Strata and Topographies. The Arduous Interweaving of Archaeology, Architecture and the City in the Case of the Thermal Baths of Neptune in Pozzuoli

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Abstract

Archaeological territories and materials constitute potential places of relations between the physical and interpretative levels of the contemporary stratified landscape.

The need for the archaeological discipline to open itself to the contribution of architecture – in relation to the role of the "new" in the conservation and re-signification of the past – focuses on two recurring aspects in the condition of ruins within urban spaces. On the one hand, the overlapping between the archaeologies and later settlements has led to complex urban situations, as the result of the coexistence of different materials, uses and memories, which is extremely interesting for the project. On the other hand, the issues concerning the isolation of archaeological areas in the wider context of the urban public spaces becomes an opportunity to work at the overcoming of the traditional archaeological fence.

The urban and architectural design for archaeological sites – dealing with the intermingling between these themes and the specific conditions of places – tends towards the reconstruction of a tissue of spatial connections, contamination of ages and rewriting of meanings.

The research – developed within the ministerial funding for the National Research Project on the theme “Architectures for Archaeological Landscapes” – has address these issues to the wide volcanic area of the Campi Flegrei, in north-west Naples. The reading of this stratified territories and their urban role highlights the connective potentials of the archaeological tissue, not only as concrete linkages, in which the "pre-existences" – included in a relational net – become transitional places able to mediate in the delicate weaving between urban artifice and landscape. The rediscovery of layers and levels – superimposed or placed below the ground level – determines a new system of connections along the vertical axis of the strata, involving significant urban pieces and focusing on the architectural character of the public space with its many variations and configurations.

Keywords: Architectures for the Archaeology, Changing Stratigraphies, Urban Topographies
Introduction. Archaeological Preexistences and Urban Relations

The coexistence of the archaeological research in the city with the use of urban spaces is now an accepted datum. Especially in the cases of continuity of use of a particular site, actually the archaeological ruins not only can constitute a fundamental element of identity, but they can also be re-read and re-used for new roles, within completely changed urban spaces.

In this perspective, the archaeological ruins constitute a crucial variable within the cities: over time, the levels of investigation of the historical knowledge of the different remains can vary, the digging areas can be widened and the ruins attractiveness can be adequately regarded. At the same time, the modalities through which urban spaces interrelates with the archaeological findings may be the object of significant updates and redefinitions, even independently of any variation in the archaeological scope.

Oblivion and memory, marginality and centrality, openness and closure of the archaeological fences constitute some main schematic and synthetic pairs, through which the changing relation between archaeological ruins and the city can be read. About these aspects, quoting Carlo Aymonino and his reasoning about the central area of Rome is worth, above all when he stated that the ruins "become relevant referring to this or that city, right because – first with their specific presence and then with their diversification – they significantly contribute to change the partial references in relation to the whole, to the urban form as a whole […]."

Also Andreina Ricci, from different disciplinary horizons, argued that "the ruins do not constitute memory in themselves, but they need an action that allows to transform them". In this perspective, still recovering Carlo Aymonino’s considerations, the ruins become urban design materials, so as they cannot be considered in a neutral manner, but they must assume a precise meaning right in the scope of a work specifically concerning the design dimension, which can be continuously updated over time, in order to give a more detailed interpretation of the single theme.

The possibility to develop an entrenched work of the ruins within the cities through the project, surely depends on manifold factors, from which it is possible to extract a very articulated series of cases, in which the configuration and extension of the archaeological areas play an important role.

It is nevertheless agreed with Andreina Ricci, as she advocates the necessity to "stave off the temptation of believing that the accumulation of fragments belonging to preexistences is equivalent, by itself, to the accumulation of a memory, an immobile and fixed waiting which shall be grasped in the future". This consideration is very important because, in many urban and territorial situations, the archaeological parks, even the extremely

broad ones, lie in a state of indifference referring to their surrounding areas. From the urban and architectural point of view, the main problem concerns the relations between ruins and settlements, since they must be tackled in terms of space, of design that works on urban spaces.

Maurice Halbwachs has well pointed out this position from another side, by arguing that: "there is no collective memory which does not unfold in a spatial framework, it is towards space, towards our space [...] that we must turn our attention: it is on it that our thinking needs to be fixed because this or that category of memories shall appear again"1.

The discourse of the collective memory reveals a fundamental importance, precisely because it brings us back to the relationships that the ruins may establish in the contemporary urban spaces: those relations concern the specific conditions of each single archaeological sites, meant in terms of urban spatiality, although hardly solvable within a single site. At the same time, however, it is necessary to consider that the construction of new spatial concatenations in which the archaeological ruins are involved, should not necessarily be related to the entire city in an undifferentiated manner. A critical and design work is therefore required, just as previously stated, based on a site selection mechanism, built through references and concatenations, with levels of flexibility and possibilities of expansion. This way, avoiding to develop general considerations on the different interpretations of the relationship between ruin and architecture, it is possible to identify a bordered research field and a theme to develop, just focusing on a few issues.

Ultimately, the thesis to be verified is based on the idea that the archaeological preexistences, placed in a new system of urban relationships, can constitute a place of transition able to mediate in the delicate connection with the urban landscape. By rediscovering new relations between levels and sub-levels placed above or below the ground floor, a new connection system can be determined along the overlapped arrangement of the strata. It will adjust the “high”-“low” ratio and tend to expand horizontally, and it will involve relevant urban pieces and focus on the architectural characters of public spaces in their multiple potential variations and configurations.

The Construction of an Archaeological Itinerary through the Meso-Urban Terrace of Pozzuoli

As Daniele Manacorda pointed out, by reasoning about the design for Largo Argentina by Mario Manieri Elia, it is necessary to "subtract some archaeological sites from their status of separated places from the city, in order to restore a wider urban use, according to diverse modalities, each time applied

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to the different contextual situations\textsuperscript{1}.

In order to carry out this crucial passage, concerning many important archaeological sites in Italy, even of great relevance, it is necessary to reason about some fundamental aspects of the relationship between archaeology and urban design, such as the substance of the ruin, the location within the city (with particular reference to the configuration of open spaces and to the relation with the landscape), the permanence or the transformations that have marked the historical-urban evolution of a particular ruin.

Surely also this field is very broad, so as it is necessary to consider some specific situations and some relevant examples, in order to clarify some aspects of the general topic.

In Pozzuoli, a city with Roman structure, which has undergone massive volcanic and bradyseismic phenomena, the ruins of the past do not remain only in the presence of ancient monuments, but are confirmed in the modern city buildings, that resume their alignments and, sometimes, their masonry elements. The map of the archaeological findings superimposed on the current map of the settlements, which we have recently contributed to update, highlights this great articulation of elements and the often inextricable weaves of the overlapping (see Figure 1).

Starting from this framework, we began to formulate a reflection about the urban open spaces of Pozzuoli, a city in which those spaces, although fragmented and unresolved, play a strategic role, since they often correspond to important ancient sites in which a very complex relationship between permanence and change has been generated. In summary, Pozzuoli is a city in which the archaeological presence, so strong and interwoven, is composed by fragments, to which a role is not always recognized, and in many cases they are considered only as a problem to be solved. However, this view is often determined by a lack of depth about the contemporary open spaces containing the ruins, which are not only those, though important, to which it directly relate with, but also further areas, arranged at even significant distances, with which it is possible to establish a physical but also conceptual connection.

In this perspective, starting right from the re-configuration/re-interpretation of these spaces, it is possible to build an "itinerary", not only meant as a connection among some important archaeological sites, but also as an intervention technique to restore meaning to many additional apparently far aspects, in relation to few clear objectives of knowledge and valorization: an itinerary/path that leads to a dynamicity made by multiple relations with the land it crosses.

Thus, at the urban and territorial scale, the itinerary can be read as a physically recognizable fabric, a network of paths that connect different areas and elements, but also as a "mental plot" that ideally links different facts, no longer connected memories, fragments that cannot be put back together again.

In this view, the issue of integration between archaeology and the city can

be defined on the basis of some strong design connotations, "especially in conjunction with cognitive circumstances and not analytical interests, nor philological nor antiquarian, but definitely active, thus inevitably also transformative. History and project, ultimately, are made of the same design essence: they take shape and change over time because of the interactive bond that binds everything in the world, so as recording the complex story of that relationship both in the final statement (the history) that in the preventive (the project), and the modalities in which the fundamental function of men adaptation to the changing environment takes place and develops, in our need/intent to live it, inhabiting it"\(^1\).

**Figure 1. Superimposition of the Archaeological Findings on the Current Map of Pozzuoli. The Meso-Urban Terrace (Highlighted Area). Original Drawing by the Authors**

![Diagram of Pozzuoli with highlighted Meso-Urban Terrace](image)

According to this overall setting, particular relevance is held by the area of the meso-urban terrace in Pozzuoli.

"On the top, above the hill, far from the crowds [...] in front of the broad panorama of the gulf, there was the most significant district of the city, rich in monuments, sumptuous houses and villas. Here, the masses of the two amphitheatres, the wide Public Baths, which were supposed to be adjacent to

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the Solarium for sun treatment, and the Circus arose side by side"¹.

By assuming the ancient meso-urban terrace as the field of reference for a contemporary urban design, Pozzuoli becomes the object of a reading of the old settlements based on the idea of a city that grows on sites situated at different interconnected levels: the promontory of Rione Terra, the coastal part of the city interrupted by the promontory and the terraces on a high tier, which instead are characterized as a continuous scheme.

"With the system of terraced urbanization, and through the many stepped streets with steep slopes, the lower city is connected to the area where the road network culminates coming from the acropolis and the branches of the broad territorial traffic flows. About that area, as for the other parts of the city, it is important to point out the alignment of the major buildings orientation, such as the Flavian amphitheater, the thermal layout, namely the "Temple of Neptune", and other minor episodes. This aspect demonstrates that the urbanization of the western districts was based on a careful planning that took into account a fairly extended area, gradually occupied from the Neronian age to the Flavian period"².

Today, that configuration is hardly recognizable, and in particular the meso-urban terrace is compressed between the road and rail infrastructures, the direct route Naples-Rome in the north, the Cumana subway line in the south, and it is invaded by recent urbanizations of various kinds. Some ancient monuments, such as the Major Amphitheater, are easily recognizable, other ones, like the circus (the stadium), while fragmented by infrastructure cuts, have been significantly reassembled on the basis of more recent archaeological excavations. Moreover, the Amphitheatres and the Stadium constitute the two recognizable ancient cornerstones of the meso-urban terrace, meant as places that unequivocally mark its longitudinal dimension and that may constitute key elements in a system of cross-connections to the waterfront and Rione Terra, but also towards an hinterland marked by the distinct morphology of the volcanoes. However, most of the ancient settlements of the meso-urban terrace is located within a grand overlapping system, with the ancient structures incorporated within the modern buildings.

The Sequence of Layers: The Ruins of the Thermal Baths of Neptune as Urban Connection

A particular situation characterizes the Baths of Neptune, whose ruins are partly visible and partly embedded in buildings of recent construction; at the same time, the findings effectively lie inside a fenced private property, although they result recognizable within a system of articulated and interesting

¹A. Maiuri, I Campi Flegrei, dal sepolcro di Virgilio all’antro di Cuma, Istituto poligrafico e zecca dello stato, Rome 1958.
open spaces. For this reason, the Baths constitute a very worthwhile case to be explored, both in relation to the issue of the construction of public open spaces, in which the ruins should play a decisive role, and to the definition of a crossing path in the meso-urban terrace, able to piece together some elements of ancient Pozzuoli, by assigning them with a unitary role in the contemporary city.

The area of the Thermal Baths of Neptune is bounded by two major road arteries of Pozzuoli, Corso Terracciano, the ancient street bordering the Amphitheater which led from Via Domitiana to the way to Naples, and Via Pergolesi, placed on a very lower level towards the coast (see Figure 2).

**Figure 2. The Area of Thermal Baths of Neptune**

The existing difference in height between Via Terracciano and Via Pergolesi, amounting approximately fifteen meters, allows to highlight the fundamental tiers on which the ancient city was developed, arranged within the area of the mesourban terrace and the coastal territory, although it is clear that the old levels were definitely different: in particular, the tier of the meso-urban terrace was resolutely lower than the current one.

Nearby Corso Terracciano, aside from the more easily recognizable thermal structure, a number of further archaeological remains are actually detectable, some of which were probably part of the thermal complex itself. In particular, the ruins of the Nymphaeum of Diana can be found northward within the Olivetti public housing district. Thus it is possible to consider the ruins as a unitary wide thermal complex of exceptional significance, the only one known to us in Pozzuoli, according to the interpretation of Werner Johannowsky, and "a monument worthy to be read in a monographic study"\(^1\), according to Paolo Sommella.

On the other hand, even the diggings of the Twenties of the last century in the Bourbon Prison have been attributed to the Baths complex: "The distance that separates this large nucleus of constructions of the grand ruins of the Thermal Baths, known under the name of Temple of Neptune, is about a

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\(^1\)P. Sommella, *Forma e urbanistica di Pozzuoli romana*, Stampa et Ars, Naples 1978, p.29.
hundred meters at most [...] "\(^1\) (see Figure 3).

**Figure 3.** Plan of the Ruins of the Thermal Baths of Neptune. Source: Paolo Sommella, 1978

This is not the context to deepen the history of the Baths, starting from the Eighteenth-century curious interpretation by Panvini, that named the building as the Temple of Neptune. More detailed studies have come to a more precise comprehension of the thermal complex, built in the first half of the second century A.C., and characterized by a planimetric distribution of axial type, with a path which following a sequence from bottom to top: *caldarium, tepidarium, frigidarium, natatio*. Most of the structures are underground, beneath some of the buildings of Via Pergolesi, while the visible ruins, located within a private property as previously stated, refer to the upper levels, in particular the area of the *frigidarium*.

However, the parts which have survived have a great fascination: "The ruins of the Baths of Neptune are of exceptional beauty and their majestic and massive presence inspires an admiring respect in the eyes of visitors. They consist of two large parallel walls, about two hundred meters long, each one with a thickness of about one meter and forty centimeters, and thirteen meters apart from each other. At the top, the traces of windows, niches and passages can be detected, that were used to allow communication among the various spaces [...]"\(^2\).

The very peculiar condition of those ruins facing the sea has become even more attractive as a result of the demolition of a school complex, for static reasons, which until the Eighties of last century was located right close to the thermal structure. The demolition has allowed the formation of a space to be interpreted, which preserves the arrangement, size and shape of the base portion of the school.

This space overlooks the thermal area, but has no accesses to the Baths, this way not allowing a direct physical connection. The only access to the remains is a narrow path from Via Terracciano, which links the tiers of the

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\(^1\) A. Maiuri, Pozzuoli, scoperte varie di antichità, in *Notizie degli Scavi*, 1927, p.320.

street to the level of the findings.

The presence of a fence accentuates the fragmentary character of the diggings, also hidden by a thick vegetation.

In the area of the Baths of Neptune, the overall theme of the definition of a set of urban open spaces of connection thus assumes full sense, as places through which to read the relations between the tier of the current city and the level of the ancient city, especially through the introduction of calibrated transition plans, that may constitute the backbone of logics for the "reuse" of the ruins.

That issue can be expressed through compositions of planes/strata, through which the levels that mark the presence of the remains can be defined, so as linking public spaces and archaeological spaces and building urban places that contain the findings themselves.

In other words, the "ancient" is put into play through connection mechanisms, which involve different strata and levels of the city, aiming at building spaces and places of urban reference, even completely "new".

In fact, the area of the Baths of Neptune can be re-read as a sequence of three closely interlinked urban spaces:

- the entrance space/square;
- the level of the ruins;
- the incorporated remains within the downstream buildings.

The first space can be conceived as a terrace overlooking the archaeological remains, meant as identity elements of the landscape towards the sea, as the fixed scene of Pozzuoli: a fundamental place in the image of the city already in the sixteenth century, as attested by the picture of the ruins of the Baths by Hendrick van Cleve in 1550 (see Figure 4), but even as here interpreted as a specific element of connection between the tier of the current city and the original level of the thermal complex. A system of comfortable ramps should easily ensure the access to the level of the Baths from the tier of the city. At the same time, the terrace can be considered a key element within the above mentioned itinerary along the meso-urban plane.

The second space is a plane that allows to control the peculiarities of an impressive interior in a more accomplished way: "the frigidarium, which is also apsidal, lying between two rooms which had been intended to hold the tubs [...] or to fulfill the function of the Thermarum Basilica, as a sort of foyers with access to the locker rooms and the gym, extending northward and containing a large cold pool".1

Basing on careful and specific studies, that plane will be able to give an account of the original dimensions of the bath, at least in the planimetric layout, and also of some fundamental relations among the different spaces, as well as of some elements of the operating mechanism. In this place, the

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knowledge of the thermal system may be supplemented with multimedia devices, through which it will be possible to better perceive and understand the internal spatiality of the Baths. The plane of the Thermal complex shall be also intended as a space for movable installations, where to carry out shows and concerts, which may involve the survived ancient structures as a stage scene.

**Figure 4. View of the Ruins Thermal Baths of Neptune, by Hendrick van Cleve, 1550**

The third space is inevitably more complex and fragmented, and can be defined through a work-fold: on the one hand, the recovery of the historical topography as an element of the relationship between the scattered remains; on the other hand, the embedding of the rooms along Via Pergolesi in a continuity mechanism of open spaces, including the ruins of the *prefurnia*, the boiler halls under the large thermal spaces of the caldarium, willing to south and positioned according to a precise program for the utilization of natural energy sources. The current building fronts along Via Pergolesi defines a very diversified curtain, but in some places the ancient structures are still recognizable.

By crossing those spaces it will be possible to have access to the rear terrace on a lower tier (about eight meters below the "plane" described above). As described by Johannowsky, there was a very tangled report between the *prefurnia* and the rooms of the *caldarium*: "a large barrel-vaulted crypt ran around the apse of the main *caldarium* and stretched along cantilevered side bodies, in order to connect through the corridors the compartments and interspaces with each other, where the heat had to propagate in the above mentioned spaces"\(^1\).

**Conclusion. The Construction of a Contemporary Public Space through the Interpretation of the Historical Topography**

Ultimately, among the three spaces it is possible to articulate a set of

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connecting paths/ramps, through which to realize the connection between the level of the terrace, the plane of the ruins and the level of the prefurnia along Via Pergolesi (see Figure 5).

**Figure 5.** Design Proposal for the Area of the Thermal Baths of Neptune: 1. Ruins of the Thermal Baths of Neptune; 2. Praefurnia; 3. Nymphaeum of Diana; 4. Ruins of the Tabernae; 5. The Entrance Space/Square; 6. The Level of the Ruins. Original Drawing by the Authors

Through that organization, the project is entrusted with the task to allude to the thermal layout, so as realizing the urban connection path between Via Terracciano and Via Pergolesi, and at the same time a crossing of the ancient building. Starting from this first step of design indications, in which some fairly simple and flexible interventions can be identified, it will then be possible to engraf a more complex design solution, by incorporating further buildings and small open spaces to be reconfigured. That reasoning recalls the logic described by Rafael Moneo for the intervention of realization of the Museum in the archaeological areas of Cartagena. "The project proposes to incorporate and connect built volumes and empty spaces currently existing within the urban fabric of the city, so as creating a museum path which defines an itinerary from the sea to high altitudes, allowing the visitor and the student to overcome a significant difference in elevation, and then culminating the visit with the unexpected sight of the stately space that emerges today in the already dug spaces of the cavea. This promenade - abusing once more of the expression by Le Corbusier - that leads from the low tiers to the high ones unfolds through exhibition spaces illuminated by a complex system of skylights, and develops by serving the visitor of mechanical means of elevation, stairs as well as lifts, which act as a guide for the exhibition of the remains found during excavations. Therefore it comes to a musealized
In reference to a wide and varied program, the proposed ideas about a first connection of the three levels of the Thermal Baths assume the character of an installation, of an arrangement of temporary structures for the purpose of an initial fruition of the area (see Figure 6).

**Figure 6. Overall Strategy: from the Design for Archaeology to the Project for the City. Original Drawing by the Authors**

In this perspective, some small service facilities shall be realized, in relation to the various heights and to the new connection ramps among the different levels, with the aim of transiently realize reversible contemporary additions, albeit integrated within the ancient spaces.

The paths/ramps shall also be entrusted with the task of establishing morphological and physical relations with the further spaces of the thermal system, now partially incorporated in the Prison or in the Olivetti Park, westward and northward, that may be related to the core nucleus of the Baths. This way, the whole of the terraces, which to some extent may be defined as a park, becomes an element of urban connection in its entirety.

The Thermal Baths will then become a great contemporary public space, including some peculiarities of the ancient setting through the historical topography according to Yannis Tsiomis' reading of the Acropolis in Athens: "The historical topography is operational, as the space is not fragmented in a unique way, but based on certain criteria: surely the principle of the archaeological approach, that of the relationship to be established among urban spaces which appear differentiated in terms of time, use, and functions, and also the criterion of the landscape as a witness of the evolution of writing of the

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place (according to the etymology of the word topography) and as the writing of history through the place. The historical topography becomes - I think - not a landscape-museum, but an operational concept for the arrangement of the public space. The public space is thus the grand ordering device both of the diachrony and the synchrony III.

References


Johannowsky W. 1993. I monumenti maggiori In Da Dicearchia a Puteoli, F. Zevi (edited by), Banco di Napoli, Naples.

Maiuri A. 1927. Pozzuoli, scoperte varie di antichità estr. from “Notizie degli Scavi”.


Manieri Elia M., Attualità dell’archeologia urbana. DOI=http://www.treccani.it/enciclopedia/attualita-dell-archeologia-urbana_(XXI_Secolo)/ [consulted in May 2014]


