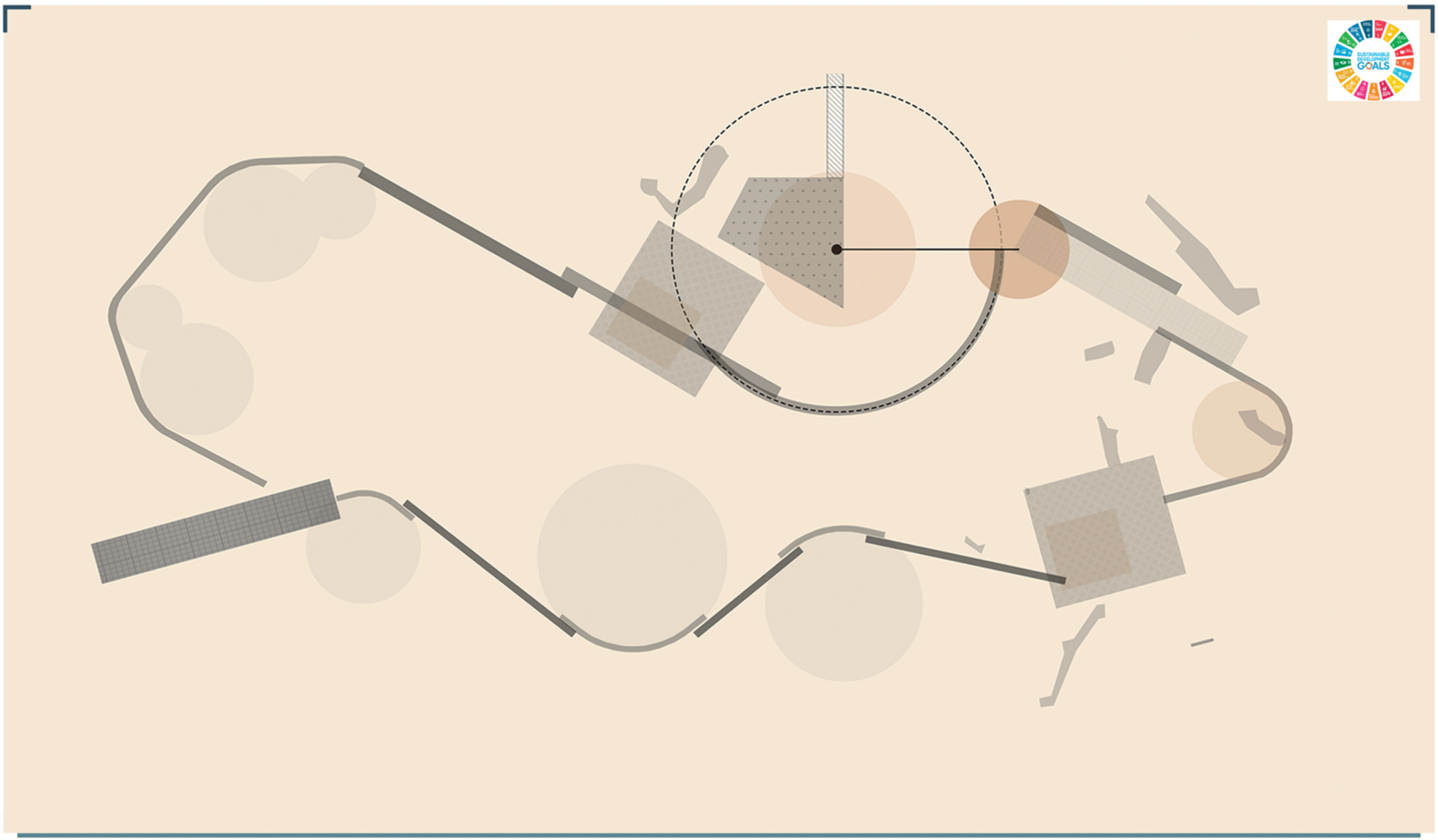

Country / City	**Greece**
University / School	**Technical University of Crete / School of Architecture**
Academic year	**2018-2019**
Title of the project	**Narrative mechanisms in a historical land.*Reviving the sound detecting devices on Patella hill, Leros island***
Authors	**Chrysanthi Zorpala**

TECHNICAL DOSSIER

Title of the project	**Narrative mechanisms in a historical land.** ***Reviving the sound detecting devices on Patella hill, Leros island***
Authors	**Chrysanthi Zorpala**
Title of the course	**Diploma thesis**
Academic year	**2018-2019**
Teaching Staff	**Panita Karamanea**
Department/Section/Program of belonging	**School of Architecture**
University/School	**Technical University of Crete**

Written statement, short description of the project in English, no more than 250 words

This thesis concerns the **study, analysis and interpretation** of the area of the gulf of Lakki on the island of Leros in the Dodecanese, Greece.
The **strategic position** in combination with the **geomorphological features** of the island, had set the conditions for the creation of the main Italian naval base during the World War II. In addition there were created, an urban center according to the values of the rational movement and a strong air defence network on it's mountain tops.
Mount Patella , that happens to be the case study of this thesis,was chosen as the main air defence administration center for its elevation and its position overlooking to the ports entrance. The composition of the hill, shaped by the Aegean sun, winds and vegetation, featuring remnants of sound devices for sound guidance, military and administration buildings, over a period of 80 years, is now **the subject of special historical interest** and **a gathering point of the island's walking network.**
The landscape is approached as an **open-air "museum"** and is treated with an analysis of two individual parameters: the natural and man-made space.
The idea of the proposal is **a walking narrative**, on site, through different micro-landscapes, viewpoints putting the sound devices of the place in a new reinterpretation and meaning, where the walker sees and examines elements in the environment. As a targeted architectural intervention, it is activated by the experience and function of memory and has the ability to reveal and highlight the complexity of this enigmatic landscape.

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CLIMATE CHANGE AGAIN

11th International Biennial Landscape Barcelona

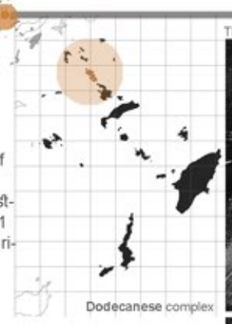
Barcelona September 2020

SCHOOL PRIZE

NARRATIVE MECHANISMS IN A HISTORICAL LAND.REVIVING THE SOUND DETECTING DEVICES ON PATELLA HILL, LEROS ISLAND

SITE ANALYSIS

LOCATION



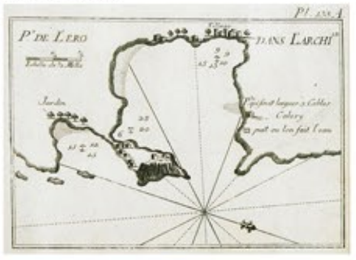
Leros is located in the northern part of the **Dodecanese complex** with coastline that reaches 71 km thanks to its horizontal division.

The geographical shape of the island is characterized by small hills and innumerable coves with the largest being **LAKKI**, which is the largest natural harbor in the eastern Mediterranean.

These conditions were exploited by the **Italian occupation of World War II**. The geographical location of Leros, with three spacious ports and especially the naturally protected Lakki, was considered ideal for the creation of the main Italian navy base in the Dodecanese.

The selection of Leros as the center of military operations led to **the construction of extensive fortifications, the creation of aeronautics base and consequently the creation of a strong network of artillery on the surrounding mountain peaks.**

The need to install 30,000 soldiers and their families of officers who moved to the island led to the construction of a new city in Lakki called **PORTOLAGO.**

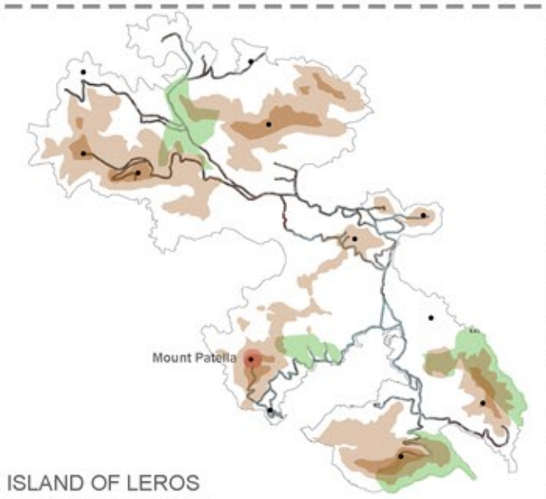


ANALYSIS OF THE LANDSCAPE

The city of **PORTOLAGO**, LEROS

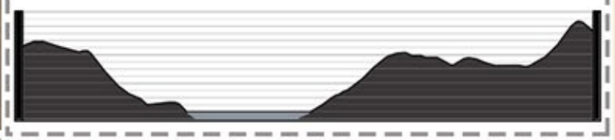
Architectural typology of PORTOLAGO

Le piazze d'Italia, Giorgio de Chirico, Rationalism

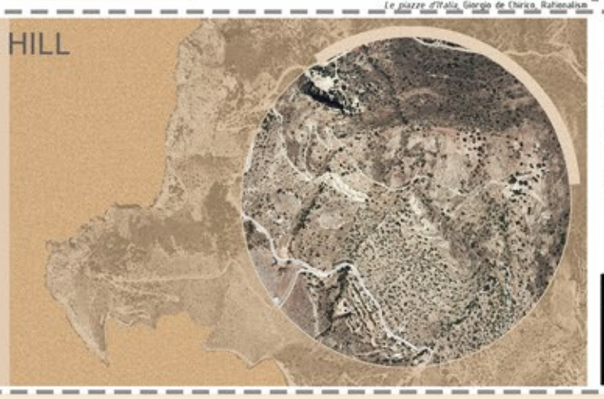


THE ISLAND OF LEROS

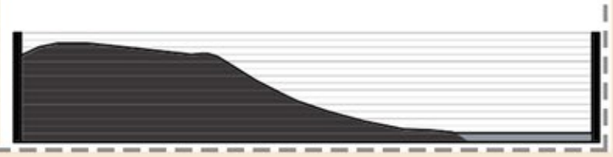
Air defence network on the mountain tops, during World War II



PATELLA HILL



Mount Patella was chosen as the **main air defence administration center** for its hight and its position overlooking to the ports entrance. The composition of the hill, shaped by the Aegean sun, winds and vegetation, featuring remnants of sound devices for sound guidance, military and administration buildings, over a period of 80 years, is now **the subject of special historical interest and a gathering point of the island's walking network**.



CURRENT SITUATION

DESIGN INITIATIVES

Design as an additional level of reading seeks **a narrative approach** and **not the drastic intervention in the unused building stock**. Main axis of the intervention, is **respecting the identity of this peculiar palimpsest landscape**. The research idea of the proposal is **a movement, a narrative,** where the walker, looks at and examines elements in the environment. This move, as targeted architectural intervention, **activates the experience** and **function of memory** and has the ability to reveal and highlight the complexity of this enigmatic site.

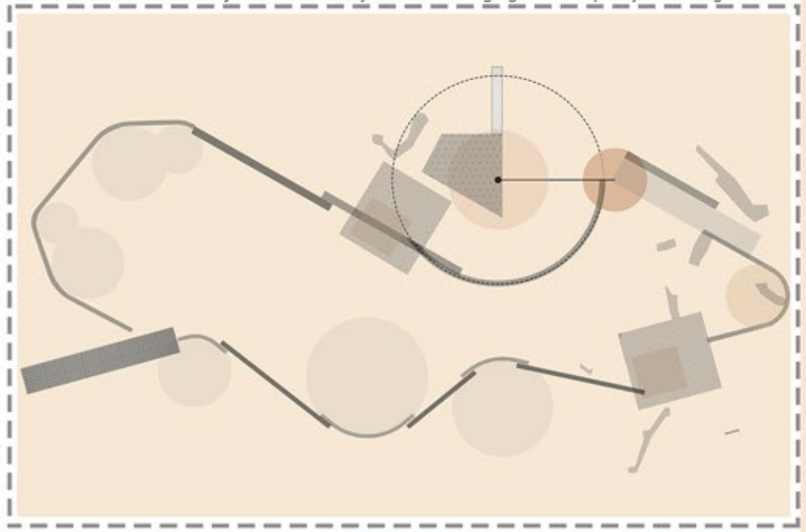
The **purpose** of the composition is to **highlight** and **connect** spatial values and senses that exist in the space.

The **composition** is the result of organizing the proportions, orientations and forms that exist in the natural and man-made landscape.

A **central point** is created around which routes and viewpoints are organized. The composition is being shaped equally around it.

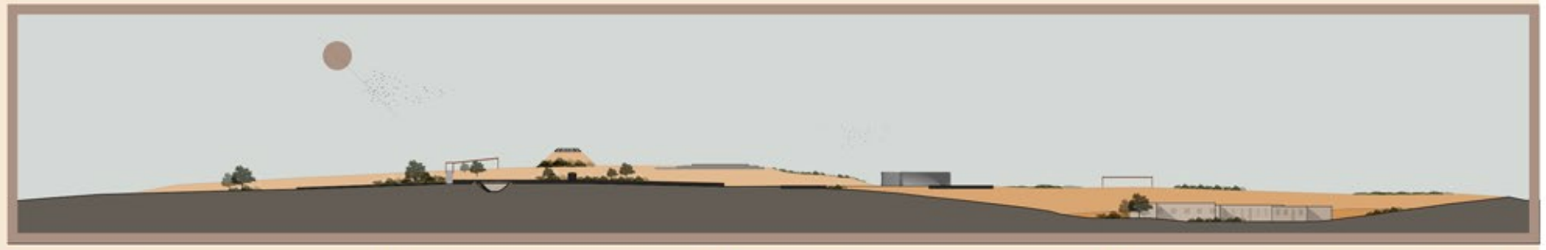
The design composition in total attempts to **connect points** like a series of directed movements, viewpoints and emotions.

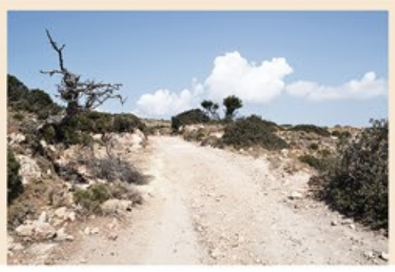
As a result, the beginning, the middle part and the end of the story that is being told, create **a circle like an eternal game**.

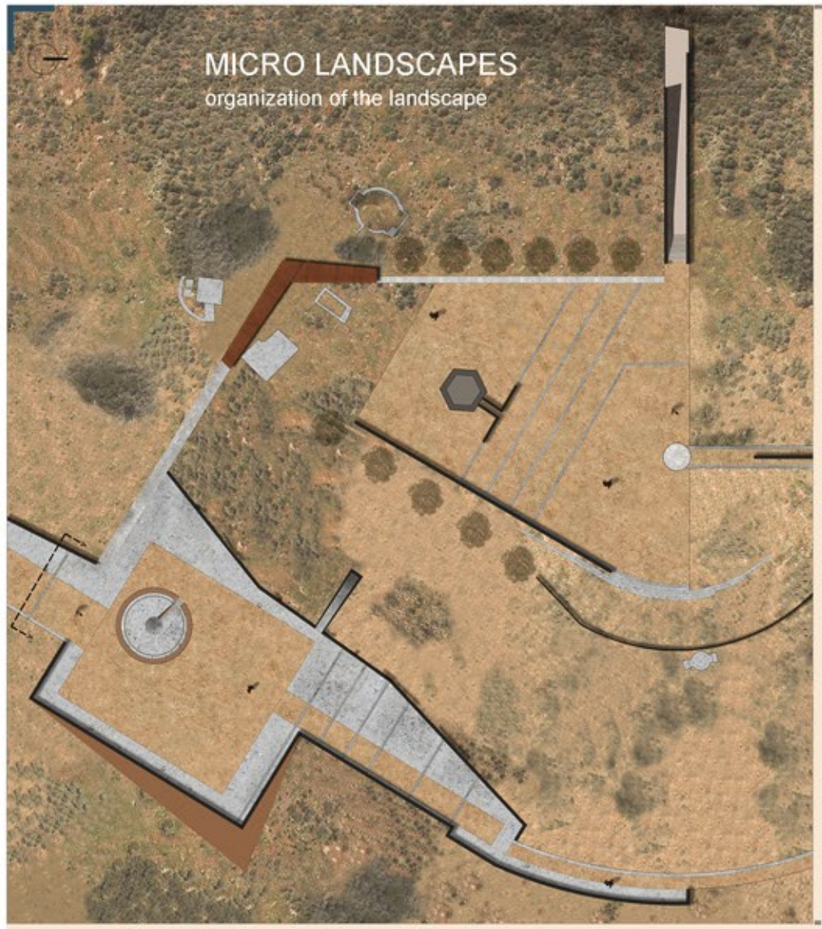


MASTERPLAN

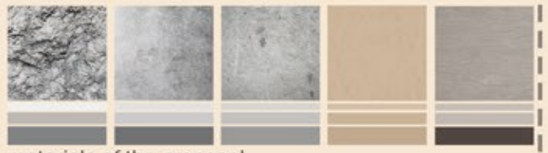
organization of the landscape





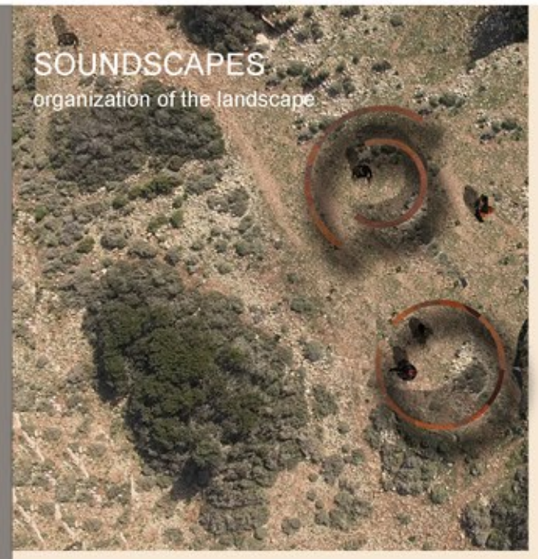


Central view point of the synthesis



materials of the proposal
color/composition

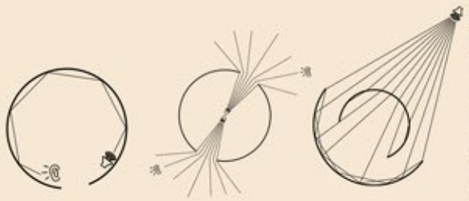
rythmic material changes lead to the main "balcony" of the site



organization of the landscape

Based on the **physical properties of sound**, a set of sound study constructions from oxidized steel are proposed. As shown in the diagrams, **reflection, refraction and diffraction** are used, as well as the voice of the participants.

By placing the constructions in the landscape, it is recommended to the visitors to **take part and discover the sound experience** through the natural distortions of their own voices. These experiences are **participatory** as they require at least two people, a transmitter and a receiver.



Non solo il vento puo 'suonare' una foresta un corpo in movimento puo imitare, sostituirsi al vento.

new reinterpretation of the hill's sound devices

An **acoustic mirror** is a passive device used to reflect and focus (concentrate) sound waves.

Parabolic acoustic mirrors are widely used in parabolic microphones to pick up sound from great distances.

Sound is collected through reflections on the spherical surface, at a **focal point** that changes depending on the position of the transmitter, which means that even the farthest sounds can be concentrated in the field of the mirror point that changes depending on the position of the transmitter, which means that even the farthest sounds can be concentrated in the field of the mirror.

The purpose off the reuse of the acoustic mirror i**s to maintain its function**, but by **changing the hearing aid** and connect Mount Patela with some characteristic points of the island.

Different **viewpoints** among the walking narrative of the hill have been connected overlooking the most significant elements of the surrounding environment.
(high mountains, steep rock cliffs, Aegean sea)