, 1999



Foster + Partners
Reichstag, New German Parliament, Berlin, 1999



Andrea Branzi
Residential Park, Non-stop City, 1969



Jessica Taylor
Hybridization of UK House of Commons, London, 2020



Jessica Taylor
Hybridization of UK House of Commons, London, 2020



Ed Davey
Zoom framed by two geometric artworks, 2020



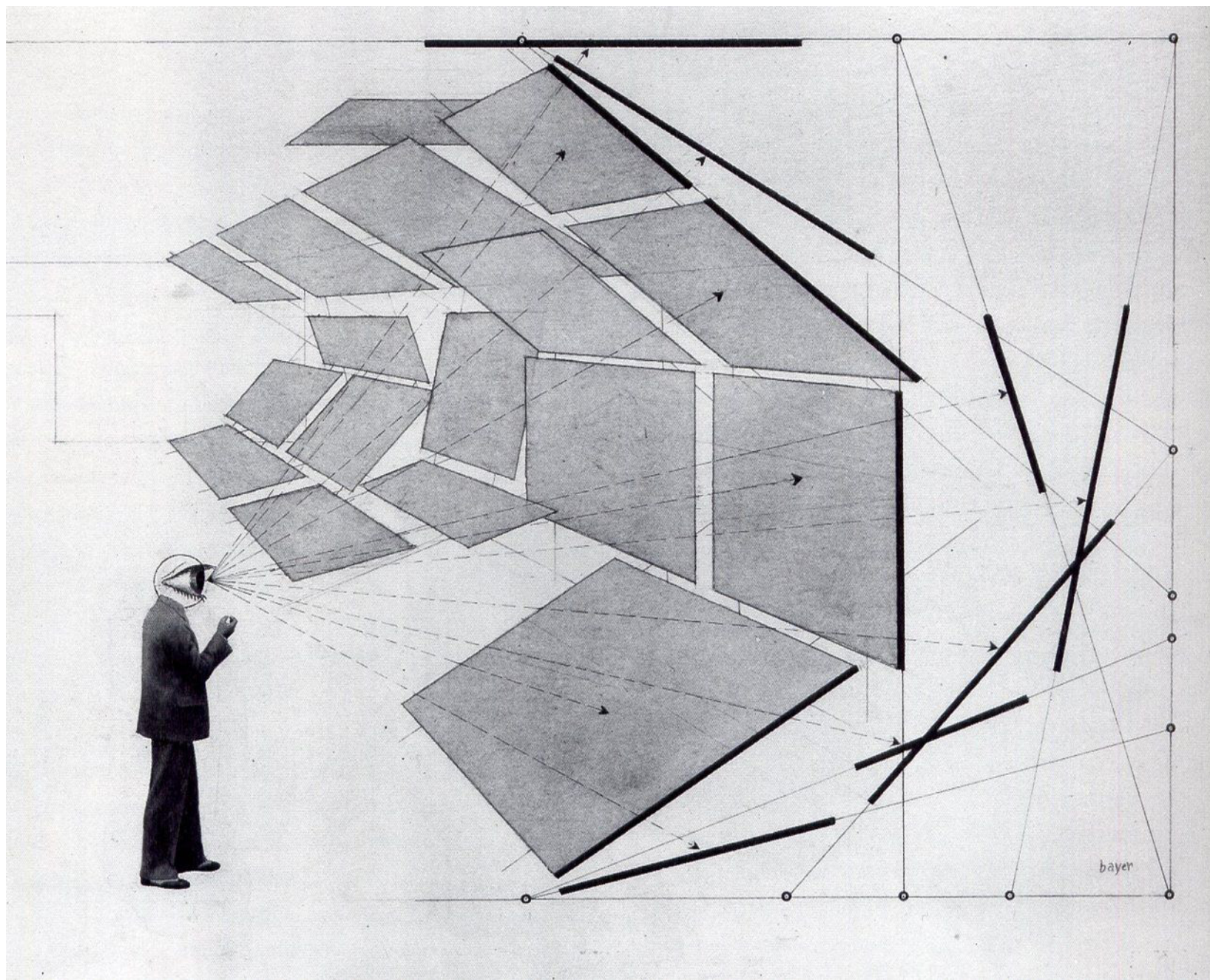
Ed Davey
Setting up Zoom, 2020



Stanley Kubrick
Dr. Strangelove, 1964



Stanley Kubrick
Dr. Strangelove, 1964



Herbert Bayer
Diagram of the Field of Vision, 1930



J.R. Wharton Eyerman
First 3D motion picture at Paramount Theater, Los Angeles, 1952



Philippe Ramette
Object for seeing the world in detail, 2007



Matthew Lloyd
VR at World Economic Forum, Davos, 2016



Neilson Barnard
Virtual New York Times, 2015



Vincent Capman
Google Cardboard VR headsets in the outdoors, Mont Blanc, 2015



Walter Bieri
Women's strike in Helvetiaplatz, Zürich, 1991



José Moscardi
Demonstration at the FAU USP building designed by Vilanova Artigas, São Paulo, 1996



David Grandorge
Vertical protest at London Metropolitan University, London, 2015



Bob Adelman
People's Wall, World's Fair, New York, 1965



Tayfun Coskun
Storming of the United States Capitol, Washington DC, 2021



Win McNamee
Storming of the United States Capitol, Washington DC, 2021



Andrew Harnik
Storming of the United States Capitol, Washington DC, 2021



Saul Loeb

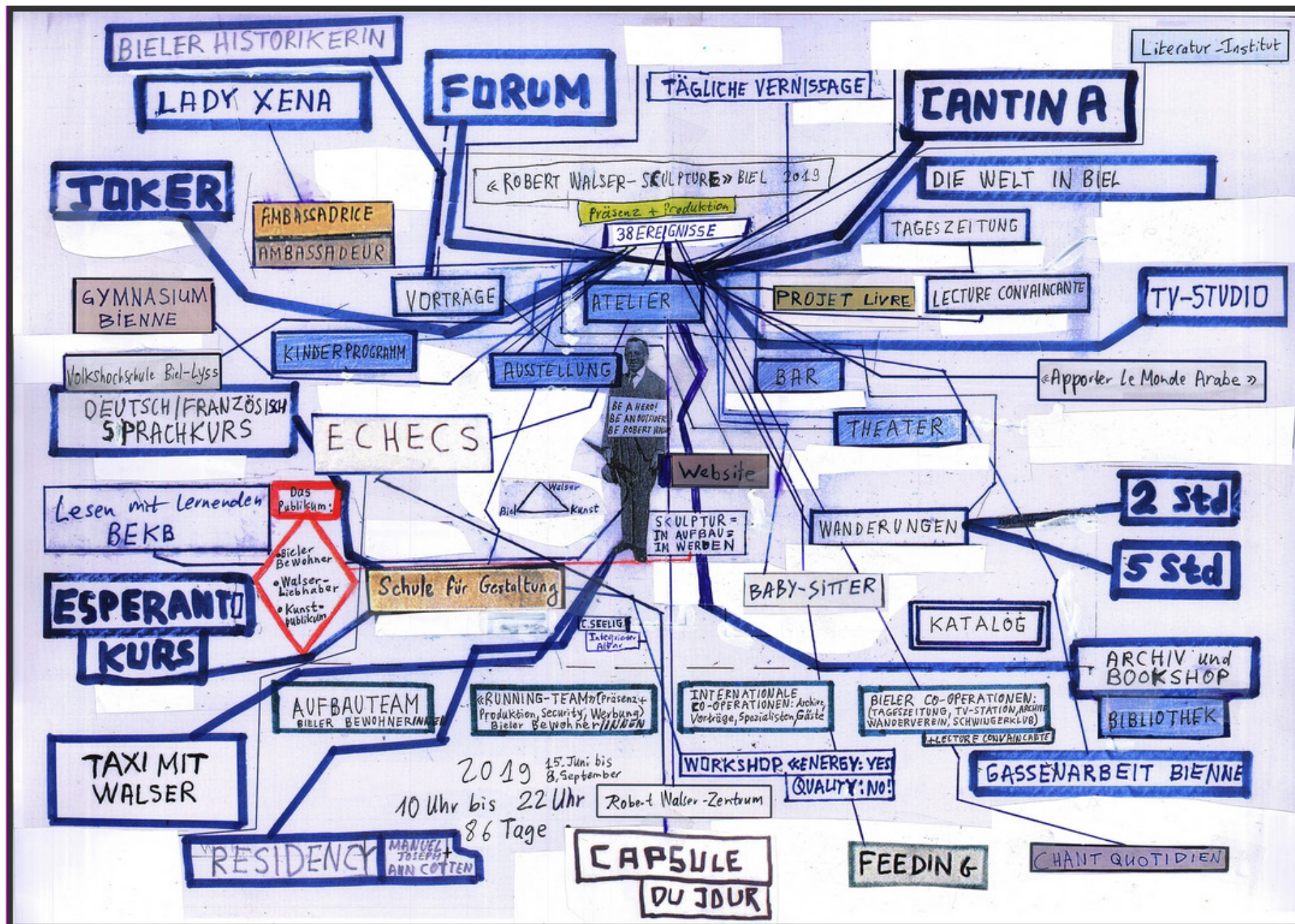
Facial recognition system for law enforcement, NVIDIA GPU Technology Conference, Silicon Valley, 2017



David McNew
Facial recognition and video surveillance in the French government, Paris, 2020



Thomas Hirschhorn
Robert Walser-Sculpture, Biel, 2019



Thomas Hirschhorn
 Robert Walser-Sculpture, Biel, 2019



Jonas Staal
New World Embassy, Rojava, 2016



Jonas Staal
New World Embassy, Rojava, 2016



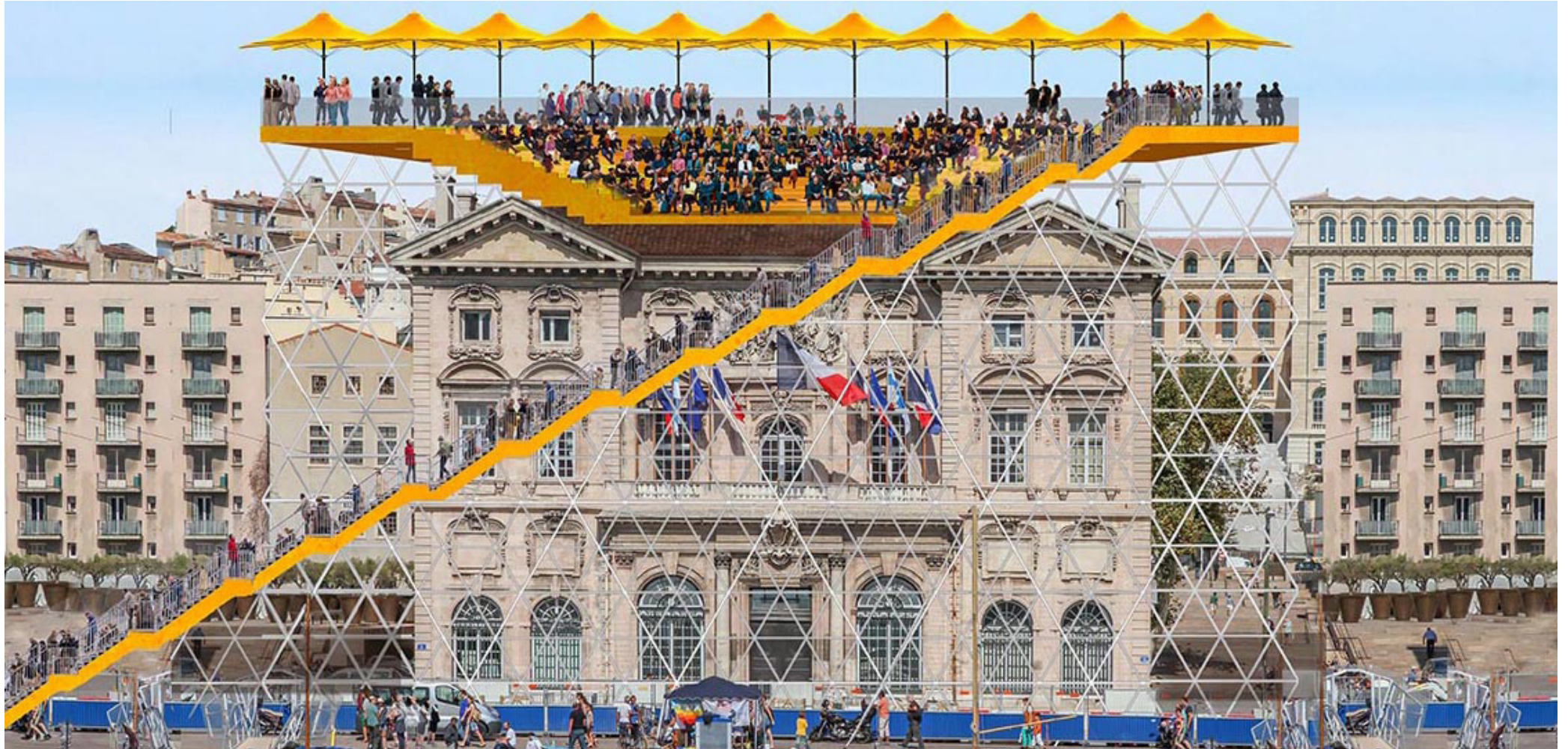
Jonas Staal
New World Summit, Rojava, 2018



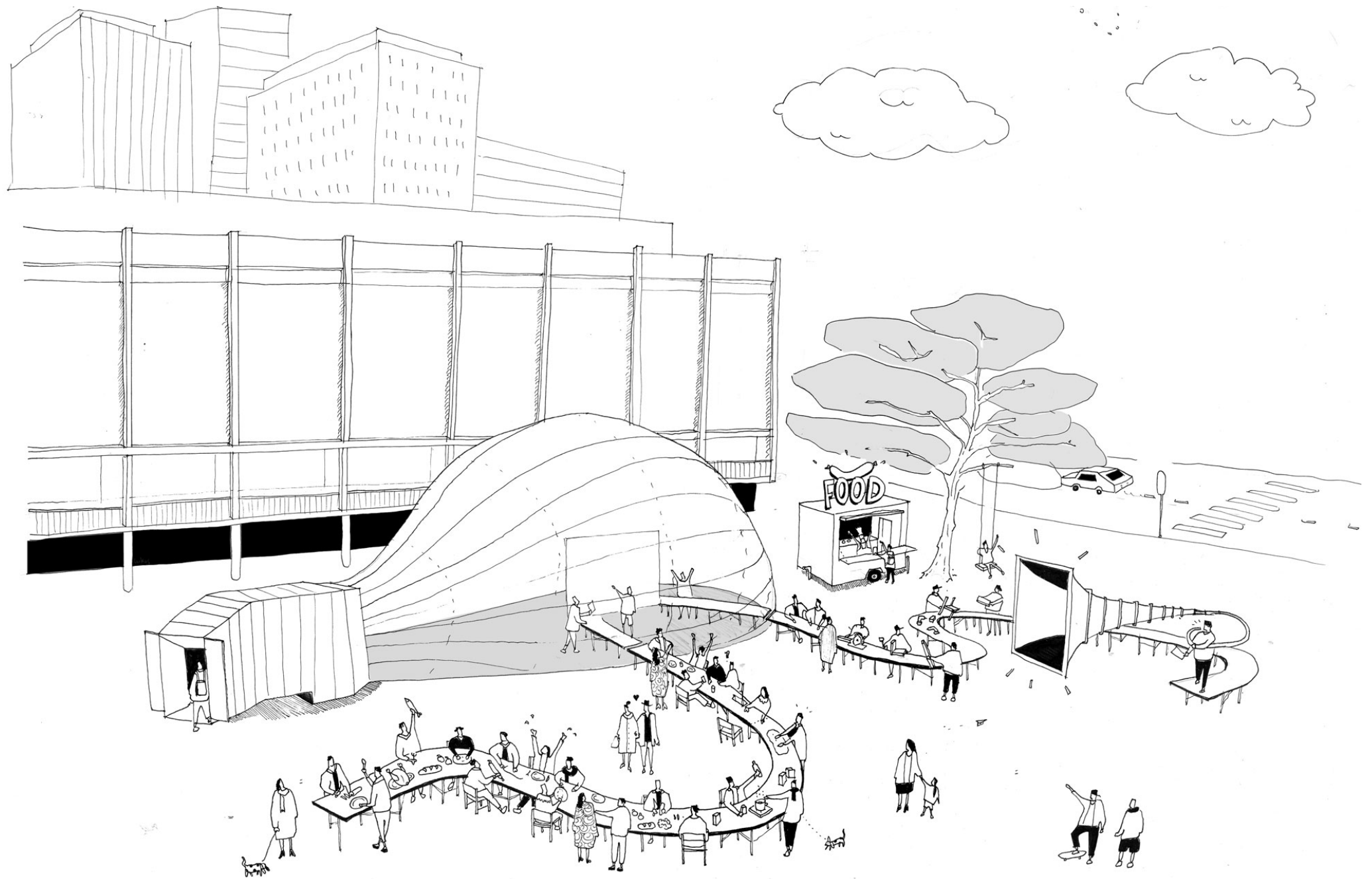
Jonas Staal
Interplanetary Species Society, Stockholm, 2019



raumlabor
Dialogue as Form, Tel-Aviv, 2019



MVRDV & The Why Factory
The Elevated Plaza, *Manifesta 13*, Marseille, 2020



raumlabor
Popup Monument, Frankfurt am Main, 2017



raumlabor
Tempelhof Workshop, Berlin, 2016



raumlabor
Kitchen Monument, Venice, 2010



Studio Tom Emerson
Pavilion of Reflections, Zürich, 2016



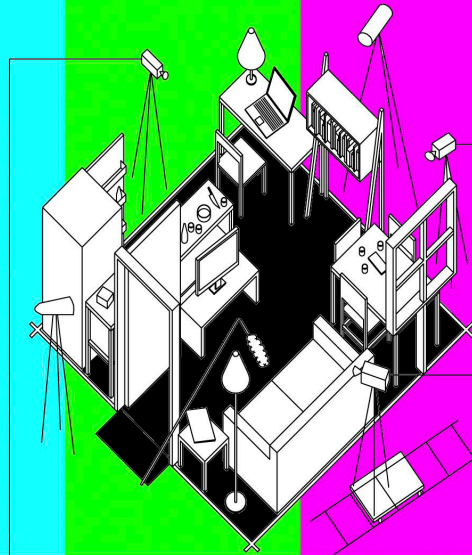
Studio Tom Emerson
Pavilion of Reflections, Zürich, 2016

NEVER DISCUSS POLITICS AT HOME

THE DOMESTIC SET:

LOCATION: WAREHOUSE,
MELBOURNE, AUSTRALIA.

INGREDIENTS:
DOOR, WINDOW, COUCH,
FRIDGE, MICROWAVE,
TABLE, KITCHEN, DESK,
BOOKSHELVES, LAMPS,
CARPET, COATRACK, BIN,
DOORMAT, MIRROR, PLANT,
DOG, VACUUM, FAN, SCALE,
KETTLE, TOASTER, CLOCK,
FLOWERS, CHAIRS, ETC...

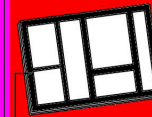
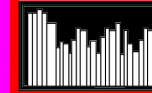


THE DOMESTIC DEVICES:

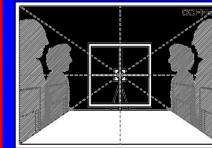
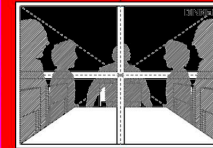
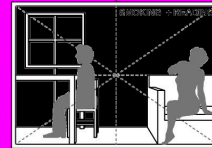
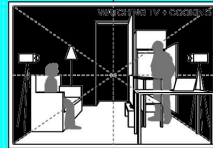
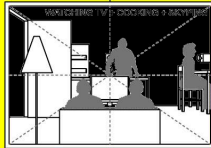
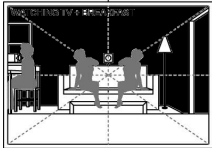
TELEVISION, COMPUTER,
SMARTPHONE, TABLET,
NEWSPAPERS, MAGAZINES,
RADIO.

PITURES, MAPS, LISTS,
TABLES, CATALOGUES,
GUIDES, DICTIONARIES,
CONTRACTS, INSTRUCTIONS,
RULES.

EXTERNAL TERRITORIAL
CONFLICTS INTO THE
THE DOMESTIC LIFE.



DOMESTIC SCENES



INTRO
1:00

2:00

2:00

1:00

1:00

0:30

1:00

1:30

3:00

0:30

1:00

0:30

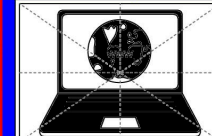
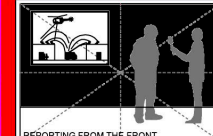
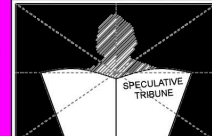
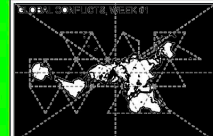
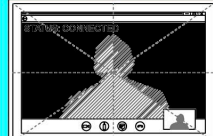
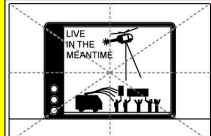
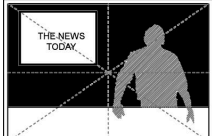
1:00

1:00

2:00

END
0:30

MEDIA CAPSULES





Angela and Anita, New York, USA, power couple for an innovative green city that will integrate seamlessly with nature.



John and Mikalah, from Toronto, Canada, competing to fund their IVF treatment, so they too can raise a family. Children are the future and this couple want plenty of them.

Ken and Peter from Hong Kong are building the art and culture capital of the world. Their Instant Nation will be the first global cultural precinct for exploring creative human power in a free society of artists and entrepreneurs.



ANGELA Y ANITA, DE NUEVA YORK, USA,
SON UNA PODEROSA PAREJA





Vanessa Grossman & Ciro Miguel
Tour of political spaces in Zürich, *Megalomania*, 2020

Important Dates

Spring, 2021

Studio Introduction

Feb 22

Phase I: Learning Political Spaces

Feb 23-Mar 9

Studio trip to Bern/Swiss Parliament

Mar 15

Phase II: Spatial Virtualization

Mar 16-Apr 12

Spring break

Apr 5-6

Phase III: Hybridization Design Proposal

Apr 13-May 3

Phase IV: Representation

May 10-25

Final review

May 31-Jun 1

The studio theme spans the entire academic year of 2020/21.

Accordingly, there will be continuity between the fall and spring semester, but each semester can be followed independently.

Dates are subject to change.

Prior programming experience is not required.

Team

Media x Design Laboratory

Prof. Jeffrey Huang

Christina Doumptoti, Christoph Holz,

Mikhael Johanes, Frederick Kim,

Gianna Ledermann