

# Food for Atlas

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The **UNIVERSITY of Universities (UoU)** is an international network of academics from European schools of architecture collaborating to provide two-week online workshops across the academic year for students from different universities who work together remotely and in a collaborative way.

This Atlas section shows the work that undergraduate and master's degree students have produced in three workshops where the relationship between architecture and gastronomy (as in the call of this issue# 4 Gastroitecture) has been the central theme, the cultural diversifier and nexus of unity among participating students.

The first two workshops are part of the UoU network. Students of the Digital Design and Fabrication course in Architecture at the American University in Dubai joined this European teaching project. They participated in the workshop of Architecture & Food: An International Buffet in September 2020 and the 2043 A Dinner with Churchill in the Metaverse workshop in February 2022. The workshops lasted two weeks and were online.

By putting gastronomy from such diverse locations and nationalities at the epicentre of the workshops, the outcomes reflect the richness and diversity of their cultural backgrounds. In the same way, a part of these exercises was to reflect on the work tools and means of graphic expression that clearly and completely represent projects that distance themselves from recognised architectural forms and graphics and delve into the discipline of gastronomy.

The acceleration of online meetings and virtual settings brought by the pandemic has also been the subject of study in these workshops. The 2043 A Dinner with Churchill in the Metaverse workshop in 2022 has provided an opportunity to reflect and propose bids that allowed us to enjoy unimaginable gastronomic experiences until recently. Taste is perhaps the most

complex sense when transferring it to virtual environments. The ideas presented by the students show a high capacity for imagination and creative freedom typical of their university years, where priority is given to stimulating knowledge and having a holistic vision between subjects and disciplines.

The third and last workshop presented here is entitled Bigamies for gastronomy and was held face-to-face during the International Seminar and Workshop on Transdisciplinary Knowledge Transfer in the Basque Culinary Center, Donostia-San Sebastián, Spain, on March 2022. The students of the Master in Gastronomic Sciences, unlike UoU architecture students, have a background closer to gastronomy and far from architecture. Among them are graduates in pharmacy, biotechnology, chemical engineering, cooking, food technology, nutrition and dietetics, and advertising, to name a few. In addition, their places of origin are the USA, Colombia, Peru, India or China.

This workshop provided the opportunity to experience the gastronomy-architecture binomial in the opposite direction to the predecessor workshops. The workshop was conducted with the biologist José de la Rosa, and a joint lecture was given by both academics showing a theoretical-practical framework of architecture-biology associations.

These three workshops and the selected work of the students demonstrate the multiculturalism in contemporary higher education and how architecture allows for building a common language for communication. Society and education are progressing towards overlapped disciplines with their boundaries openly and intentionally blurred.

# **WORKSHOP: Architecture & Food. An International Buffet**

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## CONTENT

Architecture, open and expansive in nature, has explored unlikely interactions and projected hybrids with unpredictable results. Danish architect Bjarke Ingels has defined it as bigamy;

"Take multiple elements that apparently don't fit together and merge them to create a new creation or genre". (1) This positioning will allow us to get out of the accepted parameters of architecture and, in doing so, give life to new ideas that previously seemed impossible or unknown.

## AIMS

To become familiar with the edible world from an architectural perspective. To study and understand the inherited relationships of the DESIGN & FOOD bigamy.

To highlight students' local culture and encourage, through online group work, the discovery of other gastronomic and architectural backgrounds.

To take an introspective journey to our body and the spaces surrounding us by stimulating the senses involved in eating. To create + Act + Collaborate + Iterate + Invent + Question + Disseminate + Transcend

## METHOD

In this workshop we will work on the architecture-food bigamy:

We will present edible products-objects.

We will draw the conditions demanded by objects that are perishable and edible, the actions and rituals associated with them and the spaces defined around their tasting protocols.

We will rethink architecture and context from the gastronomic objects and, in reverse

We will rethink culinary art and its elements from an architectural approach.

## PART 1: ANALYTICAL-DESCRIPTIVE (Individual Work)

Find an edible product that is man-made and has become iconic in your country & culture. Analyse the making of and the relationships, proportions and rules between its parts.

## PART 2: REPRESENTATIVE (Individual Work)

Draw in 2D cad a detailed architectural representation of the object. Find out your own graphic language that best provides a comprehensive representation. Include dimensions, annotations, views name, section lines and scale.

Prats, E. & E. Miralles (1991). "How to lay out a croissant". *El Croquis* 49/50: 240-241. <https://unit01greenwich.wordpress.com/2013/12/02/how-to-lay-out-a-croissant-by-miralles/>

## PART 3: NEW TASTING EXPERIENCE (Group Work)

Arrange working groups of 10 members each for one of the following topics:

1-TIME, 2-STRUCTURE, 3-SOCIAL INTERACTION, 4-PROCESS, 5-HISTORY, 6-CUTLERY, 7-FORM-FUNCTION, 8-SUSTAINABILITY, 9-GEOMETRIC PATTERN, 10-TECHNIQUE

It is recommended that groups are made up of students from different universities and that the topic matches your product and interests.

The whole group will jointly develop the following:

1. Design a new edible product that represents the fundamental values of your category. It must be a contemporary design, innovative and aligned with new technologies.

2. Conceptualize and design the ritual and space for the tasting of that new edible object/food/product. Design new utensils/cutlery, new technologies and

new spatial, social, sensorial, interactive and emotional conditions that define how to eat it.

Martí Guixé on food karaoke, edible objects and techno-tapas. <https://www.youtube.com/watch?v=UkOi55jpiU>

L'Ex-Designer Project Bar. <https://www.youtube.com/watch?v=9Nh-EG3qv5E>

An Experimental Feast, Plated by Artists to Amuse and Confound. [https://www.youtube.com/watch?time\\_continue=400&v=TdSp\\_BaEQ24&feature=emb\\_logo](https://www.youtube.com/watch?time_continue=400&v=TdSp_BaEQ24&feature=emb_logo)

Experimental gastronomy: Breaking all the dinner party rules. [https://edition.cnn.com/style/article/experimental-gastronomy-dinner-steinbeisser/index.html?TB\\_iframe=true](https://edition.cnn.com/style/article/experimental-gastronomy-dinner-steinbeisser/index.html?TB_iframe=true)

3. Show the relationship with the human body through sequences, phases, times, temperatures. Work with reference images that support your proposal, merge them, combine them with some 2D/3D drawings you might draft, create physical models, etc. Output: Multi-layered drawings, collages, sketches, physical, etc. Anything that clearly supports the understanding of your proposal.

Philippe Rahm Drawings digestion, evaporation, radiation drawings. <http://www.philipperahm.com/>

## PART 4: PERFORMATIVE (Individual Work + Group Video Clip)

Create the physical/virtual setting and represent the architectural scenography generated by the object and its tasting protocol. Create a group video providing a complete vision of the new tasting experience. The output video must have a perfectly connected narrative and a consistent format as a unique visual piece. VV Maximum length: 5 minutes

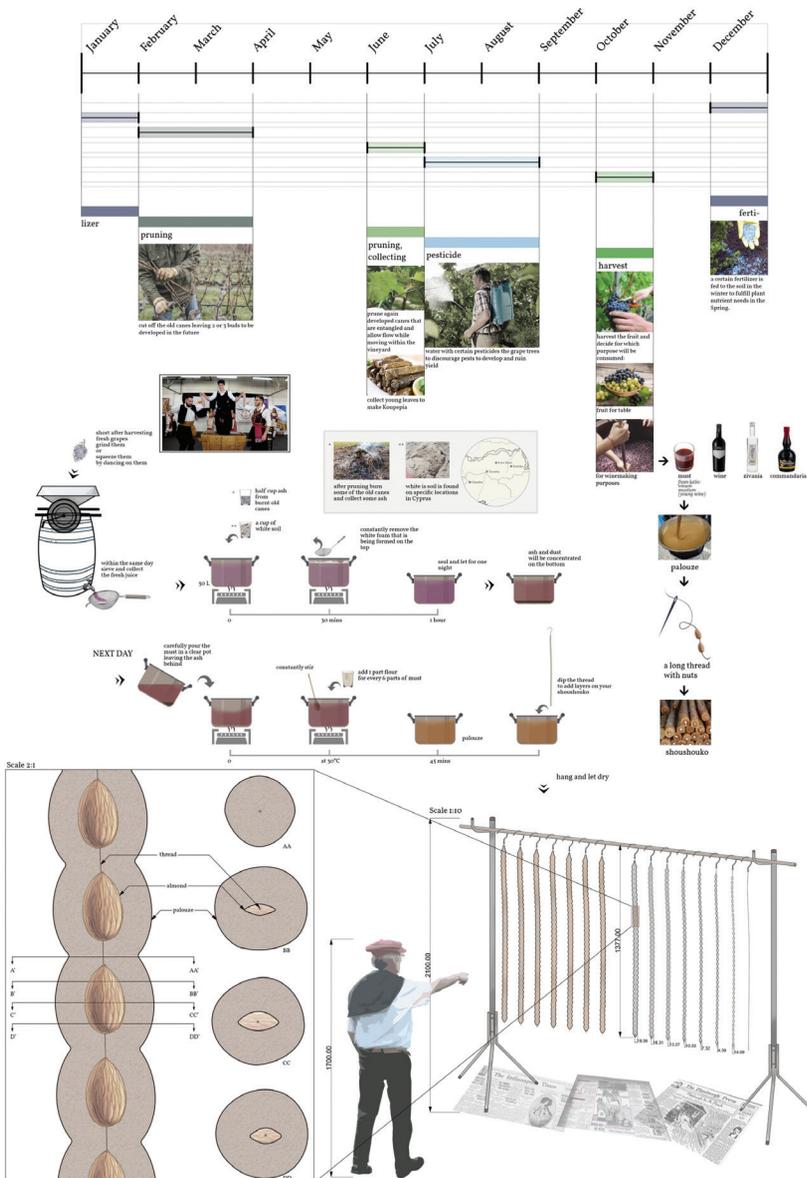
(1) Bjarke Ingels: Architecture should be more like Minecraft. (2015, January 28). YouTube <https://www.youtube.com/watch?v=clslKv1IFZw&t=137s>

# Part 2 Representative

# Shoushouko

Christos Savva<sup>1</sup>

<sup>1</sup>University of Nicosia, Cyprus

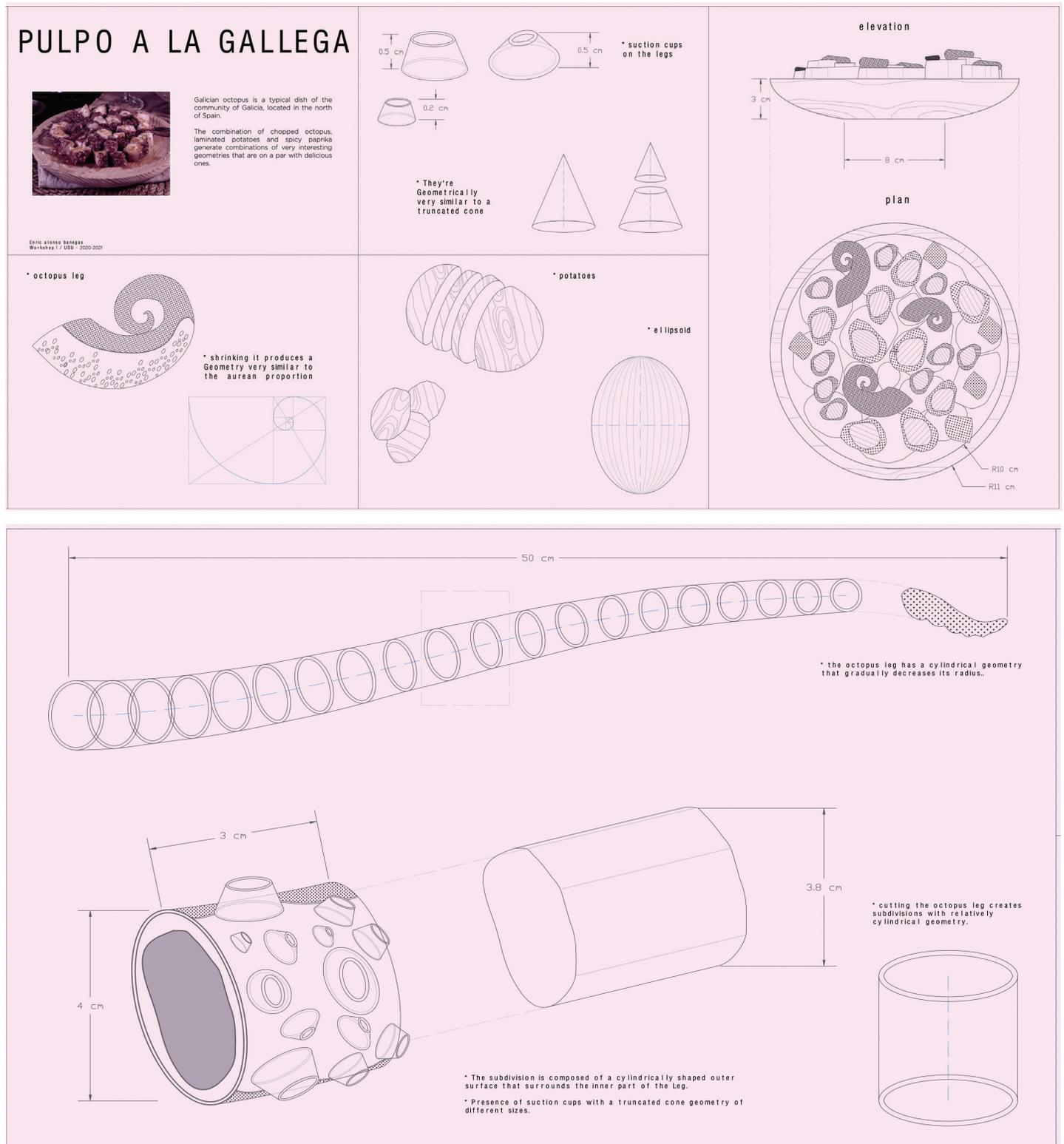


Shoushouko is a traditional Cypriot grape juice-based sweet created from whole almonds or walnuts that have been soaked before being strung with cotton thread, and Palouze, which is made from young must. The thread is dipped in Palouze and then let dry. This process is repeated multiple times and takes several days to reach a thickness of usually seven layers with a diameter of up to six centimetres.

# Pulpo a la gallega

Enric Alonso<sup>1</sup>

<sup>1</sup>University of Alicante, Spain



Galician octopus is a typical dish of the community of Galicia, located in the north

of Spain. The combination of chopped octopus, laminated potatoes and spicy paprika

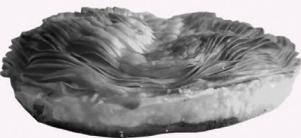
generates combinations of very interesting and delicious geometries.

# Pastel de Carne murciano

Gonzalo Carrillo<sup>1</sup>

<sup>1</sup>University of Alicante, Spain

### MEAT PIE MURCIANA



Murcian Meat Pie is a typical dish of Murcian gastronomy for several centuries. It is made in different varieties, ranging from the puff pastry (or not puff pastry), to the ingredients of the filling (more or less sweet).

**INGREDIENTS OF "OUR" MEAT PIE:**

**FOR THE CAKE DOUGH:**



250g flour    85g lard    125ml water    pinch of salt

**FOR THE FILLING:**



250g beef    100g ham serrano    100g chorizo    100g bacon



2 tomatoes    2 eggs    olive oil    salt and pepper

**FOR THE TOP OF THE PIE:**



1 egg

+ 1 fresh round puff pastry

### MEAT PIE PREPARATION

**FIRST**, you have to make the base dough. To do this, you have to mix the flour, lard and salt in a bowl, and add the water in a thread. You have to knead it until the dough is uniform and manageable.

You have to wrap it in plastic wrap and let it rest in it for 30 minutes.

**MEANWHILE**, the filling can be made. You have to finely chop the chorizo, the bacon and the ham. It is mixed with the minced meat and seasoned to our liking. And you keep it.

**THEN**, you have to cook the 2 eggs for 12 minutes, cool them and peel them.

**ON THE OTHER HAND**, the tomatoes are washed, the seeds are removed and finely chopped the tomatoes.

In a frying pan with a little olive oil, fry the tomatoes. The meat is added and everything is stirred. Cook until the meat is done. Then the cooked eggs are chopped on top.

**NEXT**, the dough is removed from the fridge and rolled out on a floured surface until it is large enough to be placed on a removable round mold. You have to cover both the base and the walls.

The oven must be preheated to 200 °C with heat from above and below.

**NOW**, You have to fill the dough with the meat filling and smooth the surface. The puff pastry is stretched out on the same work surface and cut into 1 cm thick strips.

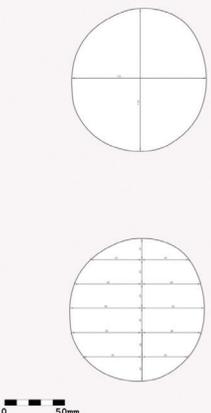
The strips are crushed with the roller to refine them and they are placed on top of the cake so that they form a spiral, from the center of the pie, until the cake is completely covered.

**FINALLY**, the remaining egg is beaten and the puff pastry is painted with it.

Put in the oven for 25 minutes, or until the surface is golden brown.

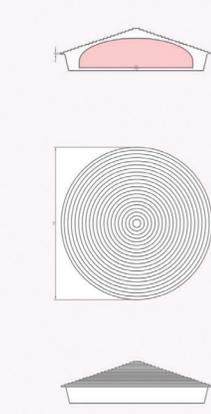


### PLANT (AXES AND DIMENSIONS) :



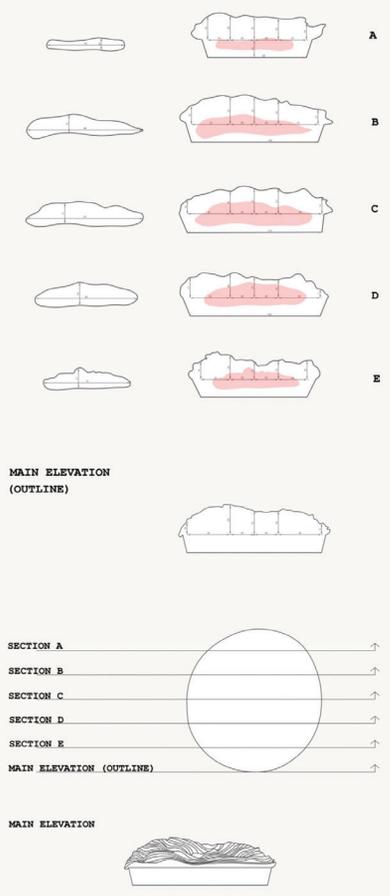
0    50mm

### THE "ARCHITECTURAL" MEAT PIE:



0    50mm

### ELEVATIONS AND SECTIONS (AXES AND LEVELS) :



0    50mm

For many years, Murcian cuisine has been known for its Pastel de Carne murciano (Murcian Meat Pie). There are various ways to make it, from puff pastry or no puff pastry to more or less sweet filling ingredients.

# Crumpets

## Heather Knights<sup>1</sup>

<sup>1</sup>UWE Bristol, UK

### Choice of food / Crumpets



Plan (Top)



Elevation



Section



Plan (underneath)

#### Description of food /

Airy, bouncy, soft, crunchy, absorbent, greasy, collective, structural.

The crumpet has the appearance of a pancake from the underside, however its own unique almost 'honeycomb-esque' look.

#### Quick history of food /

Crumpets can be dated as far back as the Anglo Saxon period, circa 410-1000's.

Started as 'picketlets' which were more comparable to pancakes/biscuits - cooked on a griddle.

At some point during the Victorian era, the recipe was altered to add yeast and bicarbonate of soda, both of which are rising agents which gives the crumpets the soft, fluffy and airy texture we know them to have today.

The name crumpets is suggested to originate around the 14C as 'Crompid cake' (crumpled cake) and 'Crompeht' - crumpled.

#### Rituals /

Crumpets are typically a breakfast food, served with butter and/or jam, complete with a tea or coffee.

Each person has their own ideas of how much butter, jam or whatever topping fits best with the food.

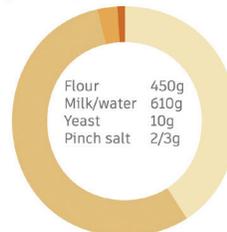
#### Important part of crumpet /

The yeast eats the sugars in flour and release CO<sub>2</sub>. This is what makes the dough rise when proving. When cooking, the steam escapes to the top pushing the CO<sub>2</sub> up through the top of the dough and the heat sets it - giving them their iconic holes.

#### Method /

1. Gently heat milk/water so its warm to touch.
2. Mix dry ingredients.
3. Slowly add heated liquid whilst stirring the mixture.
4. Let the dough double in size.
5. Pour mixture into crumpet ring sitting in a 200 ° filling it half way.
6. Cook for 6-7 minutes, then toast.
7. Add toppings of your choice and enjoy.

#### Ingredients /



#### Proportions / Volume = 26.7 cm<sup>3</sup>



#### Relations/portion/rules /

- Average height: 2cm
- Typical bottom dimension: 9.5cm
- Typical top dimension: 8.5cm (Deflates when cooled.)
- Base thickness: 15mm
- Hole sizes range from 20mm - 1.2cm.
- Portion size: 2

#### Scale / 1:1, Plan (top)



The crumpet has the appearance of a pancake from the underside; however, its own unique almost 'honeycomb-esque' look. Crumpets can be dated as far back as the Anglo-Saxon period, circa 410- 1000's. Started as 'picketlets' which were more comparable to pancakes/biscuits - cooked on a griddle. At some point during the Victorian era,

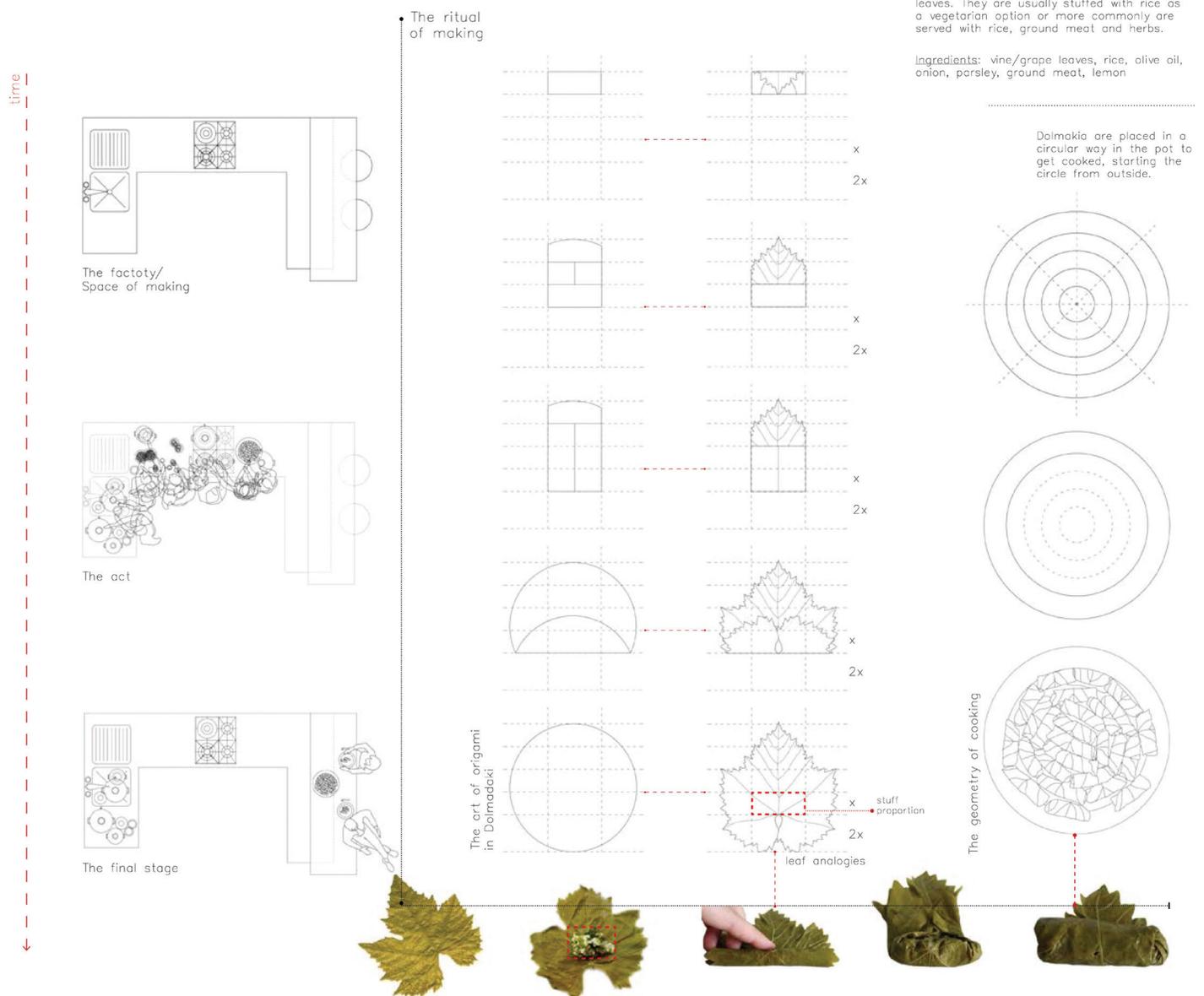
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# Dolmadakia

Maria Tziakou<sup>1</sup>

<sup>1</sup>University of Nicosia, Cyprus

Dolmadakia/ Koupepia



Dolmadakia is a little wrap made with vine leaves. It is usually stuffed with rice as a vegetarian option or more commonly served with rice, ground meat and herbs.



# Part 3

# New Tasting Experience.

# Sustainability Group

**Christos Savva<sup>1</sup>; María Ponce<sup>2</sup>; Jorge Plaza<sup>3</sup>; Natalia Lozano<sup>4</sup>; Enric Alonso<sup>5</sup>; Helena Jenkinson<sup>6</sup>; James Reed<sup>7</sup>; Francis R D Mussenden<sup>8</sup>; Bradley Homer<sup>9</sup>**

<sup>1</sup>University of Nicosia, Cyprus

<sup>2,3,4,5</sup>University of Alicante, Spain

<sup>6,7,8,9</sup>UWE Bristol, UK

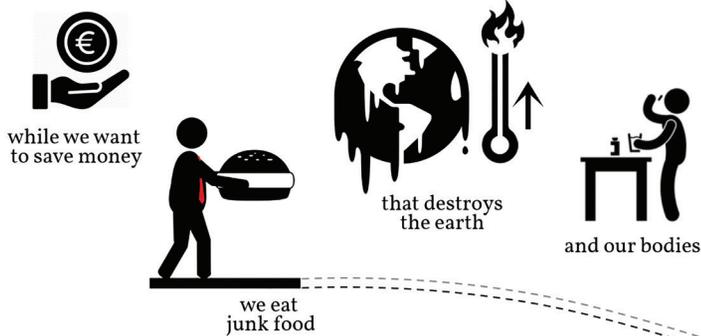
The team's primary concern was the issue of eating sustainably and healthily. The proposal includes working within a community with a focus on cultivating "mush-rooms" to create a new dish, and new materials and build resilience through time. These processes are sustainable in terms of the quantities of human energy needed for specific processes, costs, and impact on the environment and the community. The cultivation of fungi can yield food, and medicine and is already being taken further through specific processes we started creating a construction material and building various objects and buildings. The proposal includes processes of constructing with mycelium composite material objects

like utensils, furniture and an ephemeral pavilion. Its primary structure is composed of mycelium composite elements creating a meandering effect. On the canopy, trays are being formed to allow the cultivation of mushrooms making the pavilion a living, growing organism. The final part of our team's proposal is a whole new tasting experience. The performance describes a new way of eating a proposed sustainable dish derived from mushrooms and holds a message, invitation, or hope.

Video

[https://www.youtube.com/watch?v=Wes2\\_tp\\_RGw](https://www.youtube.com/watch?v=Wes2_tp_RGw)

# THE STRUGGLE TO EAT SUSTAINABLY

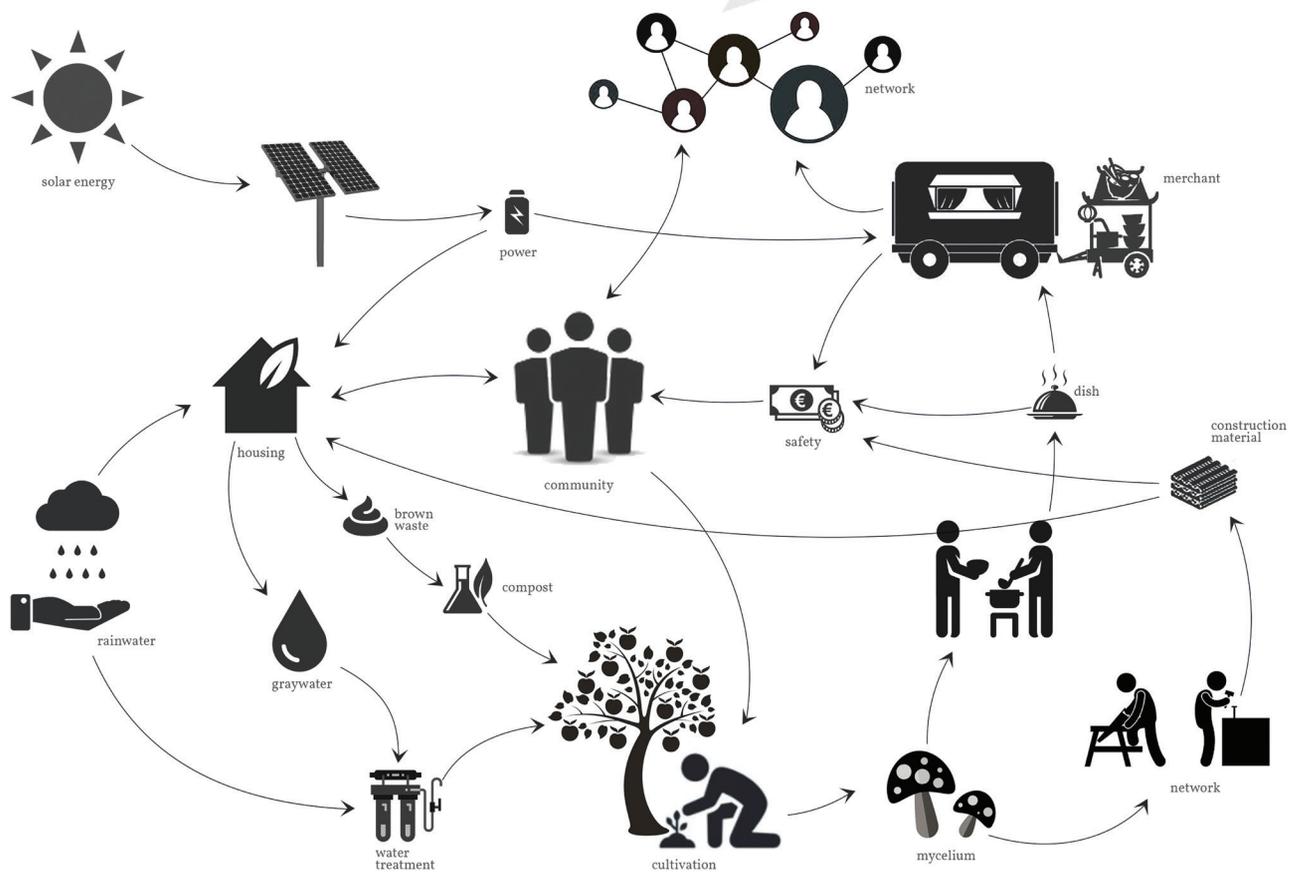
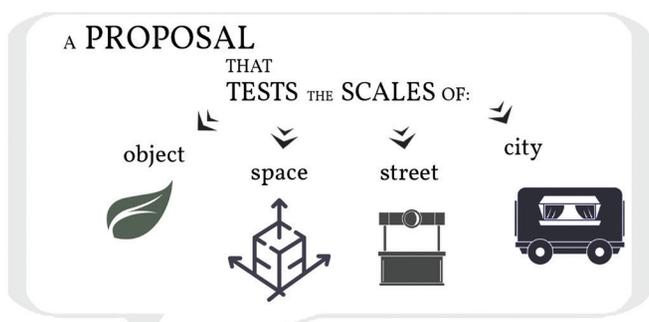
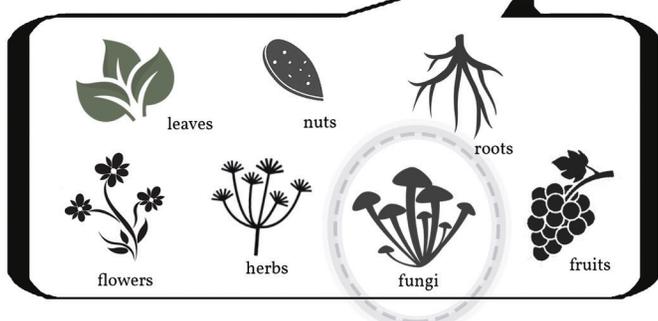


## WHILE WE CAN FORAGE

### FRESH & CLEAN FOOD FROM NATURE

forage /'fɒrɪdʒ/

verb  
(a person or animal) to search widely for food or provisions, supplies, resources.



# CULTIVATION OF MUSHROOMS

sterilization and pouring of agar medium  
isolation of mushroom mycelium from contaminants

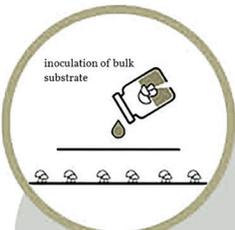


rules of mycelium:  
type 1: rhizomorphs  
type 2: fluffy mycelium  
transfer rhizomorph to new dish to isolate and eliminate any fluffy mycelium to create a pure sample

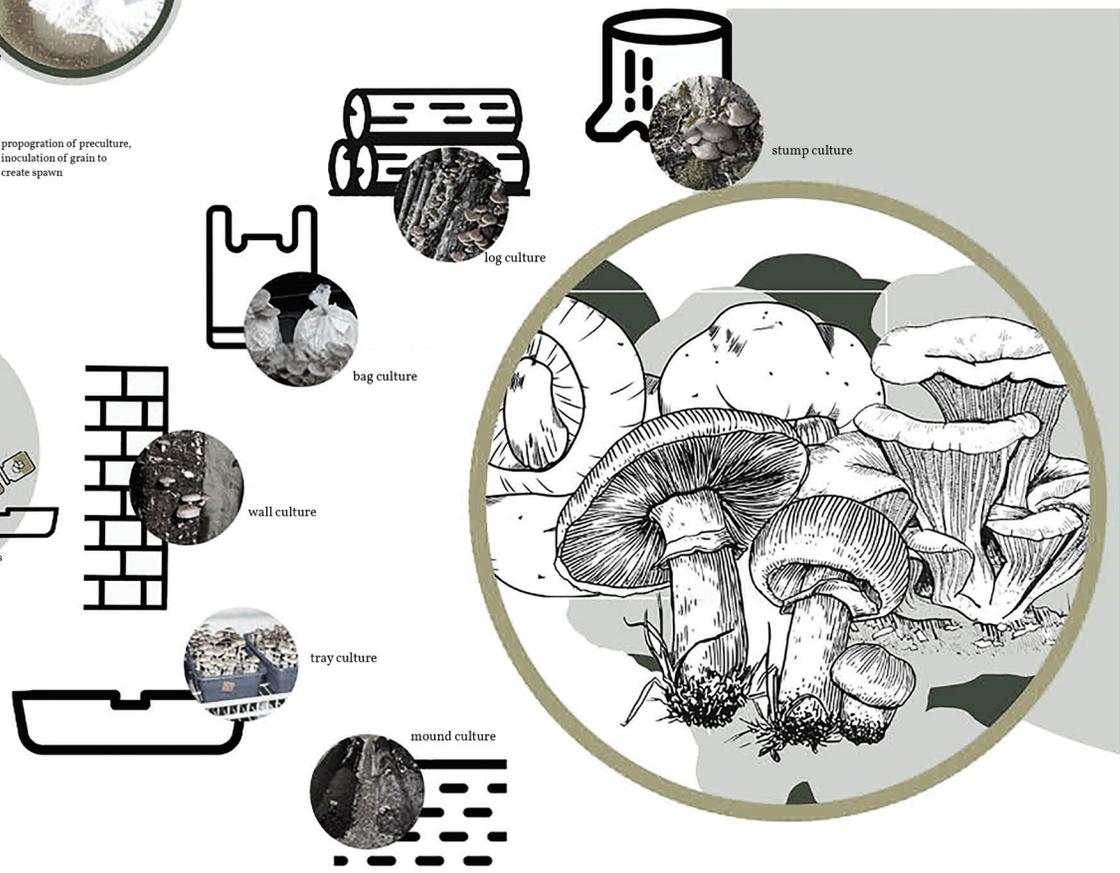
propagation of preculture, inoculation of grain to create spawn



inoculation of bulk substrate



4. (a) inoculation of saw dust/dowels  
4. (b) inoculation of bulk spawn

# CROPPING ENVIRONMENTS

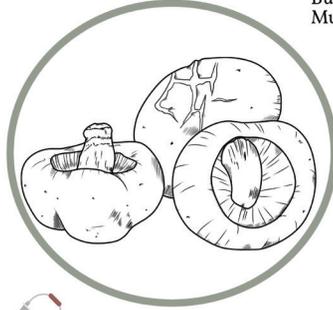
Oyster Mushrooms



bag culture



Shiitake Mushrooms



log culture  
submerge logs into water for 24-72 hrs before starting cultivation



Button Mushrooms



tray culture  
perfect for home growing



HUMIDITY		95%
AIR TEMP		55-60 ° F
DURATION		2-7 weeks
LIGHT		2,000 lux / diffused natural light
HARVEST		directly before uncurved margins are elevated to plane
WATER		misting twice daily

HUMIDITY		85% - 90%
AIR TEMP		59-68 ° F
DURATION		7-14 days (regrowth for 2-5 years)
LIGHT		ambiental light or 10 lux in 270-420 range
HARVEST		directly before incurved margins flatten and the cap expands
WATER		mist once or twice a day for 5 minutes at a time

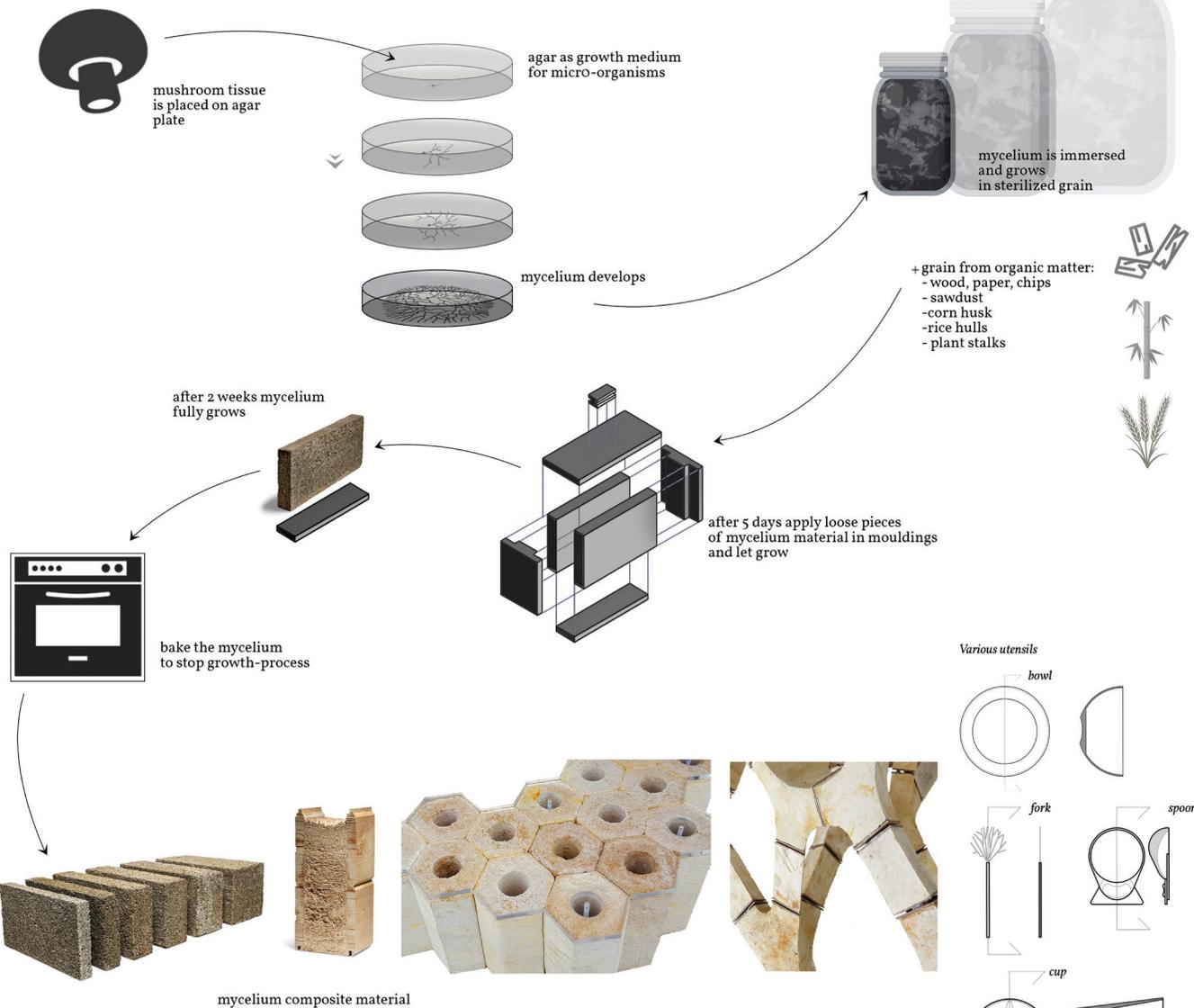
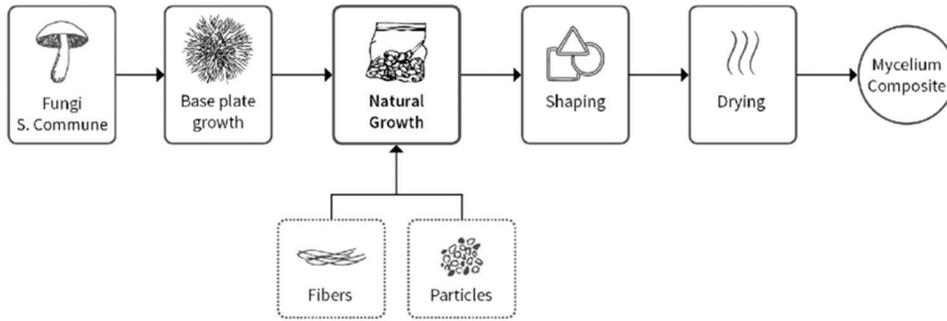
HUMIDITY		65% - 70%
AIR TEMP		60-74 ° F
DURATION		7-14 days (will continue to grow for 3-6 months)
LIGHT		does not require direct sunlight
HARVEST		directly before the caps pop open
WATER		Mist everyday to keep the beds moist

# FUNGI CULTURE

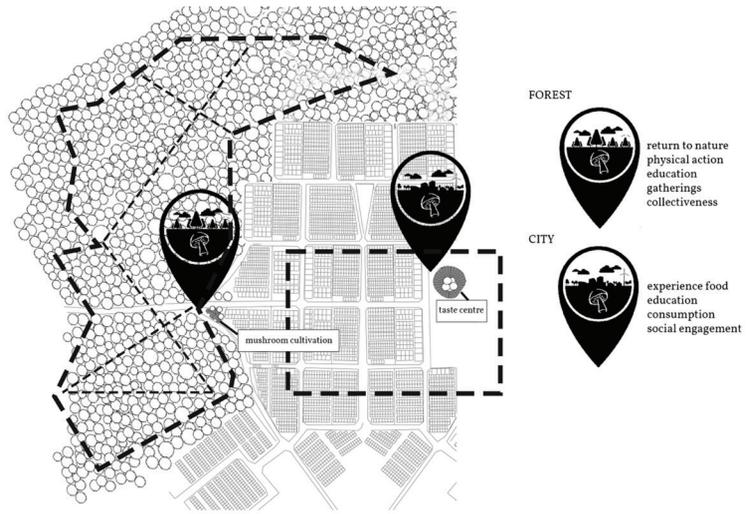
## CULTIVATION OF MYCELIUM

- floatable
- waterproof
- fireproof
- flexible
- durable
- heat resistant
- sustainable
- decomposable

- for:
- food packaging material
  - tools, utensils
  - furniture
  - construction material
- insulation panels
  - acoustic ceiling tiles
  - bricks, blocks
  - wall partitions



# HOW TO USE MUSHROOMS SUSTAINABLY

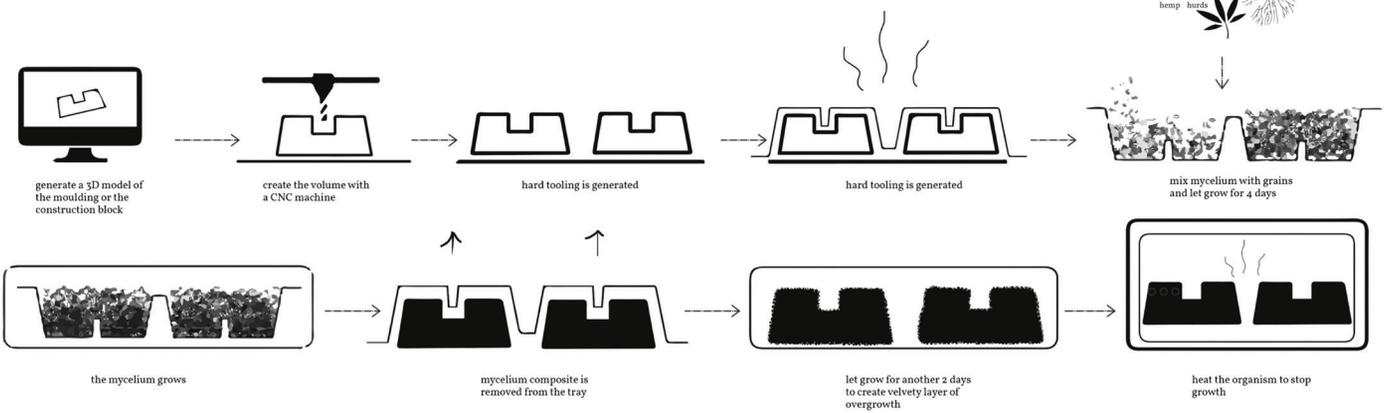
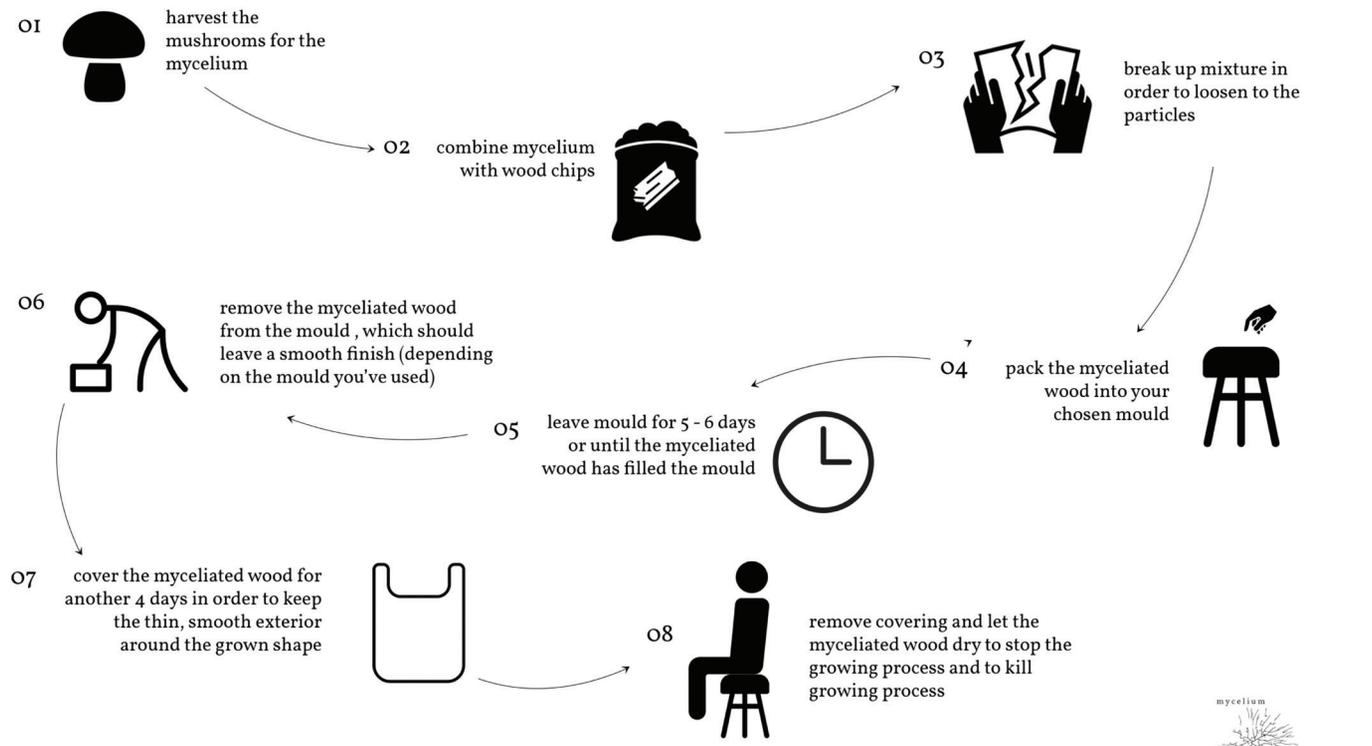



**WHY MUSHROOMS?**

Mycelium is one of the most abounding living systems on Earth, it's a tissue composed of wire-like microfibrils that are part of the fungal roots

-  no deforestation
-  easily grown
-  can be cultivated everywhere
-  cost effective

## HOW IS IT MADE?





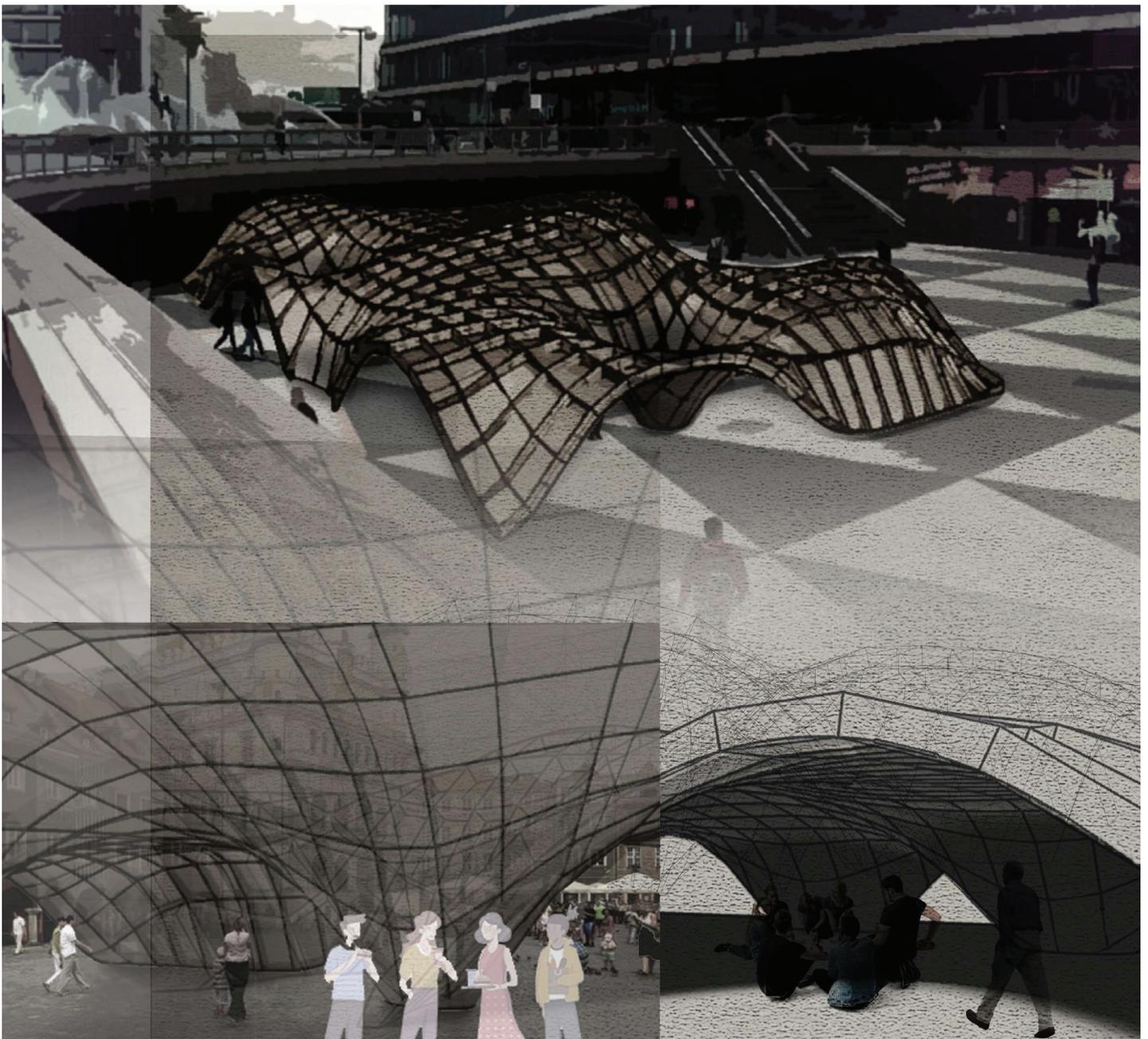
Ephemeral pavilion made of mycelium pieces with parametric patterns that you can put together and then disassemble to take it away from that place so that it does not have a bad impact.



Sustainable and zero waste cultural activities and workshops to educate about the cultivation of mushrooms and all its possibilities and benefit for the community and the environment.



New sensorial and interactive ritual for the tasting of our mushroom based food. The temperature, humidity and other conditions will be adjusted in this environment to recreate the forests where the mushrooms are cultivated.



# Part 3

# New Tasting Experience.

# Cutlery Group

**Tristan Sanchez<sup>1</sup>; Malak Benmoussa<sup>2</sup>; Zaynab Aboudou<sup>3</sup>; Hasnae Mirali<sup>4</sup>; Ibtissam Bakkach<sup>5</sup>; Maxwell Robinson<sup>6</sup>; Josiah Searle<sup>7</sup>; Jake Fellows-Samuel<sup>8</sup>; Elham Al Dweik<sup>9</sup>; Taimaa Barakat<sup>10</sup>; Farah Ali<sup>11</sup>**

<sup>1</sup>University of Nicosia, Cyprus

<sup>2,3,4,5</sup>University of Alicante, Spain

<sup>6,7,8</sup>UWE Bristol, UK

<sup>9,10,11</sup>American University in Dubai, UAE

This proposal aims to playfully explore different forms of love and relationships through an interactive mode of utensils, cutlery, and food. This newfound culinary experience is as valid and exciting as the many forms of intimate relationships between humans.

The Arabic food “Yalanji”- incredibly popular stuffed grape leaves, common across all Arab countries- was selected in this redefined culinary experience. The process of selecting, making, and eating “Yalanji” is intimate and phenomenological. The vine leaves are often intricately selected, cleaned, and stuffed with rice and other secondary fillings. This mesh between rice’s neutrality with the slightly acidic and textured vine leaf is usually eaten as finger food, and, is often a staple.

The redefined Yalanji proceeds to create a new eating experience that highlights the already fun, intimate, and democratic use of the food. Different kinds of love are placed and analysed: platonic, sexual, parental, etc. Varied kinds of relationships can create their new “Yalanji” differently. Through the selection of the ingredients, the process of “Yalanji” is expanded into an experience reflective of the couple that eats it. Food thus becomes a continuity of our personal and intimate relationships: varied and- ideally- filled with love.

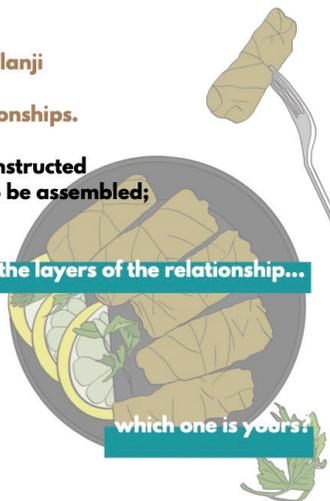


At the heart of the reinvented yalanji is the social interaction between different types of relationships.

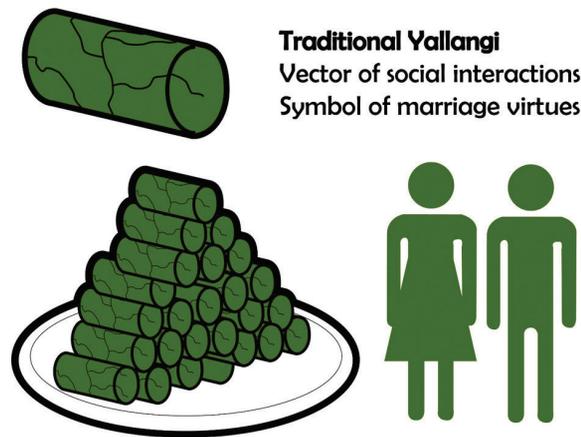
The yalanji and cutlery are deconstructed into ingredients and materials to be assembled;

Each level of the ingredients is reflective of the layers of the relationship...

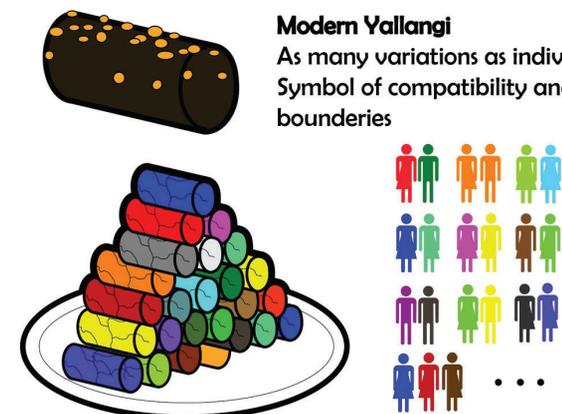
There are infinite possibilities-



**Traditional Yalanji**  
Vector of social interactions  
Symbol of marriage virtues



**Modern Yalanji**  
As many variations as individuals  
Symbol of compatibility and boundaries



1. Wrapping



2. Filling + Rolling



3. Dipping



4. Topping



### The Ingredients.

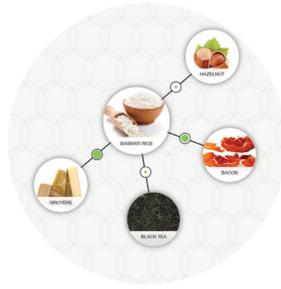
#### 1. The Wrap



The essence is the same for all-  
**Love is Love.**

Layer I- The essence

#### 2. The Fillings

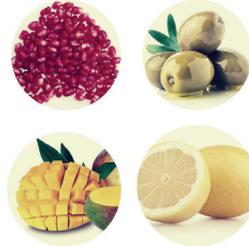


Complex and Intricate.  
The fillings show the **diversity** in the inner self.

Layer II- The Gender.

### The Ingredients.

#### 3. The Toppings



Undefined and Open.  
The toppings provide an added layer;  
**who are you attracted to?**

Layer III- The Gender.

#### 4. The Dip



Sprinkled with love-  
You and your partners-  
**What are you?**

Layer IV- The Relation.



### The Combinations

#### Her Wrap



#### Her Fillings



#### Her Toppings



#### Her Wrap



#### Her Fillings



#### Her Toppings



#### Her Dip



### The Combinations

#### Her Wrap



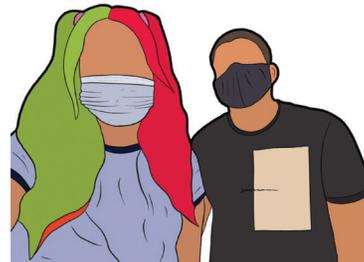
#### Her Fillings



#### Her Toppings



#### Her Dip



#### His Wrap



#### His Fillings



#### His Toppings



### The Combinations

#### His Wrap



#### His Fillings



#### His Toppings



#### His Wrap



#### His Fillings



#### His Toppings



#### His Dip



### The Combinations

#### His Wrap



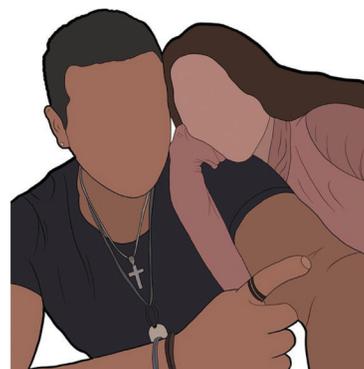
#### His Fillings



#### His Toppings



#### His Dip



#### Her Wrap



#### Her Fillings



#### Her Toppings



#### Her Dip



# The Cutlery

**Undefined,  
Unrestricted.  
The are infinite possibilities.**

**Grab, Remove  
Tighten, Scoop  
(I hope the Yalanji does not fall out).**

**Again. Repeat. Redo.  
Add, Hold,  
Screw.**

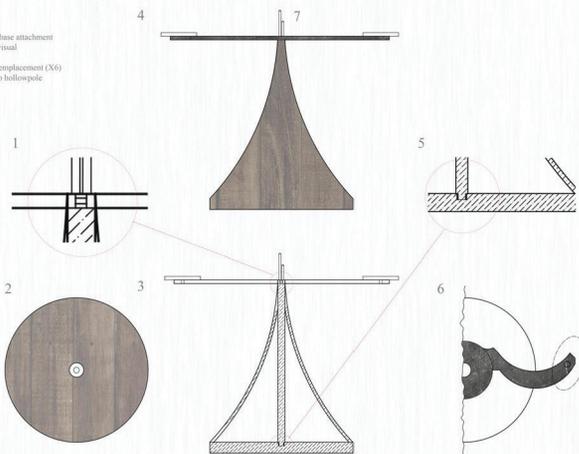
**Add, Hold,  
Screw,  
(This yalanji tastes... New?)**

**Compare, Smile,  
Laugh,  
(I love him).**



## Parts/Detail

- 1- Top Rotary screw hold
- 2- Base Plate
- 3- Section: Inner pole with base attachment
- 4- Elevation with material visual
- 5- Detail screw hold
- 6- Rotary view with food itemplacement (X6)
- 7- Chopstick Placement into hollowpole



DIY Variations I



3D

Top View



# WORKSHOP: 2043, a Dinner with Churchill in the Metaverse

**Carrillo Andrada, José Antonio<sup>1</sup>**

<sup>1</sup>AUD American University in Dubai, School of Architecture, Art and Design, Dubai, UAE.  
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## CONTENT

Sir Winston Churchill (1874-1965), British Prime Minister (1940-45, 1951-55) in his speech to the House of Lords on October 28th, 1943 said *"We shape our buildings; thereafter they shape us,"* requesting the House of Commons, bombed out in May 1941 during the World War II, be reconstructed exactly as before. He stated that the old Chamber's rectangular configuration shaped the two-party parliamentary system, the essence of British democracy. This profound and powerful statement reveals how the environment we have constantly created shapes and affects us and how we perceive things. Since 2020, the pandemic has made more apparent the flexibility or rigidity, not only spatial, of the structures that organise the world we inhabit, the times of adaptation and the human predisposition to change. On the other hand, it has also revealed the increasingly recurring technological lifesaver, based on the need for networked, remote work without physical limitations—a clear invitation to reflect on how we architects can

position ourselves to unfold the future. University of Universities, a pioneering example of adaptation, becomes the ideal setting for this reflection.

In *With a new mind*, Daniel H. Pink (2008) speaks of the end of the "Knowledge Age" and the beginning of a new era, the "Conceptual Age", where the future belongs to a type of person with a global and creative vision. That seeks transcendence instead of people with logical, linear and computational capabilities, typical of the information age. In the middle of an intermittent pandemic, we will consider whether, as Churchill did with an old camera after World War II, we cling to the replica of the already known models that have shown their deficiencies, or we begin to anticipate what the new ones may be like. Physicalities, spatialities and social relationships will "shape" the future, and consequently us, or our alter-egos: the avatars. It is time to enter The Metaverse.

The Metaverse responds to the growing incursions and dependence on the virtual world, where users can interact socially

and financially using an avatar. Interactivity, incorporeality and continuity are essential for its operation. The Metaverse concept is not new but originates in 1992 in the novel *Snow Crash* by American writer Neal Stephenson. In 2018, director Steven Spielberg popularised it with the film *Ready Player One*, based on the 2011 Ernest Cline novel of the same name. Different companies such as Epic Games, Roblox and Facebook are leading and developing their Metaverse concept which will converge the physical or tangible with the digital. These companies will not constitute the Metaverse by themselves. However, they are already the first "architects" and inhabitants in it, and they are anticipating a paradigm shift for many professions and markets, architecture being one of them.

As the futurist Matthew Ball points out in *A Framework for the Metaverse*, what happens in this space will become part of our culture. *"Building things with friends within virtual worlds will become common, and major events within the most popular virtual worlds will become pop culture news stories."*

## AIMS

To learn from our experiences by taking an introspective journey to the food-space relationship.

To propose new ways of socialisation around virtual/hyperreal food experiences.

To look around us and highlight the physical formats that are falling into disuse or being replaced by digital formats that reinforce our increasing dependence on the virtual world: digital money, documentation, art, workplaces, education, entertainment, shopping, and socialising.

To conceptualise the future and propose a new professional framework for architects and designers.

## METHOD

Among the many transformations and changes in different sectors that The Metaverse proposes, this workshop invites us to focus on a critical economic and social engine in most cultures. We will talk about food and its power to socialise. We will first look at it by analysing the traditional role it has played in our lives as a binding agent of social and family relationships, a builder of memories, and a stimulator of meanings. After looking at the past, we will now reflect on the relationship that food establishes with the spaces where it is enjoyed. More specifically, we will imagine those gastronomic spaces of the virtual future.

### PART 1: FOOD-SPACE-FOOD (Individual Work)

Describe a space and food/meal from your culture that both are intimately and uniquely intertwined, creating a distinctive symbiosis as a food-space relationship. Your chosen space gives the food a unique dimension, just as the food gives the space an exceptional grade.

Tell us, using ppt format, how the food builds the space and vice versa.

Bonus reflection, any finding in other species?

### PART 2: ARCHAEOLOGY OF THE VIRTUAL GASTRONOMIC FUTURE (Teamwork 3 Students)

After extensive research, groups will present, using ppt format, the most relevant findings of existing experiences around food, or that can relate to food, in virtual environments. Reflect on how this "Meta-reality" can affect our relationship with food. Conclude with a summary table/chart/diagram of the most relevant features of the findings.

### PART 3: 2043 (Teamwork 5 students)

We are in 2043, a hundred years after Churchill's mythical quote "*We shape our buildings; thereafter they shape us*". The students propose a space, menu and eating experience in The Metaverse for virtual social gatherings around food. The following will be designed and presented (ppt):

1. The virtual space: a transformable geometry and atmosphere
2. The menu: 1 starter + 1 main course + 1 dessert showing their cutlery and eating ritual
3. The eating experience in 4 interactions: avatar-avatar, avatar-food, avatar-space, space-food

Do not miss including Mr. Churchill's avatar in the performance. Important note: The student's mindset should be wholly detached from reality. A dining experience in The Metaverse should benefit from unprecedented, exceptional and fictional conditions.

Along with the ppt presentation, students will submit an A4 landscape manifest with the ten

key features of the dining project. Each feature page includes the feature name, descriptive short sentence and image.

## GUEST JURORS

**Dr. Juan Carlos Arbolea.** Physical Biochemist. Expert in improving sensory and nutritional properties of foodstuffs

**José de la Rosa Morón.** Gastronomic Scientist and Food Alchemist Lab

**Dr. Georges Kachaamy.** Architect, expert in Future & Virtual Environments

**Jashan Sippy.** Food-Architect. Expert in sustainable food future

**José Antonio Antoli Salva.** Architect, Entrepreneur

**Dr. Francesca Zampollo.** Food Design Thinking Consultant, Teacher, Facilitator, Researcher

**Sergi Freixes.** Historian, food designer and graphic designer.

**Caroline Hobkinson.** Anthropologist

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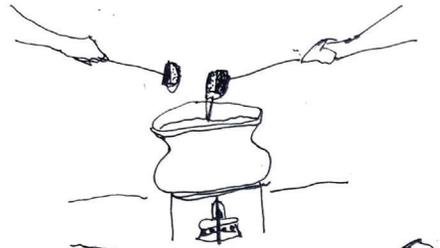
# Part 1

# Food-Space-Food

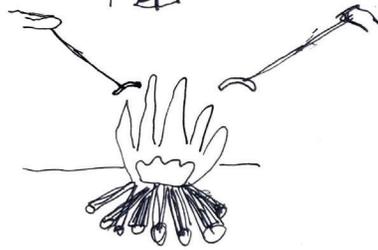
## Theodore Curtius<sup>1</sup>

<sup>1</sup>University of Alicante. Spain

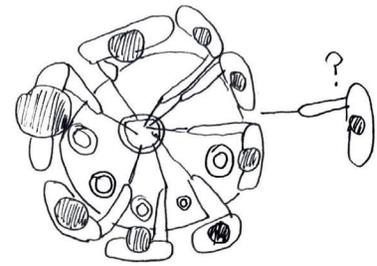
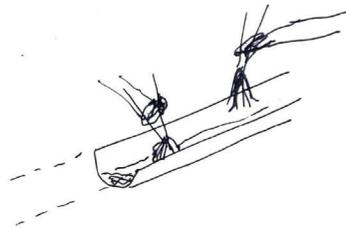
### Fondue savoyarde



### Grilling sausages



### Nagashi Somen



### Spatial organization



### Fondue savoyarde

The fondue is a very social dish, originally from the Alps, between France and Switzerland. It involves a unique pot called a "caquelon", put on a small stove that keeps the cheese warm and the consistency stable.

The fondue creates a circular space, like the primal campfire where everyone gathers around. Since the cheese needs to be kept at the same melting temperature, everyone has to reach for it from their seats, using special cutlery, the "pique à fondue".

### Grilling sausages over a campfire

This is probably an international thing to do when camping, but I remember doing it in Germany and France. The space is made of

the campfire, the wood sticks that link the gap between the human and the food, separated by the difference of temperature, and the humans. It reminds me of fondue, even though in this situation the action is made to cook the sausage when a fondue is an act of helping yourself to get food.

### Nagashi Somen Noodle Waterslide

This original way of eating noodles comes from Japan. The water flows and brings noodles that are dunked in a sauce inside a bowl before being eaten. You must fish for the noodles from the bamboo noodle slide with the chopsticks.

It is an architecture specially designed for this kind of meal, there is a fundamental relation between space and food.

# Part 2

# Archaeology of the Virtual Gastronomic Future

Theodore Curtius<sup>1</sup>; Vit Kucerovsky<sup>2</sup>; Taimaa Barakat<sup>3</sup>

<sup>1,2</sup>University of Alicante, Spain

<sup>3</sup>American University in Dubai, UAE



# Part 3

## 2043

# Se[taste] you in the Metaverse

Theodore Curtius<sup>1</sup>; Vit Kucerovsky<sup>2</sup>; Taimaa Barakat<sup>3</sup>; Farah Ali<sup>4</sup>; Dheyaa Dheyaa<sup>5</sup>

<sup>1,2</sup>University of Alicante, Spain

<sup>3,4,5</sup>American University in Dubai, UAE

We design our own Metaverse food such that users can enjoy it from a Virtual to a Real World experience. We provide a gamified metaverse connected with real-world sense.

### VIRTUAL SPACE

**A rainforest start.** The visitors arrive in a rainforest with ingredients ready to be harvested, hunted or fished. To enjoy the game experience, they have a list of ingredients they need to gather for the next steps and they can customize their avatars.

**Cooking incubator.** After collecting the required ingredients, they access a portal that teleports them into a cooking incubator to enjoy a cooking VR experience.

Cooking incubators are floating freely in the air space. Here represent a collective space, where users can cook, interact, taste and experience the virtual food together.

**The Biomes** are different scaled particles simulating different perceptions and environments. They stimulate our sensitivity and perception in the real world through their virtual experience. The largest scaled Biome 1 city is a rich structure. We can dive inside and find a smaller Biome 2.



## THE MENU

Starters: Biomes soup (depends on the thing you harvested).

Main course: Taste your neighbour, kill him before.

Dessert: Architecture buffet (gravel, concrete, styrofoam).

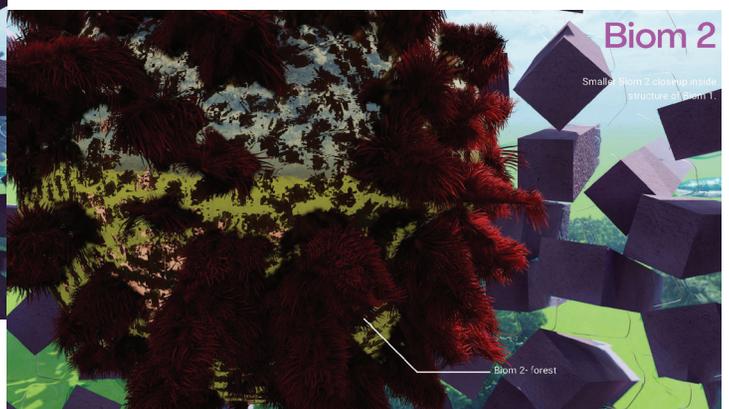
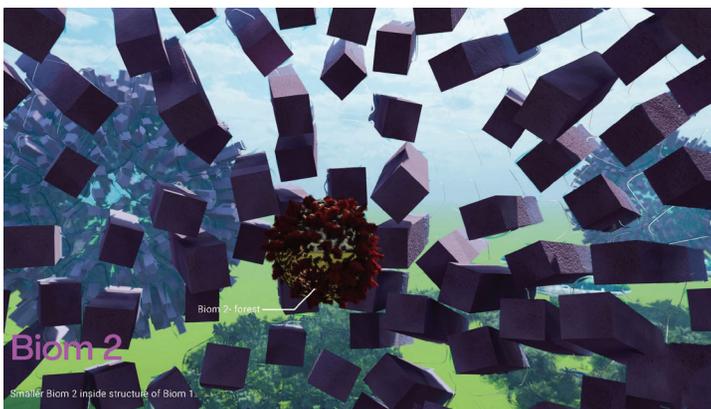
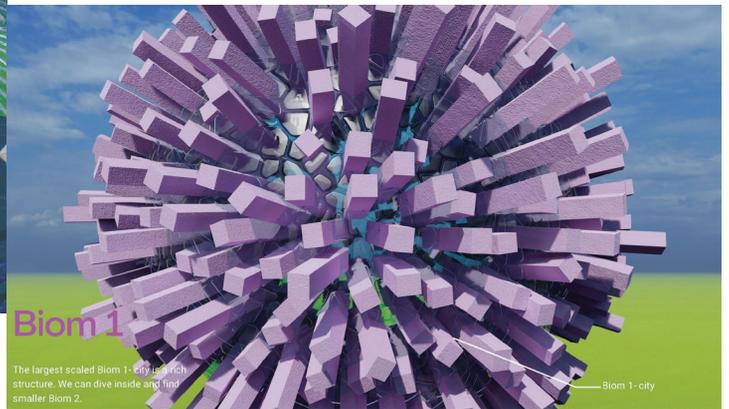
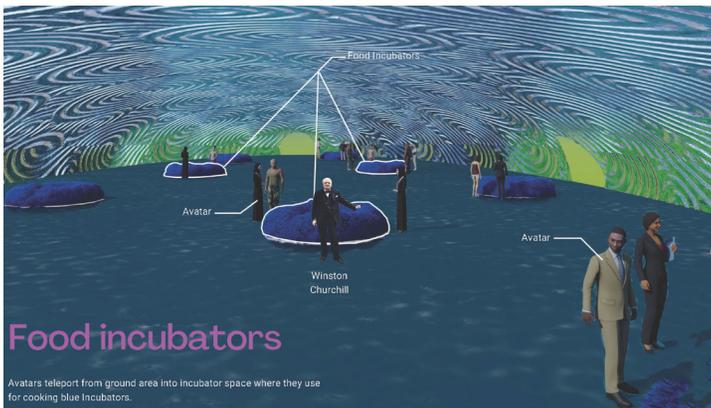
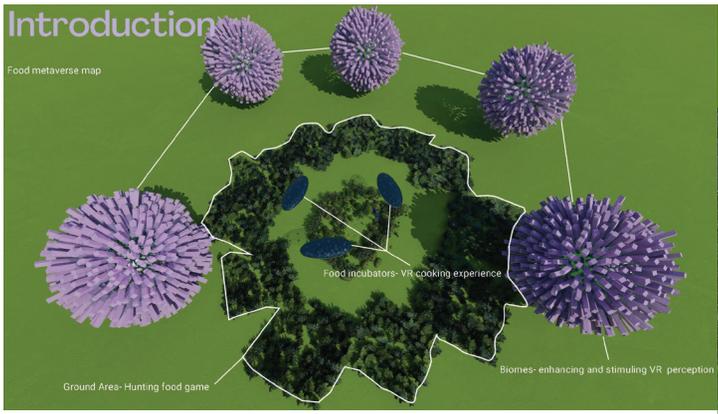
## THE EATING EXPERIENCE

Starters begin in a virtual nature, an environment to explore with all the senses. A bubble in the middle of the biomes concentrates the visitors gathering everyone around food and together they cook what everyone looted in the Biomes.

## Cutlery

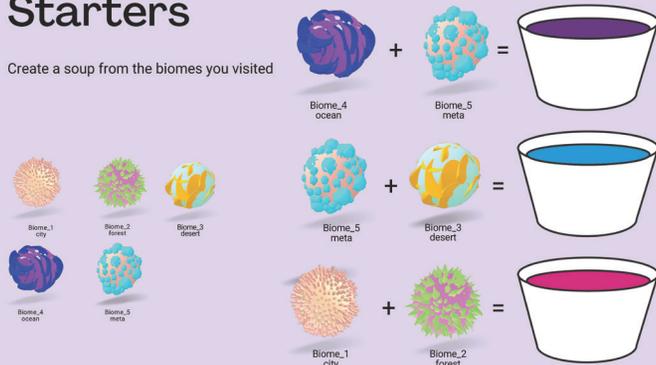
How and what do you eat in the Metaverse? VR Mask: puts you in the virtual world. Scent diffuser: get an olfactory perception of your environment. Water straw: carries water, whose taste is changed by the scent diffuser. Chemical diffuser and "consistency modifier": a chewing-gum-like element that changes its consistency and diffuses a taste. Intra-bone conduction system: to hear the crunch of what you are eating.

Video <https://www.youtube.com/watch?v=of3N3IXmDp8>



## Starters

Create a soup from the biomes you visited



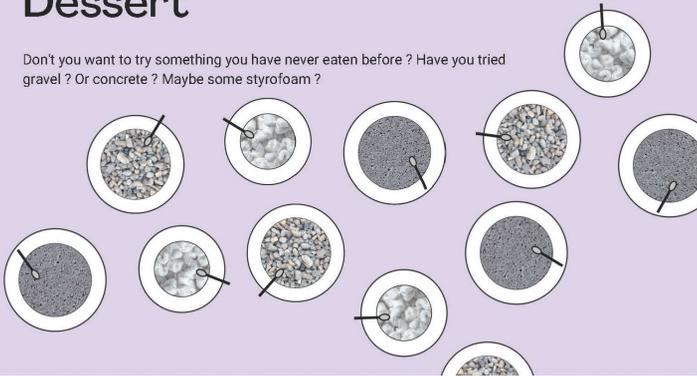
## Main course

Someone has to die - let's taste what you are, to get to know you better !



## Dessert

Don't you want to try something you have never eaten before ? Have you tried gravel ? Or concrete ? Maybe some styrofoam ?

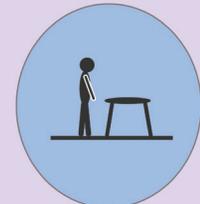


## SPACE AVATAR

The virtual visitor inside space, in an atmosphere



Starters begin in a virtual nature, an environment to explore with all the senses



A bubble in the middle of the biomes concentrates the visitors to gather everyone around food

## AVATAR AVATAR

The relationship between the characters



Try the taste of someone  
Main course



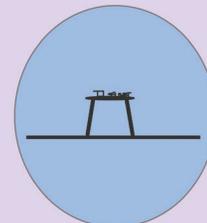
Cook together what everyone  
looted in the BIOMES

## SPACE FOOD

How is the food intertwined with the space that surrounds it ?



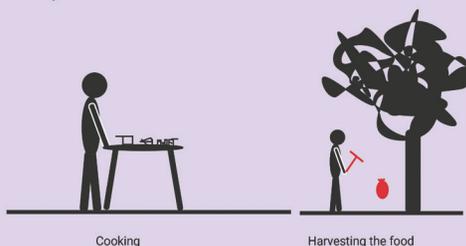
The virtual nature to loot the ingredients



The bubble around food, protecting it and the gathering created by the food

## AVATAR FOOD

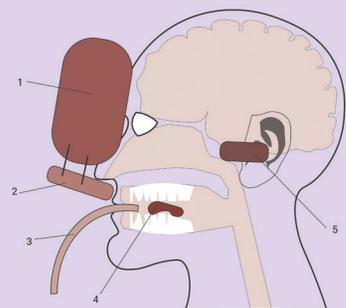
How and what do you eat in the Metaverse ?



## CUTLERY

How and what do you eat in the Metaverse ?

- 1 - VR Mask  
Puts you in the virtual world
- 2 - Scent diffuser  
Get an olfactory perception of you environment
- 3 - Water straw  
Carries water, who's taste is change by the scent diffuser
- 4 - Chemical diffuser and consistencer  
A chewing-gum-like element that changes its consistence and diffuses a taste
- 5 - Intra-bone conduction system  
To hear the crunch of what you are eating



# WORKSHOP: Bigamies for gastronomy

**Carrillo Andrada, José Antonio<sup>1</sup>; de la Rosa Morón, José<sup>2</sup>**

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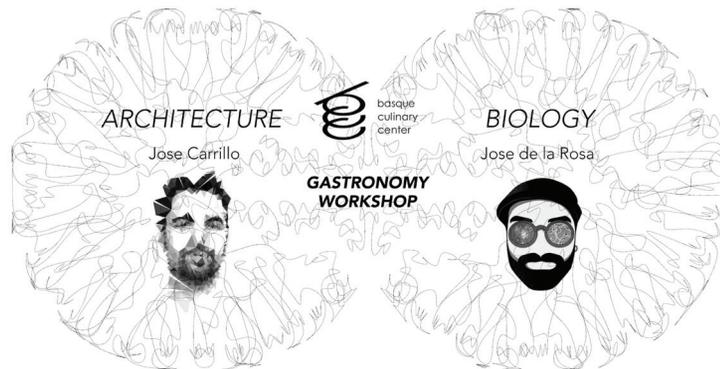
The workshop was held during the International Seminar and Workshop on Transdisciplinary Knowledge Transfer for the Master in Gastronomic Sciences of the Basque Culinary Center, Donostia-San Sebastián, Spain on March 13-17, 2022.

The students were grouped into their Master project teams: Sustainability, Enzymes, Plant-based/Towards 3S, Sensory Perception and Nutrition.

The workshop began with a lecture by instructors José Antonio Carrillo, an architect, and José de la Rosa, a biologist, where we shared examples that linked architecture and biology. We presented the concept of bigamy to the students through projects such as the Copenhill building by BIG Architects in Copenhagen in 2019. Case studies were shown where biology had inspired architecture to solve problems previously decoded by nature, and we spoke about biomimicry. Some soap bubbles models and studies were introduced to explain the design and structural analysis of the tensioned structures invented by Frei Otto for the Olympic Stadium in Munich in 1972. When talking about the minimum surfaces achieved in the stadium, we were also able to talk about the properties of gyroids, soap bubbles and their architectural translation in

the Beijing National Aquatic Centre designed by PTW architects and Arup engineers in 2008. As well as the Edible Cloud - VOM - By Plat Institute 2021, a new gastronomic technique that allows generating flying clouds of thin helium-filled bubbles with infinite flavours and aromas. When talking about multidisciplinary teams that merge architecture and biology, we showed the work of Neri Oxman and her team, leading a new era for a design where microorganisms, bodies, products or buildings can interact symbiotically. So that instead of building them, they can grow, as is the case with the Silk Pavilion 2013.

Students were finally introduced to the assignment, the game *Gastrogamy: Gamifying design innovation for a more sustainable future*. Working in teams, they were asked to develop an unprecedented product, strategy, or gastronomic project that reflected the hybridisation of the backgrounds and specialties of the members of each team. They had to justify the value that multidisciplinary and bygamies add and their potential economic, social and environmental impacts. The format for telling the proposal was left open, with options such as sketches, physical models, songs, courses, menus, presentations, videos, business models, etc.



The workshop pursued the following Learning Competences:

1. Integrate knowledge and face the complexity of formulating designs based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.
2. Know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialised and non-specialised audiences clearly and unambiguously.
3. Possess and understand the knowledge that provides a basis or opportunity to be original in developing and applying ideas, often in a research context.
4. Be able to use design thinking and methodologies from different disciplines and transfer them as innovative projects in the gastronomy and hospitality sector. To develop innovative business proposals in gastronomy

and food design, sharing information with people, companies, and associations and consolidating an active presence in local and global markets.

5. Understand the aesthetic and sensory aspects of gastronomic products and acquire the ability to perceive, through all the senses, the images, impressions or sensations that said products evoke to know the sensory aspects of said products. Likewise, be able to evaluate the design impact and analyse the processes by which the client selects, organises and interprets the stimuli to give meaning to their gastronomic option.

6. Design standardization protocols for new food products or services, optimizing, directing and supervising the different processes.

7. Know how to apply the knowledge acquired and their ability to solve problems in new or unfamiliar environments within broader or multidisciplinary contexts.

# Almarte: Almorta on Mars Plant-based Group

Leire Izagirre<sup>1</sup>; Álvaro Sánchez<sup>2</sup>; Rubén Palomero<sup>3</sup>;  
Irene González<sup>4</sup>

<sup>1,2,3,4</sup>Basque Culinary Center, Spain

The proposal developed by the plant-based group is to cultivate *Lathyrus sativus* (Almorta) on Mars to solve the problem of there being only limited space for cultivation on Earth. To do this, they propose creating an interdisciplinary working group where people from different fields, such as engineering, architecture, microbiology, agriculture

and carpentry, jointly design greenhouses adapted to the climate of the red planet. This legume is chosen based on its beneficial nutritional properties and ability to be grown in extreme climates. Similarly, its ability to fix nitrogen in the soil is highlighted, which enriches the substrate necessary for the growth of other types of crops.



# Balloon Beer Sensory Perception Group

Natalia Oroya<sup>1</sup>; Shubham Sandilya<sup>2</sup>; Teresa Moral<sup>3</sup>

<sup>1,2,3</sup>Basque Culinary Center, Spain

## Introduction

Following our union through our core project and with beer being the central theme of it, we consider that there is no better way to offer an experience to reflect our character as individuals and our journey as a team.

## Need in the gastronomic world

In the search for a differentiating factor within the gastronomic world, we consider offering the customer an experience in which beer tasting and the customer are the centers of the project.

## Proposal

The set has a base supporting all the elements that make up the dish. Also, the central globe encloses three main components of this experience, as these will reflect the customer's personality.

The three elements (globes) contained within the central one consist of three different preparations; they will be exposed to the customer when the central element is exploited. It should be mentioned that the three elements will be connected to the support by threads.

These three elements will be suspended and have different flavours, with which we seek to make the customer feel identified while tasting them. To determine the flavours, the team must carry out previous research on the flavours that cause pleasure or not to our customers. To make use of new technologies, the idea of using QR codes or surveys was raised, allowing us to know more about the customer and offer a more satisfactory experience.

