Leonardo Pisoni

Mezaràt in the Spotlight

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Contents

Introduction – 8

General:
Architecture as Creation
Environmental Issue
Introduction to the Research Question

Specific:
Intrudiction to the site of the furnace of Caldé and its evolution of the production process

The Flows: – 26
The Movement as a Base Point of the Static Science

General:
The Theory of Flows
Allagmatic Transformation

Specific:
About the Lago Maggiore Industrialisation
The Allagmatic Process Between the Lago Maggiore and the Milan Reconstruction

The Moving on the Lago Maggiore

46 – **The Stock:**
Symbols and Significance of the Stocking Structures

General:
The Stock
The Mound
The Mountain

Ambiguity and Hybrid Layers

Specific:

A Territory of Controlled Abundance

68 – **The Code:**
A Connection Point

General:

The Place of Transformation and Codification

Specific:
The Lime Recoding the Rock
The Bourgeois/Industrial Paradise

The Social Implications of a Perpetual Transformation

88 – **Conclusion**

A cultural mound is a material mound

Mezaràt = half rats = bats

Surname for the night workers of Porto and Caldé

Introduction

Architecture as an Act of Creation

Architecture is often seen worldwide as an act of creation. This might feel like a bold statement, but most of the treatises that a student would cross during his university career largely adopt this vision of the profession. It is important to notice though that creation doesn't mean self-representation, it is not only the architecture of the "archistars" that clearly expresses its subjective approach to the building, through the arbitrary decisions of the architect. Even architectures made by communities, by public and democratic states or with a social purpose are not separated from these dynamics. No matter if the author is single, a group or if it is a city architecture, a building is always something that has been added to the world, something that "wasn't there before".

The development of a building is usually more or less described in this way: "There was a client with some money, one problem and big dreams – a problem not fixable with common construction ideas –, until he met an architect with a creativity stronger than others who, through an advanced esthetical, structural or spatial approach, created something totally new, something that not even the client wouldn't have thought of, and became so famous that this building got copied, creating a new school or a new style. Students then take inspiration from this architect, and try to emulate his mindset rather than his building hoping that they will create something with

the same boldness and creativity in their future".

Historically, as far back as Greek times, Architecture was associeted with Painting and Sculpture as one of the three major arts, as represented in paintings such as Pietro Aldi's *Allegory of the Three Major Arts* (Painting, Sculpture, Architecture) in Siena[1] or Francesco Fontebasso's fresco in Palazzo Bianco in Genoa[2]. Thus, it was seen as a tool for artistic creation on a par with Painting or Sculpture, and this thought was further enhanced by the numerous historical revivals through the centuries, that brought Architecture on the altar of the arts capable of creating a better society with their work[3]. Moreover, among the arts, architecture relies on the art of representation as a medium between the author and the object he designs, and this increases the abstraction of the process and makes the architect lose his grip even more on the complex material structures and operations that are condensed in the process of the built environment[4]. If the architect deals with lines, ink, paper, cardboard and spray paint, his works deal with stucco, brick, mortar, glass and metal.

[1] Pietro Aldi, *Allegory of the Three Major Arts* (Painting, Sculpture, Architecture), Siena, 1872

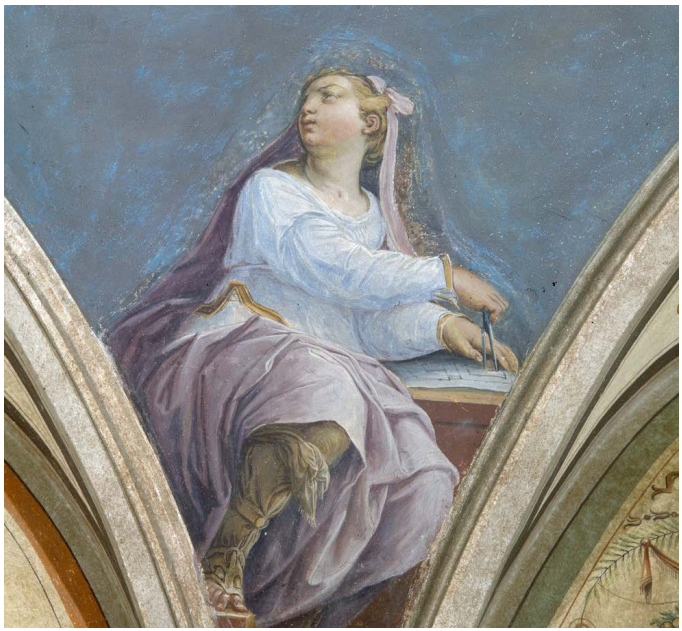
[2] Francesco Fontebasso, *Le tre arti : pittura, scultura, architettura,* Palazzo Bianco, Genoa, 1750

[3] Adolf Loos, *Spoken into the void*, The MIT Press, Edition (July 1983)

[4] For example: Peter Eisenman, *Giuseppe Terragni: trasformazioni, scomposizioni, critiche,* Quodlibet, 2004

[1] Pietro Aldi, Allegory ***Allegory of the Three Major Arts*** (Painting, Sculpture, Architecture), Siena, 1872

In architecture schools many topics about the consistency of materials are discussed, but most of the time, in order to achieve a greater composition, they are presented as tools which are at the disposal of an architect to build a great architecture, at the same level as other tools like proportions, colour and spatial configurations or conceptual ideas. Materials are one of the skill set, often considered as a texture in order to assign a grain to the colour or add blur to the surfaces, a trend that has been even more increased by new realities like visualisation and three-dimentional renderings of the deliveries in competitions and in general in the new perception that is ruling the economy of architecture, seen only as an image.



Environmental Issue

In recent years, however, the architectural discussion has timidly opened up to the major issue of environmental sustainability and, consequently, to the problem of the consumption of materials and the production of waste. This new concern has forced architects to take a critical look at the true nature of their work, and to rethink their approach to the profession and their role in society. Their status changed in the media from being perceived as visionary city planners able to drive society, to visionary builders of picturesque gardens, who can build greener than others. Nowadays, a project cannot be presented to the public if it doesn't have a strong focus on the landscape around the plot, rather than on the architecture, which is still most of the time the only material outcome of the architect's work.

Unfortunately, in many cases, current environmental strategies for image architecture more sustainable are reduced through calculating the emissions produced during construction and the materials consumed, in an attempt to lower the enviromental impact. Numbers, percentages, and norms are everywhere nowadays, especially as statements to submit new projects. Statements such as "this building uses a concrete that releases 60% less CO_2 than normal concrete" are everywhere. Such specific counts make the issue of materials an abstract and almost bureaucratic matter. The

message being sent is that, as an architect, you can build almost anything as long as some data are respected, like a sort of checklist before departure. It is easy to understand how quickly these numbers start to lose their grip on reality, and that the discussion is no longer about materials and emissions, but about numbers on a sheet of paper.

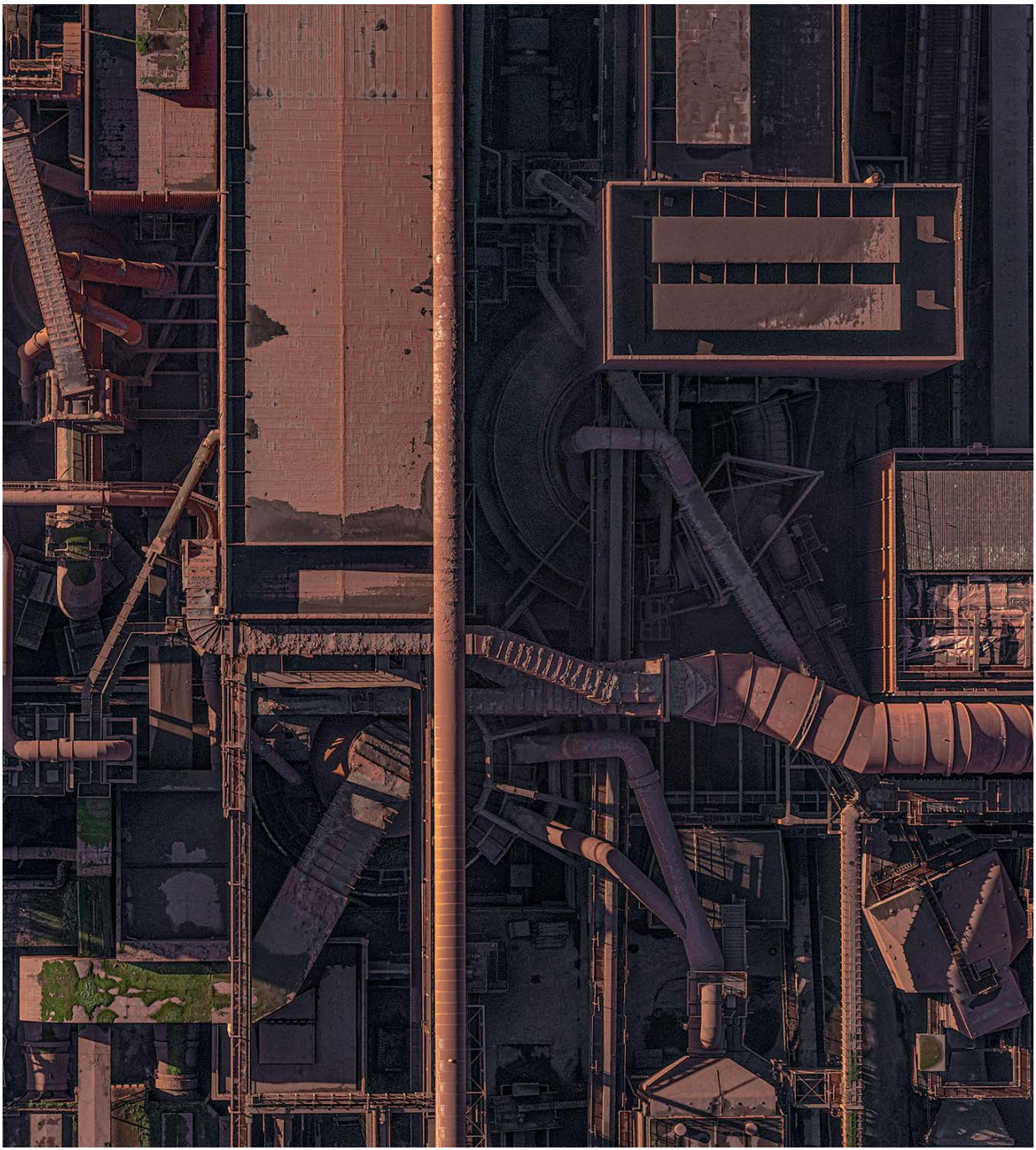
In a world where the public is only craving to see cute images of blooming gardens in front of a building for sale, and the institutions impose bureaucratic thresholds as the only sustainable requirement to address, the spectrum of material transformation is extremely simplified. The material path that made the construction possible is still unclear, and architecture feels like an act of creation out of nothing.

Introduction to the Research Question

In order to change this way of looking at architecture, it is clear that adding data or imposing restrictions cannot be the solution. Adding complexity may improve one's vision, but it cannot change the structure and habitus of the profession. In order to change the way we deal with the use of materials and waste in architecture, it is necessary to completely change our understanding of what the practice of architecture means. It is necessary to look at it from a different point of view, focusing on the “operations”, rather than the structure of things: a point of view that explains materials not by describing them statically, but by understanding their meaning, through the movements, transformations and processes that made the structure possible. This way of looking at things will end up shifting the focus of discussion towards the concept of material flows that spread across the globe and to the ability of an architectural project to start or stop them.

This text will also try to delve into the problem of the meaning that we, as human beings, give to a material in order to make it useful; moreover it will concentrate on how the act of moving matter represents a transformation of its meaning or "coding". If indeed the concept of transformation is derived from the one of movement, then in a transformative process not only the material itself, but also its meaning, shifts.

This main shift immediately raises questions about the meaning of things, such as the nature of matter, the meaning of form and the one of significance. And also other practical ones that deal with our own understanding of material movements in the world, such as:
Where does matter come from?
Where does it accumulate?
What remains where matter once was?
What is the relationship between the material and the place where it is deposited?



Specific

The Site of the Lime Kilns of Caldè and the Evolution of the Production Process

“Towers, cones, cathedrals on the water's surface: these are all ways to try to render briefly and efficiently what lime-kilns represent today. Their memory is linked to the rising up and majestic image of the truncated cone nineteenth century chimneys. Their considerable size, their often constricted position between the lake (excellent means of communication) and the mountain (necessary reserve of raw material and fuel), their state of abandonment and the consequent fascination which the "value of antiquity" has for the observer, leads finally to emphasising and looking with admiration, respect and love at these pieces of architecture whose importance, apart from for their monumentality, derives from their role as irreplaceable document on the means of producing lime. This is ever truer today when contemporary research is directed towards the study of traditional materials and techniques.[5]”

In this way, the local researcher Luca Bertagnon introduces and explains the importance of the kilns in Caldé for the place and the people who live there. These furnaces are lime production complexes located on the eastern shore of Lake Maggiore in Italy. Long stretches of self-built kilns, scattered industrial relics and visible transformations of the surrounding area are the presents signs. They do not represent a ‘new industrial tradition of the place’, lime production is traced back as far as the

[5] Luca Bertagnon in *Le Fornaci di calce del lago maggiore*, (a cura di) Antonio Bandirali Giuseppe Armocida, Alberti Editore intra, 1997

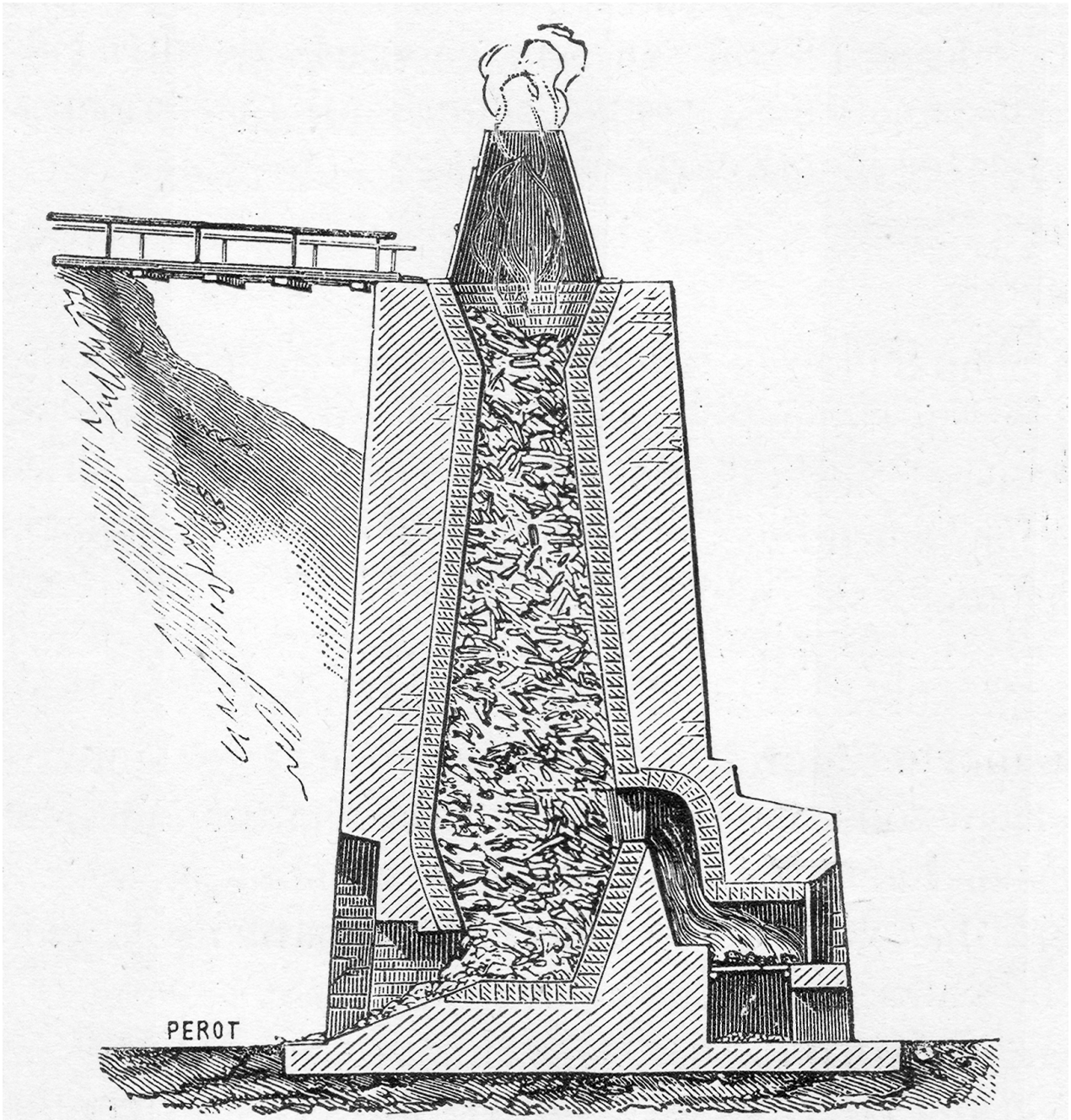


Fig. 78. — Four à chaux.

XIIIth century, we know it thanks to laws establishing its importance in the territories near the lake. Authors of geography and history from a wide variety of periods have spoken of the area's production as one of the most important lime deposits in northern Italy.

One author who has spoken extensively about the architecture of lime production is Vincenzo Scamozzi in his treatise: The idea of universal architecture[2]. "Talking of kilns, the author gives a first and important precise definition of the habits of digging and firing the rocks on the site, distinguishing those constructed to work for a long time, from those which satisfied a requirement limited in time. The first, behind large banks of high-quality lime and served by means of communication, were generally more solid, better made, larger and thus able to survive over the centuries."[6] The kilns of the Rocca of Caldé can certainly be placed in the first group, and in fact even after years of production they represent a testimony of the place. Scamozzi was one of the first treatise writers, and above all architects, who described the functioning of lime kilns, considered by most historians purely practical structure that had nothing to do with the discipline of architecture.

[6] Luca Bertagnon in *Le Fornaci di calce del lago maggiore*, (a cura di) Antonio Bandirali Giuseppe Armocida, Alberti Editore Intra, 1997

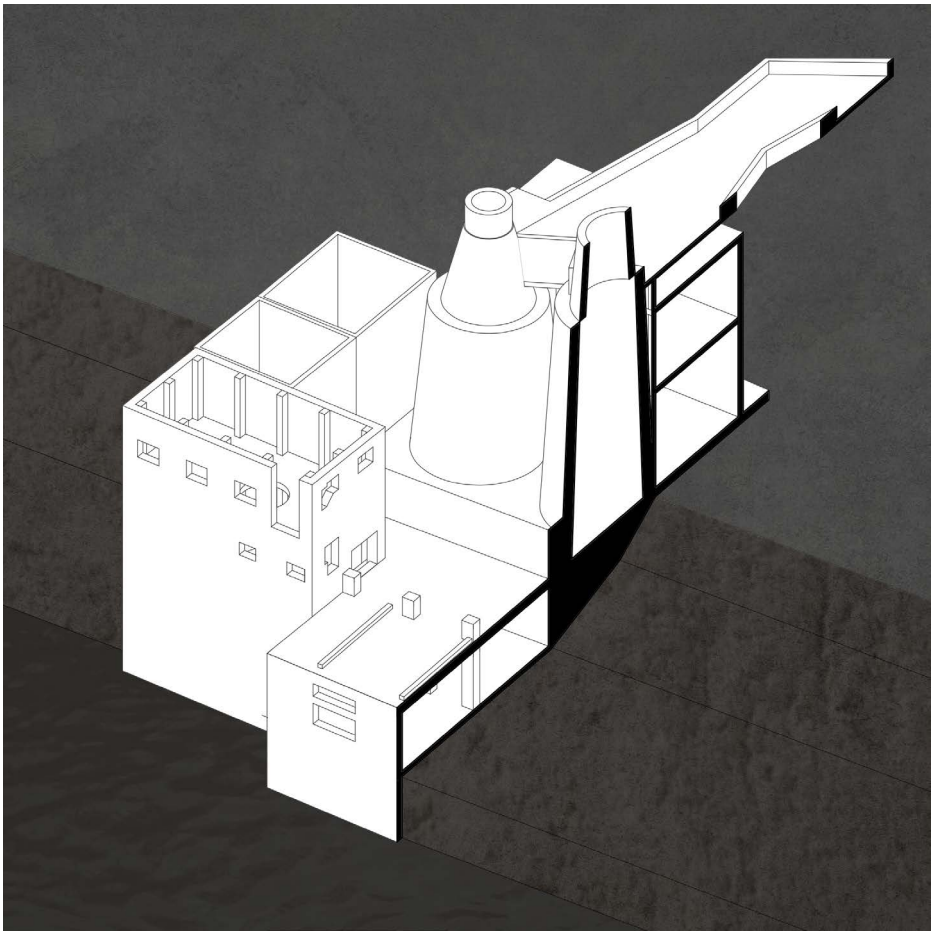
The Renaissance architect explains the location and the relationship with the context necessary for the machine to function "The lime kilns, which are called this from limestone, from which lime mortar is made, must be sited at the bottom of a hill or other high place; or be on the flat, on a good embankment all around, with a slope sloping outwards so that the entering air rises. They are round,

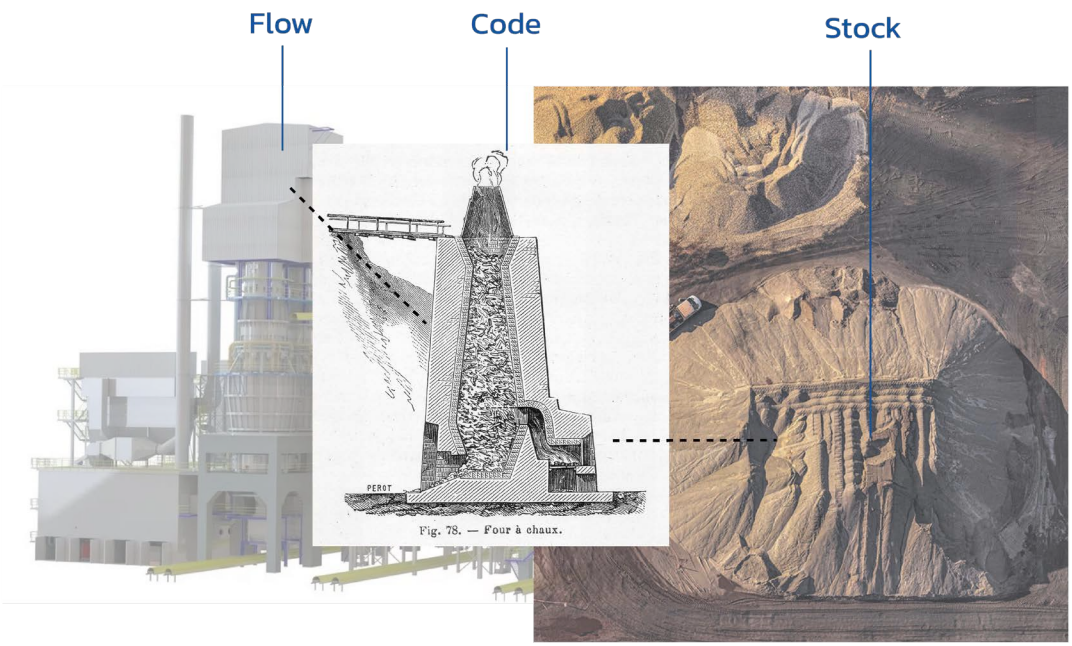
from ten to twelve feet in diameter, and are straight in height or narrower at the top, so that the fire has greater effect."[7]

[7] Vincenzo Scamozzi, *L'idea di un'architettura Universale*, Expensis Auctoris, 1615

In the area of the Lago Maggiore, the industrial process to arrive to a proper industrial fabrication of the lime enter in the scene in the second half of the XIXth century, before it was done only in cooperations or in families. It took plenty of time to land in the territory, but in the end the many kilns where substituted by six major ones and the whole shores of the mountain was acquired by a single company. Around 1930, it was decided to change the production to continuous cycle kilns. It is the final form that characterises the present appearance of the Rocca of Caldè, with its six towers with chimney.

The development of this type of kiln followed three main material lines, three flows that shaped the landscape: the flow of air, the use of different types of fuel and the clearer separation of the various phases of combustion: preheating, calcination and cooling. Although these may seem very practical issues, in a production space, they determined the architecture much more than compositional rules, the views from the lake and morphological relationships with the adjacent buildings. As a result, instead of blending in and fitting into the context, they created a very specific singularity in the landscape.




Flow
Code
Stock
PEROT
Fig. 78. — Four à chaux.

The Flows
The Movement as a Base Point of a Static Science

General

The Theory of Flows

Gilles Deleuze and Félix Guattari, in their famous philosophical treatise *Anti-Oedipus*[1], describe a new way of understanding society, called the "theory of flows". However general it may sound, the concept is easy to grasp: it is a theory that understands everything, from the material to the most intangible dynamics of the world, as a flow: an ever-changing movement of anything that spreads out until there is something that tries to block it or contain it. Exactly like water, everything, from money to rocks, from labour to emotions, is a flow scattered across the world and enters into relationship with other types of flows.

[1] Gilles Deleuze e Félix Guattari, *Anti-Oedipus* , Minuit, 1972

This theory is not an invention of Deleuze and Guattari, it is landed from the economic field, where John Maynard Keynes[2] describes in these terms the economy of the States, showing how much the supply and demand chain can be synthetized in a meeting point between flows. Actually, for Keynes, on the one hand "the flow of labour must no longer be determined or codified as slavery or serfdom, but must become naked and free labour", on the other hand "wealth must no longer be determined as landed wealth or the money dealing of merchants, but must become pure, homogeneous, and independent capital, which is capable of buying this labour"[3]. In this way the economist is trying to explain that these flows are not relational in themselves, but they become so, and here

[2] Alan S. Blinder, *Keynesian Economics*, Concise Encyclopedia of Economics. Library of Economics and Liberty, 2017

[3] Daniel. W. Smith, *Flow, Code, and Stock. A Note on Deleuze's Political*, Deleuze and Guatarri Studies 5, 2011

is where capitalism appears, with its trading of labour in exchange of wealth.

Deleuze's socio-political theory is based on three interrelated concepts, all of them derived from Keynes' approach[4]. Flow is not the only important keyword that needs focus, the other two important topics are Stock and Code. On the one hand there is the act of stocking the flow, which is the portion of the flow that belongs to a being at a given moment in time, which he can spend and consume, which does not mean stopping but just collecting. On the other hand there is the concept of code, which is the inscription or recording of flows, and makes a flow understandable and active for a certain group of beings. These two topics represent the two entry points of the next chapters and will be extensively discussed.

[4] Daniel. W. Smith, *Flow, Code, and Stock. A Note on Deleuze's Political*, Deleuze and Guatarri Studies 5, 2011

The theory of flows can be particularly useful in architecture, precisely for the question described in the introduction, because it immediately gives the possibility of thinking the subject of architecture through the lenses of movement and stocking, rather than with the over-used concepts of creation, production and reproduction. The use og this theory to analyse some of the material processes which give shape and materiality to architecture is a way to understand the movements of material as the starting and the ending point of construction.
It is a way to give a central role to the operations and the spaces that managed the movements of material, such as the places of extraction, the places of storage, their waste disposal and their transport infrastructure.

General

Allagmatic Transformations

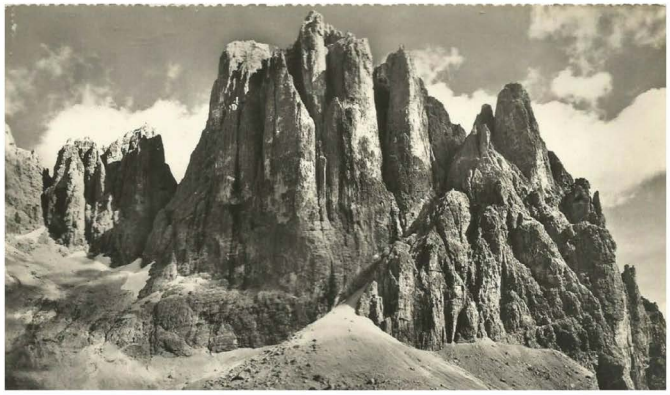
The Greek word "allagma" can mean change or vicissitude, but it can also mean that which can be given or taken in exchange.

The French philosopher Gilbert Simondon uses this word in order to describe his "Theory of Operations"[5]. Allagmatics analyzes the chain of operations that are needed in order to transform a structure in a different one, an alternative from the analysis of the pure structures in their modulations that is the focus of the "theory of structures", highly used by modern science[6]. Allagmatics is thus the science of generic "operations", that can be understood as the acts that one needs to perform in order to transform a structure. The topic takes an important meaning for the design processes since for the philosopher Simondon, the traditional "hylomorphic schema", the dialectic separation between matter and form, is essentially a distinction between an understanding of the structure or that of the operations of the same object.

[5] William J Baumol, E*conomic Theory And Operations Analysis*, 1977

[6] Gilbert Simondon, *Individuation*, Mimesis, 2020

The theories developed by Simondon provide a key to understanding how the deleuzian theory of flows can be analysed pragmatically, through the division between structure and operations it is possible to understand both the nature and entity of the flows dealt with, and which operations they are bound to and produced by. In other



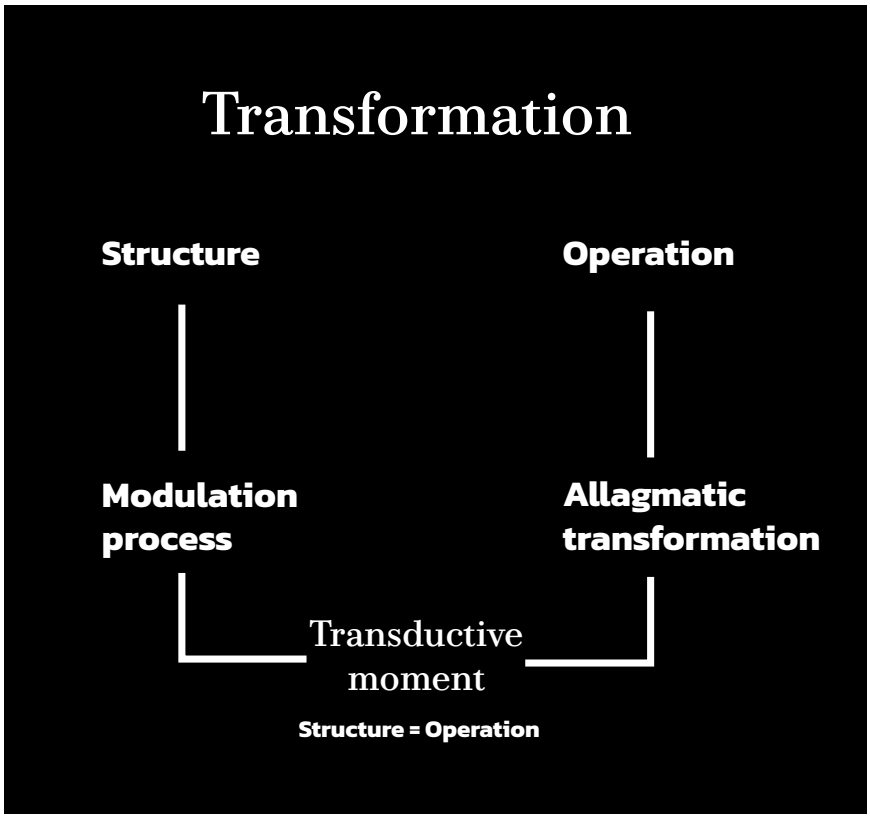

MILANO — Piazza del Duomo.

words, the split in the analysis of form and matter makes clear the path that matter follows and, at the same time, the one that its forms follow, and divide them into two different flows that can meet in specific situations, but that have different ways of being perceived.

Normally architecture is understood in a purely structural way, we reason about the modulations of its structure and about the progress of its physical character by attempting to study how materials, forms and technologies have evolved over time. A much less studied field, on the other hand, is its opposite, allagmatics, in which we reason about the operations (economic, social, material, technological) that make possible the transformation of the a structure into the next one.

However, many researchers are constantly noticing how much the nature of the architecture profession is far from being purely structural: Mario Carpo[7] maybe is the most radical when he says that architecture is purely an "informational operation", in which it is not important its being an object, but its nature as being a tool in the operation of conveying messages. This point of view enables the possibility that the study of allagmatics of the operation is the way to shift from a formal based architecture to a material based architecture.

[7] Mario Carpo, *The The Alphabet and the Algorithm*, The MIT press, 2011


Transformation
Structure
Operation
Modulation process
Allagmatic transformation
Transductive moment
Structure = Operation

Specific

About the Lago Maggiore Industrialisation

Lago Maggiore is one of the three big lakes of glacial origin in Northern Italy, in a steep valley on the threshold between Italy and Switzerland. Because of its longitudinal shape from North to South, it acts as an access gate to Italy from the North and as a barrier between the East and the West side between the two northern regions of Lombardy and Piedmont. Since it is surrounded by mountains, no big cities have been built along its shores, but many small towns and villages found their setting there since the Roman era. If one looks at the map without knowing the history of these places, he could assume the fact that the towns scattered along the eastern side had strong relationships between themselves and that there could have been roads of high trading importance connecting them. In fact, until the 19th century, when the roads along the shores where built, it was much easier to use the lake as a transport device. During the past centuries the lake was used and "coded" as a road[8]. There where villages on the shores that where totally relying on it and because its form is long and thin (the maximum width is 10 km), they wisely had more relations with the villages on the other side rather than the ones of the same shore. The connections so were fostered in a multidirectional way with an understanding of the lake as a great “urban” area highly interconnected, a system where was not strange to take the boat reach the other side just for the market, as the still existing great market of Luino (way bigger

[8] AA.VV, *Loci Travaliae IV. Contributi di storia locale*, Biblioteca Civica di Porto Valtravaglia, 1995

than the buying capacities of the singular city) materially explains.

In the 19th century, with the beginning of the industrial era all the villages on the lake thought systematically on how to distribute the industries on territory, which were already there since the Middle Ages, in order to improve production. The factory distribution, moreover, wasn't planned but was rather random, because the territory was rich in raw material and highly valuable for extraction, the industries and the kilns were scattered around shores with the clear logic of producing something different in each site, rather than competing, and all the towns equipped themselves with one big factory producing what they were able to do the best, because of the skilled workers already living nearby. Workers where even coming from far away to work here, it became an attractive destination for industry workers. In the village of Porto Valtravaglia there is still the trace of an old neighbourhood in a perfect Dutch style, because the Dutch glass blowers where the best at the time, and they came here to practice their skills. Besides Luino had the textile factory, Porto Valtravaglia had a glass factory, Caldé

[9] *Le Fornaci di calce del lago maggiore*, (a cura di) Antonio Bandirali Giuseppe Armocida, Alberti Editore Intra, 1997

its lime kilns, Baveno was the place for the extraction of granite, Candoglia for marble and so on, arriving in more recent years to the highly industrialized sector as the chemical products or the electronics in Locarno. Already in the early industrialisation phase this division fostered economy making the Lago Maggiore one of the most industrialized lakes in Italy with two major routes of flows of these goods: going South, towards the big Italian cities of the Po Valley and going North, towards Switzerland and Germany.

This way of coding the life along and around the lake through an industrial understanding has been so important for more than two centuries: it fostered connectivity, it created unexpected flows in the land, and unite really different communities, considering that at the start of the industrial revolution the two shores where not even in the same State. When the factories closed, around the Seventies of the 20th century, the understanding of the entire lake changed drastically. That moment can be considered as the end of an era for these places, and brought people to emigrate, to move to the cities of Varese and Milano and to even blocking the stream of flow across the lake by boat that once was crucial for its economy, since the time when the marble for the Duomo di Milano was taken from the caves of Candoglia and travelled by boat through rivers and artificial canals to Milano.

Specific

The Allagmatic Process between Lake Maggiore and Milan Reconstruction

I will describe a process that influenced my area of research only from the point of view of operations, without focusing on the structures that these operations have created and the differences that might have occurred between the input and the output.

On the right side of Lago Maggiore, there is a small mountain that has a really peculiar characteristic: it is situated right next to the lake shore. Furthermore, this mountain, the Rocca di Caldè, as it is called, is made up fully of limestone. For this reason the inhabitants started to build around it little chimneys, becoming larger and larger in time, and their kilns became small "mountains" all around the main mountain. Then inhabitants started to slice the cliffs, explosive were placed on its slopes, and huge pieces of rocks fell from above in the lake and on the coast. The kilns were on fire, burning all day and night, the material was piled everywhere on the shores, and big machines transported the material inside the ovens. It was a never-ending process: explosions, smoke, fire and collisions where the routine in this landscape.

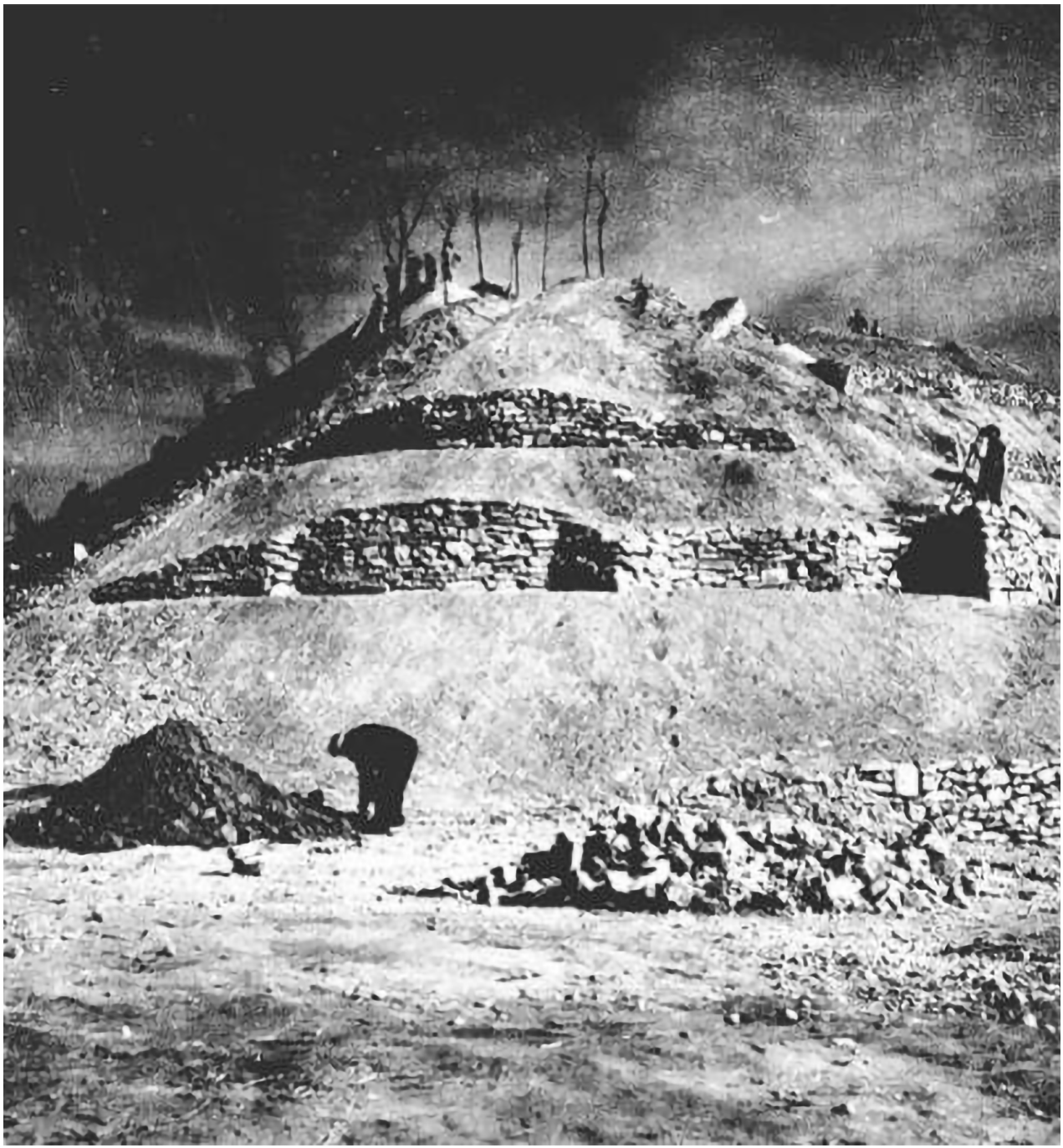
The lime produced in these furnaces was particularly appreciated in the nearby city of Milan, which was rapidly expanding during the XIXth. Massive piles of quicklime were travelled through the complex networks of artificial

canals connecting the lake and the town. As Cesare Cantù, historian, writer and politician, wrote in 1859: "Le Cave di Caldero provedevan quasi sole Milano di eccellente calce... tuttora cercata per la qualità superiore"[10]. *(The quarries of Caldero almost alone provided the city of Milan with excellent lime... still sought after for its superior quality)*

[10] Cesare Cantù, *Storia di Milano*, Corona e Caimi ,1859

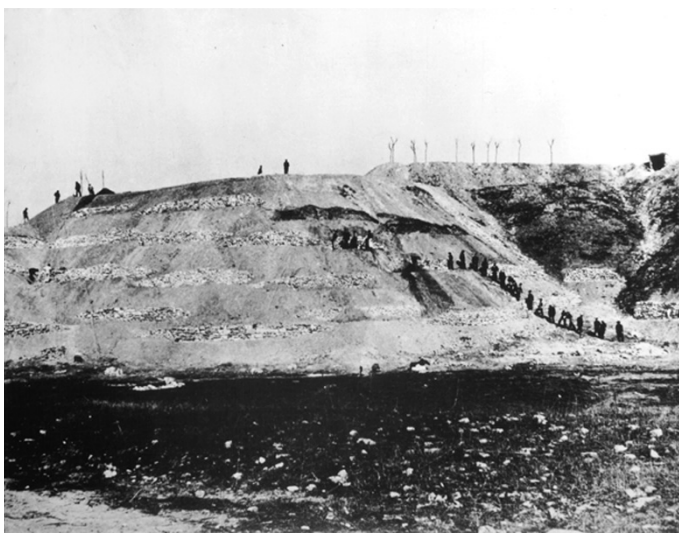
Later on, the city of Milan was hit by the II World War, and highly bombed by the Allies in 1943-44. Another scene of explosions and destruction. The rubble of the former XIXth century buildings lay in the streets waiting for an operation that could breathe them new life. After the war, a modernist architect, Piero Bottoni, tried to fix the situation by bringing all the ruins of the war to one place in order to clean the city. The location designated was itself an old extraction place of material and the original idea was to transform it in a little lake for the newly planned QT8 quarter, an experimental quarter designed according to the principles of the most modern and avantgarde architectural and urban plans. But there was too much rubble and the pressure from the city was so high that trucks started to pour the debris in the future lake.

Piero Bottoni, the chief architect of the project, explains the process in this terms: "L'acqua diveniva limo, il limo fango, il fango pantano, il pantano terra: una terra umida, e poi sotto il sole, secca e scagliosa come la pelle di un coccodrillo. Era come se un caimano ottuso e feroce, la guerra, dopo averli divorati, ora digerisse immobile e senza rimorsi tutti quei delicati organismi distrutti. Il lago



azzurro e romantico della nuova architettura spariva a poco a poco esalando i miasmi delle cose morte e della fogna."[11] (*The water became silt, the silt became mud, the mud became a quagmire, the quagmire became earth: a damp earth, and then under the sun, dry and scaly like the skin of a crocodile. It was as if a dull and ferocious caiman, the war, after having devoured them, now digested, immobile and without remorse, all those delicate destroyed organisms. The blue and romantic lake of the new architecture gradually disappeared, exhaling the miasma of dead things and sewer.*) The only thing that could be done was to reverse the process, and build from the ground something positive rather than negative, to transform the site into a huge mound of rubble, a sort of sanctuary, a memorial of the war, or just Milan's only existing height in the vast, flat Po Valley. It was as if the mountain of the Lago Maggiore had moved and, like living organism, found a new, more suitable place to rest silently.

[11] Piero Bottoni, *Ascensione al Monte stella*, in Una nuova antichissima bellezza, Laterza 1995



General

The Moving on the Lago Maggiore

The concept of movement and transport, that we will discuss in this section, is very important to understand the flows that regulated the community of Lake Maggiore. The division of production and the different economies made the lake's transport system central. For most goods and people in fact, the lake represented the only connection route between the shores well before the building of coastal roads. Workers moved massively to reach the factories located strategically along the shores in order to attract the flow of workers who may come from the other side of the lake. The transport system made the lake extremely busy with different flows and routes.

As Piero Chiara (Luino 1913-Varese 1986), the best-known writer from Lake Maggiore, wrote: "The boats on Lake Maggiore - called "piate" or "scave" - were flat-bottomed, tarred wooden hulls (...). Those "scave", which no longer exist today, were for centuries, and ever since they only went by sail, the main means of transport for the people of the lake. They carried sand, lime, marble, granite, stones, wood, soldiers and livestock up and down. They had a crew of two men and were steered with a long, arched oar fixed to the stern"[12]. The interesting thing in this description is the fact that the typical boats described were not differentiated and they could transport livestock, food, people or materials: as instruments they were transporters of indistinct flows. The lake system

[12] Piero Chiara, *Mago del lago: Piero Chiara a cent'anni dalla nascita*, Luino, 2013

can thus be understood as a diffuse city where, equipped with a boat, it is possible to travel, rather safe from winds and currents even to do every daily needs. In the film *La Stanza del Vescovo* (*The Bishop's Room*)[13], based on a novel by Piero Chiara, director Dino Risi makes this territorial approach clear in the banality of the absent-minded wanderings of a lake flâneur who, instead of getting lost in the streets of a big city, strolls around the lake by boat without any aspiration of wanting to change his life or "settle down" somewhere. The lake, though not immense, is seen as a field of action in which the protagonist wanders freely, though contained in a small space. His landing possibilities are many, but not infinite, containing

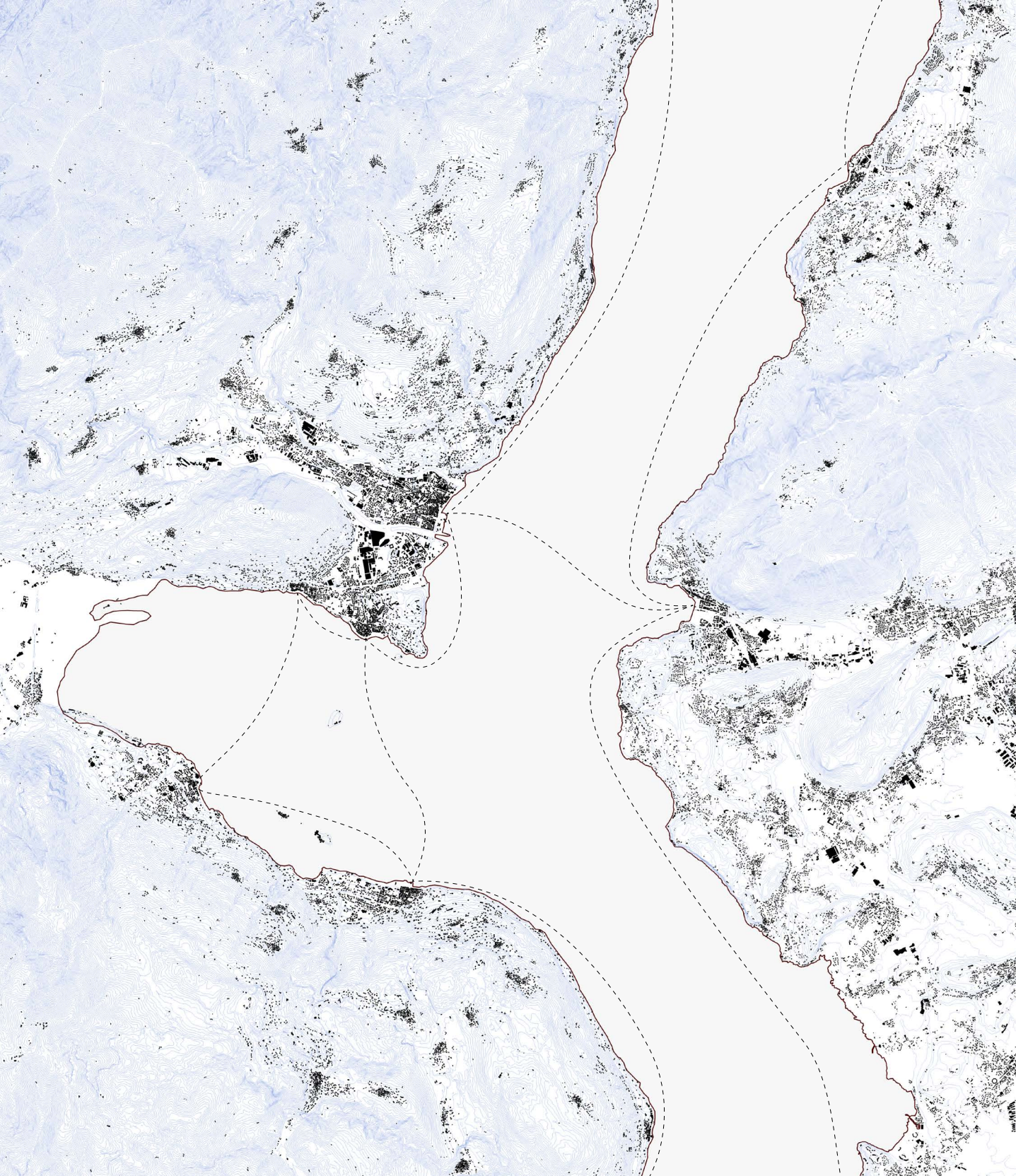
[13] Dino Risi, *La Stanza Del Vescovo* (film), 1977

his freedom.

As a regular visitor of the lake since my childhood, these descriptions cannot help but sound bizarre. If you visit Lake Maggiore now, you will have very few opportunities to see even simply boats transporting people and cars from one shore to the other. The lake, rather than being perceived as busy, is the image of a peaceful body of water with a few sailboats and ferries steering around.

The transformation of its identity is directly related to the closure of the factories, because there was no more need to cross the lake regularly, the municipalities have also closed most of the ports for ships giving an end to the lake traffic. Now the navigation is mostly for tourist flows. On the official Lake Maggiore navigation website you can see how you can only make a direct crossing with car by ferry between Laveno and Intra[14]. A single crossing point that extremely lengthens waiting times and makes crossings difficult and inconvenient to go to all the other places on the lake (I myself have crossed the lake to visit the opposite shore a couple of times in my life). It is difficult, therefore, to think of a real future for Lake Maggiore without rethinking its internal transport system and favouring the restoration of the diffuse city that once coded and organised the territory.

[14] https://www.navigazionelaghi.it/, Navigazione Lago Maggiore



The Stock Symbols and Significance of the Stocking Structures

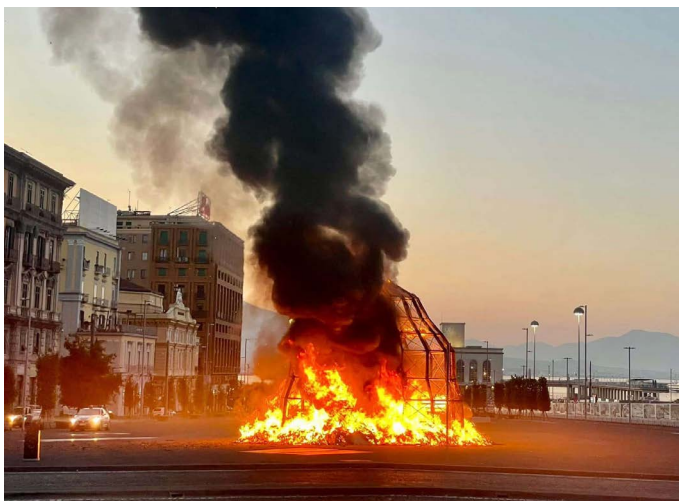
The Stock

"*Stock is any entity that accumulates or depletes in value over time, whereas a flow is the rate of a change in a stock.*"[1] Daniel. W. Smith in *Flow, Code, and Stock. A Note on Deleuze's Political*

The stock is directly related to the flow, it is the way to try to contain it. The stock is the accumulation of the flow. For Deleuze, it is a useful tool to talk about private property and the accumulation of capital. In his revolutionary approach, capital is no longer held by a person as property, but on the contrary, it is only a containment, a way of trying to block a part of it to wait for a lack on the market in order to release it at the right moment. The approach shown towards the possession of something

can be translated so in the action done by a dike, not a warehouse, it will be able to hold a certain amount of things but this storage will be influenced by other agents and will test the strength of the dike. For all the flows, that, as we said, are infinite, there isn't a way to stop them there is only the possibility to hold them in a space for a definite period of time. Deleuze and Guattari's vision is not far from being the actual reality of how private property functions in an entropic world, which tends towards the degradation of everything that is stored.

Stocking something is always a form of control, it is an external agent that blocks the flow progress with an alien force. Through this action of blocking, new ways of using the flows are created and the former possibilities increases its potential. For example, the lake can be considered as an accumulation of water between the flows of the inner river and the outer river: the existence of this accumulation of material (the lake) however allows other



flows, for example the possibility of having agricultural fields that need of a large amount of water in a short period of time. Thus the lake isn't just an accumulation of the same thing in quantity, it adds possibilities that wouldn't otherwise be possible.

The mound is probably the most direct connection of the stock to material reality, it is a pile of materials that creates a resource in order to do something. Modulation and allagmatics according to Simondon possess moments of encounter, in which a single act manages to combine an operation and a structure: this moment is called transductive moment. In this rare encounters, the process of making something its exactly what is being made, it's the moment when the shape is the matter and the matter is the shape. “Transduction”, in his own words, is a “specific moment or emergence when both the structural and operational consistency that characterize an individual is challenged and is interdependent”. As already discussed, for the philosopher the relationship between the structure and the operation of a process, is a progression of the dialectic between its matter and its shape[2]. The act of stocking can be perceived as one of these few transductive moments, the stocking is as much connected as the existence of the material as its shape is the act shaping it.

[2] Gilbert Simondon, *Individuation*, Mimesis, 2020

The shape is the outcome of the material piled, but also the material individuated in the stock is the act of selecting and shaping that material as the maximum accumulation possible. It’s a shape made out of material and a material individuated though the shape.

The Mound

"I took a fistful of sand, dropped it silently some distance away and said in a low voice: 'I am modifying the Sahara'."
Jorge Luis Borges, in Livio Vacchini *Masterpieces*[3]

[3] Livio Vacchini, *Masterpieces* Capolavori, Libria, 2017

In relation to the concept of stock, the first figure that comes to mind is the mound, the shape composed by the addition of materials one on top of another. The mound can be coded and classified and so the material inside is clearly recognisable, it becomes a mound to be used, an organised agglomeration of selected material, but it can also be an uncoded mound, when the act of piling material on material makes only the surface clearly intelligible, in these cases the mound can also be used to keep the inside secret. In general, however, the mound is the state of waiting for something to happen, or the waste of something that has already happened.

In his book *Masterpieces*[4], Livio Vacchini, although talking about the pyramids of Giza, gives a great explanation of what a mound is. For the Swiss architect, in fact, the pyramids have this shape because it is the one most associated with the concept of eternity; the Egyptians, looking for an architecture that could last forever without being destroyed, ended up concluding that the best possible shape could be nothing other than a pyramid, or a mound. The mound is in fact the result of a destruction,

[4] Livio Vacchni, *Masterpieces* Capolavori, Libria, 2017

it is its final form, when a building collapses or things start to rot the gaps between the matter tents disappear, leaving more and more of the original form to become a mound, a form driven only by the accumulation of things, a spontaneous form. Because it literally represents the final form of destruction, it can last forever, the material of a pyramid will rot and collapse but the result of this transformation will be a re-proposition of the designed form. The mound is one of the most enduring shapes to be found in the world influenced by gravity.

It is not surprising that the mound is highly used for burial rituals, from Bahrain to the ancient Vikings memorials of Denmark, its character of hiding something inside strongly influences its perception. In Italian the "grave" and the "mound" can be described with the same word: "tumulo". The mound, that is a positive shape on the soil is always in a direct relationship with something negative, a place where the material is taken from a layer lying underneath the surface.

There are examples of construction techniques that are related to the concept of addition. Butabu, for instance, is an african building technique, where the word "Bu" signifies everything related to earth and "Ta" means the shape that contains something else (like a house), so it can be translated as "the earth that contains earth"[5].
As it is literally the act of building with a mixture of earth and water, it always requires the addition of new material on top of the existing one in order not to dry out. This technique, used in Sahel region of western Africa–Mali, Niger, Nigeria, Togo, Benin, Ghana, and Burkina Faso,

[5] James Morris, *Butabu, Architetture in terra dell'Africa occidentale*, Electa, Milano 2005

very harsh and dry environments acknowledges the ever-changing nature of the shape, which from the first one of the early days of the house gets more and more organic, corners become curves and the straight lines become crooked. The life of the building ends with a mound that has so little free space inside, after all the layers of stacking, that the building has to be abandoned and returns to being an uninhabited mound that once had space inside for living. In this building technique the process of stocking has its clearest relationship with the living space and the flow of the matter inward the mound.

The Mountain

In theory, mountains can be seen as big mounds, but their size and origin transform and redefine their character. When one thinks of a mountain, one thinks of steep rocks, snow and highlands. These key elements show us how much the mountain is perceived through its surface, an intensification of the earth soil. This view denies everything that is inside it, in this case what is inside in matter, not identified, is not important; the key point is that the mountain rises from the surface of the earth, if it is hollow or full is a secondary problem in its perception.

The culture related to mountains is full of myths about creatures and gods that live on this ambiguous and privileged ground. From the local culture of the mountains full of pagan myths about elves and gnomes, to the Greek classical myths of the Parnassus and of the Olympus or to mountains inhabited by gods, their characteristic is being metabolised in culture as a place that lifts you to other states of conscience[6].

[6] Michael Jakob, *La Fausse Montagne: Histoire d'une Forme Symbolique*, Métis Presses, 2021

A mountain, however, is easily referred to because of its peculiar and condensed shape. Furthermore, even if it is considered as a raised surface, it is a difficult environment to build and to live, therefore it transmits the sensation of an object in space or an entity. In fact, in my opinion, the idea that several mountaineers express about the mountain being the real symbol of nature, untouched by

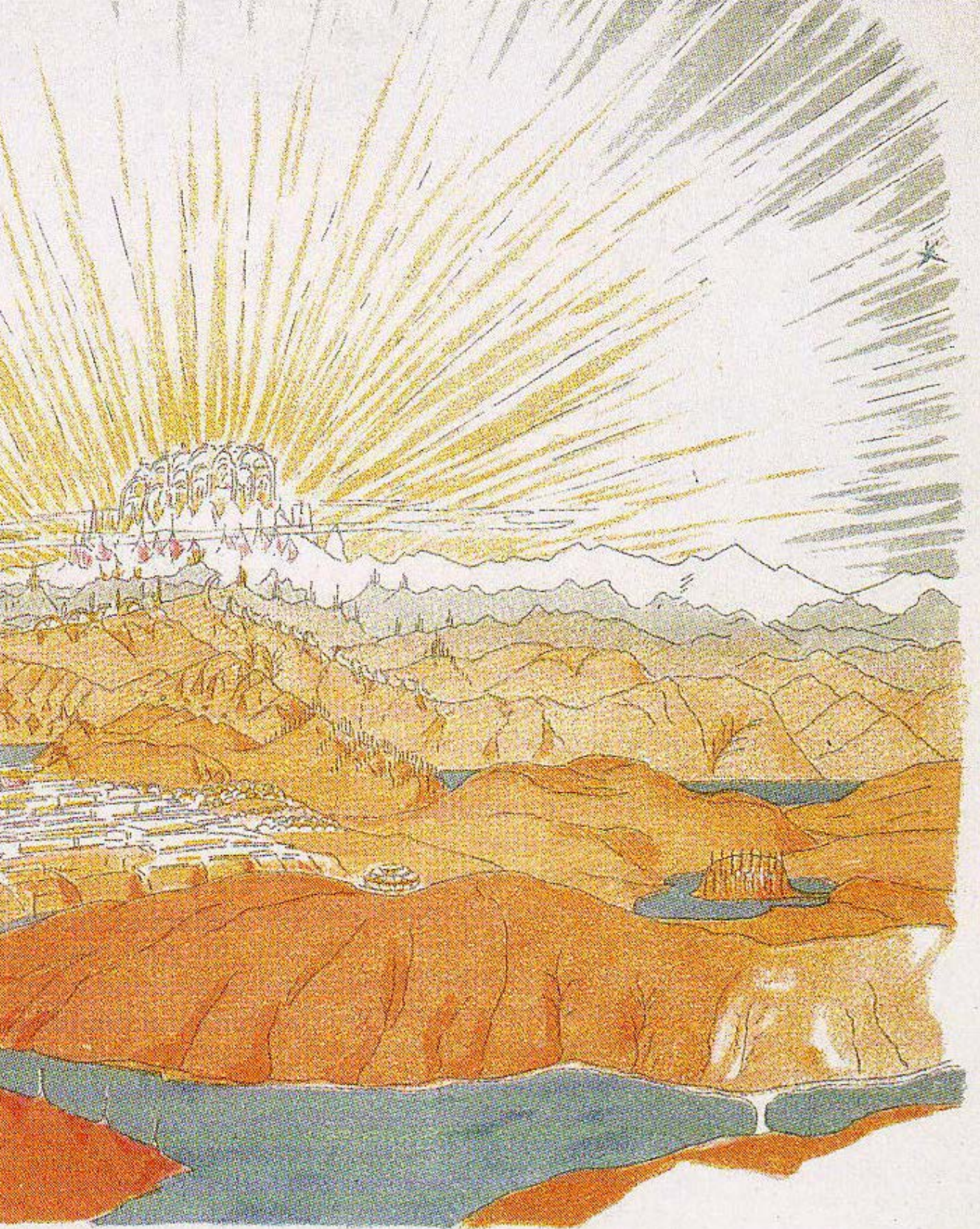
the human being, is not far from the truth. On the contrary the tree, that is often used nowadays to convey the idea of naturality, can be highly modified and transformed by the human being. Mountains hold a symbolic place in our concept of nature, not because they are alive, but because they remain unattainable to humans, representing a territory that belongs to something beyond us.

Architecture, too, has always had an ambiguous relationship with the mountain. From one side it tries to consider itself as a worthy competitor, through the height, the mass and the possibility of living at the top. On the other hand, especially in the XX century, it tried to distinguish as much as possible the image of the new constructions from that of mountains, giving more and more a sense of structural lightness and characterising the spaces as a continuous plan between the exterior and the interior. In their relation to mountains, architectures try either to emulate or to deny their material nature; the ones that have a fruitful dialogue to them are really few. One peculiar example is the book *Die alpine Architektur* by Bruno Taut[7], in which the architect, instead of trying to copy the spatial experience of the mountains, imagines architecture as the utopic completion of them, transforming their tortuous environment in an alternative society. In his book, the relationship between the mountain and the crystal gives a key to imagine something different for the post-war society. Again, in this example the mountain is a selected environment rather than being perceived for its mass. A similar approach was seen in Michele De Lucchi *Mountains* exhibition[8], at the Jannone Gallery in Milan, where small sculptures represented hypothetical finishings of the mountain tops.

[7] Bruno Taut, *Die alpine Architektur*, 1919

[8] Michele De Lucchi, *Montagne*, Jannone Gallery, Milano, 2018


DAS TAUGEBIET, VON MONTE
CENEROSO GESEHEN
Bergbekrönungen, -bearbeitungen, Täler ausgeräumt – wie
im Vorigen. Die Hochfläche am Lugano-See
mit gestaffelter, von oben mosaikartig wirkender
Glasarchitektur bebaut.



Ambiguity and Hybrid Layers

As we have said, the concepts of mound and mountain already have an important meaning on their own, for the values attributed to them, but they become properly and highly symbolic where human beings have attempted to copy their being, recreating their symbol. Michael Jackob has extensively explored this subject in his book *The Fake Mountain*[9], an analysis of the reasons that brought humans to build "copies" of mountains throughout history.

Simondon[10] explains well the meaning of symbol, which I will quote here so as not to confuse the terms: the philosopher uses the old Greek meaning for symbol, where a symbol is a broken part of a vase gifted to a guest as an identification code in case of coming back. The symbols, so, should not be understood as a copy of the original object, but as something that resonate with it and that has joints able to connect the two pieces[11], in some cases it is even complementary to it. In the artificial versions of mountains, therefore, man-made mountains are not related to the archetype of mountains, but rather something very different, with different meanings that nevertheless possess links and points in common with them. I will analyse three possibilities of how the meaning of the mound/mountain has the capacity to vary its symbolic nature depending on which way a mound/mountain is understood.

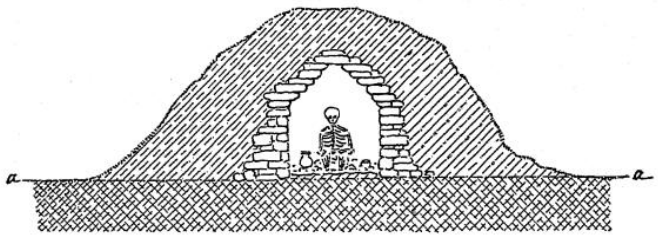
[9] Michael Jakob, *La Fausse Montagne: Histoire d'une Forme Symbolique*, Métis Presses, 2021

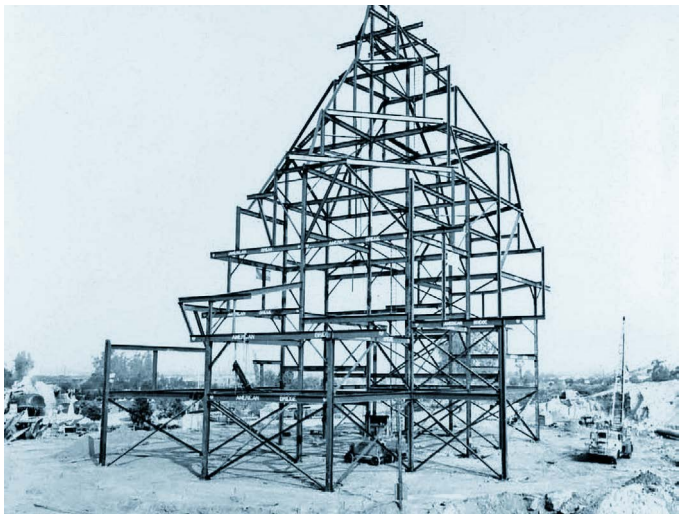
[10] Gilbert Simondon, *Individuation*, Mimesis, 2020

[11] Yves Citton, *The image as Agency*, Colombia University, 2011

Mountains/Mounds of Rubble

A mound/mountain can be a monumental artifact of something big that has gone, rubble grouped together to get rid of it, or to cover it up, as the non-removable remnant of a trauma. This symbolism has close ties with death and, as already mentioned, the act of piling up in a heap also represents the act of burying. Jackob, in the above mentioned book, mentions the example of the Wehrtechnische Fakultät, a Nazi military building in Berlin: such solid building that, to erase it from memory, it had to be buried under a huge mountain of rubble instead of being destroyed with dynamite. The hill's function, therefore, is precisely that of being a mountain made of unknown matter inside, so that it has the possibility of covering up a trauma.





Mountains/Mounds as an Image

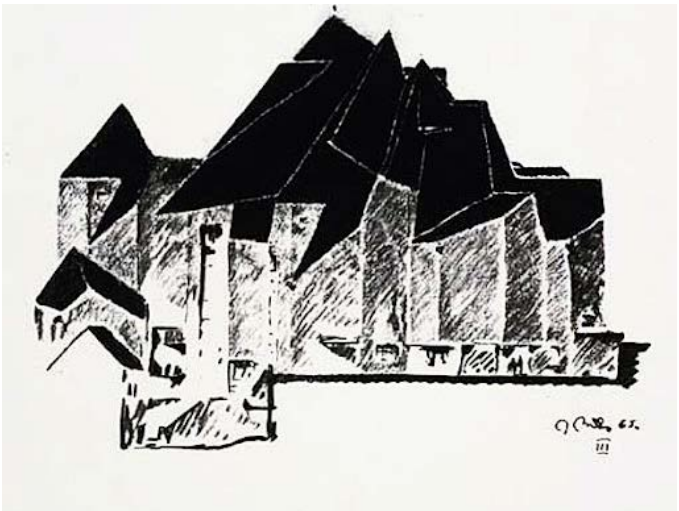
Another type of artificial mountains are those made only for "image" purposes, the most important emblem of which is perhaps the fake "Cervino", the Matterhorn, designed by Walt Disney himself in his theme park in California. These artificial scenographic mountains can be considered as a simulacrum of the mountain in late capitalism, transformed in a spectacle for masses, a shift of reality into its representation, as the French philosopher Guy Debord[12] had already warned about since the 1960s. Although they bear no relation to a type of materiality, in fact they are hollow inside and present a unique surface that simulates a rock, they act on the perception of matter in a very similar way to real mountains. In fact, in both artefacts, the interior is incognito, and thus the viewer's attention is focused on the surface. Moreover, they both undergo a clear objectification due to their singularity. Nonetheless, the purely image-oriented feature brings

[12] Guy Debord, *La Société du Spectacle*, Buchet-Chastel, 1967

out the archetypes that are attributed to mountains such as pine trees, streams, snow on top and the pyramid shape.

Mountains/Mounds for Construction Purposes

They may be considered more mounds than mountains, they are the results of something bigger, they have a relational value given by the fact that they allude to something else. These man-made agglomerations are largely characterised by the meaning of material, they are often made of a single material and are waiting for some other use, they are therefore a trace of the willingness to build something bigger. They are mounds made of a single material, the connections joints are clearly visible and their being understandable as mounts of material stand out more than their surface, becoming the main characteristic. In this category, the feeling of expectation is what strikes the observer most.



A Territory of Controlled Abundance

The small mountain on which my project is based is unique in its location. Being a single promontory close to the shores of the lake between the plain of Caldé, Castelveccana and Porto Valtravaglia, it has always been characterised as an Aldo Rossi's *emergences*[13] of the territory. Looking at the map of the isohypses one immediately realizes its uniqueness: almost everywhere the lake has shores that gradually slope down to the water, the trend is therefore progressive. In the case of this rock, on the other hand, a plain that also loses height as it approaches the lake has a drastic uplift into a steep cliff, 370 metres above the lake. On the shore towards the lake, the fortress makes two terraces, one particularly steep makes a 100-metre drop to 270 metres in the horizontal line. The second represents the lakeside promenade a few metres from the water where the industrial archaeology of the furnaces are positioned. As stated in the project report of the 2008 competition: "The white promontory silhouetted against the sky characterises the entire basin and, together with the kilns, has become the symbol of this area, both in the minds of those who live there and of those who occasionally visit these places."[14] The rock therefore clearly represents the most important landmark in the area.

[13] Aldo Rossi, The *Architecture of the City*, MIT Press 1984

[14] *Le Fornaci di calce del lago maggiore,* (a cura di) Antonio Bandirali Giuseppe Armocida, Alberti Editore Intra, 1997

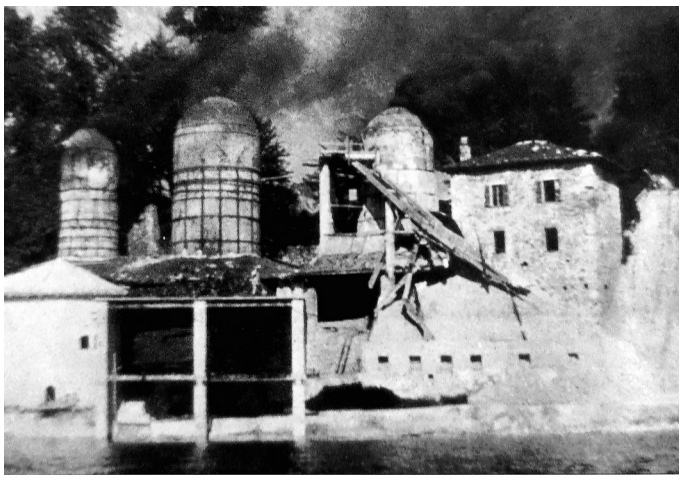
"Here they [the inhabitants of the lake] find their Indies, those robust inhabitants among the limestone rocks of

the famous fortress of Valtravaglia and (...) from these boulders, they extract as much gold as is sufficient to live, seeing in this land so many burning furnaces that day and night make it bright among the darkness of their own rags."[15] With these words, the parish priest Vagliano tells not only about the mountain, but about the mining character attached to it, that was crucial from the old times, other testimonies tell how the extraction of lime, of which the rock is composed, was responsible for the foundation of the village of Caldé, and that there were extraction points in the area before industrialization, as far as 1600, since the shores of Caldé were described as being surrounded by incessant fires, by furnaces that lit up the night and that were even built on boats around the white mountain, or that raised a white powder that whitened all the buildings around the Rocca.[16] The methods were extremely manual: "Workers tied to ropes pass out immense walls, which, crushed by the falls of the mountain, serve to liquefy into lime so white and fine, that it ennobles the most superb factories".[17]

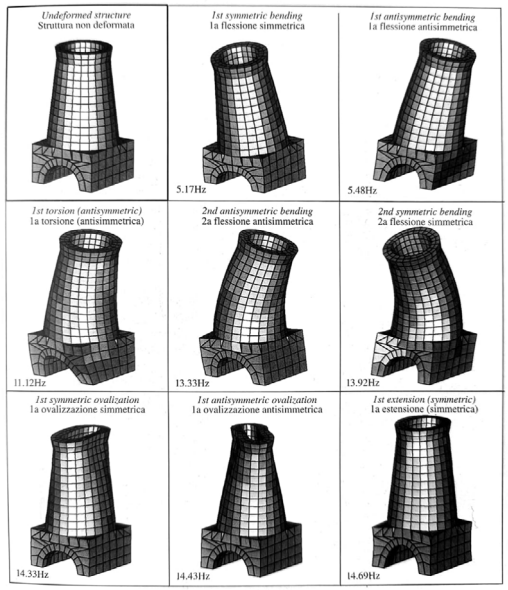
[15] Parroco vagliano in AA.VV, *Loci Travaliae IV. Contributi di storia locale*, Biblioteca Civica di Porto Valtravaglia, 1995

[16] AA.VV, *Comune di Castel Veccana* (1928-2008)

[17] AA.VV, *Loci Travaliae IV. Contributi di storia locale*, Biblioteca Civica di Porto Valtravaglia, 1995



Through the Rock of Caldé we can understand how the environment of the lake is all about material storage. The lake is the storage of waters, the mountains are great masses of material, the villas around it are the storage of money, the vegetation is massively lush. Everything speaks of wealth. But you can also see how this environment does not deal with the concept of infinity. The lake is all about a controlled abundance. It is not the sea that represents infinite possibilities, but it does represent a possibility. The sailor of the lake cannot go everywhere, but he can go somewhere, which is why in some cases he has the freedom of choice, even more than the seafarer who can go anywhere in the sea. Indeed, the Caldé Rock cannot even be considered a mountain, as it is less than 600 metres high, actually it is a large deposit of limestone, it is clearly not infinite and in fact almost half of it has already been used up. The mountain sits there with a large part of it clearly carved out and the other treated by the small villas that would like to consume is ground, but still it stands with a strong authority. It shows the controlled abundance of the territory.


Undeformed structure
Struttura non deformata
1st symmetric bending
1a flessione simmetrica
5.17Hz
1st antisymmetric bending
1a flessione antisimmetrica
5.48Hz
1st torsion (antisymmetric)
1a torsione (antisimmetrica)
11.12Hz
2nd antisymmetric bending
2a flessione antisimmetrica
13.33Hz
2nd symmetric bending
2a flessione simmetrica
13.92Hz
1st symmetric ovalization
1a ovalizzazione simmetrica
14.33Hz
1st antisymmetric ovalization
1a ovalizzazione antisimmetrica
14.43Hz
1st extension (symmetric)
1a estensione (simmetrica)
14.69Hz

The Code
A Connection Point

The Place of Transformation and Codification

The flows in the world are multiple, perhaps infinite, they work on every scale and can shift between the most diverse subjects, from emotions to waste, from rocks to money, from energy to labour. In fact Deleuze and Guattari, in *Anti-Oedipus*[1] do not refer to them with the aim of individualising them, they only show a way of perceiving the world that already contains them. It is possible although to question and to take active action from them by the act of coding these flows. Coding is in fact the act of signification of the theory of flows, it is a further level that assigns them a meaning which translates the existing flow into a concept that is understandable, measurable and finally available.

[1] Gilles Deleuze e Félix Guattari, *Anti-Oedipus*, Minuit, 1972

Its concept, as already said, starts from the field of economy that, in order to match the products produced and the consumers interested, makes sure that the flows are clearly identified and categorised. Thus, in order to open up new areas of the capitalist economy, the key lies in the boundary between what is already codified and what is still uncodified, which, once recognised, becomes available for sale. The coding is not done by an institution, and it is not univocal, which is why the same object or place can mean a completely different thing to different people.

Simondon writes extensively about the concept of "images"[2] that, in many aspects, can be considered the outcome of the codification processes of the *Anti-Oedipus*. For the philosopher, "the images contain a certain measure of will, appetite and movement, images appear as secondary organism within the thinking being"[3]. So even if the images are produced by an interpretation of reality that can be changed or even disregarded by another observer, they have a strong agency of reality itself, arriving to show how the image is not a reproduction of reality, but reality can be a reproduction of the images. The images produced by the coding process are so not less real than reality itself, through "the circle of clichés" they can transform drastically the object of interest.

[2] Gilbert Simondon, *Individuation*, Mimesis, 2020

[3] Yves Citton, *The image as Agency*, Colombia University, 2011

As previously discussed about the difference between the mound and the mountain, the difference of coding is all about the relationship between its internal matter and its surface. On one side we have a pile of material that is clearly codified as a mass of material, on the other an object of indistinctive matter that is only perceived through its surface.
In other words, on the one hand there is the material, often understood as what a building is made of, its

texture, its structure: the term material tries to underline a categorisation of the elements and a diversification of their structure, there is a question of functionalism within the concept of material, as soon as the word is pronounced one thinks about how to use it.

The haecceity is in its properties[4]. On the other hand, matter has a more metaphysical coding, its individuation is in its unity, matter is everywhere and in constant motion, but it does not represent an action performed on it, matter flows *per se*, disconnected from any external action. It is another class of abstraction.

[4] Gilbert Simondon, *Individuation*, Mimesis, 2020

In this difference it is clear that the process of carving and extracting material from a mountain represents a truly ambiguous action, it allows humans to make visible the intangible and to promote and confirm that there is indeed something under the skin of the surface. So it is a clear coding process, extracting and working the rocks transforms the code of the matter into material, makes

it something usable, but at the same time it changes its inner meaning. After an industrial process, the matter processed loses all its connotations and acquires new ones, as it is visible in the lime process, which succeeds to be transformed even in the opposite of what was, a rock full of irregularities becomes the human tool to fix the irregularities of the matter.

The factory is the membrane, the gate that allows the process. It is the operator that gives a name to the material flow and works primarily as such. It enables the possibility of storage by transforming inconsistency into a quantifiable mass. For example, a mountain was already a stockpile of material, but it was not clearly codified, making it unusable and without value for economical purposes. If this process so clearly influences the significance of matter, it is easy to understand how the same tool, the factory, can influence the significance of other, less material flows. The lives of the people around the factory are codified and classified by it: their work time is dictated by it (it is not the factory that adapts its rhythm to human biorhythms, rather the other way around). It codifies their imagination and their relationship with the surrounding territory.

Thus, the factory, rather than merely producing objects, is a device for producing codes[5]. This is a key concept for understanding the difference between the territory during the factory's existence and after its closure. It is not just a missing piece while everything else remains the same; instead, an entire layer of understanding disappears, drastically changing every aspect of the territory.

[5] Alberto Toscano, *The Theatre of Production Philosophy and Individuation Between Kant and Deleuze*, Springer, 2006

The Lime: Recoding the Rock

Lime is an inorganic material composed primarily of calcium oxides and hydroxides. It is recognised as a mineral with the chemical formula of CaO. The word lime originates with its earliest use as building mortar between bricks. The rocks and minerals from which these materials are derived, typically limestone or chalk, are composed primarily of calcium carbonate. The rocks are cut, crushed, or pulverized and chemically altered. The burning (calcination) of calcium carbonate in a lime kiln above 900°C converts it into the highly caustic material burnt lime, unslaked lime or quicklime (calcium oxide) and, through subsequent addition of water, into the less caustic (but still strongly alkaline) slaked lime or hydrated lime (calcium hydroxide, Ca(OH)2)[6].

[6]Treccani, *Calce (material)*, treccani.com

Uses include lime mortar, lime plaster, lime render, lime-ash floors, tabby concrete, whitewash, silicate mineral paint, and limestone blocks which may be of many types. Lime has many complex qualities as a building product, including it cohesion, adhesion, air content, water content, bond strength, and its flexibility[7].

[7]Jane Schofield *Lime in Building. A Practical Guide Paperback*, Black Dog Press 1997

Without lime, the pure, immaterial volumes of modernism could not exist, nor could the typical stuccoed Italian buildings or the entirely white rooms with sharp corners where humanity retreats with a pronounced sense of abstraction from the context.

In its qualities and its many uses, lime represents a symbol of refinement, precision, uniformity, and immateriality, all characteristics that are scarcely connected to our conception of the mountain or the quarry where it gets extracted, which, in our eyes, is perceived as something anomalous in the landscape, undefined in its shape, with a rough texture and not fully containable. Its industrial process results in an effective transformation of its code. The rock loses its symbolic and morphological connotations to become a tool to cove imperfections of the nature. It is then used as plaster, lime: a unifier, a way to cover materials and transform them into abstract shapes.

The Bourgeois/Industrial Paradise

If you have a heart and a shirt, sell the shirt and visit the surroundings of Lake Maggiore.[8] Stendhal in *La Chartreuse de Parme*

[8] Stendhal, *La Chartreuse de Parme*, 1839

Not only a material or an action can be coded, but also a territory, and the territory, for its size, can have multiple codes overlapping. In the case of Lake Maggiore, the coding are indeed numerous: in a place rich in resources and close to an important economic centre this overlapping is almost immediate. The main ones were certainly two and then one got added.

From one side, as we said, it is an industrial landscape, highly specialised and with important big industries. As it is pretty clear from the previous research, Lago Maggiore has never been a virgin land untouched by man but, on the contrary, its soil has always been extremely extracted and processed. The traces of its industrial past can be found everywhere. Around the outskirts of the small lakeside villages one can find buildings that almost seem not to make sense with the surroundings, places that tell another story compared to the one of the picturesque towns of Italy: old disassembled hangars, long workers housing, industrial ruins. Through this coding, the lake was just the tool, it was useful for commuting, it was getting the wastes of the factories and the mountains


ISOLA BELLA

around where eroded and carved. There was even a time, in the second half of the XX century, when the lake was not even swimmable because of the pollution of the area. Its shores are still often marked by metal wires and docks for loading ships.

On the other hand, there is a completely different way of perceiving the lake: in the same places, there is simply a multiple of the previous code that incredibly coexist; and this code is the one that sees the lake as a paradisiacal gateway for the city bourgeoisie. Since old times the term "villeggiatura" in Italian means the tradition of the wealthy families to move all together to spend a long period in a house in the countryside near the city where they lived, to reach a more pleasant environment to spend the summer or the spring. The lakes were one of the most important places for this tradition, because of their closeness to the big cities in northern Italy. Lake Como is so much coded by the construction of the “ville di delizie”, that they can be considered structurally connected with its natural setting and actual components of the landscape, it seems that no human settlements was ever been there before their construction. Huge villas with well adornated gardens spread all along its coasts, made out of stone and marble, extremely lasting materials that make them perceived as being a part of the geological ground.

Even if the Lake Como is considered the archetypical place for this tradition, the lakes Garda and Maggiore have nothing to envy. Since mid XV century many territories of the Lago Maggiore were owned by the noble Borromeo family, that controlled its waters and built beautiful

palaces on the only three little islands in front of Stresa. Going around the lake is it possible to see incredible villas of the XIXth century and of the beginning of the XXth, places that can easily be defined as the ultimate luxurious lifestyle achievable.

In *La Stanza del Vescovo*,[9] the film by Dino Risi, based on the novel by Piero Chiara, already mentioned because of the protagonist travelling on the lake by boat, the noble and vacationing side of the lake is widely shown, and the characters move around, swim, explore, have sex in the grass as if they were in a classical bucolic literary environment. If you watch this film and the go around the lake it seems unimaginable that these two codings are overlapped and that the bucolic villages filmed were important hubs for chemical manufacturing as well as gateways for escapism.

[9] Piero Chiara, *La Stanza Del Vescovo*, Mondadori 1976

The last, most modern is of course the code of modern tourism industry, trying to revitalise and have a glimpse of the high class life of the residents of the "ville di delizie", as this location is historically highly appreciated by Swiss and Germans, massively buying houses and plots. It is still, luckily, not a mass tourism. Like the Lago di Como, the tourists are pretty wealthy and usually want to buy houses to become seasonal citizens, but this became the major driver of the economy after the closure of most of the old factories. The villeggiatura coding so has not expired, it is still strong and drives lots of political decision towards the whole area. In this contest it is pretty easy to understand how much the real estate industry and the tourism industry its deliberately trying to push towards the coding of the "villeggiatura paradise", the whole

understanding of the lake, while eroding as much as possible the sign of the great industrial past. It is the case, for example, of the area of the "ex fabbrica di ceramica" in Laveno, one of the greatest ceramic factory in Italy, that has been really recently clumsily reconverted in a big residential area for German tourists, where the builders "reconnected" the buildings to the industrial heritage only through the use of some blue tiles for the cladding of the facade (that probably have been brought form China because the factory there is closed since the Seventies). The area now has drastically changed and doesn't look even as a restauration, it feels as if nothing had been there before, and therefore it seems just a luxurious estate in an pleasant natural setting.

The Social and Cultural Implications of a Perpetual Transformation

At this point of my research it may be useful to focus on the people and communities that lived in these places: as mentioned above the extraction processes were largely connected with the everyday life of the villages around the rock of Caldé. Many historical sources even speculate that lime kilns, together with the nearby Porto's glass factory, was the primary reason for the foundation of the small villages of Caldé and Porto Valtravaglia. This fact is important to understand how the rhythms of the place, and the social context, have always been strongly influenced by their existence.

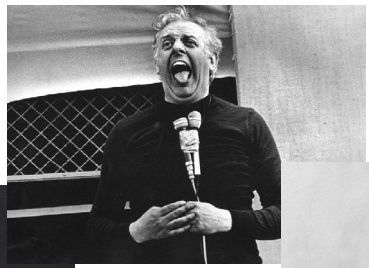
By now the villages are unrecognisable from a social point of view: passing through Porto, one will see very peculiar dynamics of an area that looks like an holiday resort rather then a village, for example today village has just one bakery and a supermarket but no less than three hairdressers, for old ladies to get their hair done over the weekends.

To truly understand these places and social dynamics, it is necessary delve into what it was through the people who lived there once, and fortunately there is a great amount of written literature on the subject, since many authors who became important in Italian culture come from that area. Dario Fo (Sangiano 1926-Milano 2016), a writer and a theatre actor who won the Nobel prize in

1997 and one of the central figures of Italian theatre in the XXth , was born and lived his youth near Porto, where his father was the stationmaster. Piero Chiara, a famous Italian writer we already mentioned, was born in 1913 in Luino and mostly set his novels on the shores and villages of Lake Maggiore. Both of them tell about a very peculiar detail of the area, the storytellers, half-crazed people who would chat up anyone who came within reach and start telling made-up stories, funny anecdotes or picturesque descriptions of locals. These descriptions are rituals and appear multiple times in the works of both authors.[10] At first these descriptions seem to clash with both the coding of the industrial work environment and that of the holiday paradise. But these realities are far more connected than

[10] Dario Fo, *Il paese dei Mezaràt. I miei primi sette anni (e qualcuno in più)*, Feltrinelli, Milano 2002

Dario Fo



Nanni Svampa

Piero Chiara

one might imagine at first.

The job of the workers in the furnaces and glass factories had to follow the progressive transformation of the materials, and a common feature of lime and glass is that they both need to be produced and processed through blast furnaces with temperatures approaching 1000 degrees. The process of extinguishing the gigantic furnaces alone for instance took one month and was carried out only twice during their lifetime.[11] The village was therefore surrounded by unquenchable fires, which changed their course at a rate determined by the decomposition of the lime. The furnaces continuously needed rocks in order to work and needed coal as fuel. As in the myth of Prometheus or better to say of the "Unbound Prometheus"[12], once triggered, fire could not be reversed unless it cost a catastrophic effect on the local economy. The workers had to follow the rhythm of the rock transformation as well, changing their biorhythms. In order to follow this imposed rhythm, the workers were given the dialectal acronym Mezaràt[13], half-rats, because of their lives, in which time and the difference between day and night were not a matter of interest. This meant that the village was packed with people at all hours of day and night, they came and went from the furnaces at unlikely hours, so the taverns were always open and it was easy to find people drinking beer in the morning, after their night shift. As if this were not enough, smoke and pollution had a considerable impact on the health of the inhabitants, especially the glass processing produced silicon, the inhalation of which led to a state of semi-dementia.

[11] AA.VV, *Comune di Castel Veccana* (1928-2008)

[12] David Landes, The *Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the present*, Cambridge University Press 2003

[13] Dario Fo, *Il paese dei Mezaràt. I miei primi sette anni (e qualcuno in più)*, Feltrinelli, Milano 2002

In the middle of all these processes of accumulation and transformation of flows, a small lateral heap was being created, difficult to understand because it was not tactile, which was the cultural heap of all the somewhat nonsensical and headless stories that were told for fun or out of madness by the workers. Even without being shown, it was strong: Dario Fo describes his early years in Porto and Caldé as his school of storytelling and theatre, which later led him to develop his extremely dreamlike and carnivalesque theatre, similar to the stories told by the village madmen workers.

This mound, as may be a lime or coal mound, in my understanding, is a direct product of this transformation of the matter of the territory, it is a waste mound of the larger process of the relationship between human and his environment, it is a direct outcome of the factories production. When the factories closed, this interesting cultural feature of the place was also lost. But this character is still there, as a sort of *genius loci*, hidden or made invisible by the surface appearance of these villages, by the tourist expectations, buried in some larger mounds of images. It is just waiting for a new transformation able to make it flow again.

Conclusion

A cultural mound is a material mound

A Cultural Mound is a Material Mound

Of course our brain does not accumulate culture the way material accumulates, it does not get bigger with every handful of new information. But it magnifies connections, it stratifies, it makes networks more complex.

In order to reason about such a complex place, it is therefore necessary to question this stratification. How things are piled up, how a project can convey material terms but linked to immaterial existence. The themes then overlap, how can one be sure that a flow still exists in a territory, how to act if it has died out or if it has been transformed to such an extent that it is unrecognisable. I do not consider it the architect's job to resolve these complex philosophical questions, to answer them would lead into other fields and would require different knowledge. I believe that the intellectual honesty of an architect is to take a step back from complex situations that cannot be resolved by a single professional figure, although on the contrary many contemporary architects try to fill the void of unfeasibility through rather bizarre attempts to broaden the horizons of the discipline and by concentrating more on communicating what the project can be, rather than analysing all the potential of the project itself.

As Luigi Snozzi[1], architect of the Swiss plain of Lake Maggiore, used to say, an architectural project is above all a project of analysis. And so the architect's work is not just to propose something, but above all to understand it, to

[1] Luigi Snozzi, *Viva la Resistenza!*, Archivio Cattaneo, 2014

act towards a way that can activate its flow again. To create an infrastructure that can support the possibility.

As we have said, the codes of the lake in the past can be summed up as a heavenly place far from the caos of the city on the one hand and a centrality for Italian industry on the other.
The unequal respect given in contemporary times to these two traditios of the lake tends to depotentiate them both, turning the first into a picturesque and macchiettish image and removing the second fearing that it might damage a millionaire's business. It is important, therefore, to propose a project that fully recognises the industrial past and reflects on it and its hybridisation with what can be considered a suitable function for the place at this time. In a way leaving aside the postcard image that the tourist expects, and instead plunging the locals in an extremely concrete reality that must not be feared. The hybrid and heterogeneity of the two realities will act as a powerful friction capable of re-energize these sleeping places. A project, therefore, that seeks to enhance rather than depower the existence of the Caldé furnaces, praising their monumental and austere but at the same time creative and transformative character. Bringing the kilns to the centre of a codification process that can influence the entire surrounding area.

Analysing in Simondonian terms of ‘transformation of operations’, it does not seem such a bizarre idea after all to compare a mountain of rubble to the creativity of storytellers' tales. The mound of stories told without any particular expressive need, without any great book

purpose, is nothing more than another big mound, a new pile of cultural waste material developed and directly connected to the production of lime (and glass) and the transformation of the land. The Mezaràts were a product of the factories of the surroundigs, they teach us, through their existence, the heterogeneity of the results of a transformation process and the stratification of these territory. Although this specific culture of those small villages is now difficult to find, somehow it is still there, piled up and in need of a new operation to make it visible and activate its potential. In this regard, what place can tell us more about the reactivation of flows than those controversial factories that have been the driving force behind the activities of the entire area, what more appropriate place to push this transformation than the old furnaces that produced it in the past.

These reflections are not just theoretical and symbolic, even if Lago Maggiore is an sleepy area, it is waiting for its transformation. There are numerous signs that these arguments are valid, the surrounding cities are becoming progressively more expensive, Milan has altready many commuters who come daily from the villages around Lake Maggiore. The distances are not big, and the proximity to numerous cities can be a key factor in the future, the lake could repopulate itself, regaining in the near future a space of centrality, for living rather than for vacations, from which would also follow a need for an increase in services and entertainments.

Moreover, the proximity to Locarno, an international reality linked to independent cinema on the Swiss shore of

the lake, should not be underestimated. Just as the Venice Biennale has expanded over the years to embrace various different arts and crafts, moving from art to cinema and then to architecture, theatre and dance, the same process could be done for the Locarno Film Festival as well, an extremely interesting reality, considered by many to be one of the most interesting venues for cinema, but one that remains exclusively sectorial and therefore not wide. The old area of the kilns, with its large indoor and outdoor spaces suitable for numerous theatrical performances of all kinds at the same time, thanks to the park's strategic position in the centre of gravity of the lake and a possible direct navigation channel between it and Locarno, could very economically and ecologically (without constructing new buildings) fill this gap by becoming the theatre branch of the Locarno Film Festival.

The transformation would therefore not be an addition of new spaces and buildings but on the contrary a build-up on the buildings that already exist in the area, an old factory can keep its industrial character but also have the sophistication of an theatre piece. An unspoilt park can retain its wilderness but at the same time become the setting for a performance. The recodifications and necessities that I propose below should therefore not be understood as a restoration of the old becoming new, but on the contrary as the use of parts of the old kilns in such a way that their spaces can be reactivated, leaving other spaces in the state they now maintain. The idea then of taking care of the old industrial area shouldn't be seen as a masterplan but a discovery of potential situations in an environment that in most of its parts doesn't need any

transformations.

The possibilities in the plot are numerous due to the width of the interactions between the parties:
The school: The location is particularly favourable for the establishment of a theatre school. Indeed, it enjoys the necessary isolation that in a hyper-connected society like ours can feed creativity and original theatre education. It could be organised either on an annual basis or as more restricted seasonal courses using transformable and mobile spaces.
The theatre: Especially the Fico kiln, the central kiln with its large spaces can be embellished with a theatre inside it capable of hosting performances, conferences and capable of having a large audience
The dock: A key need is to find a way through the old boat loading structures to turn them into a dock for ferries. The idea of the proposed new ferry route that could also connect the site with the other side of the lake (which would be at an average distance of 15 minutes by boat) would make the area an attractive pole for the whole of Lake Maggiore and not just one side, so that there could be a new dialogue between the two sides.
Paths for Open-Air Festivals and Performances: By reactivating the lake as a means of transportation, the old upper route, once used for piling up stone after mountain explosions and transporting it to the furnaces, will no longer be needed for its original function. This upper path has a character that is diametrically different from the lakeside path. While the lower path, during the factory's operational years, was used to move processed material, already crushed and refined,

the upper path witnessed the raw matter: heavy blocks and mounds of stone, untouched by the industrial process. The intention is to transform this upper route into an architectural and experiential journey through the remnants of these material accumulations. These mounds can become the starting point for spontaneous theatrical performances and informal cultural events. As a slower, more reflective detour from the direct and linear routes, this path offers visitors an opportunity to engage with the striking beauty of the surrounding landscape.

This agglomeration of different functions (educational, performative, and recreational) will generate a unique dynamic. The interconnection between these uses will produce a new kind of spatial and social codification: a way of living that emerges specifically from the characteristics of this exceptional environment. In this way, I believe the area will not passively undergo the effects of increasing tourism and speculative development, but instead will draw strength from its existing structures and infrastructures. It will position itself as an alternative model for inhabiting the territory: one that values memory, adaptability, and cultural vitality. All the essential elements are already present: the beauty, the creativity, and the resilience. What is needed now is simply a frame, an architectural device capable of revealing what is already there.

Giving voice to the Mezaràt means giving voice to the territory.

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