

# THE CERRO DE PASCO EFFECT THE PROJECT ‘¿CERRO DE PASCO? CARTOGRAPHIE D’UNE VILLE AMORPHE’, BY BORIS LEFEVRE

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## ABSTRACT

Cerro de Pasco is a small town of Peru in the Central Andes. The reason for its foundation is found in the presence of a silver deposit. The evolution of the form of the city depends on the progress of the mine. The analysis of the relationship between the locus, the urban form and this large, and singular anthropic event gives a picture of a city whose shape has no other purpose than to support the mine to the detriment of those who live there. Boris Lefevre, in 2016, faces this relationship with a project that seeks a non-oppositional with the mine, and at the same time returns one of the most precious assets to its inhabitants: water. A building, located on the surface of the Patarcocha lagoon, capable of purifying water and producing energy. The project seems to be a new urban event that can guide the subsequent development of this singular urban artifact in which ancient metaphor, symbolism and older measures of the mine coexist.

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At over 4000 meters above sea level, in the Pasco region of Peru, a small town lives (or survives). Its history is not ancient but still holds intense memories. Cerro de Pasco is a city, to be precise a mining city, purely originated by the need to give a place to stay to the miners, there are no other productions, everything comes from the outside. The opulent Cerro de Pasco, as it was called, owes its shape and everything else to the large open-cast mine that empties it at its centre.

The architecture of this small city is a “gigantic man-made object, (...) complex and growing over time;”, but at the same time concrete and analysable through the singularity of its architectures, through the relationships between them. (Rossi, 1982, p.29) As Aldo Rossi wrote there is a The Architecture of the City, capable of bringing together the whole, the part, and the single architecture of the city, this single architecture for Cerro de Pasco is not a volume but a great void: the mine. In his discussion on the reasons for the shape of a city, namely its architecture, Aldo Rossi makes many references to one of the above-mentioned relationships, that is, the relationship with the locus. For Aldo Rossi it is an essential bond, which finds its confirmation both in Viollet-le-Duc’s admission of “the difficulty of transposing a work of architecture from one place to another.” (Rossi, 1982, p.103), and in the relationship between Villa Foscari and the landscape of the Riviera del Brenta. For him, the “situation” itself presents some of the principles by which we can better understand architectural works. The urban artifacts are conditioned by the locus, intended as “as a singular artifact determined by space and time, by its topographical dimensions and its shape, by its

*Figure 1. Boris Lefevre, 2015, City center photography.*

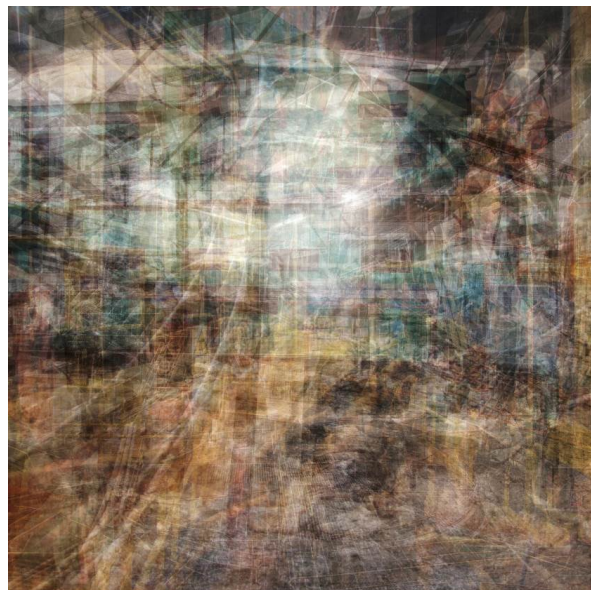
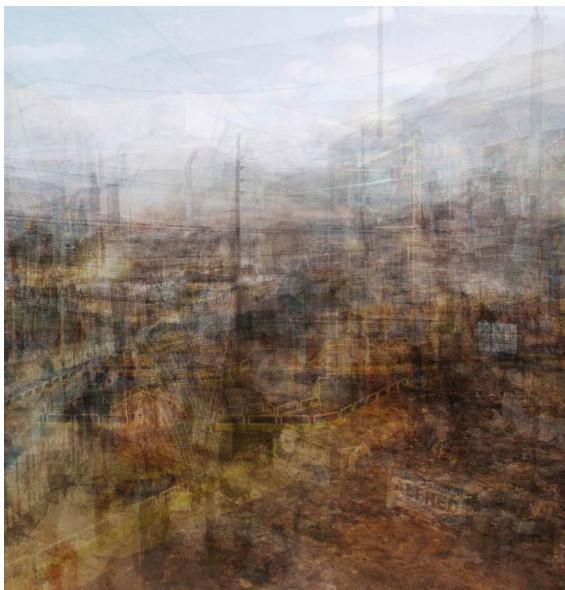


being the place of a succession of ancient and recent events, and by its memory.” (Rossi, 1982, p.107) and at the same time condition it. The identification of such “singular points” (where an architectural piece finds its place) depends on the identification of complexes, intersections of factors or single events. Analysing a work of architecture means also to know why it is set in a particular place and to understand how such place conditioned its shape. The analysis of the memories and characteristics of a place (geographical, topographical, etc ...) will allow us to know the declinations that an architectural principle has undergone to adapt to the singularities of the locus, allowing us, finally, to grasp the individualities that make architecture difficult to move from one place to another. However, these events do not always become a reason of value for a place, on the contrary sometimes the conditioning they have on the city acquires the form of a pathological disintegration of any initial form.

This is the case of the open-cast mine of Cerro de Pasco in Peru, it is an event that has its origin in the particular geological composition of this place, and in a particular event, now more legendary than historical, that is, the moment in where a farmer discovered the presence of a silver vein in an inhospitable but fascinating place in the Central Andes: “Según la tradición, se señala que en 1630 un indio, llamado Huaricapcha, informa a un español, don Juan Joseph Ugarte hacendado de la quebrada de Huariacaca, de la existencia de una rica veta de plata” (Centeno, 2007, p.13).

The discovery of the first sinkhole and of others in the eighteenth century favoured the birth of a small town, which otherwise would have found no reason to exist being at an altitude of 4380 meters above sea level and where average

Figure 2/3. Boris Lefevre, 2015, ‘Cartographie d’une ville Amorphe’.





temperatures never exceed 6 ° C. Cerro de Pasco is in an area of great landscape value just 30 kilometres from the Junín National Reserve, yet there are no known pre-Hispanic traces of settlements in the area. In fact, it was due to the Spanish conquistadores, attracted by quick earnings, the structuring of a system of founding cities in the vicinity of the metal deposits. Pablo Vega Centeno writes: “La ocupación urbana en estos casos no obedeció pues a objetivos de control agropecuario, a redes mercantiles, a fines administrativos o a razones geopolíticas. Se forman lo que Salas define como las ciudades mineras, donde la permanencia del poblado depende de la riqueza del asiento. De esta manera las principales funciones de este tipo de aglomeración fueron prestar infraestructura suficiente y servir como entidad reguladora de la actividad minera así como las de proporcionar vivienda tanto a los dueños como a los operarios de mineros.” (2007, p.10). Potosí and Huancavelica are some of the mining towns of Peru founded for the sole purpose of gathering the workforce to be employed in the mines and found only in the time of the mine. It is no different for Cerro de Pasco which has found and finds meaning only in the centrality of its mine, especially since 1956, when the mine became a step towards the open-cast mining system. This deconstruction of Cerro’s shape occurs due to the continuous widening of the sides of the terraced excavation of the mine and the progressive accumulation of slag heaps around it. Therefore, unlike the Rossi’s architectural

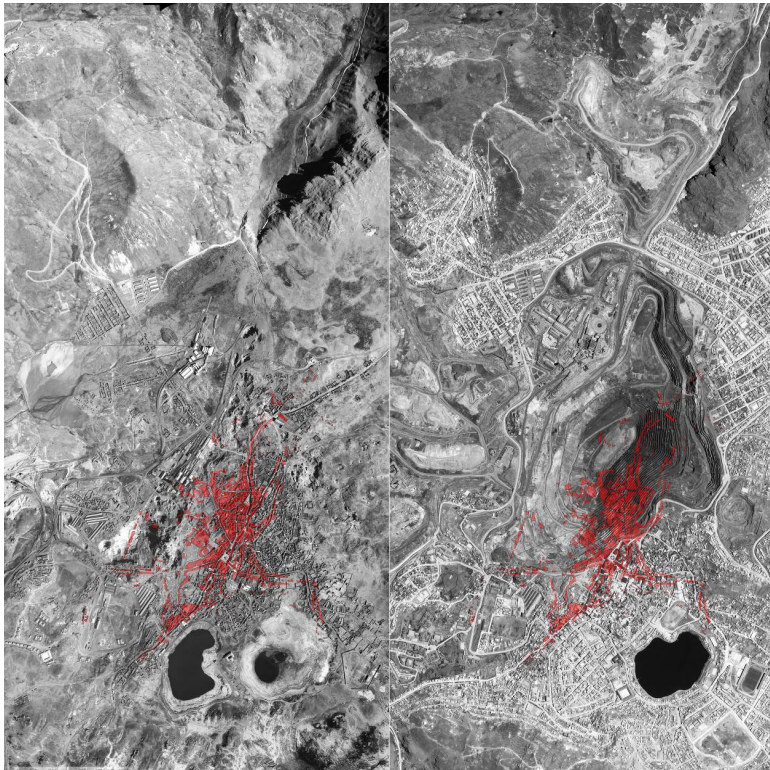


Figure 4. Boris Lefevre, 2015, *Evolution of the Urban Form in 150 years.*

event, the mine does not constitute a fixed and constant point such as an axis, a site or a measure, but an incessant element of modification with which the city building must coexist. In this case, the urban artifact must change its shape by emptying itself in the centre and expanding its external limits. The continually new orography of the land, completely absent in the maps, changes the city that grows or compresses, accepting the loss of the original landscape for a constant and unplanned evolution. The city grows and erodes at the same time from its empty monument, like an inverted pyramid where the sides of the urban landscape define the absence that is its origin. According to the trends of the world stock exchange, according to the quotation of the different metals, when the quotation value of silver and copper is lowered, the crater widens, when it rises, one of the many mountains of slag heaps is taken away to be worked in a continuous change of urban landscape. Cerro de Pasco finds in the mine both its history and the loss of it, and in the reserve of silver and copper it has the time of its life, its origin, and the reason for its shape. In Cerro de Pasco, the mine contains opposing characteristics capable of structuring the architecture of this city but also of dissolving its memories in a progressive way. The affinity of the void of the Cerro mine with the definition given by Kenneth Frampton in the text *Megaform and Urban Landscape of megaform* further clarifies how much the mine is an anthropogenic structure capable of changing the shape

*Figure 5. Boris Lefevre, 2015, Transposition of the Cerro de Pasco mine in the center of Paris.*



of the entire urban landscape of a settlement: “the megaform may be defined as the displaying the following characteristics: 1) A large form extending horizontally rather than vertically. 2) A complex form which, unlike the megastructure, is not necessarily articulated into a series of structural and mechanical subsets as we find for example in the Centre Pompidou. 3) A form capable of inflecting the existing urban landscape as found because of its strong topographical character. 4) A form that is not freestanding but rather insinuates itself in a continuation of the surrounding topography, and last but not least, 5) a form that is oriented toward a densification of the urban fabric.”(Frampton, 1999, p. 20).

The extension of the mine to from the bottom the surface has an area of over one square kilometre, it is certainly comparable to the examples proposed by Frampton starting from the first example of megaform or the Plan Obus of Algiers by Le Corbusier, which first introduces the term analysed by Frampton. In the mining town it also has the disorderly characteristics of the industrial town set out by the Swiss architect: disorder; absence of the conditions of nature; instability and overabundance of the working community; abandoned countryside areas; excessive distance between residential areas and production areas. (Le Corbusier, 1925) The last characteristic has not yet been verified <sup>1</sup>, but proposals have already been made for a total delocalization of the population due to the continuing

<sup>1</sup> *The proposal to move the entire population of Cerro de Pasco to a healthier area was the consequence of the declaration of a state of emergency by the Peruvian government in June 2013.*



*Figure 6. Boris Lefevre, 2015, Representation of the city inspired by the collective imagination of the inhabitants.*



need for a surface mining facility to deposit the slag heaps resulting from extraction. This would give Cerro de Pasco the same fate that the Chilean city of Chuquicamata raised next to the homonymous mine inexorably abandoned to relocate its inhabitants to the nearby city of Calata. This process described by Pedro Ignacio Alonso would generally be the definitive modification of the landscape in a new orography dictated by engineering and economics (Alonso, 2013).

The mine is therefore, for better or for worse, an urban fact that defines the entire Cerro and any urban sprawl or architectural grafting in its fabric must be related to it. From this indissoluble connection starts the 2015 project “¿ CERRODEPASCO ?” by the French architect Boris Lefevre for the reclamation of the waters of the only surviving lake inside the city. The project finds its foundations in an initial reflection on how to deal with the megaform of the mine as an existing and essential urban landscape. His project, initially lacked a programmatic text, but aimed at the need to intervene to give the citizens of Cerro an alternative centrality to that of the mine, it does not deny its presence but, on the contrary, it starts from it. In the memoirs that describe the project, a story that moves between Paris, Lima and Cerro de Pasco, the evolution of the compositional principle is linked to experience and knowledge, and starts from a first hypothesis of building a ring that surrounded the void where creating a public space for residents would have removed the inhabitants from the mine’s excavation area by applying the principles of the land art of R. Morris and Robert Smithson to the field of architecture. This first possibility, however, both due to the changing nature of this border, and due to the necessary expropriation of the residences in the area, would have been resolved over time not as a space for reconciliation between mine and city, but in a vacuum made available for future expansions of the mining cavity. The second option is described by the author of the project as follows: “The second design alternative was that of an architecture that would oppose the mine, symbolically or physically. I was looking for architecture that could withstand the growth of an open pit mine. (...) In Cerro de Pasco, a solution to limit the mine’s growth might have been imagining that Frank Gehry built a Guggenheim museum there. “The Cerro de Pasco effect”. Unfortunately, I’m not Frank Gehry.” (Lefevre, 2015). The need for a non-oppositional relationship with the surface mine becomes a founding principle in the project, this relationship is resolved in the generation of a new contemporary urban fact which, as Rossi says, may not have had the same historical value as the

previous one but which, through the search for a symbolic link with the territory and its tradition even prior to the mine itself could give space back to man, or better give water back to man, a primary asset that in this place, even if it is an area where ground water is very high, water is almost totally used for industrial uses and the little remaining is unhealthy. The Patarcocha lagoon, the only other void in the dense inhabited area beyond the limit of the mine, becomes the site of the project. The project symbolically seems to protect this asset, water, which currently risks disappearing under a layer of debris and low buildings. The project proposed by BL aims to shift attention from the void of the mine to the void of water, and at its centre the compact volume functions as a purifier for the waters of the lago de tomar and as a distribution point for its waters. “The lake becomes an island. The baths are a place where there is no longer employed, merchant or minor. Are you a woman or a man, Cerreño or Cerreña. They draw a city within a city. A place where nothing is produced, nothing but subjectivity. Everyone invents their own journey there. The senses are stimulated there. The subjective perception of the city is enriched by it. The project, for its architecture, its program, its structure, and its materials, refers to the Cerro de Pasco. Architecture is a medium. It becomes the mean to question an urban model, to extract a formal and symbolic language and to offer it an alternative. The mine, through its symbolic and political strength, structures the perception of

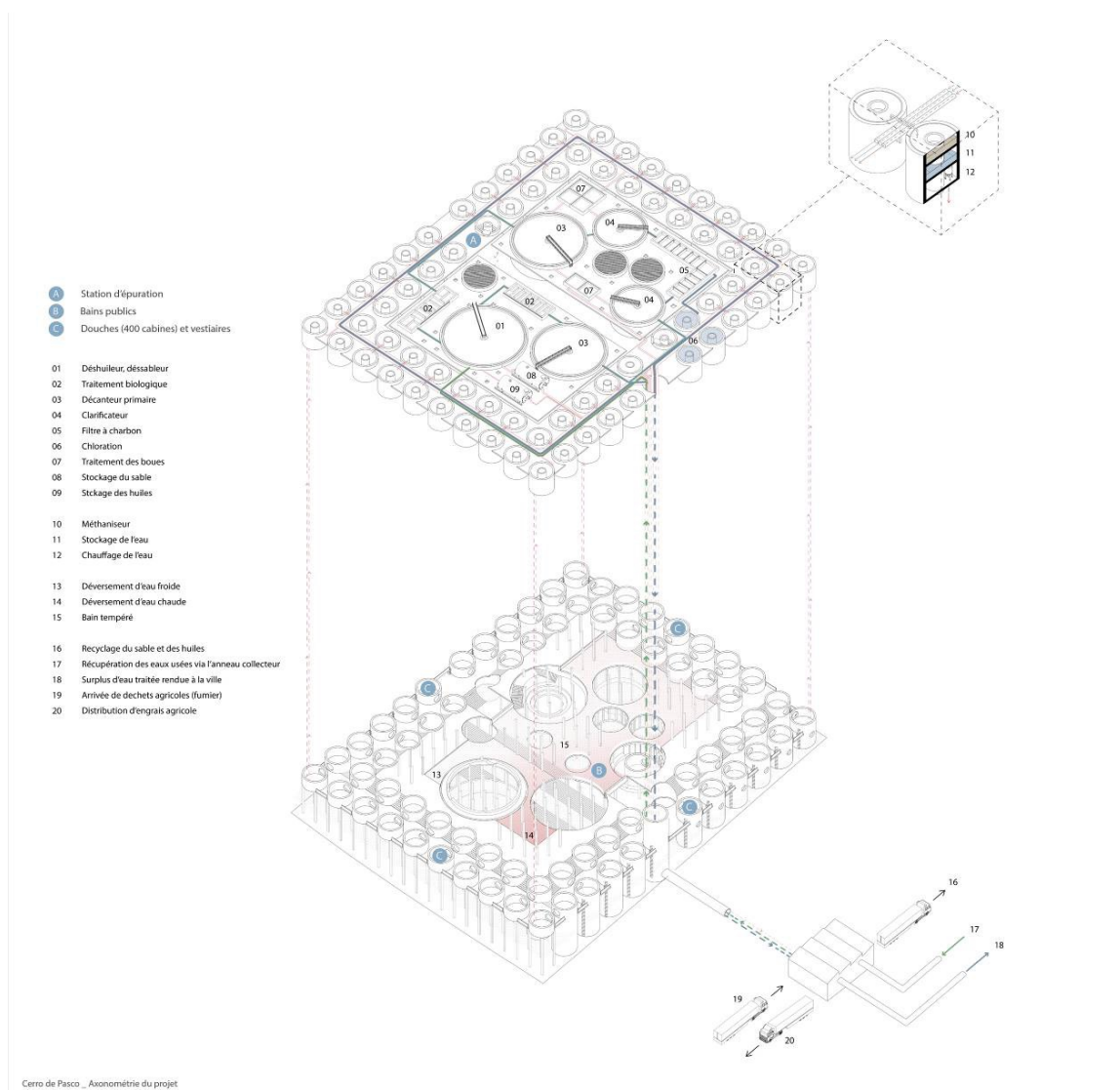


*Figure 7. Boris Lefevre, 2015, Perspective from outside the project.*



the Cerro de Pasco by its inhabitants. The project tries to cope with it, it opposes it. Become its opposite.” (Lefevre, 2015). An opposition that wants to suggest a method of positive coexistence between the industrial city and the man who resides in it, restoring what LC calls conditions of nature. (Le Corbusier, *The City of To-morrow and its Planning*). In the lines of the project, the traditions allegorically cited in the stereometric figures that compose it: the cylinder figure which more than the others recalls the industrial theme, recalls the American silos published in *Toward a new architecture* as “(...) the magnificent FIRST-FRUIT of the new age.” (Le Corbusier, 1986, p. 31) enclosed in the rectangle of the cancha central courtyard of Inca dwellings around which the rooms intended for the dwelling of a community are developed. The cylindrical volumes, prefabricated portions of oil pipelines, in an iterated series surround the central cancha and appear as the solid re-proposal of the voids of the baths of Caracalla;

Figure 8. Boris Lefevre, 2015, *Project Axonometry*.



the solidity of the Roman brick is replaced by the waters of the lake that creep through the 4X4 structure chosen for its widespread use in Peru, yet another reversal between full and empty. The functional distribution is articulated vertically, on the roof the wastewater treatment system recovered from a pipeline that never came into operation that surrounds the lake and was supposed to recover the wastewater. Below the waste mechanisation system for powering the plant, the water reserve and its heating, then in the dense weave of pillars are the spaces for humans, bathrooms, shower cubicles, reading rooms. This island contains what according to BL are the needs of those who live in this place: “400 shower stalls is what the city would need for every inhabitant to take a hot shower for free, twice a month.” (Lefevre, 2015).

The result is a new element, a new focus of a composition that generates a tension that shifts the meaning of this city from

*Figure 9. Boris Lefevre, 2015, Perspective of a side passageway (showers and changing rooms).*



the first event that created it, and that gives a new possibility of expansion linked not only to the emptiness of the mine, without however denying its existence, growth and memory.

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