

Leonardo Pisoni

Transformative mounds

Le fornaci di Caldè (VA), Italy

RESEARCH PLAN

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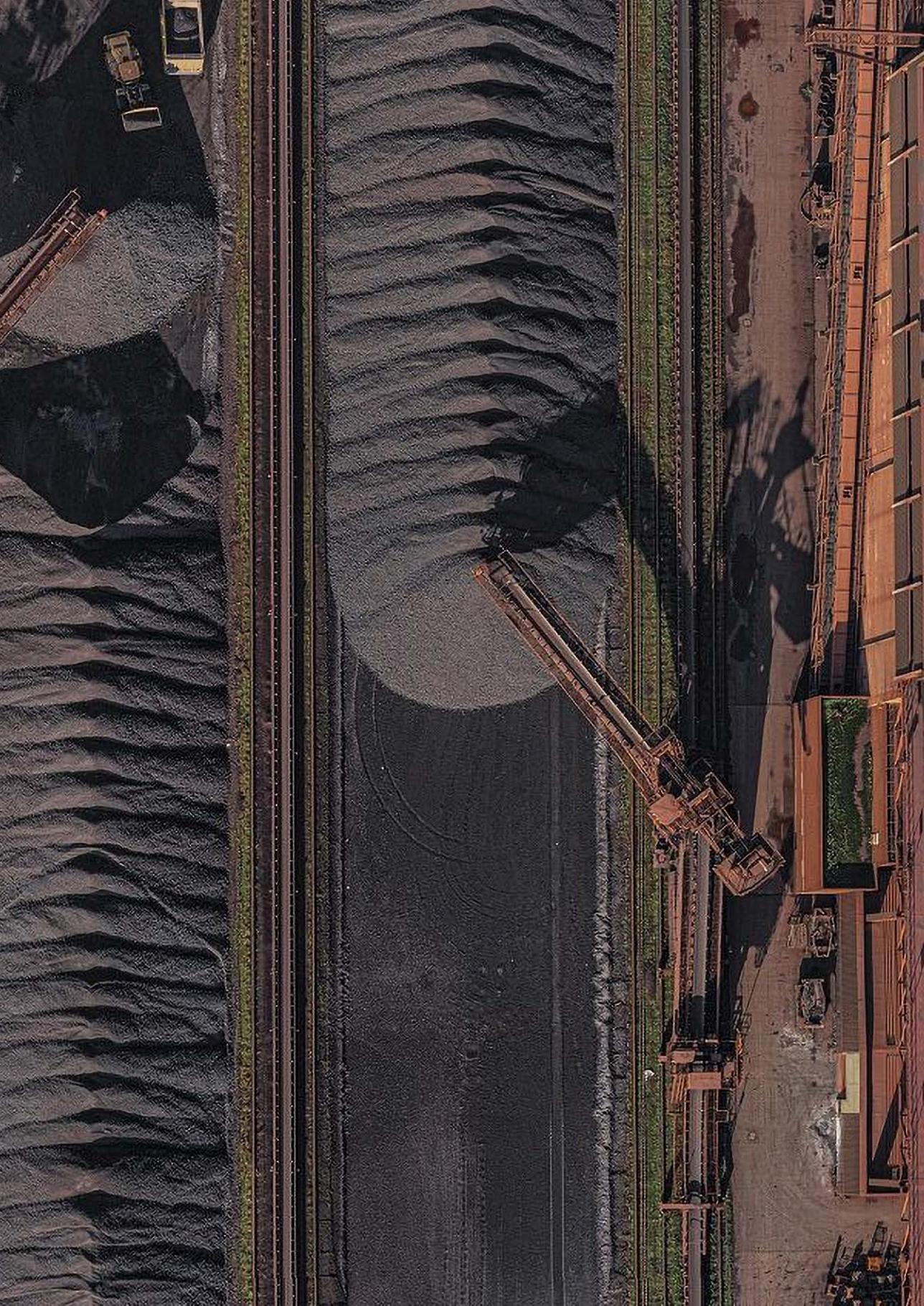
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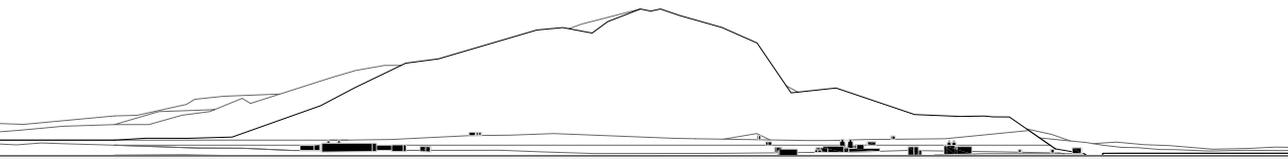
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1 Problems statement and research question



1.1 General Problem statement

Architecture is seen in most treatises as an act of creation, in university discussions or those by practitioners. Materials, proportions and ideas are discussed, always with the aim of informing future architects of the infinite possibilities in their hands. Architecture is therefore perceived as a way of expressing an area, an individual or a community, but always with a perspective of creation.

¹Enciclopedia Treccani,
Definition: Order,
Dizionario delle Scienze
fisiche, 1996

In recent years, however, the discussion has timidly opened up to the major issue of environmental sustainability, which has forced architects in particular to take a critical look at what the true nature of their work is. Unfortunately, in many cases the issue is resolved by counting the emissions developed during construction and counting the materials consumed. Such specific counts make the issue of material use an abstract and almost bureaucratic matter, easily losing the sense of the matter.

I therefore propose to change the definition of architecture to the above: 'architecture is the act of moving and stocking material'.

With this statement the focus of the conversation regarding the role of architecture changes, the architectural object does not become the centre of the discussion but rather the

movement and the stocking. The terminology as been taken by the philosopher Felix Guattari and Gilles Deleuze that spent a big part of their life trying to concretise a theory of flows, that they borrough from economy theories.

The change facilitates privileged viewpoints to find the 'removed' that is too often concealed in the discourse on the subject and to look at the broad ecosystem of mutation.

Two main topics become key principles guiding the issue:

The first is the relationship between the meaning of matter versus the meaning of material, these two terms find different declination through the process of movement, an epistemological enquiry into the topic can shape questions such as:

Where does matter come from? Where is it piled up? Are matter and material the same thing? What remains where material once was? Can matter be transformed into material?

The second is the relation between moving and stopping, a concept highly influenced by the theory of flow, code and stock of the *L'Anti-Œdipe* of Gilles Deleuze e Félix Guattari. It focuses on the notion of movement as a generalised approach towards all the matter and the act of stocking and recoding that organisms apply to the material in order to make it active for themselves.

The issue poses important questions in relation to the perception of time, the continuous modification of matter and its relationship to the concept of time, it is necessary to ask where movement takes place in which time is not implied and how movement is declined both spatially and temporally.

From the topic arises questions such as:

Why does matter move? How can time pass without movement?

In which cases does movement turn into transformation?

1.2 Specific problem

The specific problem at the core of my research is finding a way to reuse and valorize the ruins of a former quicklime factory on the banks of Lake Maggiore in northern Lombardy, known as ‘Le Fornaci di Caldé.’ This area, once one of the most industrialized lakefronts in Italy, is gradually transforming into a tourism paradise, particularly for German and Swiss visitors, through the development of infrastructure for retail, housing, and tourist facilities.

While this shift toward tourism can be seen as a catalyst for revitalizing post-industrial areas, it is also leading down a dangerous path for former industrial complexes, often resulting in the demolition of these structures to free up land for random real estate developments. This approach erases the region’s industrial heritage, replacing it with a new, disconnected vision of the landscape that loses its meaning of the past.

This fate is a significant risk for the Furnace area as well. As evident in the images, the site represents a remarkable geological, historical, and cultural landmark that deserves a more thoughtful future. Therefore, it is urgent, not just for my university research, to conduct a thorough study that highlights the cultural significance of this site and its potential, with proper development, to become a major attraction for the surrounding territories.

1.3 Research question

“When is the act of moving matter a transformation of its significance?”

My research question, which arises from the combination of reasoning developed as a result of the general and specific problems encountered, is: “When is the act of moving matter a transformation of its meaning?”

Because if we have to analyze the process of moving material, it is fundamental to see what transformation of its meaning this movement entails. Transformation that can occur either intrinsically to the material itself or in relation to a different use. A transformation of its essence linked to movement. The concept of transformation differs from the concept of movement through the recoding of its meaning. But at the same time it must be evaluated in which cases it occurs and in which places, and whether the opposite is possible, that is, matter that irrelevantly maintains its meaning in the mutation.

This main movement raises further questions such as the nature of the exceptionality of matter, the form and meaning.

Does matter have an essence? Does it carry memories with it? What is the relationship between the material and the place where it is deposited?

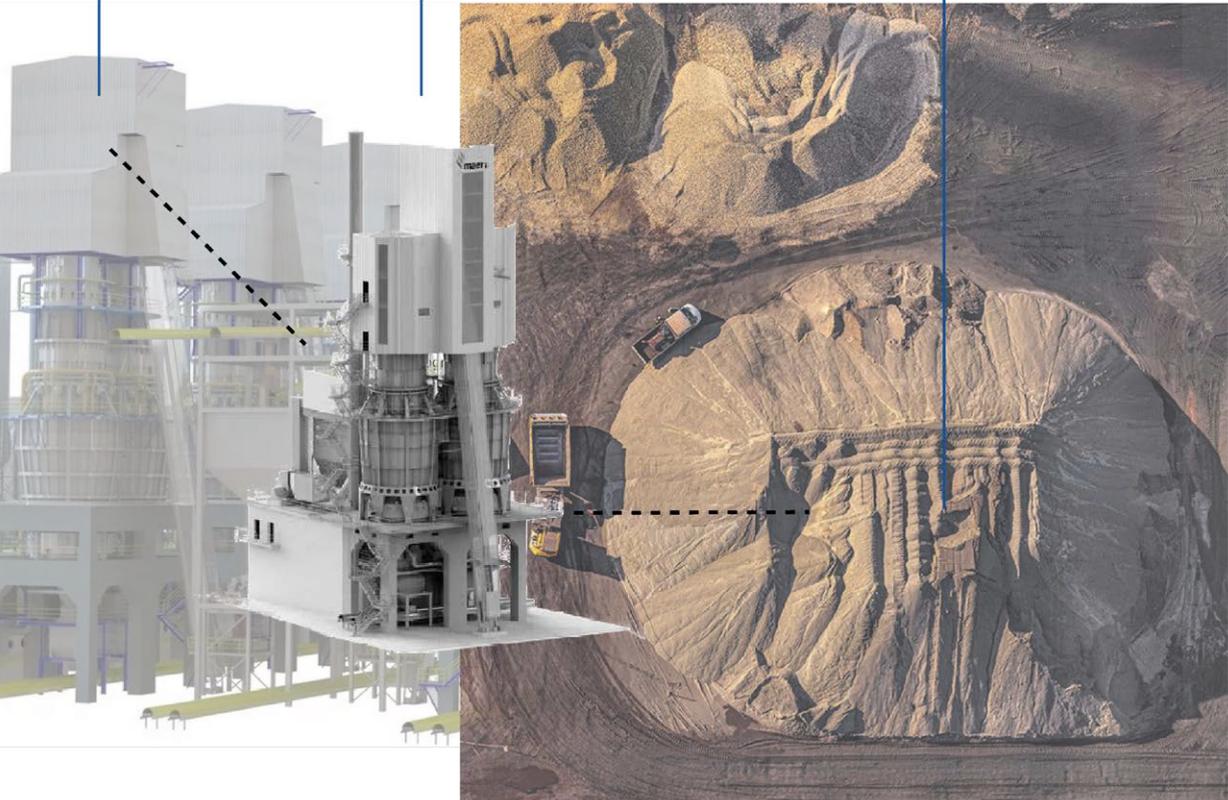
2 Theoretical framework



Flow

Code

Stock



2.1 The flow: Unconscious movement

Let us start, in order to understand how to evolve the theme, from a concatenation of events directly related to the research location: there is a small protuberance of land at the side of Lake Maggiore in Lombardy, because of its specific characteristics, they built a furnace that through the transformation of material became larger and larger, its chimneys became small promontories all around the main mountain that through the need of excavation work tended to thin the main one, almost to slice it. The material produced was particularly prized in the nearby city of Milan, which was rapidly expanding at the time. However, the city was hit by the war and the rubble of these 19th-century constructions lay in the streets waiting for an operation that could breathe new life into their meaning, so an architect Piero Bottoni decided to bring all the ruins of the war to one place, thus creating Milan's only existing mountain in the vast Po Valley. The lake mountain had moved, and like an organism, had found a new, more suitable place to be.

If one looks at the history of architecture from the point of view of the transformation of materials, as these events do, if one no longer focuses on the finished object but on the flux it has managed to store, one actually traces a much richer genealogy, in which the architectural object represents a simple interlude

in a much more articulated process of movement.

In my view, this is a way of understanding a building in a way that is certainly anti-classical, since it is closely linked not only to its necessary future decay, but also to its lack of statics in the present.

Borrowing terms from Deluze's philosophy of flow theory, my intention is to reason both theoretically and practically in the reality of my context, trying to understand in it which flows are important for my project, which are the stocks and the mutation of their code, in other words: the meaning/symbol associated with them.

In this new way of understanding material processes, two topical elements acquire great importance: the mound and the mountain, two elements that speak par excellence of the concept of the sticking of forms of material and immaterial flows.

2.2 The Stock: Discussion about the understanding of the pile and the mountain

I would like to continue my analysis by looking more closely at how these two symbolic figures have been codified, and what the rediscovery of the stocking symbol might mean for understanding how a building works and what it means.

Symbol of the pile

On the one side, the symbol of the pile speaks of a state of waiting or accumulation, it is a material piled up by human beings, at the same time, however, the pile or tumulus has extremely sacred hidden meanings. In Italian 'tumulo' means both a pile of material and a sepulchre. It is also interesting to analyse how tumulo is always part of a material system of negative and positive on the earth's crust, tumulo is the opposite of excavation.

Its architectural declinations are already more than present in the world, especially in territories where there is a tendency not to demolish dilapidated constructions but to restore them. To fully understand the technique, one need only look at the constructions of the Butabu technique (Sahel region of western Africa-Mali, Niger, Nigeria, Togo, Benin, Ghana, and Burkina Faso) in which the material is modified and added stacked, irreversibly changing the forms of the constructions.

Moreover, as Vacchini recalls in his book *Masterpieces*, the pyramids themselves are of this form because it is the form that changes the least over time being the ultimate form of ruin.

Symbol of the mountain

On the other hand, the Symbol of the mountain is also an ancestral symbol which, although it has been highly explored both artistically and philosophically, still has very little connection with the world of architecture.

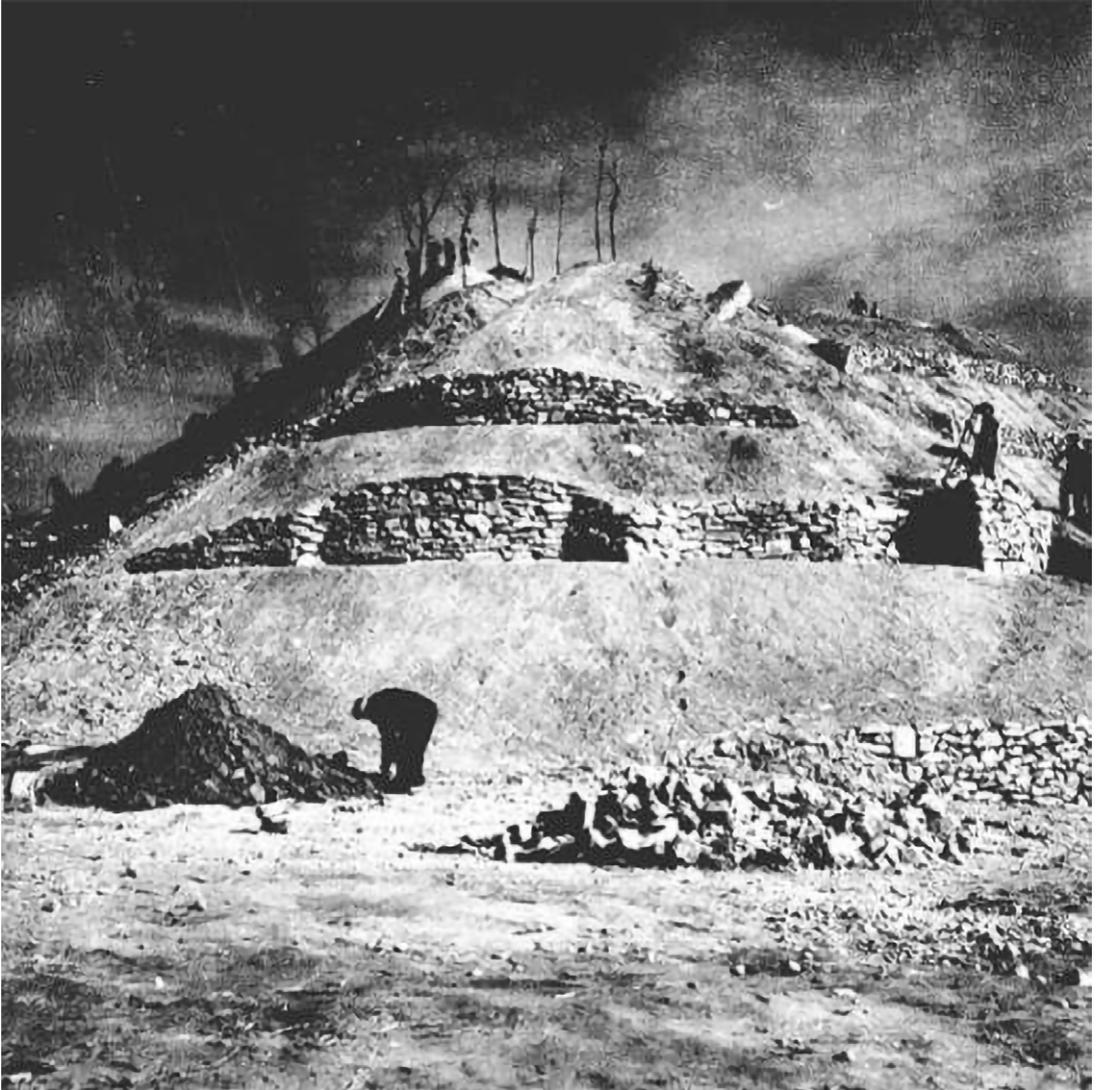
Indeed, mountains represent a complex question of whether they can be symbolically perceived as objects or as an extruded part of the earth's surface. This issue has generated numerous symbols and mythologies.

In the first case, mountains, objectified because of their finite form, have led human beings to see them as a subject, an enemy, an adversary, or a wise old man. The challenge therefore lies in facing them and trying to reach the top. In the other case, on the other hand, the mountain represents a privileged part of the earth's surface, the summit of the mountain is occupied by the gods, the myth of Olympus, of Parnassus, but also Dante's purgatory, which in a certain sense represents both visions.

In addition, the mountain as an object represents an ambiguous condition to its understanding as a part of nature or God creation because it is neither architectural nor an organic element.

The relationship with architecture is a rather unexplored territory, but there are sources a bit hidden in theoretical texts, for example the relationship with modern architecture, which attempts to be as far as possible to the concept of materiality, while on the contrary attempting to claim the sublime power of mountains in the work of man. It is part of a symbolic system, a symbol of the non-constructible territory, of non-

artefactual nature. It's a space that becomes an object, through its ungovernability. Examples of mountains treated with an architectural theme are De Lucchi's wooden mountains for the Jannone Gallery.



2.3 The Code: The transfigured symbol

To understand the implications of the stock process, we must consider the hybrid forms between mounds and mountains artificially constructed by humans. These structures convey profound symbolic meaning, as humanity has emulated their natural spontaneity for various reasons, bringing the concept of accumulation into a state of ambiguity and transforming it into a symbol. In *The Fake Mountain*, Michael Jacobs categorizes artificial mountains or piles into three types:

The Mountains/Piles of rubble, closely related to the idea of mound and thus of burial. Example: Fake Rubble Mountains of Germany, an attempt to cover up any kind of memory.

The Mountains/Piles as an image, symbolic mountain perceived as both objective and attainment but at the same time tamed to represent paradise on earth, used through its image, very often even empty, transfiguring the sense of matter. E.g.: Disney's fake mountains and those of the entertainment industry, but also the 'tamed parnassus' in Ferrara's Renaissance gardens.

The Mountains/Piles of waste, Piles in order to build something bigger, auxiliary mountains, silent witnesses of a bigger process.



3 Connection point: The place of the transformation

Bellinzona Zurich

Mechanics
Electronic

Textile

Glass
Lime

Cotton

Pink granite

Ceramic

Tertile

Chemical

Metal

Milano Roma



3.1 The extraction industries and the Caldé klinks

This is the boundary point where my theoretical discussion and the former furnace I am going to renovate come into relation, in fact I believe that in order to study the transformation process in depth it is necessary to study, the moment that represents the membrane, the detachment point that makes the entire process meaningful; that is, the place where the material is processed, the place where this transformation is exercised and acts as the activating element of the process.

Case studies: The extraction industries of Italy

Italy has had a millennial history of material extraction, thanks to its particularly diverse deposits and the history of skilful processing that has made their extraction meaningful.

Again, there is much talk of Italian creativity and cultural achievements, totally disconnecting the subject from the extracted material.

People talk about Michelangelo, but what would Michelangelo be without Carrara marble, which is so pure in structure as to be extremely malleable. People talk about Gio Ponti's architecture without analysing his ability to source material from the land. The Italian quarrying industry is concentrated in a few famous examples, leaving aside the large number of factories and mines

that still manage to inform the cultural substratum produced in the environment through their production.

Caldé furnace in Lake Maggiore

The area that I will subsequently carry out my project is the Caldé furnace, a complex dating back to 1859 and located at the foot of the Caldé rock, a solitary natural elevation in the landscape of Lake Maggiore.

The Lago Maggiore is a really interesting starting point of the analysis of the territory, because its meaning between the present and the past is very different, its can also be seen as a starting point to prove how much the renovation project that I'm going to carry out in my building is part of a concept of a much brother area that in the past worked as an industrial shared city in which the lake worked as a connector and the flows of both materials and people had really peculiar directions and relations.

The study will develop on themes that directly contribute to the design of the project. It will investigate the significance of lime, a material produced by kilns, a symbol of refinement, precision, uniformity, a-materiality.

On the double nature that divides the reading of this territory between an industrial lanscape and a place for the villeggiatura of the growing bourguasie class though the construction of the "ville di delizie".

And, at the end, the social implications that the perpetual transformation of the factory imposes, artificial boost of creativity and activity, that will become an important entry point for the design.





4 Methodological theoretical approach, the Simondonian discussion

The research will be driven by the study of some philosopher that wrote about the concept of transformation and the meaning of it, one of the key figures of this study is the research led by Gilbert Simondon about the Allagmatic transformation, and the concept of modulation of the structure and of the allagmatic of the operation that informed the structure.

I am putting this sector of the research in the methodology because I think part of the research won't be discussed largely, but it will be used, in order to filter the information that I will collect through a specific framework. The Simondonian discussion is in fact a tool for understanding the world through a lens that doesn't divide bipolarly the form and the matter, a fundamental topic for my research.

Transformation

Structure

Operation

**Modulation
process**

**Allagmatic
transformation**

**Transductive
moment**

Structure = Operation

5 Hands on research :

Tools of the research

The tools of the research that will inform the writings will be multiple because I think that the only way to understand a territories is to approach it within the spectrum of different medias and tools

The memories of the territory

First of all, I have deeply studied and understood the site and the contest throughout my life, so I am very familiar with them. This gives me the ability to speak about these areas with in-depth knowledge and provides me with a social network of people who can offer references directly connected to the local culture.

The Discussions with the authorities

I already spoke with the municipality of Castel Veccana (the town of the factory) and I am in contact with them for further information about the territory, they already gave me many documents included the PGT of the territory and the all the specification for the outline of the renovation. It a big and famous project so there are already many project and proposals where I will be able to understand also the historiography of the proposals. I am in contacts also with historian professors that

wrote book about it.

The (carto)graphical and modelling tools

The research will be informed by early starting of the use of design tools like maps, diagrams and models (physical and conceptual) that will give you the possibility of exploring the concepts in an unwritten way.

6 Relevance, coherence and consistency of the Research

To provide some real data on the contemporary relevance of this research, I can mention two key points. The first is theoretical: the book on fake mountains, which I cited in the bibliography, represents the first monographic study on the topic and is quite recent, having been published in multiple languages between 2021 and 2022. This symbolic and material approach to architecture is still highly unexplored, making it a very new field of study.

Additionally, the growing ecological awareness in construction processes demands significant discussion on the symbolic references tied to this new understanding of the discipline. Too often, ecological concepts have been narrowly confined, limiting perceptions of nature by its inhabitants and reducing the understanding of coexistence between artificial and pseudo-natural structures. I believe this topic can offer a broader vision when viewed through the lens of transformation.

The second key point concerns the specific renovation process of this factory, which has been under discussion for nearly 20 years, with many proposed projects being rejected by both the local residents and municipalities. These multiple rejections led the municipality to put a ban on any project where housing was involved, so the function is also a bit of a topic that will need a strong theoretical background.

This highlights the sensitivity and urgency for further studies. This year, however, there has been a potential shift: a Swiss company has purchased the abandoned plot, and a Milan-based architectural studio is now involved in the project. This makes the timing for proposing alternative solutions and conducting exploratory studies very tight, as decisions about its future will soon be made.

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