



Transporting Eating Architecture
Lavash • Լավաշ

Rhode Island School of Design

M. Arch Degree Project

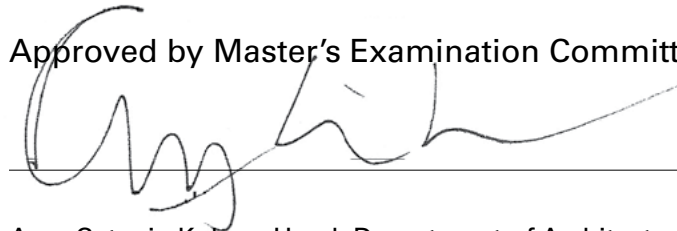
Margaret Kiladjian '18

Transporting Eating Architecture


A thesis presented in partial fulfillment of the requirements for the degree Master of Architecture in the Department of Architecture of the Rhode Island School of Design, Providence, Rhode Island.

By Margaret Kiladjian '18

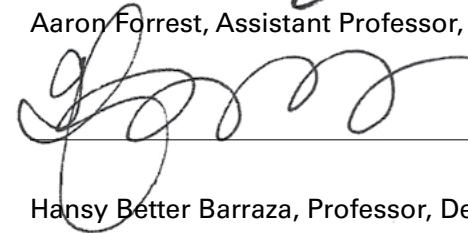
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Ani Babaian, NAASR and Jim Williams, Seven Stars Bakery

My family and friends

My late father

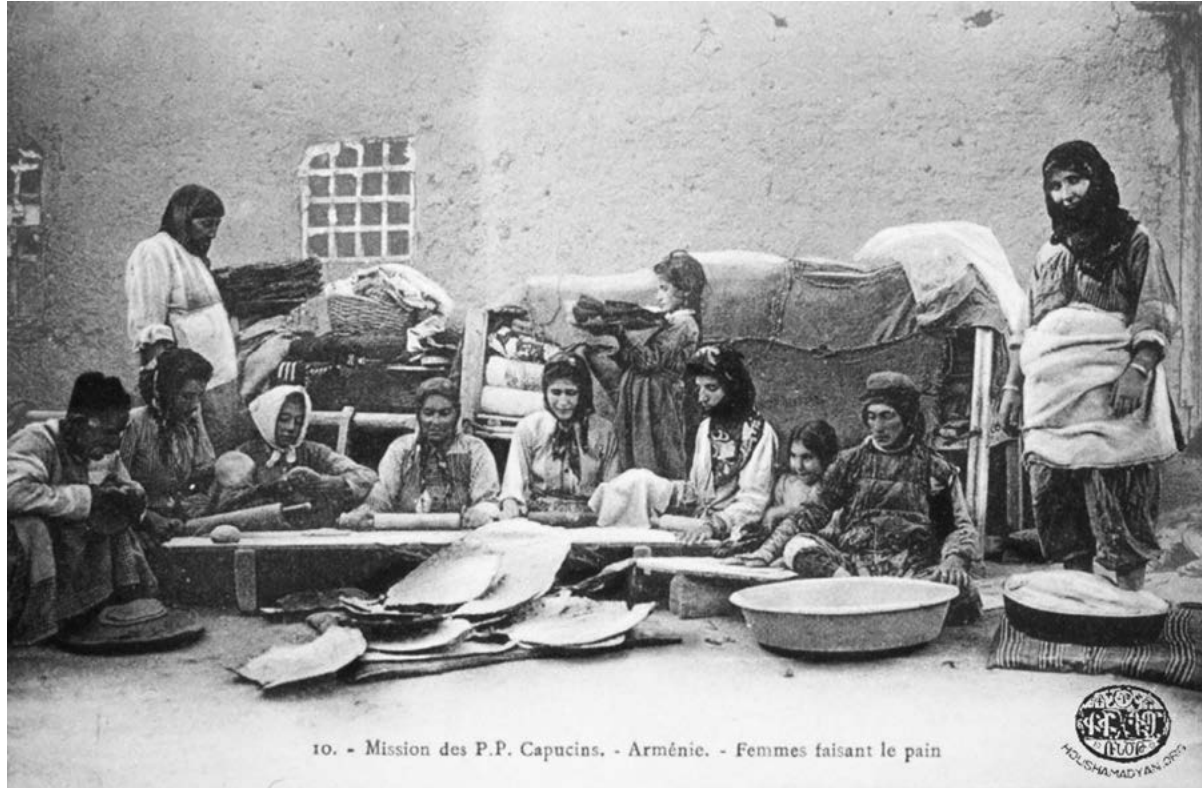
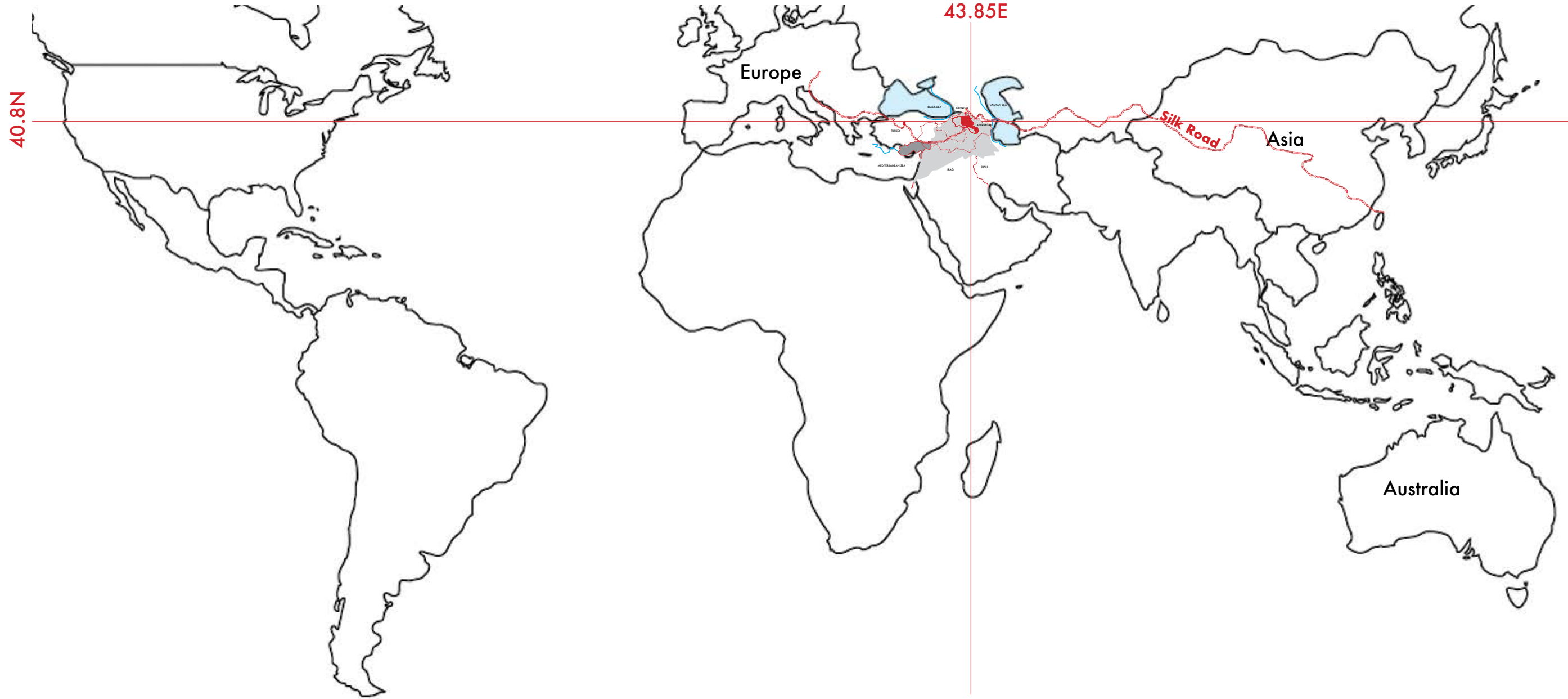
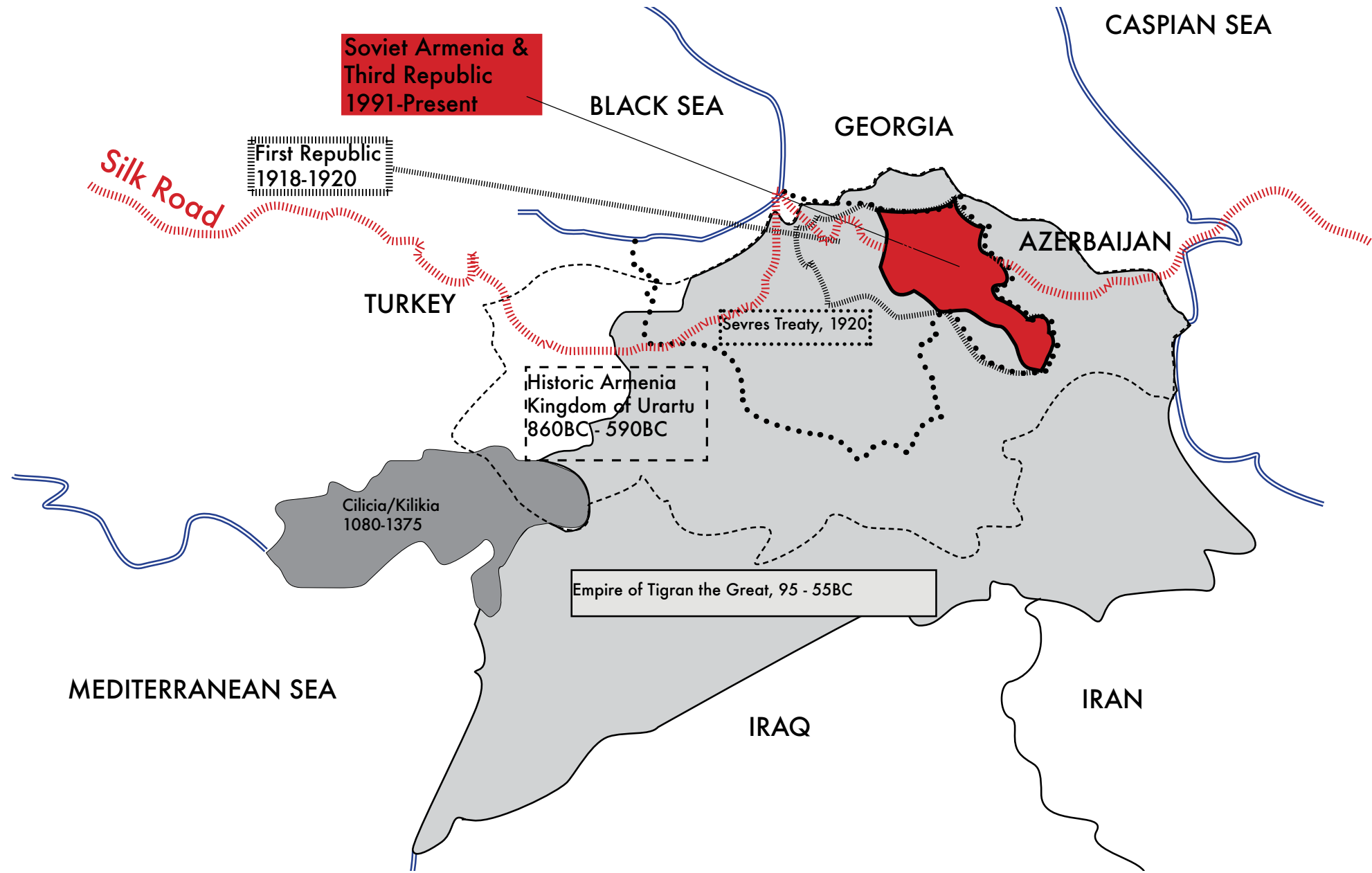


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Soviet Armenia & Third Republic
1991-Present

First Republic
1918-1920

Silk Road

BLACK SEA

CASPIAN SEA

GEORGIA

AZERBAIJAN

TURKEY

Sevres Treaty, 1920

Historic Armenia
Kingdom of Urartu
860BC - 590BC

Cilicia/Kilikia
1080-1375

Empire of Tigran the Great, 95 - 55BC

MEDITERRANEAN SEA

IRAQ

IRAN

Thesis Statement

How could I transport a taste of the Armenian culture through a practice of everyday life? Centuries ago, village women performed the baking of Lavash bread in a hearth. This rather theatrical act, bland and part of the “musts” of the everyday Armenian life became a bearer of my identity, history and culture and now a UNESCO World Cultural Heritage.

The process is a ritual ceremony that involves a group of women each with their own task; from preparing the dough using ttkhmor (fermented remnant of the previous batch) to shaping, rolling, stretching and baking it in a clay hearth (Tonir) built in the ground. Specific tools are used for the baking of this flatbread such as hey filled pillow, hooked rod, okhlao (wooden rolling dowel) and salt stored in a clay cellar.

What aspects of this culinary art evokes the Armenian culture? Would it be sufficient to use the exact recipe, tools and method to transport this cultural heritage? What kind of architecture can act as a catalyst in the transport of a practice?



UNESCO describes Lavash as the following:

Lavash is a traditional thin bread that forms an integral part of Armenian cuisine. Its preparation is typically undertaken by a small group of women, and requires great effort, coordination, experience and special skills.

A simple dough made of wheat flour and water is kneaded and formed into balls, which are then rolled into thin layers and stretched over a special oval cushion that is then slapped against the wall of a traditional conical clay oven. After thirty seconds to a minute, the baked bread is pulled from the oven wall.

Lavash is commonly served rolled around local cheeses, greens or meats, and can be preserved for up to six months. It plays a ritual role in weddings, where it is placed on the shoulders of newlyweds to bring fertility and prosperity. The group work in baking lavash strengthens family, community and social ties.

Young girls usually act as aides in the process, gradually becoming more involved as they gain experience. Men are also involved through the practices of making cushions and building ovens, and pass on their skills to students and apprentices as a necessary step in preserving the vitality and viability of lavash making.

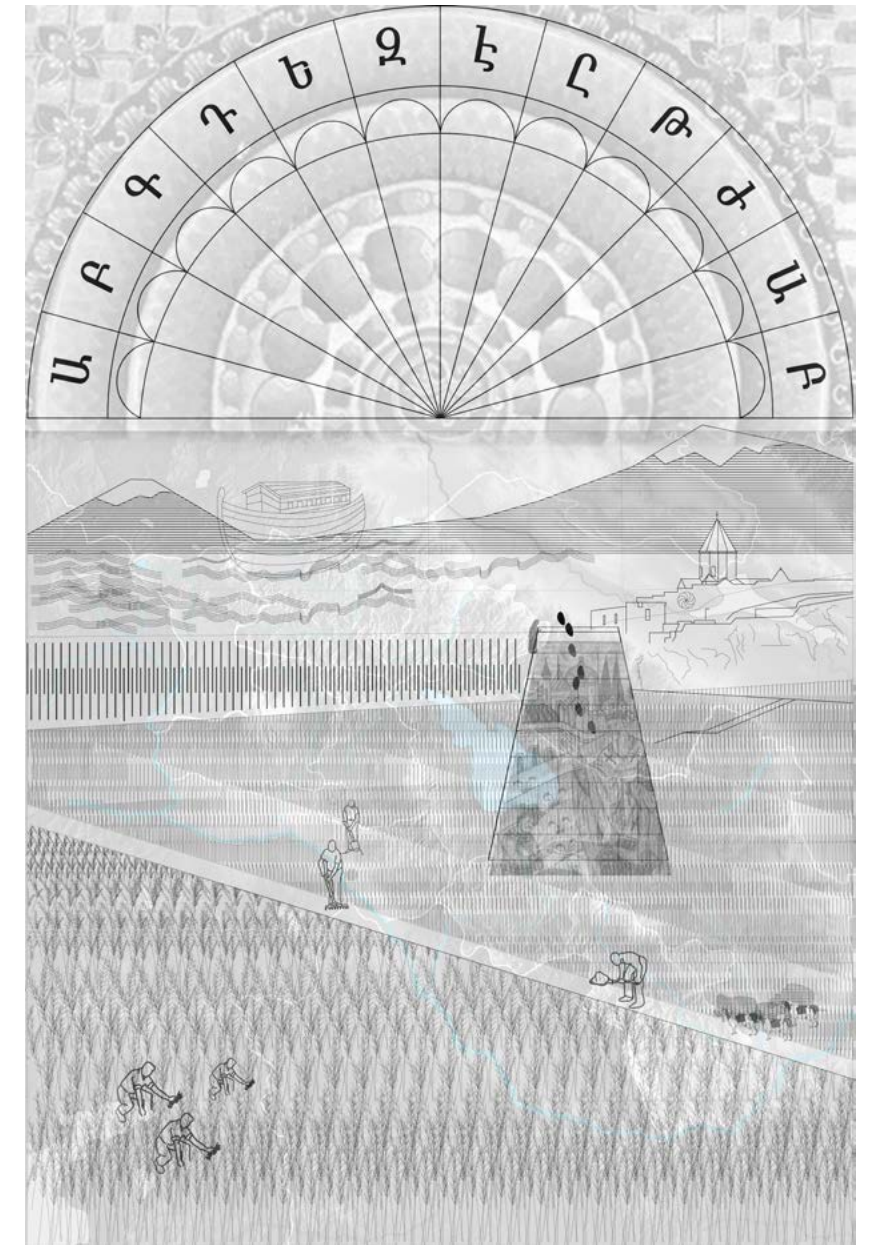


Fig 1 A drawing/collage depicting the way I see the practice traditionally through a legend

Abstract

For my thesis, I worked on transporting, or perhaps translating, the lavash practice. An Armenian flatbread cooked in a tonir • Թոնիր. A hearth symbolizing the sun in the ground. My disciplinary positioning is one of conservation and preservation.

I looked at the practice of Lavash at three horizontal levels: The land, the refectory and the table. Each of these levels informed me on where and how I would be transporting the practice. The village women, when making lavash, were living next to the field where the wheat is grown and harvested. They were using stone mills, which allowed the grain to be grind at a low temperature. This guaranteed freshness and preserved the grains' all nutrients.

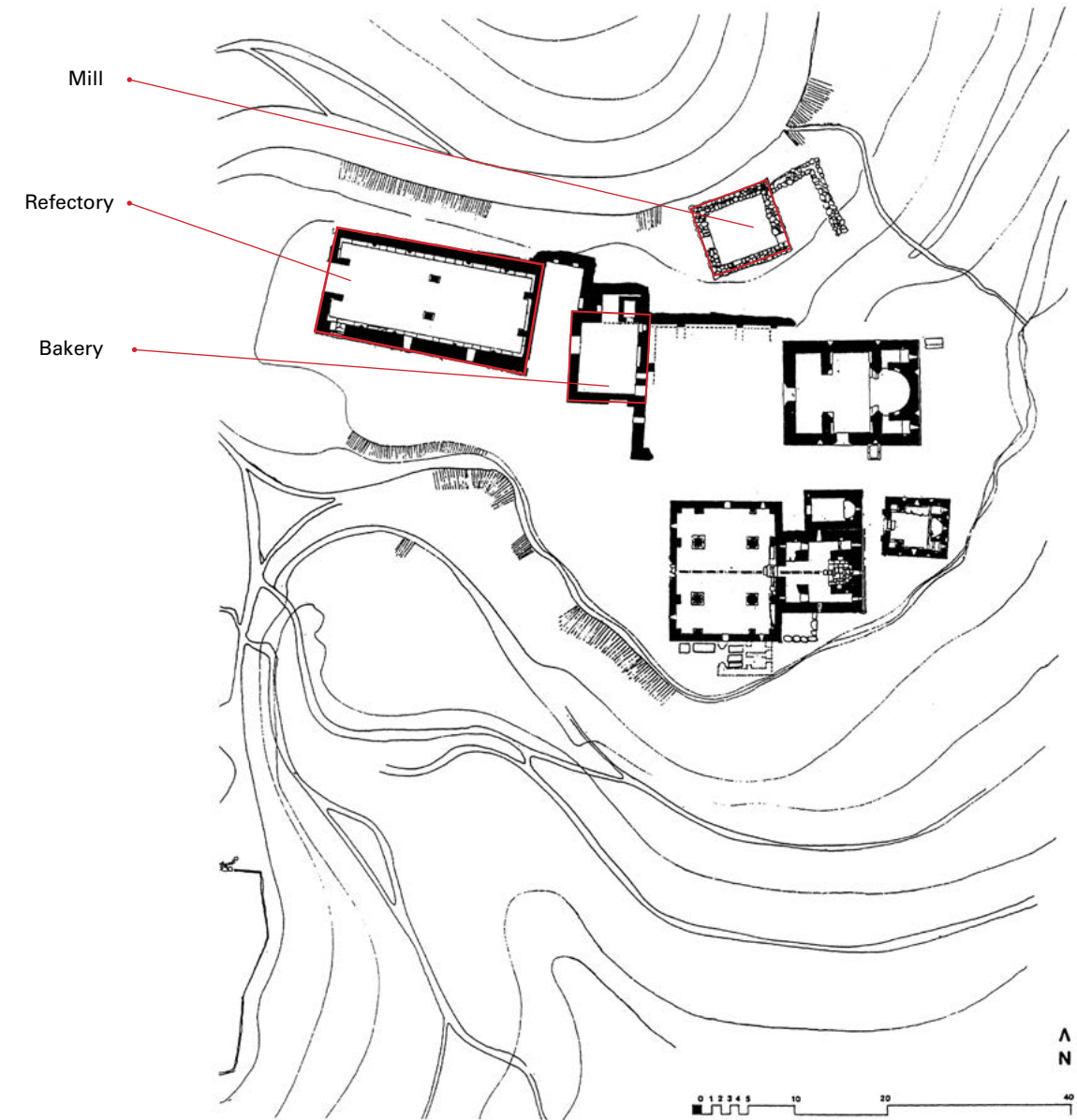
I also looked at the Haghartsin monastery in the Tavush region of Armenia because it had a refectory next to a bakery and a big stone mill. Again, the bread was consumed in proximity to where the grain was harvested, milled and the dough was baked.

These analysis lead me to choose a site that would allow me to plant and harvest the wheat. A site that would include big stone mill(s) and a place/silos where grain could be stored. My proposal's objective mainly allows people to observe and understand the practice, to participate in the making and consuming of Lavash. Ultimately it would be a site for human interaction and gathering through a practice.

I analyzed the practice in a diptych way between Armenian sites where Lavash was practiced. Specifically in the villages and at the Haghartsin monastery and the site where the practice will be transported to: Dry Dock #4 in Boston. Here the practice and the evidence of human activity would generate the space. It is liberated from a particular form. I referenced to De Certeau in his book *The practice of everyday life* when he talks about tactics vs. strategy. So, instead of having (a priori) a set of rules to operate on, the tactic gives the agility to operate anywhere. This would allow the practice to behave differently in Boston vs. in Providence or on a boat for example. Similarly for Tschumi the practice becomes an event or an activity which operates independently from its form. The specificity of the situation is what constitutes the space.

In my view, the practice would be central to the diasporic preservation and conservation and this could be the architecturalization of a practice.

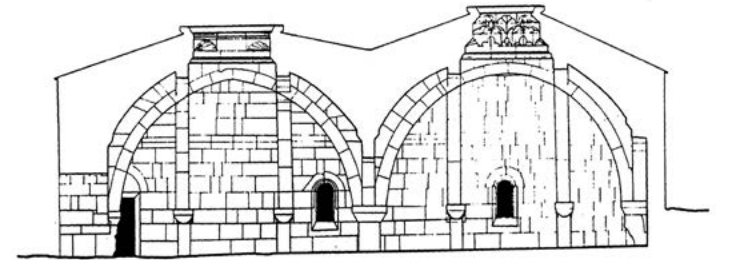
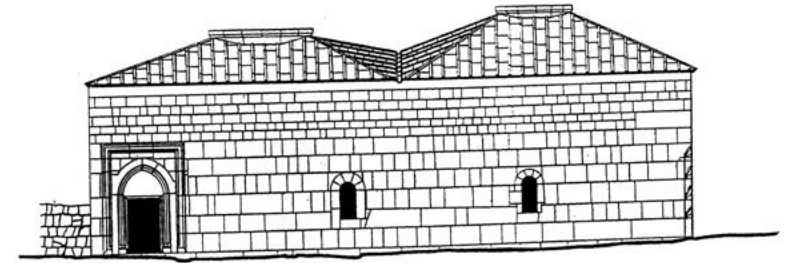
Fig 2 Haghartsin monastery
10-13th Century, near Dilijan,
Tavush, Armenia





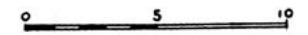
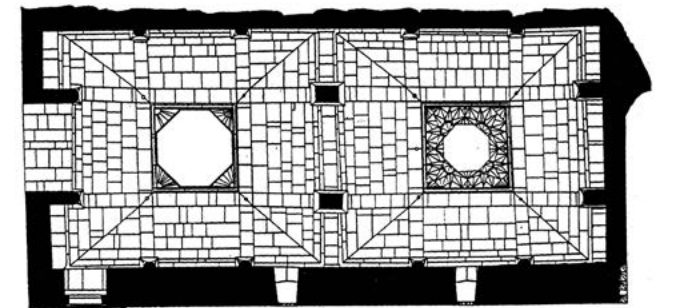
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Fig 3 Hagharstsin monastery's Refectory.



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Fig 4 Refectory Elevation (top), cross-section (middle), and plan (bottom)





The Eternity Sign • Հավերժության նշան • Արևախաչ

The “sun cross” is one of the most commonly used symbols in Armenian Architecture. An ancient symbol of the national identity. Here seen on the Haghartsin monastery.

Bauer-Mannorff, Elisabeth (1981). Armenia: Past and Present. Reich Verlag. p. 89. “The circle, as a line returning upon itself, represented perfection. Having neither beginning, nor end, it was the symbol of eternity. The architects expressed the concept of everlasting, celestial life in the knowledge of the presence and effect of the divine power by sphere.”

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This form is how I decided to have a central big fire in the middle of my site, where the practice can be observed.



Fig 5 Sundial on Haghartsin monastery



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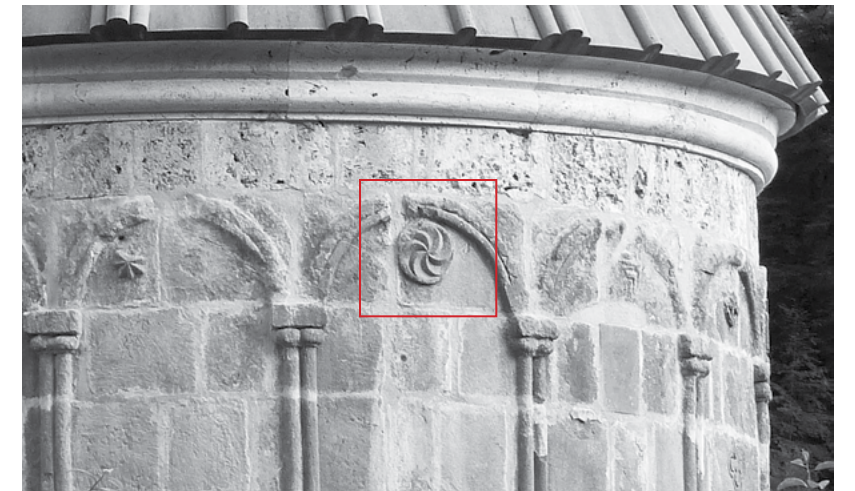


Fig 6 Eternity Sign on Haghartsin monastery

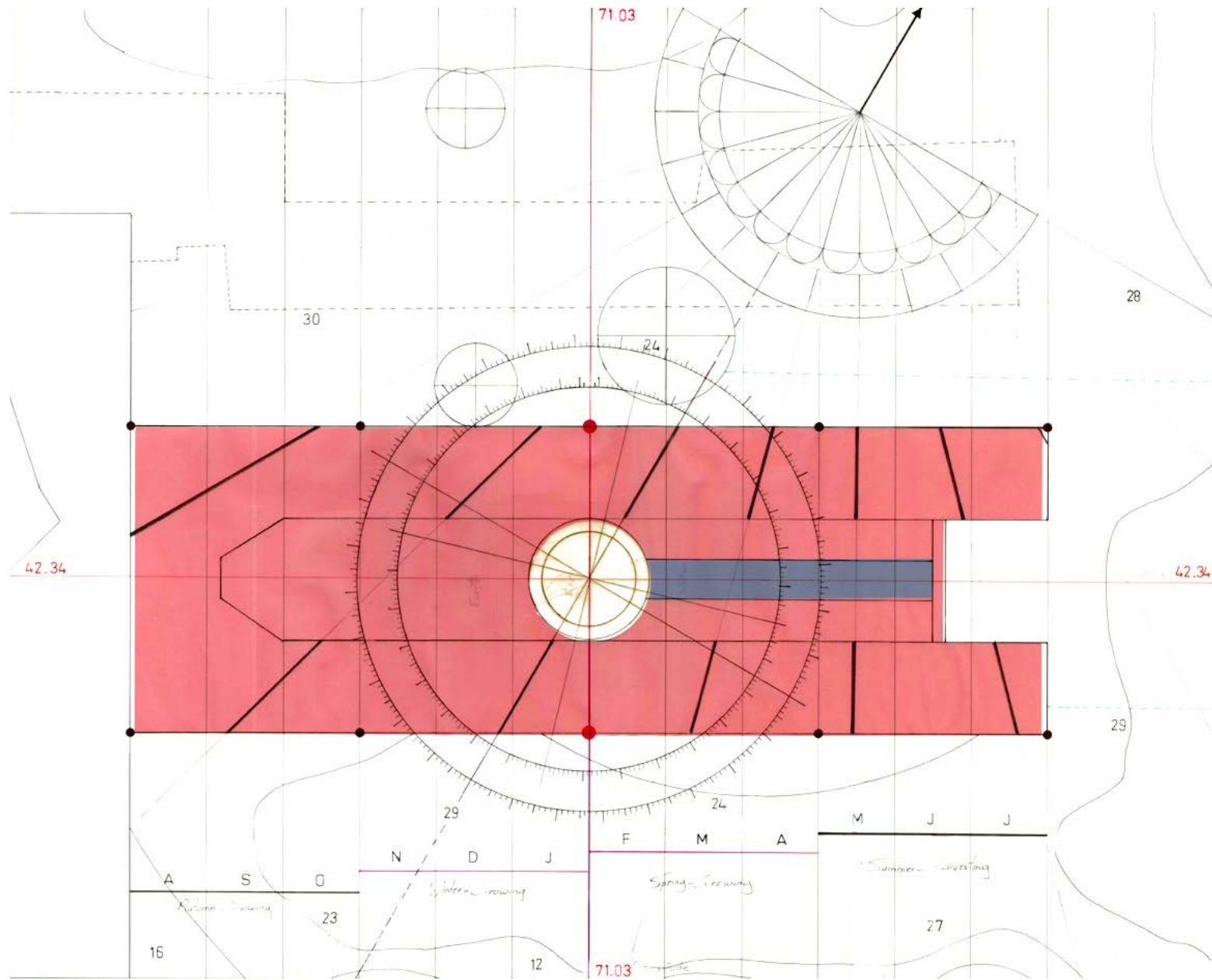


Fig 7 A hand drawing using the sundial and the compass to orient the site and generate the major grid.

Connecting with Nature

Lavash Ingredients: Flour • Sour Dough (ttkhmo) • Salt • Water

Its architecture analogy would be: Earth • Air • Water • Fire

For that, in order to successfully connect and transport the practice, it is primordial that architecture uses nature as it's reference point versus the city. It is "a cultural trend towards the essential, the basic, the roots." Earth, water, air and fire. The most basic elements of our universe is the closest analogy to lavash making and its ingredients.

This isn't a new concept. Architecture always made a connection with nature/landscape/urbanism. But here, my attempt is to make connection thru the lens of one basic/bland food that we take for granted: Bread, more particularly Lavash.

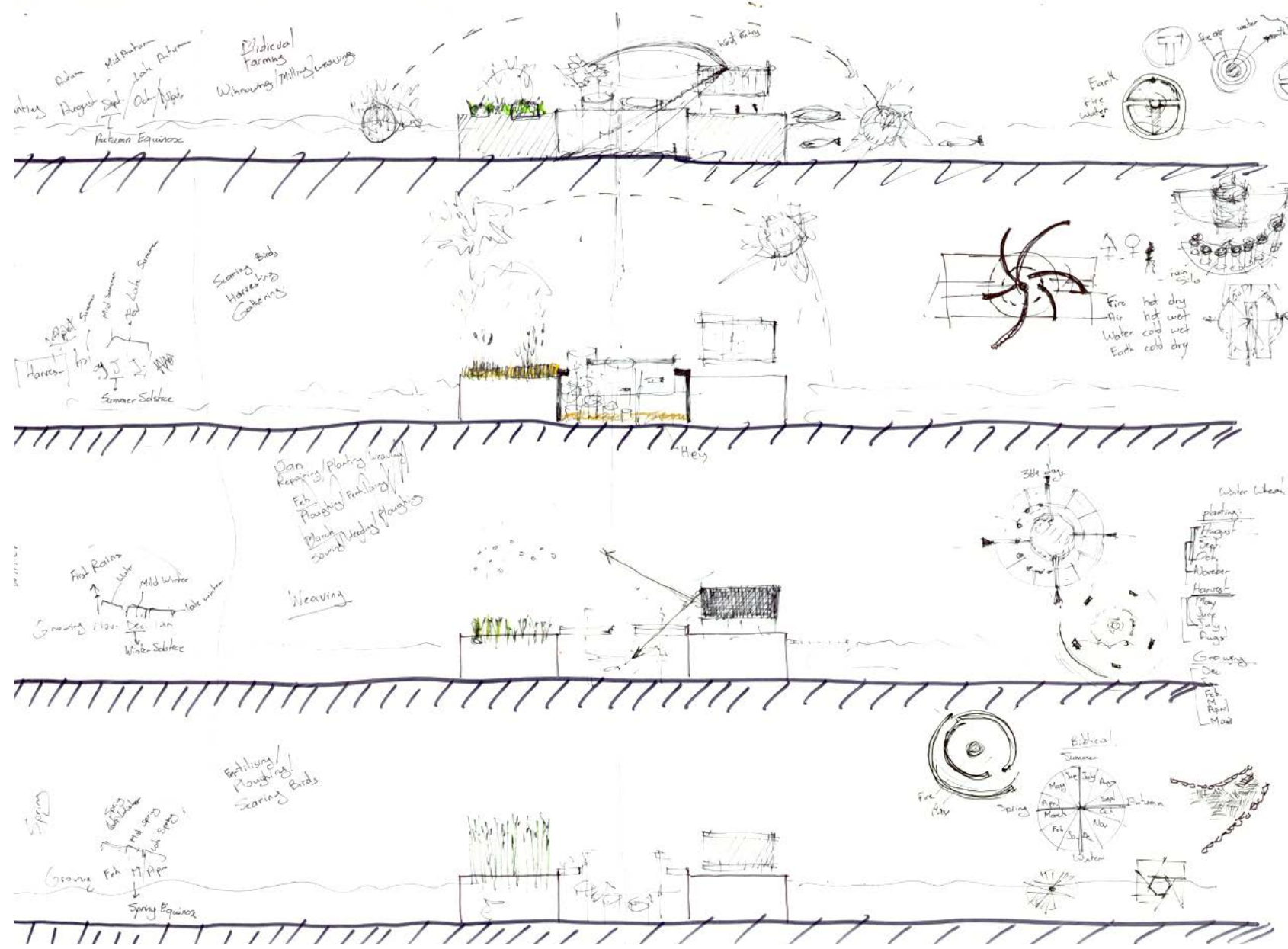


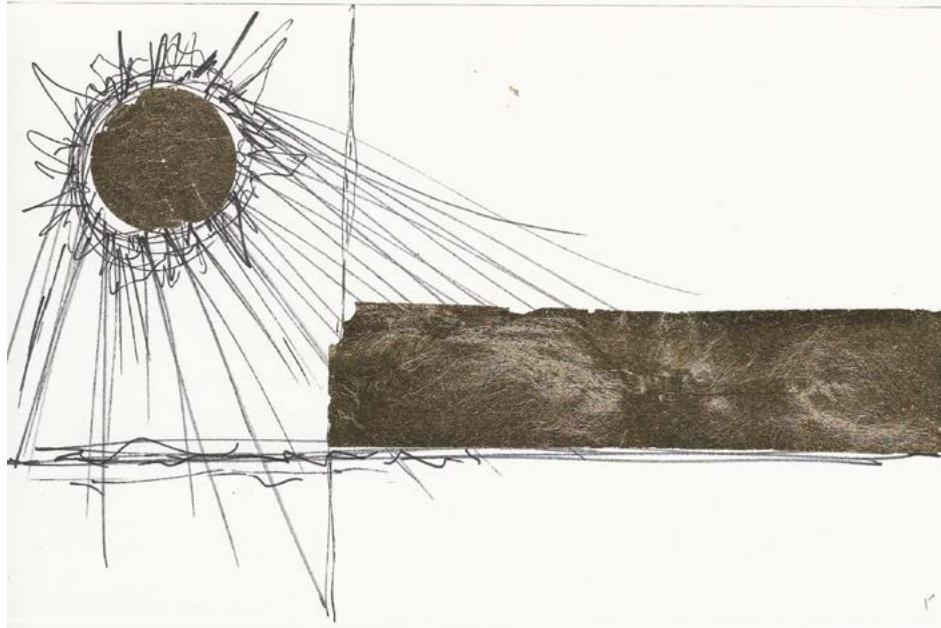
Fig 8 A section study of the different seasons. How wheat would grow on the site.

“Architecture and it’s fabrication of walls, ground and roof is to protect us or rather to put a layer of separation between our physical body in a direct contact with the water, the earth, fire and the air yet our body needs to be nurtured from resources originated from these elements. There is a direct connection between this non-human fabricated environment and the natural/ human unbuilt surrounding.” Liquid from water, heat from fire, oxygène from the air, natural resources from the earth (here the wheat) are a necessity for survival but individually not sufficient. However, water and a bag of wheat along with some air and time for fermentation and fire for cooking hence having bread, would be enough for a lifelong living.

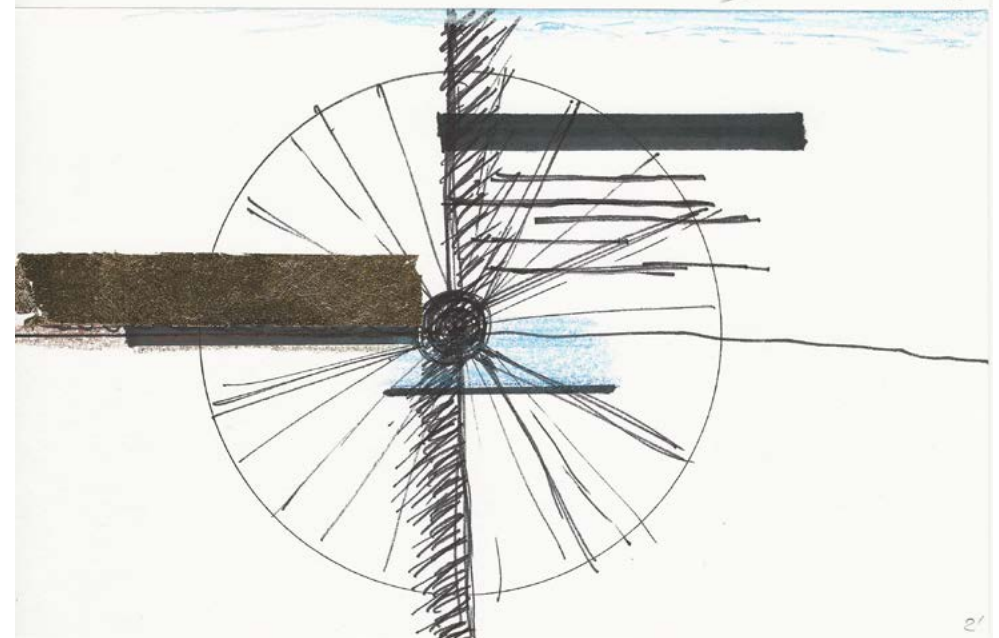
“Bread is gold”

Transforming the gifts of nature
into an achievement of a culture

Sun is gold
Wheat is gold
"Bread is gold"

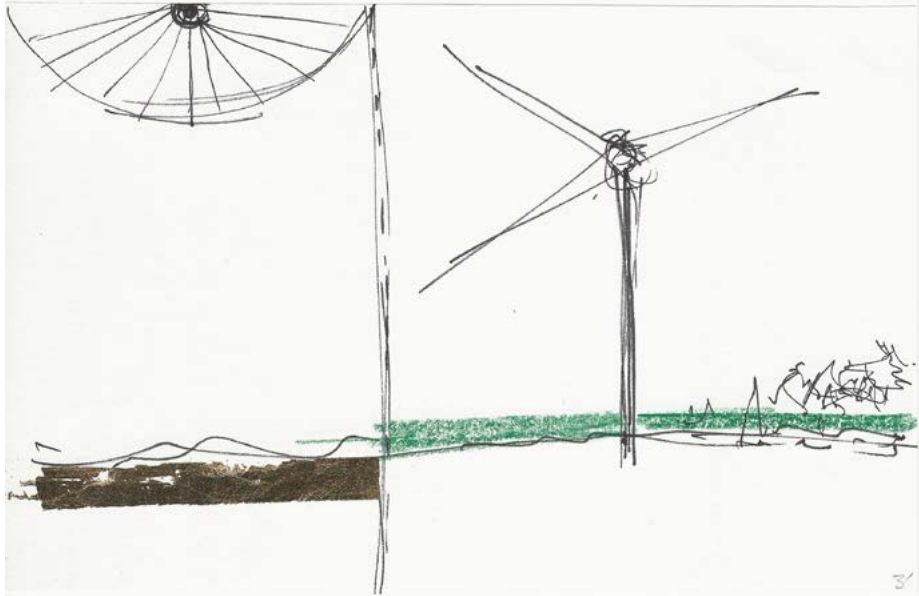


An engagement with the
natural world
Curating an experience
Suddenly the ordinary becomes
an extraordinary
Bringing us to a safe place
A Social Gastronomy

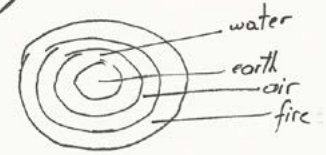


Connecting with nature
→ designing with sustainability
in mind

An abstract idea
with religious overtones
A political argument
with engineering technocracy



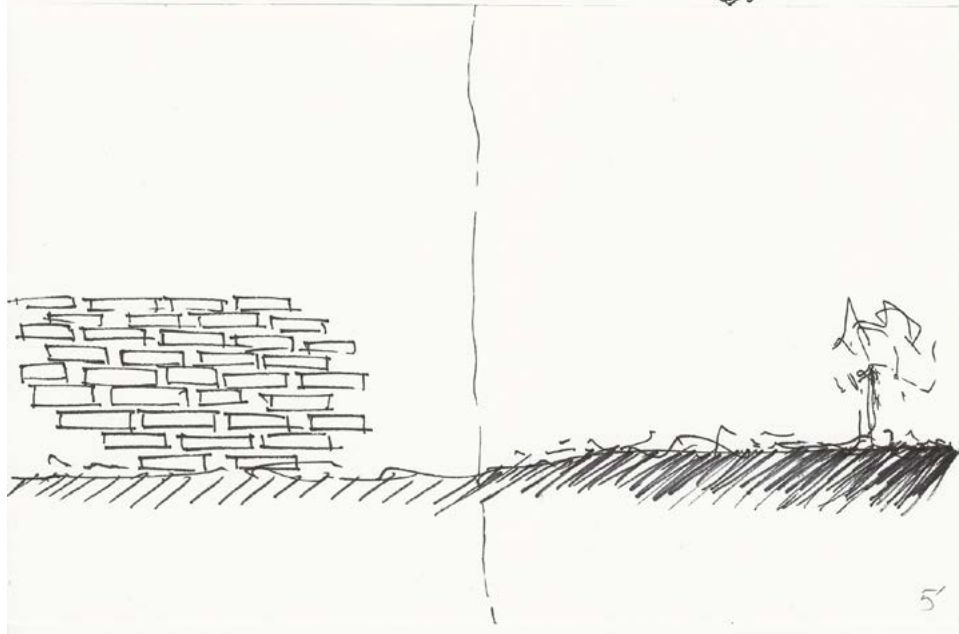
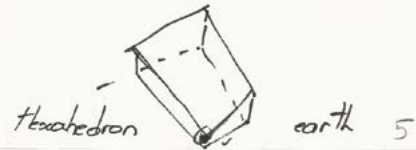
A pre-Socratic philosophers approach
our relation with nature:
the presence of the basic elements
earth, fire, water, air



Alchemy transforms
the physical form
of natural elements, of color
activating our senses
changing abstract to reality
Giving materiality in Architecture

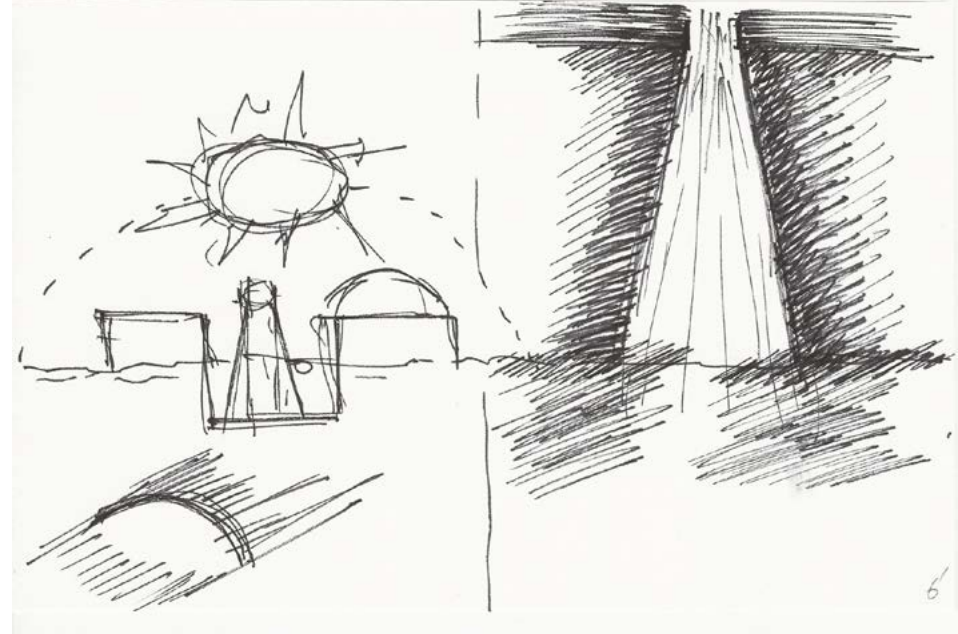
Manipulating the earth
→ giving it form
An archaic approach
Making a space habitable
domesticating an elemental condition

Earth → Wheat → Flour → Larch



Fire's stored chemical energy
becomes light
releases heat
A primeval element
gives matter form
A hearth
in the center of the house
Creates a vertical movement

Heat + light + cooking



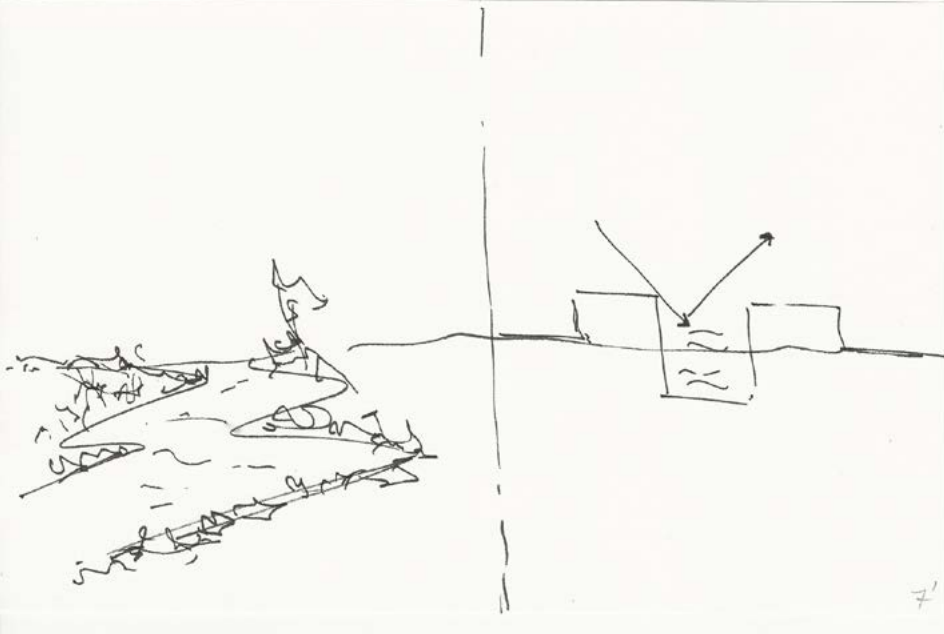
Water is formless, adapts to its container
 changing its form + volume
 liquid → solid
 A landscape of survival
 Reflexion + transparency
 parallel to a glass



icosahedron
[20]

water + flour → dough

Water 7



7'

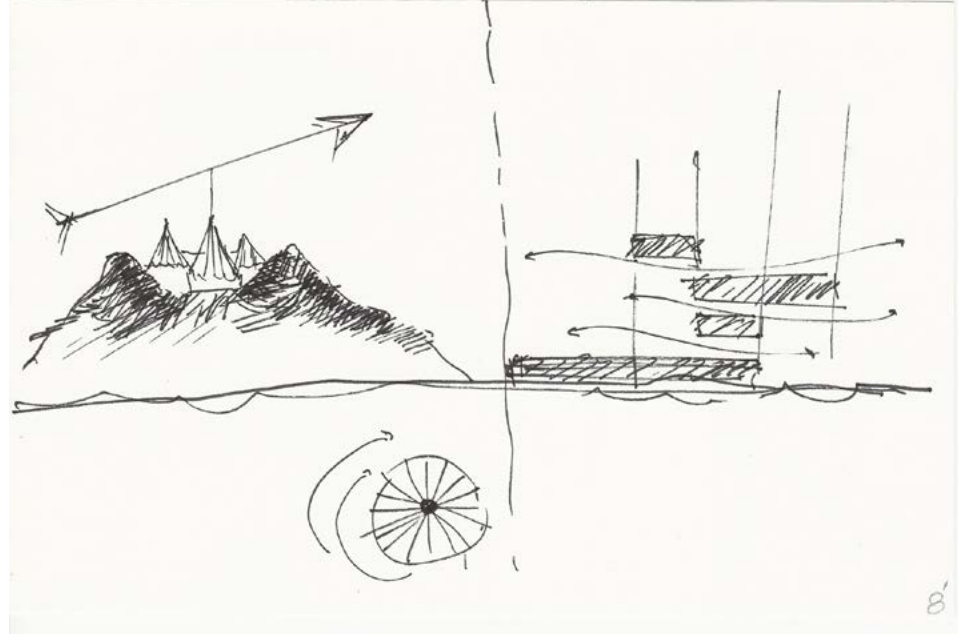
Air surrounds the earth
 invisible, odorless, tasteless
 it dries, purifies, refreshes
 Wind from the air
 a horizontal movement / ventilation
 expansion
 augmentation
 verticality



Octahedra air

Oxygene → Fermentation

8



8'

Making and Dissecting

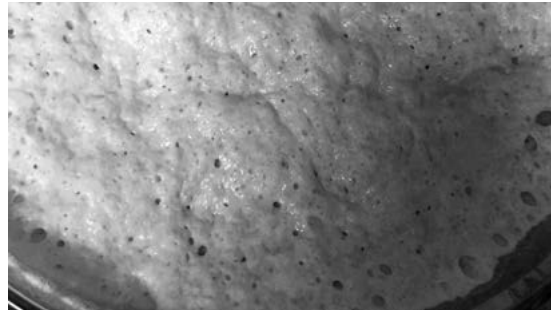
Baking Lavash might seem like a very simple process since it's the combination of only four basic ingredients. However, there's a lot of science in how these four ingredients are mixed. Variables: temperature, water source, sour dough, freshness of the wheat....they all change the bread's characteristics. This is aside the mastery it takes to roll the dough so thin.

The secret to making a good lavash lies on the freshness of the ingredients, the fermentation method and mostly in cooking it in a Tonir. This prompt me to look at the ingredients of lavash under the microscope first then to have the lavash and its ingredients dessicated this time to look at with the SEM (Scanning Electron Microscope.)

Perhaps, enjoying it with friends might be the most important thing! At least that's what I see the architecture's role should be in making a space for a practice.



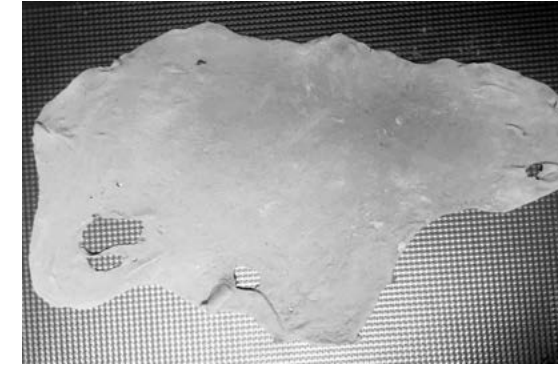
Dough: Flour, Ttkhmor, Salt, Water



Dough after ~4hours



Divide + Rest for ~30min



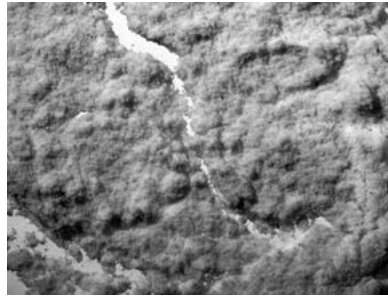
Shape



Bake



My Lavash



Flour @5X Microscope

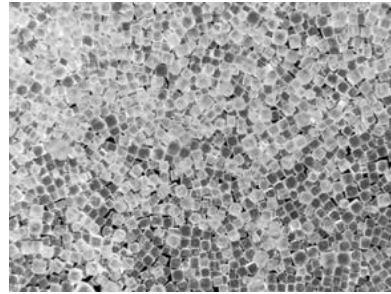
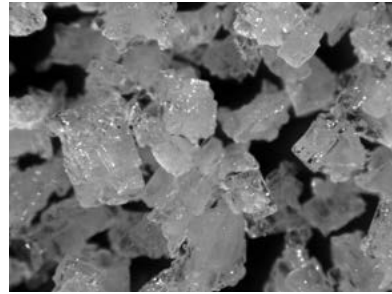
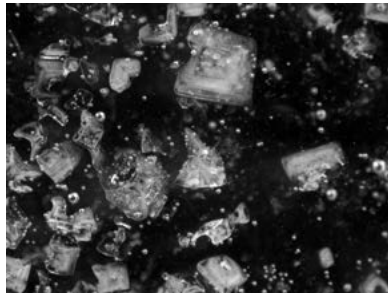


Table Salt



Sea Salt



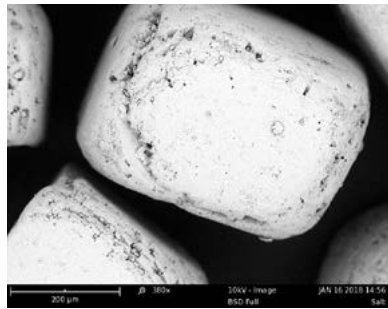
Water & Sea Salt



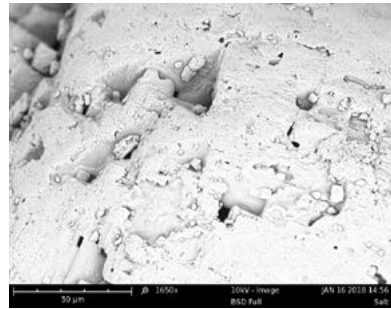
Interior of a Lavash



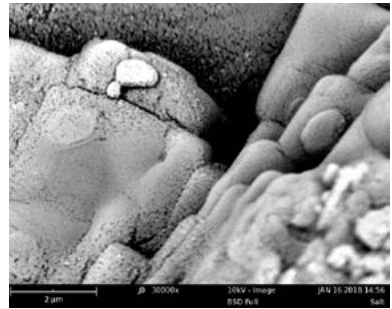
Exterior of a Lavash



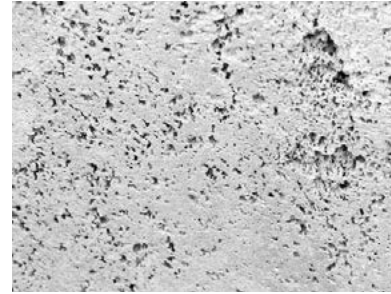
Salt seen under an SEM
(Scanning Electron Microscope.)



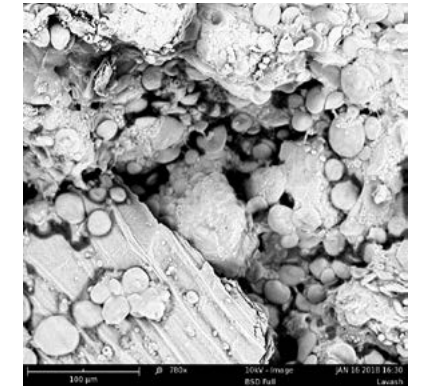
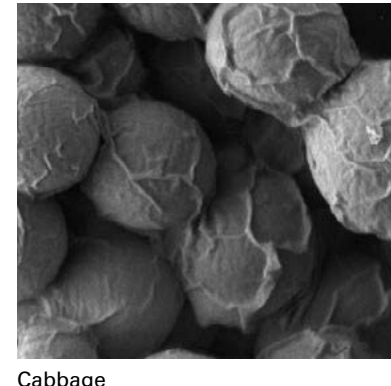
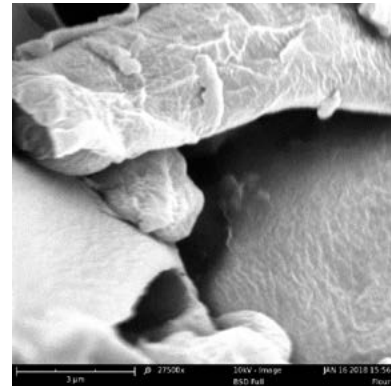
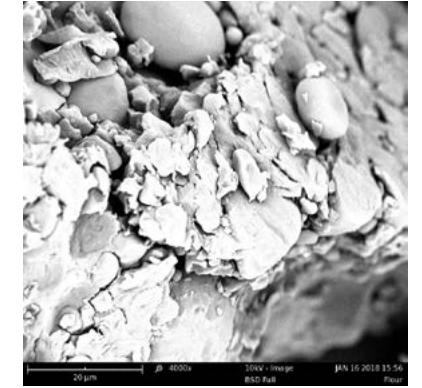
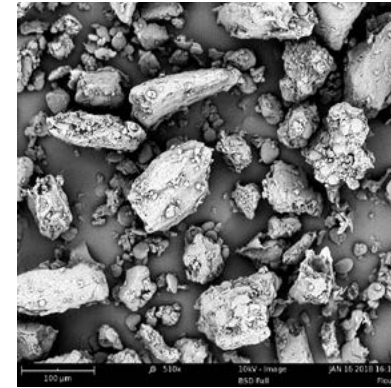
Salt @1650X



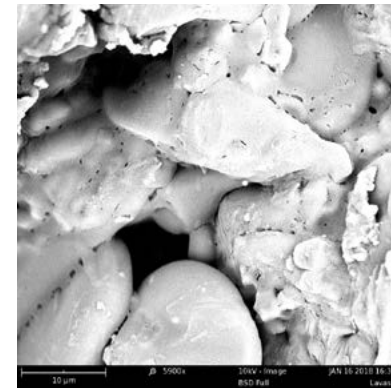
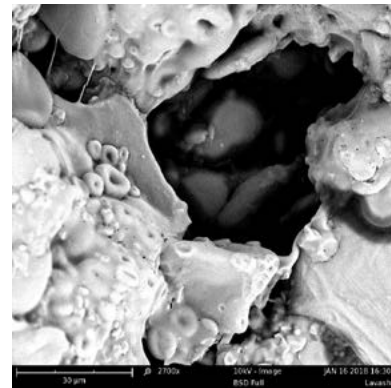
Salt @30000X



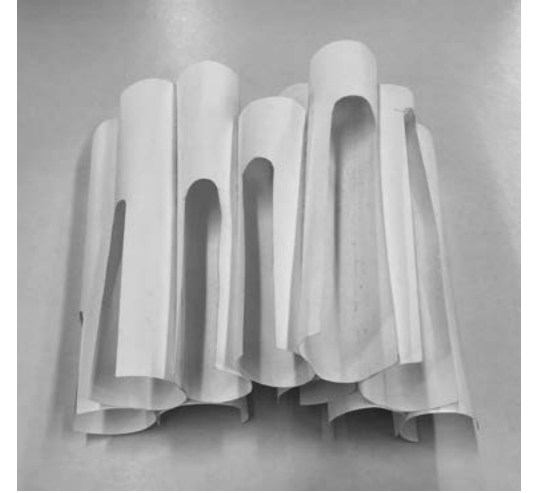
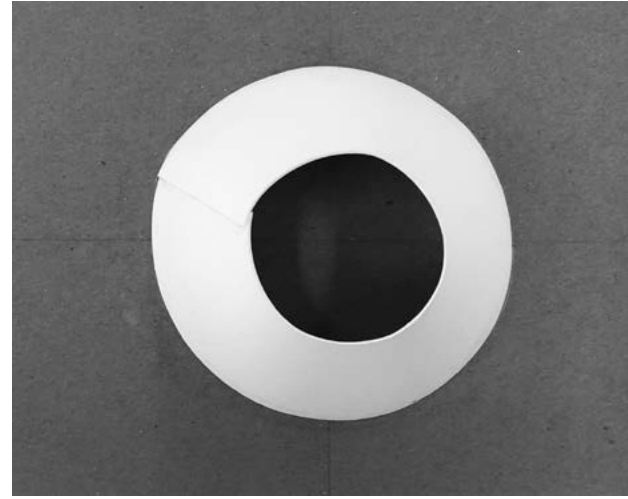
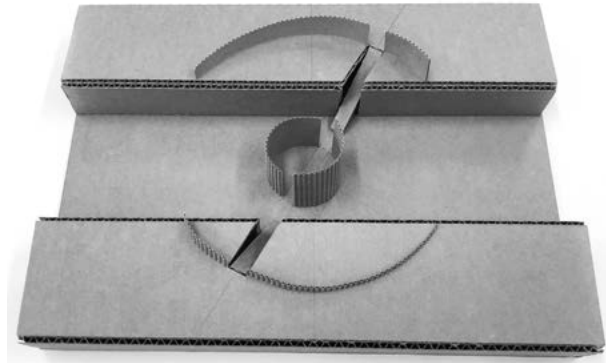
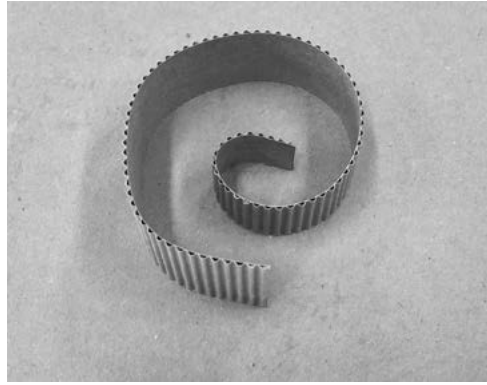
Comparison to Tuff stone.
A rock made of volcanic ashes.
Important in Armenian architecture.



Cabbage



Harrison's Cave, Stalactites & Stalagmites formations. The caves are naturally formed by water erosion through the limestone.



44

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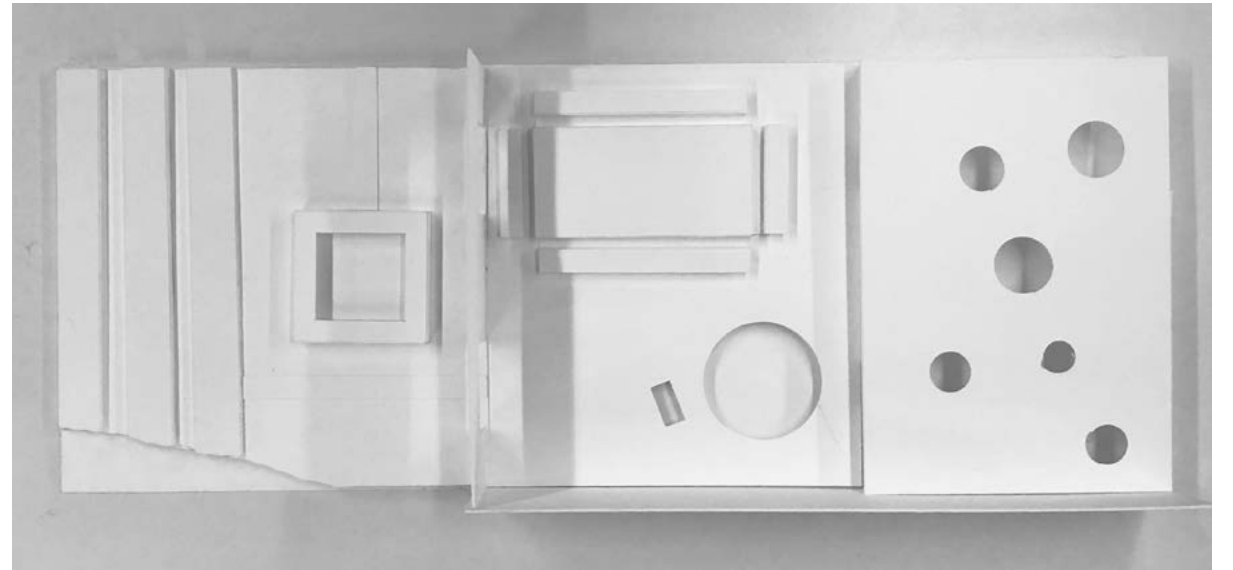
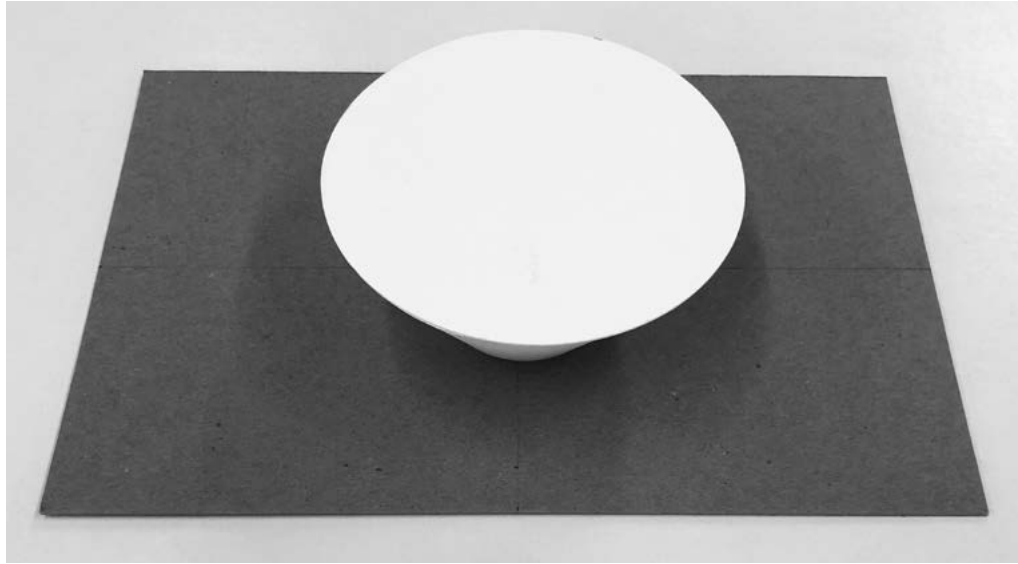
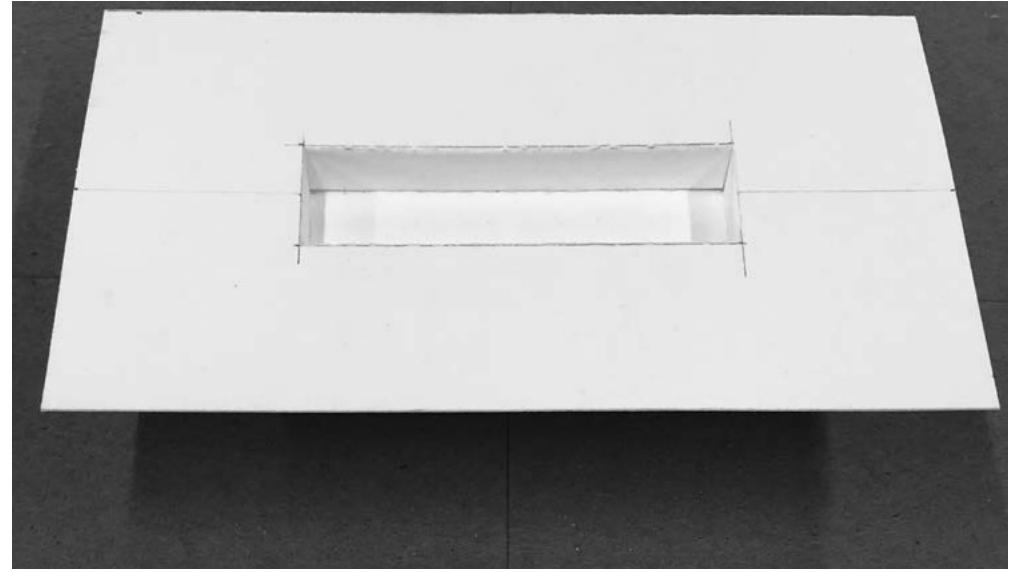
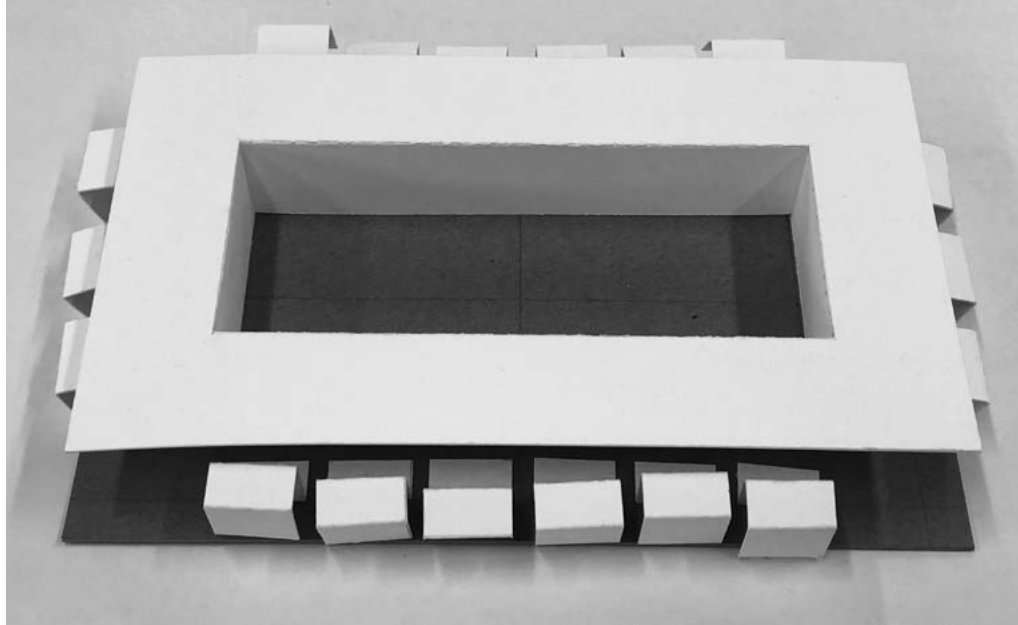


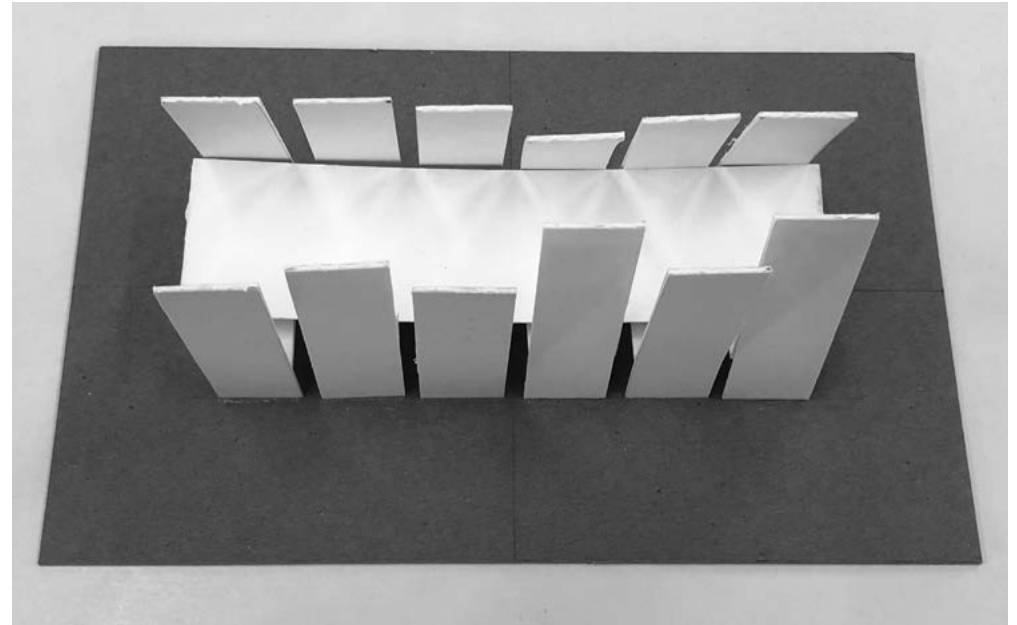
Fig 9 SpacesThrough the Anatomy of Lavash Practice

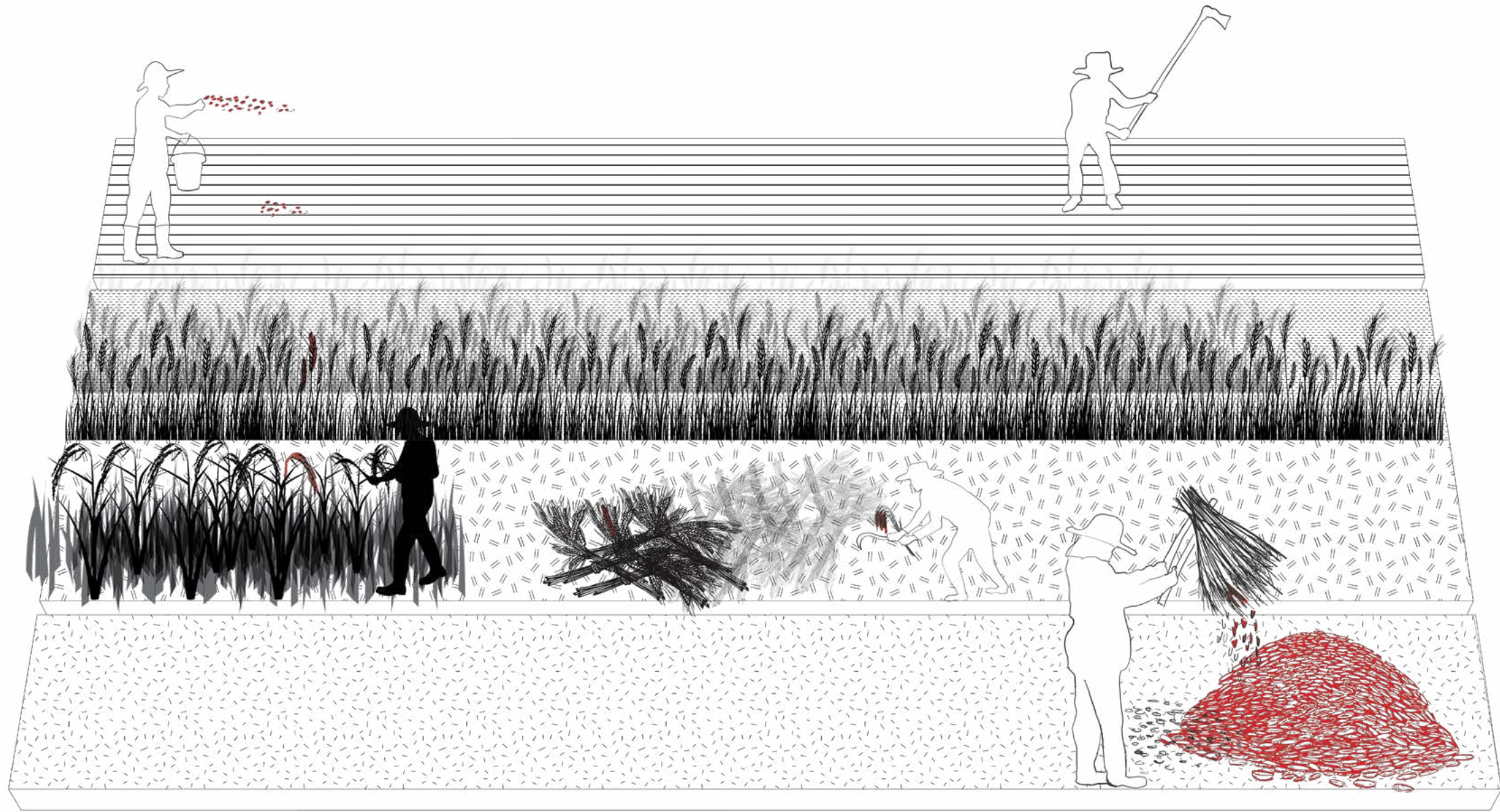


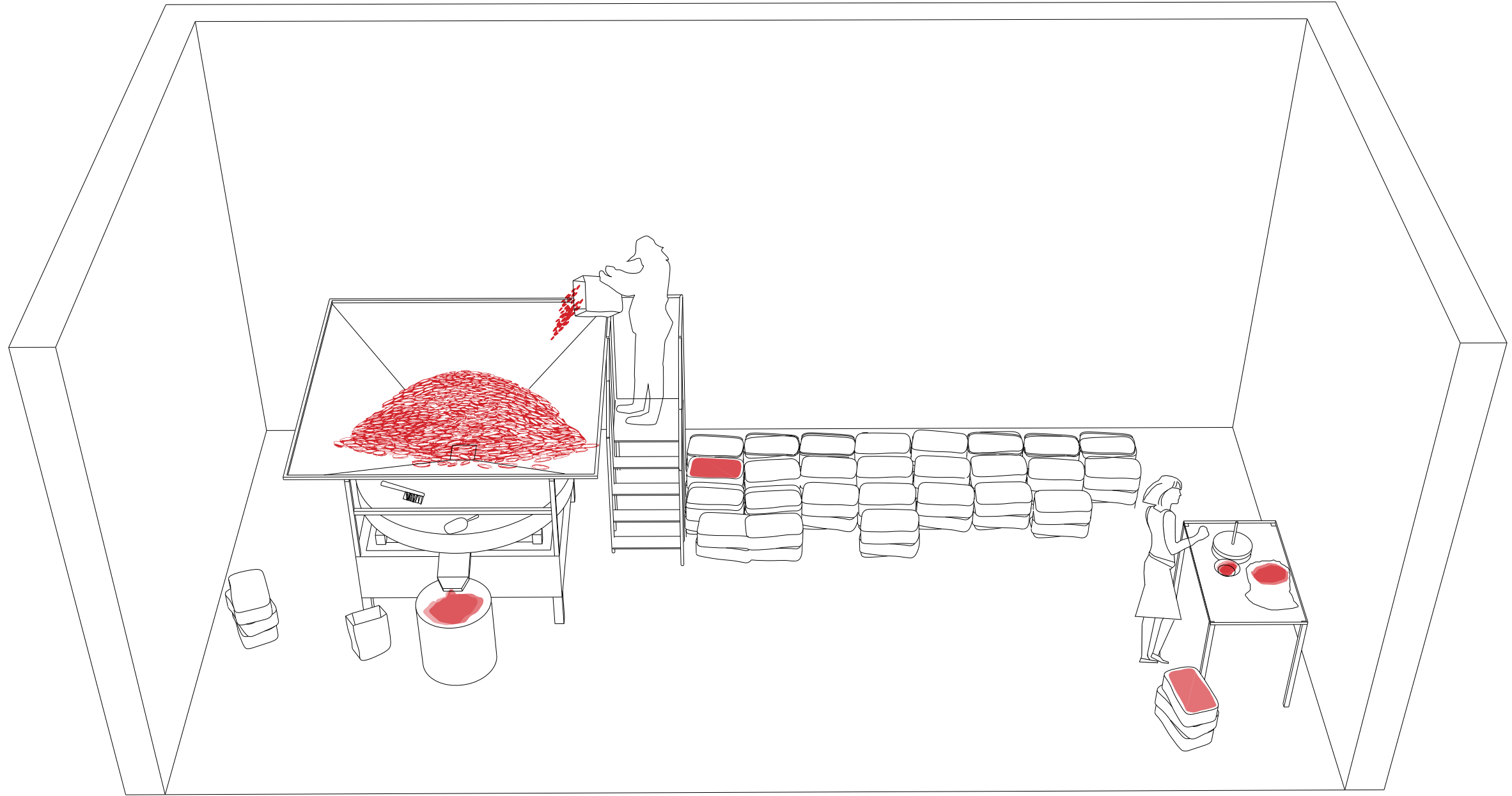
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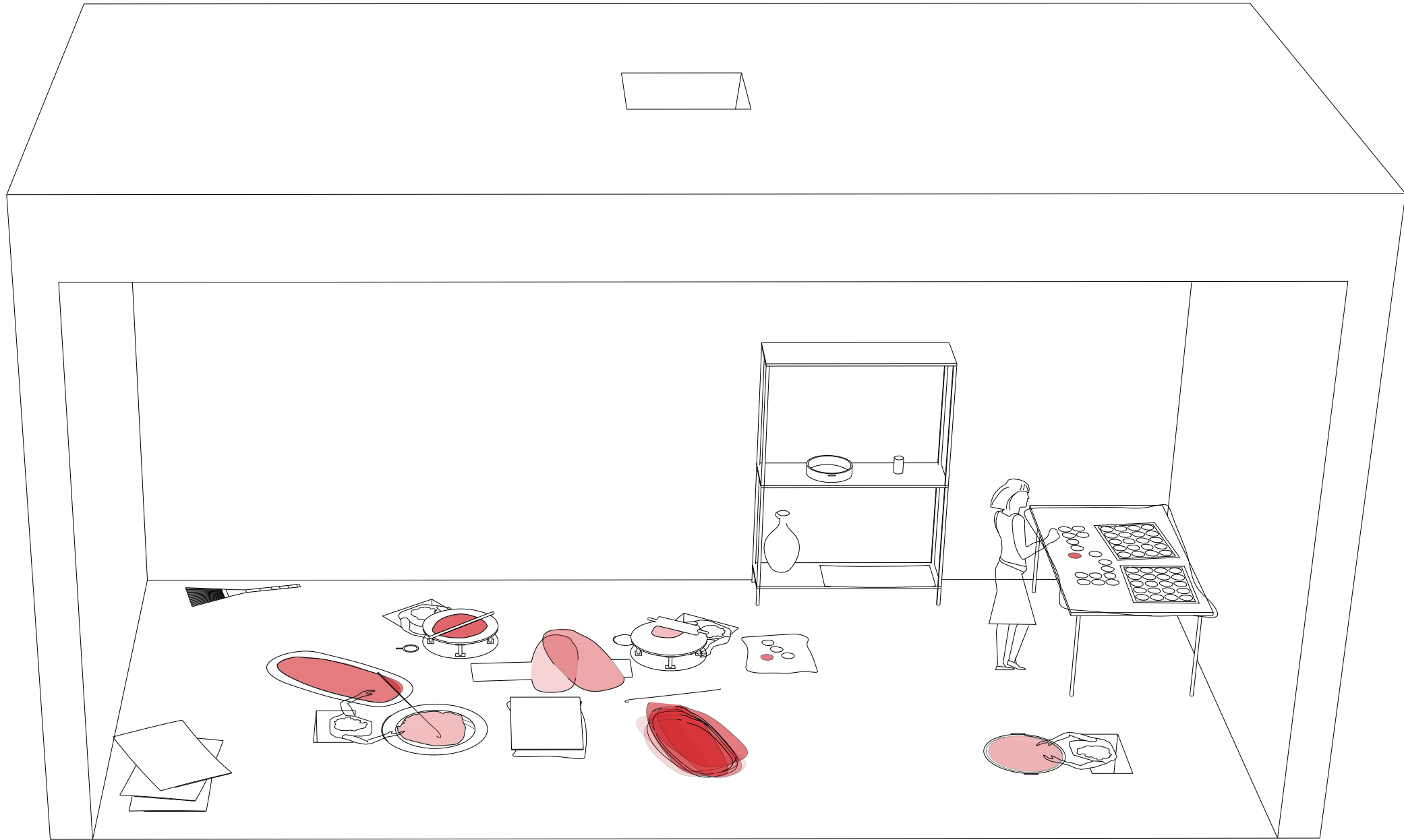


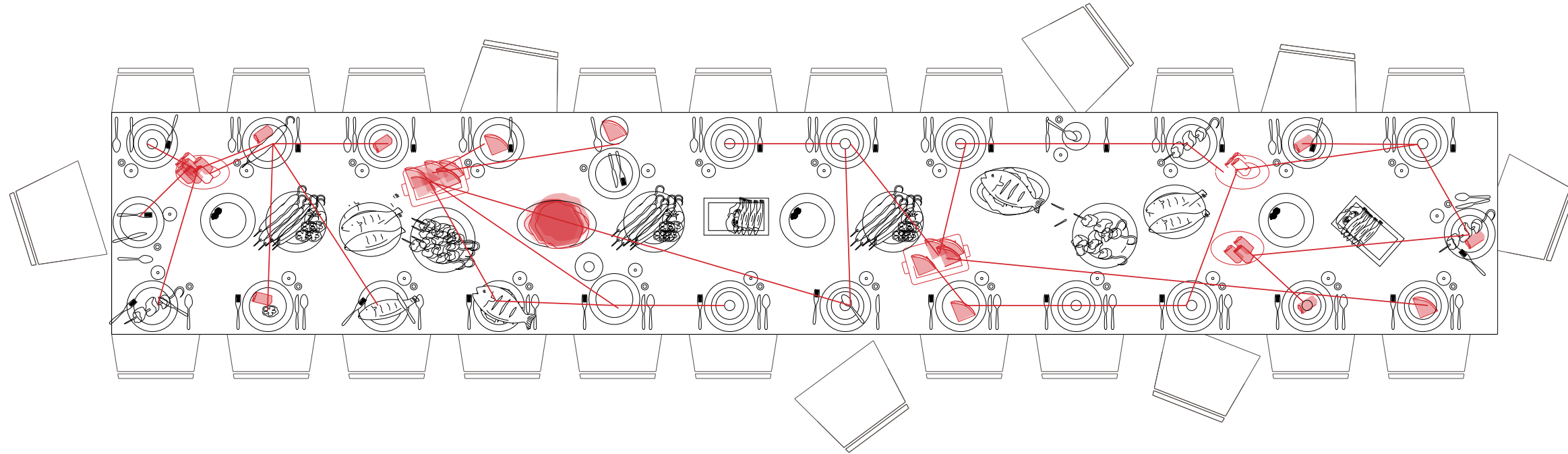
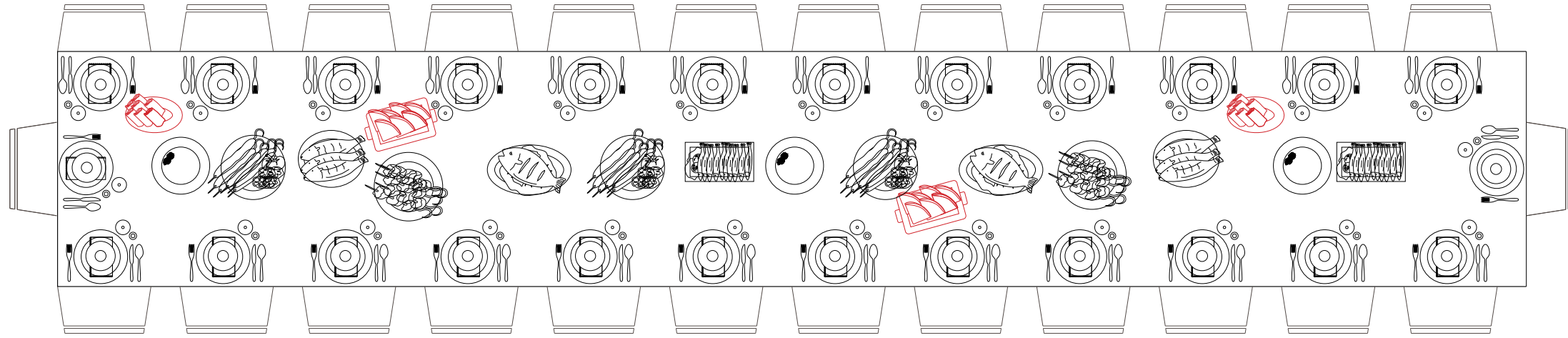
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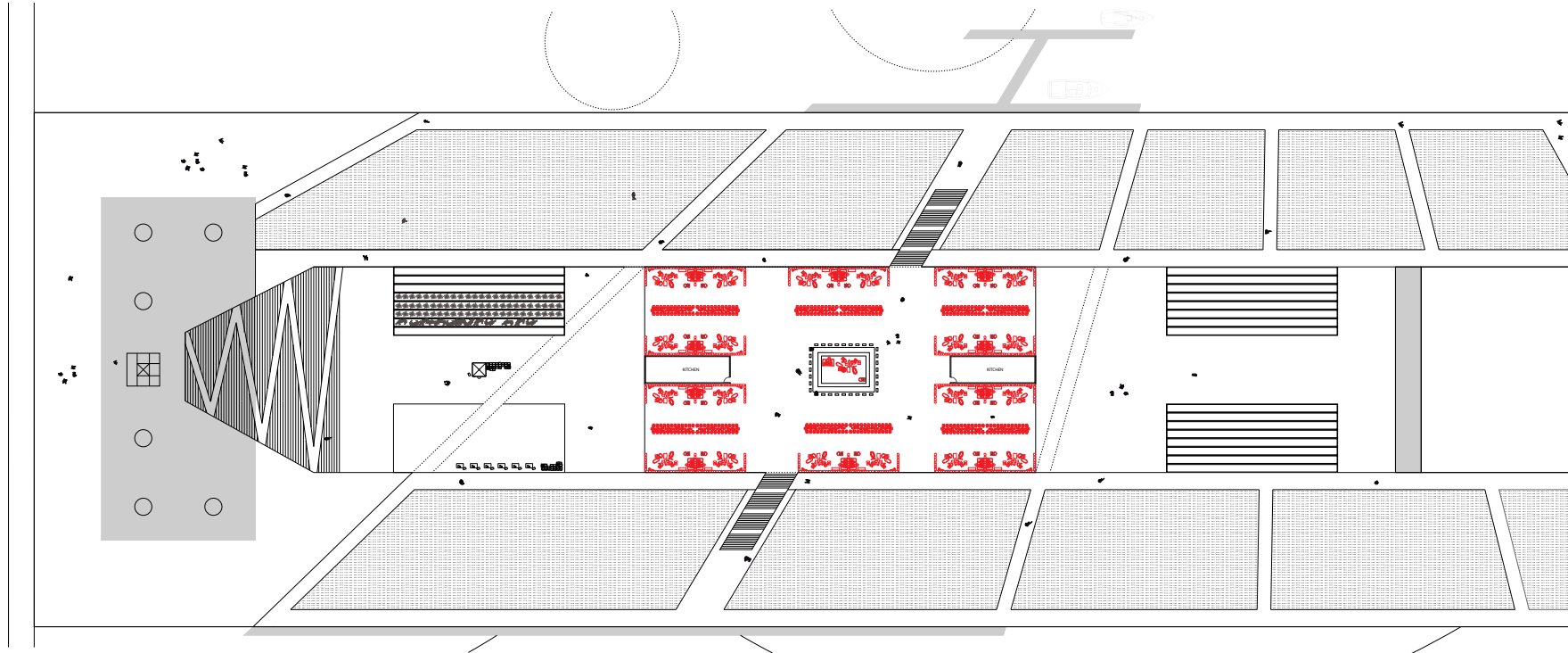
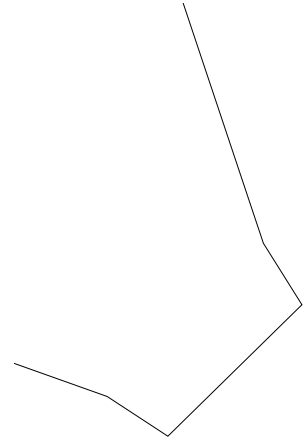


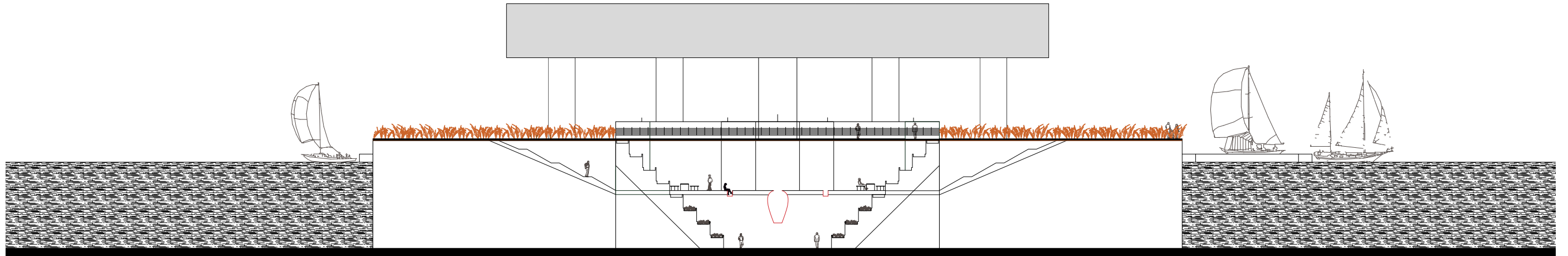


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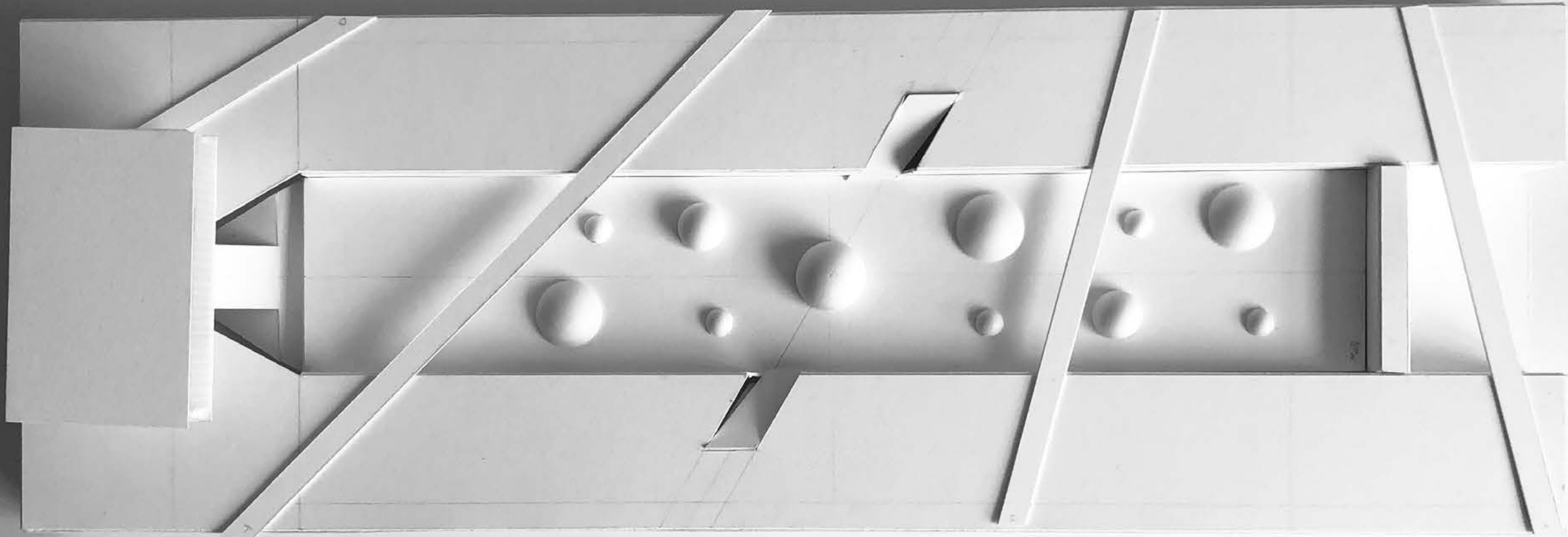


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- Primitive Future, Sou Fujimoto
- Bread is Gold, Massimo Bottura & Friends. Extraordinary Meals with Ordinary Ingredients
- Milano Expo 2015. Feeding the Planet. Comment nourire tout le monde
- Food For Soul. Community kitchens around the world
- Bottura, reffetorio
- In Praise of Blandness, François Jullien
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