

HADRIAN'S VILLA

Archaeological landscape and water architectures.

The redefinition of the fragment through a precise stitching
of the southern Pincer.



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of the southern Pincer.

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ABSTRACT

Hadrian's Villa represents an exceptional architectural virtuosity in which water, stone, light and shadow are the absolute protagonists of the landscape. The Villa appears today as an immense natural park within which the ruin emerges, stripped of its splendor, naked, suspended in a unique time, linked to the principles of beauty and inexhaustible source of research for its forms, repeated in different eras and never surpassed.

Hadrian's Villa contains a rare and exceptional compositional principle, whose origin must be investigated in the sacred places of the ancient world: the polycentric composition radial hypotactic, a soul that emerges and manifests itself when the exercise of composition selects the polar centers, fundamental places.

The aim of the thesis project is to return to the visitor an area that is inaccessible to this day, creating new paths that bring to light the Hadrian compositional prin-

ciple in the area of the "southern pincer" that includes the Pretorio Hill, the Wall of Fountains, the Roccabruna Esplanade, the Academy and the Odeon.

The adopted strategy is based on the tracing of two axes that select the hypotactic centers of the project area and touch the other fundamental places, allowing the design of point-like and scenic interventions that re-elaborate the relationships between the individual architectures and the very forms of the Villa through the study of a module, a key to reading the proportions and beauty of the ruin. The architectural intervention is inserted in a context in which matter and nature blend and intertwine and the ephemeral character becomes therefore a necessity, more than a stylistic choice.

ABSTRACT

Villa Adriana rappresenta un eccezionale virtuosismo architettonico in cui acqua, pietra, luce e ombra sono protagonisti assoluti del paesaggio. La Villa appare oggi come un immenso parco naturale all'interno del quale emerge la rovina, spoliata dei suoi fasti, nuda, sospesa in un tempo unico, legata ai principi della bellezza ed inesauribile fonte di ricerca per le sue forme, ripetute in epoche diverse e mai superate.

Villa Adriana custodisce sotto traccia un principio compositivo raro ed eccezionale, la cui origine deve essere indagata nei luoghi sacri del mondo antico: la composizione policentrica radiale ipotattica, un'anima che affiora e si manifesta nel momento in cui l'esercizio della composizione seleziona i centri polari, luoghi fondamentali.

L'obiettivo del progetto di tesi mira a restituire al visitatore un'area ad oggi inaccessibile, creando nuovi percorsi che riportano alla luce il principio compo-

sitivo adrianeo nell'area della "tenaglia sud" che comprende l'Altura del Pretorio, il Muro delle Fontane, la Spianata di Roccabruna, l'Accademia e l'Odeon.

La strategia adottata è basata sul tracciamento di due assi ordinatori che selezionano i centri ipotattici dell'area di progetto e toccano gli altri luoghi fondamentali, permettendo la progettazione di interventi puntiformi e scenografici che rielaborano i rapporti tra le singole architetture e le forme stesse della Villa attraverso lo studio di un modulo, una chiave di lettura delle proporzioni e della bellezza della rovina. L'intervento architettonico si inserisce in un contesto nel quale la materia e la natura si fondono e si intrecciano ed il carattere effimero diventa dunque una necessità, più che una scelta stilistica.

A | HADRIAN'S VILLA

A1 | Framework

Context

Hadrian's villa is located on a tuffaceous plateau at the foot of Monti Tiburtini, in an area marked by very varied morphological and landscape characteristics.

The choice of the site was strategic for the proximity to Rome (28 km), reachable through the Via Prenestina and Via Tiburtina, and for the presence of Aniene river, at the time navigable. Even now, despite the lootings suffered, the lack of care and the course of time, Hadrian's Villa represents an exceptional architectural virtuosity in which water, stone, light and shadow are the ab-

solute protagonists in the landscape: the Villa looks like an immense natural park in which the different places that reflect the polyhedric personality of their architect, inspired by the monuments admired during his travels in the Empire, take shape.

Hadrian's villa covers an area of 120 hectares crossing valleys, raising artificial plains, and creating unique perspectives even today. The Emperor Hadrian created de facto two cities: a representative city on the surface and another one built underground. The latter was made of driveways used by servants to reach every place of the villa, which was not closed and distant world, but on the contrary, was connected to the outside by fast couriers able to bring



to Rome, and to the Empire, the will of the Emperor.

At Tivoli, the landscape and the Villa were integrated as a whole, to the point that the green areas and the buildings completed each other without overlapping. Although the monuments may seem disseminated without a criterion in the scenario, they are, on the other hand, arranged following a polycentric ordering principle that originates axes and directrices capable of linking together places that are hundreds of meters apart and at different altitude.



01. Villa Adriana from Google heart.

Bufferzone

Hadrian's Villa was added to the UNESCO List on 4th December 1999. With its inscription, UNESCO established not only the limits of the Villa but also the set of areas around it that still perform a protection function to the entire complex, defined as an inseparable combination of archeology and nature.

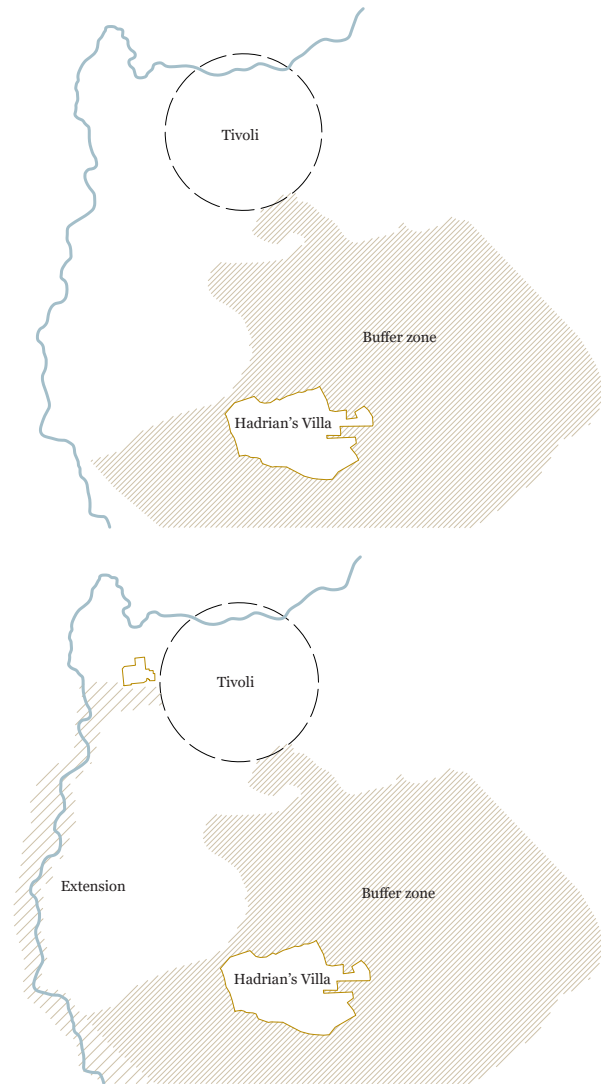
The term Bufferzone therefore identifies the areas around the Villa that creates the landscape that distinguishes it, whose perimeter is showed by the physical (such as the course of the Aniene river to the West) and administrative nature. This area also includes the 40 hectares of the Villa that today belong to the Bulgarelli family and, therefore, are privately owned: the Praetorium Esplanade, part of Rocca di Bruna Esplanade and the Academy complex.

Over the years, the Bufferzone has been extended: in 2001 there was a first expansion with the inclusion of Villa d'Este in the list of the UNESCO World

Heritage Sites and subsequently the numerous Roman suburban villas present to the territory and some monuments – such as the Santuario di Ercole Vincitore and the complex of Ponte Lucano – were identified.

The final goals have been, and are still today, the enhancement and valorization of the entire Tiburtine complex. Since the early 2000s it is subjected of studies and initiatives (including international ones) for the definition of strategies and development – managements plan able both to guarantee a more formal conservation and to favor the socio-cultural dynamics aimed at an active conservation of the immense archeological, landscape and natural heritage that the territory of Tivoli has to offer.

In essence, the Bufferzone is a protected area that needs development plans for the conservation and the enhancement of material but especially immaterial resources of the area, such as typical local scenarios.



02. The original area of the buffer zone and the extensions following.

A2 | Analysis and History

Construction and abandonment of the Villa

Hadrian's Villa stands on a tuffaceous plateau at the foot of the Tiburtini mountains, excavated by the Acqua Fer-rata moat in the north-east and the Roc-cabrana (or Risicoli) moat in the south-west. The great availability of water and raw materials (such as woods, tuff, or travertine), the proximity to Rome and to two important Imperial Roads and additionally the elevated and panoramic position of the area, were decisive in the choice of a site that turned out to be strategic: the Villa was easily accessible but, at the same time, defensible in case of need.

Apollodoro di Damasco managed to design for Emperor Hadrian a complex villa that had to meet unique needs and functions (such as residential, representative, and service). He was able to do that by facing skillfully the jagged cour-

se of the ground: he dug inside valleys, rose artificial plains, and created unique perspectives through architectures that integrated perfectly with the surrounding natural landscape, thus creating an inseparable binominal still today.

Hadrian's Villa was built between 118 A.D and 138 A.D. In this period, it is possible to find three phases of construction of the Villa that probably are the most productive ones for the presence of Emperor Hadrian in Rome.

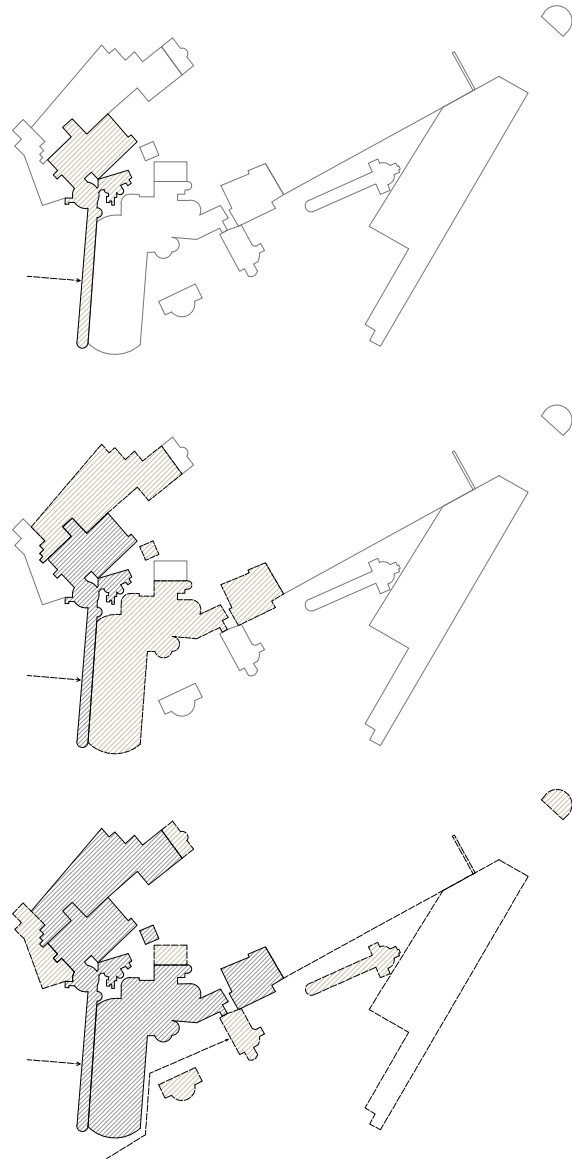
Between 118-121 A.C the first works were conducted on the already existing part of the Villa of republican age dating back to the I century, which was left in inheritance to the wife of the emperor: the ancient nucleus was transformed to host Emperor Hadrian during the first phases of construction of the new buildings. Moreover, the works concerned the access routes essential for the supply of food and raw materials of the construction of the Villa itself, in addition to the engineering and hydraulic work fundamental for water supply at the service

of scenic water features.

In 121 A.C the Maritime Theatre, the Heliocaminus Baths, the Philosopher's Hall and the Pecile were constructed close to the republican nucleus.

Between 121-125 A.D the construction of buildings was frenetic, as evidenced by the Roman brick stamps found in greater quantity: the works were concentrated mainly in the expansion of the already built nucleus, the complex of Golden Court, the gardens of the Imperial Palace, the Hall with Doric Pillars, the Winter Palace, the Garden Stadium, the Small Baths, the Large Baths and finally the Praetorium.

Lastly, between 125-138 A.D the Valle di Temple to the north with the Greek Library and Latin Library was completed, while to the south the Vestibule (the monumental access to the Villa), the Antinoeion, the Canopus, Roccabruna and the homonymous Esplanade with the Academy and Mimizia complex, the Praetorium hill with the wall of Fountains and, finally, the Odeon (also called



03. Stages of the construction of the Villa.

South Theatre) were built. The Roman brick stamps testify how, after the death of Hadrian, the Villa continued to be kept among the assets of its successors; however, its use decreased over the time, until the abandonment.

The Middle Ages, known to most people as a period of “dark centuries”, turns out to be a period of rebirth in which the “factories” – large shipyards of Cathedrals that needed a large quantity of raw materials – are reborn.

Hadrian’s Villa was not spared from the frequent practice of the time based on dispossession and extraction of building and valuable materials – such as marble, stones, and mosaics of buildings now in state of neglect – that were reused for the construction of new architectures in Tivoli. These lootings continued until the birth of Humanism, when a feeling of love and interest for the study of the classical world was rekindled, and the Villa began to be rediscovered and studied.

During the period of plundering, the artificial Academy esplanade and the Praetorium hill were affected by an intensive planting of olive trees and vines following the agricultural exploitation by the Jesuits who settled on the site: a character still visible today and that makes unique the archeological landscape of the place. All this allowed to re-habit the places of Hadrian’s Villa, although with a different function, but, at the same time, it meant an increase of the degradation of the structures due to the roots of trees and the humidity created by the foliage.

Only at the end of the 19th Century, when the Villa entered the patrimony of the Kingdom of Italy, the first works of systematic recovery began. Until today, excavations and studies are still in progress as the function of all structures has not yet been clarified.

The study of the Villa over the years

The rediscovery of Hadrian's Villa and the ideas that animated it occurred in 1491 A.D when Pope Pius II Piccolomini commissioned the humanist Flavio Biondo to undertake studies on the architectural complex. At the end of the XV Century also Pope Alessandro VI Borgia commissioned a very first campaign of excavations in the southern area of the Villa, precisely on the Odeon and on the Academy complex, which revealed numerous marble sculptures and precious marble coverings. All this generated an increase in interest in archaeological research and the production of a considerable number of illustrations of Hadrian's Villa over the centuries.

The first site plan produced bear the signature of Giorgio Martini and date back to 1465 A.D; now it is preserved in the Uffizi. Through the redesign in scale, Martini highlights the difficulties of confronting the ruin and shows the critical attitude of Renaissance architects in comparison with the ancient, which

often proposed on paper a version reconciled and free of inconsistencies, typical instead of ruin. Villa Adriana had a strong impact in the architectural composition of the fifteenth century: the works of the architects of the time were contaminated by typological solutions used in the iconic architecture of the Villa, such as the Temple of San Pietro in Montorio di Bramante, or the circular court of Villa Madama of Raffaello.

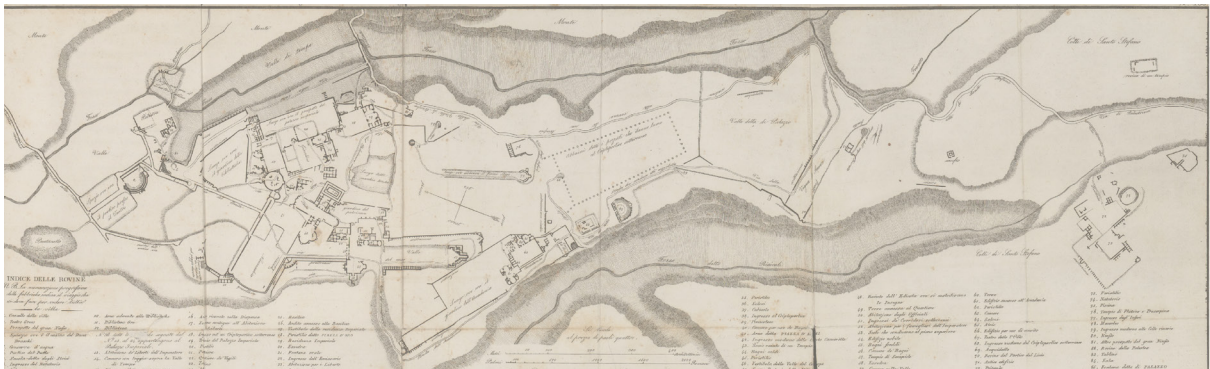
When Palladio, in 1554 A.D., included Villa Adriana in the "Guide to the Antiquities of Rome", the research and knowledge of the site reached its peak. In this period, Pirro Ligorio was commissioned by Cardinal Ippolito II d'Este to conduct excavations on the area of the Spianata di Roccabruna and the Academy from which the marbles that still cover Villa d'Este were obtained. Pirro Ligorio produced many drawings, mostly sketches, that were remade following a plan by Francesco Contini, in turn commissioned by Cardinal Barberini in 1632 A.D. to verify their veracity and accuracy: the comparison between the two plans of the



04. Francesco Contini, *Ichnographia Villa Tiburtinae Adriani Caesaris*, 1668



05. Giovanni Battista Piranesi, *Pianta delle fabbriche esistenti nella Villa Adriana*, 1781



06. Agostino Penna, *Viaggio pittorico della Villa Adriana*, 1831

complex shows how some inaccuracies were perpetuated in the elaborations.

In the 18th Century, the inclusion in the list of the “Grand Tour” (the traditional training trip of young European aristocrats) and the establishment of the Prix de Rome in France, gave further impetus to the interest matured for Hadrian’s Villa. The contribution of the Pensionnaires was fundamental in the study of the architectural composition of the Villa, in the propositions and indissoluble relationship between Architecture and Nature, scenography and ruin.

In 1781 A.C a further plan of the complex was published: it was a reworking of an earlier plan by Giovanni Battista Piranesi. He succeeded in showing the organic relationships that bind the construction of the site through an unsurpassed technique of engraving. He also has sixteen views of the Villa.

In the 19th Century the perception of the Villa changed drastically aiming for a more technical and scientific research.

The studies on the complex and excavations continued rigorously and, at the end of the century, with the birth of the Kingdom of Italy, most of the land on which Hadrian’s Villa stands were purchased by the new Italian State, allowing the visitor to have a more complete and no longer fractional overview.

Among the great architects of the past century who were fascinated by the ideas, principles, and architectural solutions of Hadrian’s Villa we can find the famous Luis Kahn and Le Corbusier, who studied the Villa understanding its extreme complexity, proposing a series of new sketches and drawings, and trying to reproduce in a modern way its forms and its underlying language.

Moreover, during the 20th Century the excavations and the archeological initiatives continue: the Pirelli society, which still today has its headquarters in Tivoli, in the first half of 1995 promoted some restoration works on the Maritime Theatre, the Canopus and the Serapeum, in addition to financing the restoration

of the original water basins of the Villa. Furthermore, the excavation campaign of that time leads to the discovery of further finds of greater artistic value, accompanied by the sensational discovery of the underground galleries which connected all the places and buildings of the Villa.

Still today, despite all the excavation campaigns and the investigations, not all aspects of Hadrian's Villa are known, such as the functions of the various buildings and pavilions and their original architecture. The findings, as we had the opportunity to deepen, are on the agenda but the time spent on the remains of Hadrian's Villa continues to run its course.

The iconic elements of the Villa

All peoples developed their own architecture at the beginning of their civilization, with their own typological and formal elements, linked to the place, climate and time (as Vitruvius deepened

in his treatises). The Greek and Roman civilization, similar to each other with due differences, have generated classical architecture, based on order, symmetry and human measure. An architecture able to meet different needs, needs and functions and able to fascinate even today.

Many typological and formal elements are present and still visible within the complex of Villa Adriana and deserve to be enunciated, since the design choices that have moved the thesis aim at a rereading of the shape of the Villa itself and the study of typological solutions has been fundamental.

Among the places, principles and architectural elements of the Imperial Villa Tiburtina were chosen: the building with Esedra, the Garden, the Spa, the Tholos, the natural context and the water element.

Exedra Building.

The term "exedra" indicates a semicircular hollow, usually surmounted by a

semi-dome, placed axially on a facade. In Villa Adriana this solution is often used to create perspectives and escape points within an architectural space, or to indicate route turns within buildings. The building with Esedra and the Hall of the Philosophers are two pavilions that expressly present this characteristic.

The Garden.

A fundamental place of classical architecture that has assumed over time its typical composition: a generally rectangular porch, used for walks, that delimited a space with an organization of the elements that converged towards the center where usually stood a statue, a fountain or a basin of water. In Villa Adriana are still visible the remains of the garden of the Pecile and Piazza D'Oro.

The Thermae.

Architectural typology par excellence of Roman culture, the baths were public buildings and meeting places, real monuments. Inside the most sumptuous baths could find also small theatres,

fountains, precious mosaics, statues and/or works of art. Inside the Villa there are respectively the Grandi Terme, the Piccole Terme and the Terme with Heliocaminus.

The Tholos.

It was initially a funerary monument with a circular plan whose first testimonies date back to the Bronze Age. It was later taken up by the Greek culture and used as a temple surmounted by a dome, sometimes surrounded externally by a circular portico. The circle is the geometric shape that dominates its architecture and in Villa Adriana we find the Maritime Theatre, Roccabruna, Golden Square and other fundamental places for the polycentric principle that regulates the entire archaeological complex.

The Natural Context.

The Tiburtino territory has different naturalistic peculiarities that, together with the advantages of a raised and panoramic position, give Villa Adriana a perfect scenography inside which to enter with unique perspectives, like that of

the Canopo valley.

Water.

Water played a fundamental role in the development of Rome and its civilization. Aqueducts, as well as thermal baths, were the most valuable engineering constructions. The construction of the Imperial Villa is based on a water supply system that exploits the proximity to the river Aniene, the aqueducts to Rome and the natural slope of the land. Today water is still present in the Pecile, in the Canopo and the Maritime Theatre, which represent the main water architecture of the Villa itself.



07. The roman garden.



08. Ruins of Grandi Terme.



09. Ruins of Tholos of Roccabruna.



10. Water, Architecture and natural context.

A.3 | The water and the Villa

The Aniene river and the Roman aqueducts.

The greatest innovation of the Roman civilization was the highly efficient water distribution system through a links of aqueducts that was unmatched over the centuries. Even today, if we think of the Roman architecture, we immediately recall the ruins of aqueducts, the remains of stone arches found in every city that was part of the Roman Empire.

In Rome, the water was taken from the Tiber, the urban wells, the cisterns, and the springs of the nearby towns. In the Republic area, however, the city began to expand, and the daily supply of water needed increased: a system of transport was organized from more remoted areas and for this reason in 312 B.C the l'Aqua Appia was designed. It was the first aqueduct which supplied the entire Rome from a spring near the river Aniene.

The roman aqueducts were characterized by considerable lengths because they had to carry water from distant sources. Furthermore, the aqueducts also had to solve the problem of the geographical features of the ground, the difference in height and the natural obstacles which needed to be overcome and/or circumvented without compromising the average inclination.

The creation of aqueducts fed by permanent springs allowed the resolutions of the problems of collection, transport, permanence, and distribution of water in every point of the city of Rome.

In Hadrian's Villa the Aniene river and its tributaries have allowed the development of a unitary and scenography project indispensable for its architectures.

To this day, it is not certain what the volume of water needed for the entire complex was and scholars exclude that the water supply was independent and was based on the collection of rainwater only. As a matter of fact, it is supposed

that some Roman aqueducts in the vicinity were diverted to the Villa, also taking advantage of the difference in height of about 100 meters that they had from the latter.

After the construction of the Aqua Appia, in 272 B.C. the Anio Venus was built, the first of the four aqueducts that were supplied from the river Aniene. In 144 B.C. the Aqua Marcia was erected, and, almost two centuries later, Caligula began the creation of Aqua Claudia concluded by Emperor Claudius in 28 A.C., who also commissioned the realization of the last aqueduct of the Tivoli area, the Anio Novus in 52 A.C., the longest and the largest one.

The water in Hadrian's Villa has always been a fundamental element, with a strong scenography presence, so much so that the same Pirro Ligorio, who studied the complex, drew inspiration for the realization of Villa d'Este.

From the historical drawings and the reliefs of several authors, the most re-



11. *Aqua Claudia*



12. *Aqua Marcia*

liable hypothesis is that the water to the Villa came from a deviation of the Aqua Marcia, as evidence of the fact there is the presence of remains of a cistern near the Ponte degli Arcinelli. The ancients plan drawn up by Ligorio and Contini in 1751 A.C, report, in fact, a line of aqueduct that reaches as far south-west, near the Odeon. Piranesi, on the other hand, adds two other deviations in his reliefs towards the east: the ruins of various cisterns, usually located at the end of each deviation of the aqueduct, including that of the Wall of Fountains (on the Praetorium hill and near the Odeon), those on the sides of the Inferi (in Hadrian's Secret Garden) and those behind the Golden Square.

After the barbarian invasions, and especially during the Gothic War (535-553 A.D.) the destruction of the aqueducts was a fundamental strategy to block the supply of water to the city under siege. In that historical period Rome also decided for the closure of the aqueducts, often used as access roads to the city. The closure of the water supply from the



13. *Anio Novus*



14. *Anio Vetus*

sources of the Aniene river, effectively sanctioned the death of Hadrian's Villa and its total abandonment.

To have the aqueducts in operation again we must wait for the Pontifical Rome of 1500 A.C. when the flow of water no longer meets the demand for a city in continuous growth but above all rebirths.

In conclusion, Pope Sixtus V had the new aqueduct of Acqua Felice designed, which, in addition to following the trajectory of Acqua Marcia and Acqua Claudia, was built with the ruins themselves.

The Water Architectures

The archeological landscape of Hadrian's Villa is characterized by a poetic atmosphere that over the centuries of Renaissance become a source of inspiration. Its primary characteristics are the Natura Naturans and the water element which create a perfect ecosystem together with the architecture. The Tiburtine territory is rich in water: at the

beginning of the 20th Century, Charline Boussoire, a French pensionnaire of the Prix de Rome, carefully studies the site and portrays a virgin territory, conspicuous by water, and dotted with Ville d'Otium around Hadrian's Villa, belonging to the following centuries.

The Aniene river in all this draws a direct relationship with each of them: the water, called Acqua Ex Maquina due to its constant movement, creates baroque scenography on the architectures themselves. At Hadrian's Villa, however, the water is captured by geometry, it is static and characterized by mirrors in which the architecture is reflected: for this reason, it is called Acqua Captiva.

Therefore, water is one of the fundamental elements of Hadrian's Villa, but it cannot be considered only as a formal part of the architecture: it is, in fact, one of the principles of design of the entire complex; it is the connecting element of the various layers of the landscape.

By studying the project of the Villa, it is

not possible to separate the water element from the architectural element. Water is never perceived as a void, a pause between an architectural episode and another one, but it is also threatened as a volume, as a primary element of the composition and syntax of the project.

Now we will briefly analyze the Water Architectures of the Villa.



15. *Pecile in Villa Adriana.*

The Pecile.

The name «Pecile» recalls the Stoà Poikile of Athens, a portico near the agora: at north of the Villa a long brick wall — mostly in opus reticulatum — is still present. At the time it delimited the four-portico that surrounded a garden in the center of which still stands a large pool. The wall was the central spine of the porch that on that side was double. Because it turned around the wall, it was used for promenades guaranteeing protection from the sun or rain. Where once the columns were located, today there are some boxwood plants, cut into a cylinder, to evoke in some way the obstacle. Unlike what we perceive today, the Pecile was not used as a panoramic place: the high back walls in fact prevented the view and had the function of isolating the green area contributing to create an atmosphere of quiet and tranquility. From here you could access via stairs to other areas of the Villa as the Maritime Theatre.

Maritime Theatre.

Built between 118 A.D. and 121 A.D. near the eastern end of the Pecile, nestled between the so-called Hall of the Philosophers, the Baths with Helio-caminus and the Library Courtyard, The Maritime Theatre is a circular building that has become a symbol of a new innovative conception of the architectural system. The structure has in the center a small artificial island, also circular, surrounded by a canal of running waters and enclosed by an annular arcade with Ionic columns trabeated on which stands a barrel vault. The space was balanced with the articulated concavity and convexity of the central island. It was characterized by a frieze representing a marine subject, from which Pirro Ligorio took inspiration for the name of the building, which evidently recalls the plan of the Pantheon taking again the measure of the diameter.



16. *Maritime Theatre.*



17. *Top view of Maritime Theatre.*

The Baths with Heliocaminus.

It is the oldest thermal building of the Villa and it was built almost simultaneously to the adjacent Maritime Theatre. The name refers to the baths as having an opening that allows the sunrays to heat the room below, which was used for sunbathing by the use of stoves. The oven vents, along with wall and floor heating, suggest the presence of a sudatio. From an architectural point of view, the room takes up that of the Large Baths and has a coffered dome with central oculus. The windows overlook the south-west, or rather, the heated environments. This is the same technique used by other thermal environments to take advantage of the sun rays of the afternoon. The frigidarium is a rectangular room open on a large swimming pool surrounded by a colonnaded porch and from which you could access the calidarium.



18. The Baths with Heliocaminus.



19. Ruins of Baths with Heliocaminus.

The Building with Peschiera.

The building has a rectangular shape; once it was decorated with statues inserted in the niches along the edge. It consists of two contiguous bodies and develops on three levels, connected internally by masonry stairs. The building today is bare and unadorned but through the marble slabs laid in opus sectile you can understand the richness of materials. In fact, the splendor and luxury of the architectural furniture has determined over the centuries the systematic dispossession of all the marble walls and floors and columns and trabeations. Between the porch and the pond, there is an uncovered corridor which is lowered and paved with mosaic tiles. It leads to an underground gallery consisting of forty windows on the floor.



20. The water in the Building with Peschiera.



21. Ruins without the water.

The Little Baths.

This spa complex is located south-east of the Pecile and aligns with the Large Baths in the path that leads to the Canopus. The construction period goes from 121-123 to 126 B.C. From its shape it is clear that it stands on a pre-existence of the Augustan era that Hadrian reused in part. The exposure of the Tholos to sunlight suggest that its function might be that of sudatio. Studying the site plan, we notice how to the south there is the tepidarium while at the center the frigidarium with two large opposing tanks. It is particularly important recognize the richness of the complex; it is thought that the use was intended for nobles, high imperial officials and guests, who were used to bathe in the baths before attending banquets. In addition to the variety of the marble decorations, we can recognize a considerable richness of architectural solutions in the plan of different environments, in the vaults and in the extraordinary ability to connect sloping roofs and dome in a lively game of curved and flat surfaces.



22. *The Little Baths.*



23. *Ruins of the Little Baths.*

The Canopus.

A long central pond surrounded by smooth columns is the scenery and the most iconic perspective of the whole Hadrian's Villa: The Serapeum's building and the artificial valley that houses it were built between 125 A.C and 138 A.C. The Canopus presents itself as an apse pavilion where the alternation, between column and column, of portions of architrave with round arches allow the creation of mixed line crowing. This is reflected in the mirror of water with an effect of great visual suggestion. On the opposite side of the pond, with a linear termination, there is the wide dome exedra of the remains of the so-called Serapeum.



24. *The perspective of Canopus.*

The Serapeum.

The background complex to the perspective of the Canopus has within a gigantic carved nymphaeum. The construction was characterized by water features in continuous movement that highlighted the compositions of full and empty volumes of the niches intended to accommodate all the statues and pools of water.



25. *The perspective of Serapeum.*

The Nymphaeum.

The rests of the reconstruction in a semicircular exedra are positioned behind the big space of the Canopus. The architecture develops with a bathtub in front of the wall and it is characterized by three niches: the central one is bigger, with a rectangular recess and the ones put on the side are smaller and used as latrines. On the back there is a small rectangular cistern.



26. *Ruins of the Nymphaeum.*

The Wall of Fountains.

Probably placed in support of the terrace under which the Great Trapeze is excavated, this nymphaeum creates a linear backdrop for the artificial Praetorian Heights. The wall is marked by some rectangular and semicircular niches which probably had a collection tank on the front. Behind there was a square cistern with a decorated front, visible even today.



27. Ruins of the Nymphaeum.

The cave of the Underworld.

Located in the Secret Garden of Hadrian, the area presents itself as a long trench dug into the ground at the end of which there is a cave. A brick arch leads to a rectangular room, where a fountain was placed, recalling the dark spatiality of the underworld and the dark feeling of a strongly closed space. On the sides there are the remains of two rectangular buildings whose function was probably that of two cisterns.



28. Ruins of the Underworld.

Golden Square.

The building is a monumental closure of the Villa to the south. The name refers to the rich sculptures and architecture of the complex, which was systematically excavated and stripped of marble sculptures from the sixteenth century. The complex presented itself as a peristyle with a long central rectangular longitudinal basin to a garden surrounded by a portico with four arms. The access to the garden of the square was through an octagonal vestibule surmounted by a dome with a central eye and on which opened semicircular and rectangular niches. The main rooms were arranged on the opposite side of the garden characterized by a sequence of architectural environments with scenography effects: In the center was placed the large main hall characterized by a series of columns. They were arranged in such a way as to form an octagon in plan with concave and convex sides, at the corners of which there were nymph's apse. In fact, in this room water gushed from the seven niches placed in a semicircular nym-

phaeum: the water then merged into the pool of the room until it reached the outer one disappearing on the underground before the vestibule.

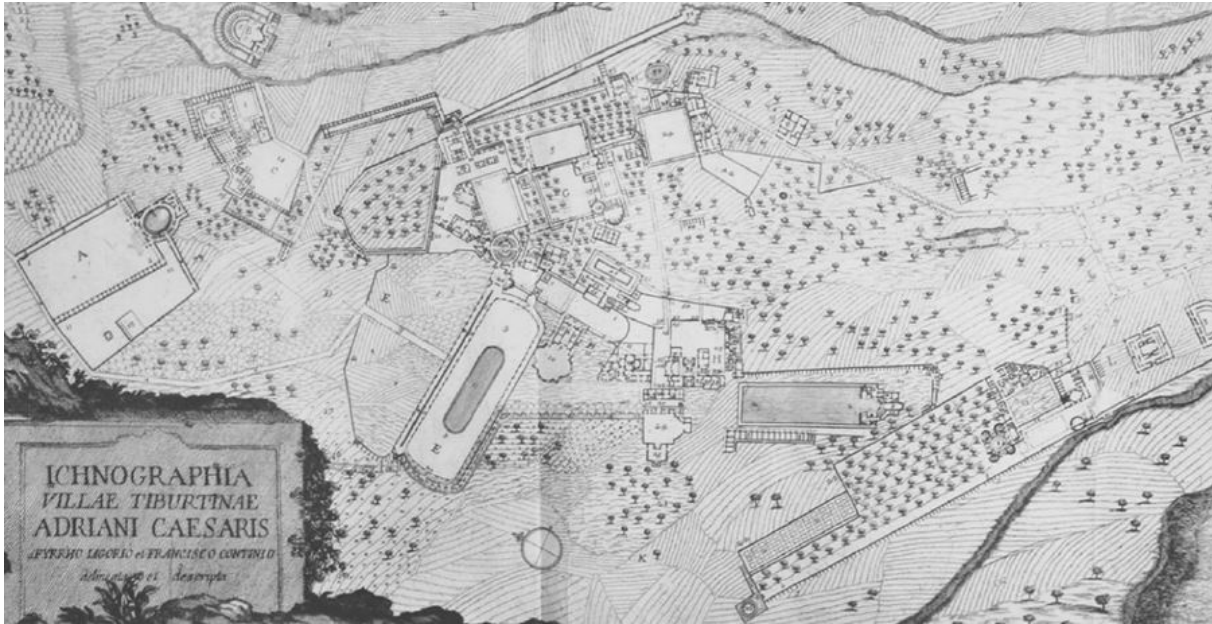


29. *The garden of Golden Square.*



30. *Top view of Golden Square.*

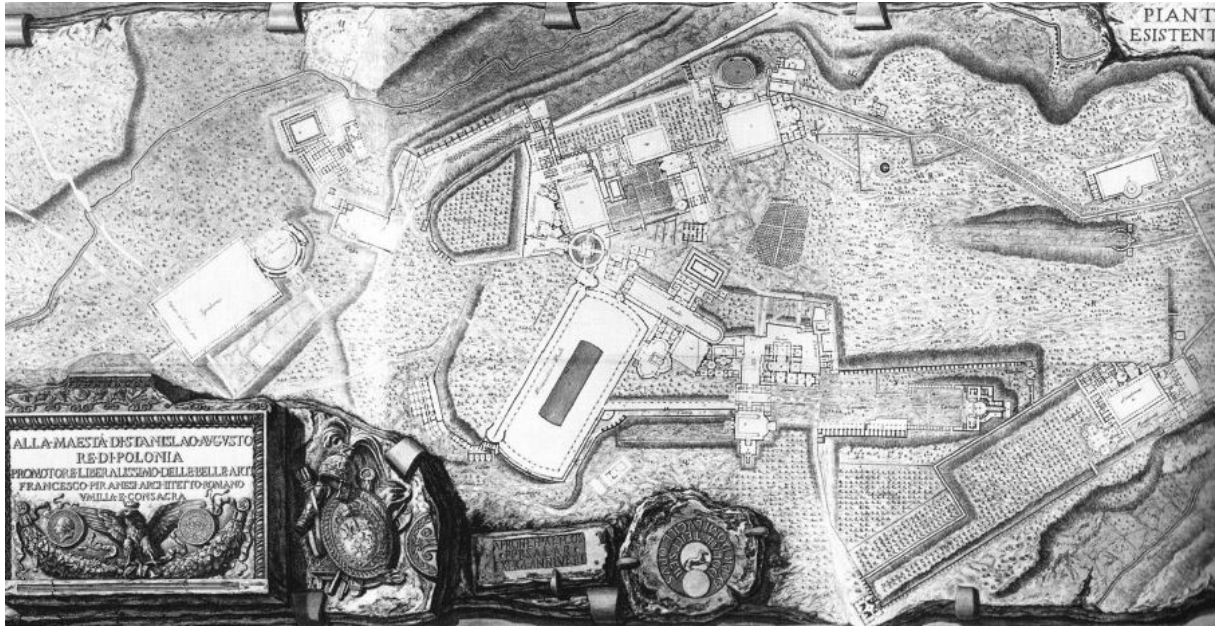
B | THE SOUTHERN PINCER



32. F. Contini, *Plan of the Villa, Rome, 1668.*

The described topographical differences that distinguish the Upland suggest different functions compared to the other parts of the Villa: the main diversity can be seen between the downstream area where buildings for private activities and imperial obligations are concentrated and the isolated area with few buildings positioned at a higher altitude, thus separating itself sharply.

Hadrian built buildings for daily life, work, recreation, guest quarters and court and service facilities in the lower part of the valley, while on the high ground the spirit and, perhaps, the allusive contents were privileged. Hadrian in fact had a conservative attitude towards the Roman religion but it is relevant the assumption that he may have been initiator of the Eleusinian mysteries in honor of Demeter and Persephone: Hadrian was thus inclined to worry about



33. Giovanni Battista Piranesi, *Plant of the existing factories in Villa Adriana, 1781.*

death and the possibility of an afterlife.

Description of the buildings and hypothesis on the Praetorium Hill

The main part of the Praetorium hill is the upper park (which we will deal with in the next paragraph) that extends from the Praetorium to the Wall of Fountains and that includes to the east the Rotunda and the Underworld. Beyond the Wall

of Fountains, to the south and at a higher altitude, there are the underground galleries of the Great Trapeze and the South Theater, also called Odeon, which connects the upland with the Academy esplanade and Roccabruna.

The rotunda is depicted in different ways: on the plan of Ligorio-Contini the rotunda is a space surrounded by an external wall reinforced by supports that are arranged radially, as well as the Mau-

soleum of Augustus to which is perhaps inspired; Piranesi instead represents an external ring of 22 columns that surrounds a very thick wall that defines an annular corridor arranged around a central space. At present only small areas of concrete remain and the hypotheses about its function remain open, although the most likely one is that of a cold room, this is due to its proximity to underground environments.

The underworld is dug into the tuff and has a total length of 130 meters, roughly recalling the size of the Canopus. Today, both the access and the cave itself are covered with dense vegetation and are partially buried. The opening of the

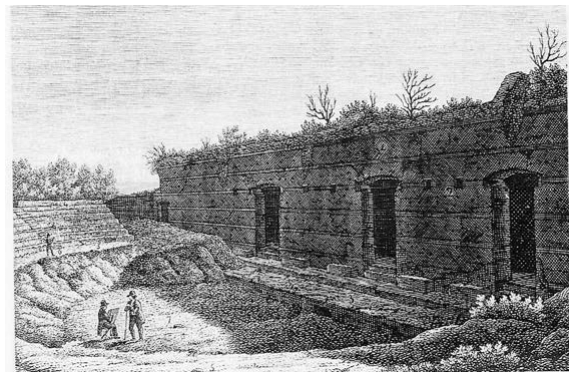
final nymphaeum is surmounted by an arch of bricks while the rest of the cave is excavated, as mentioned, in the rock and incorporates in the rear part a space in which water gushes. This building was a typical Roman installation consisting then of a rocky cave with water features that was often present in luxury villas and that wanted to represent Hades: according to the *Historia Augusta* this was the entrance to the underworld, the college galleries represented the underworld and the driveway instead was the Styx, the river of Hades.

Beyond the Wall of Fountains and the Academy complex, stands the terminal building of the “Great Pincer” that clo-

34. A. Penna, *Rotunda of the park, north, 1836.*

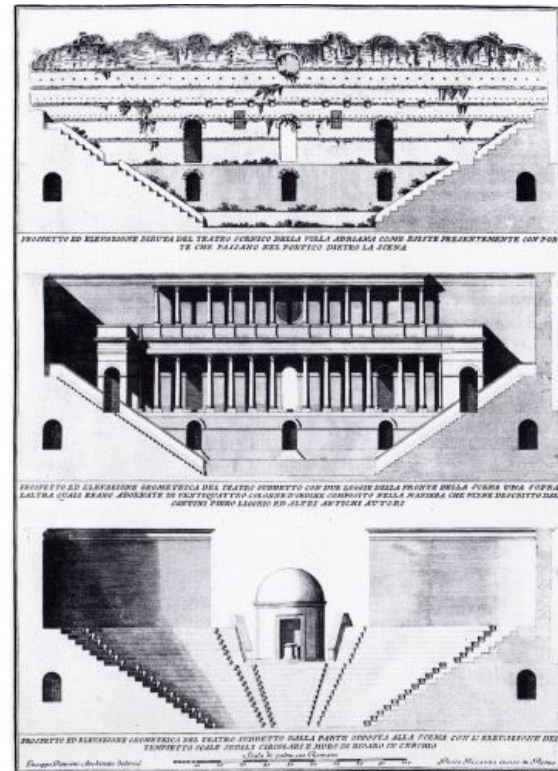


35. A. Penna, *South Theatre, Odeon, 1836.*



ses the development of Villa Adriana to the south: the Odeon. This area is the highest area of the hill, in fact the theater is about 60 meters higher than the orchestra of the north theater from which is more than a kilometer. Next to the theatre, the terrain descends steeply to the bottom of the west valley, excavated by the ditch of Roccabruna. During the centuries of the rediscovery of Villa Adriana and subsequent studies, the Odeon and its representation have always remained unchanged.

The theater is oriented to the north-west, with the complete scene for three quarters and the outer wall marked by symmetrical windows that open to the sides of the central entrance. Originally the wall of the front stage, of which you can still see the three traditional openings, was characterized by two floors of protruding pavilions and beyond the orchestra rose the steps of Greek marble, as you can see from a representation of Pannini and Fidanza. Below the stage there are three parallel corridors that have different sizes and levels and are extensions of the tunnel that connects



36. G. Pannini e P. Fidanza, *Tre stampe del teatro sud, Rome, 1753.*

the theater with the underground galleries of the Great Trapeze. On the top of the theater there were no seats but a circular structure with a diameter of about six meters, which still retains a part of the wall.

It is hypothesized that the function of the latter building of the Villa is closely

linked to the other parts of the Upland and the spiritual nature of Hadrian.

The upper park is now shown as a long, symmetrical garden with regular topography and unitary compositional design: in fact, the park is supported to the west by the buttress walls of the Canopus Valley, parallel to the imaginary line that connects the underworld and the Rotunda to the east, while to the south

the front of the Wall of Fountains and that of the Praetorium to the north are parallel to each other, thus identifying a rectangular area.

During the centuries, the hill was plundered by the statues that were present and has never been the subject of excavations or restoration and today is presented as an expanse of olive trees planted neatly. It appears in the representations of Ligorio, Contini and Piranesi who identify

37. C. L. Boussois, *Imperor Villa de Tibur*, 1913.

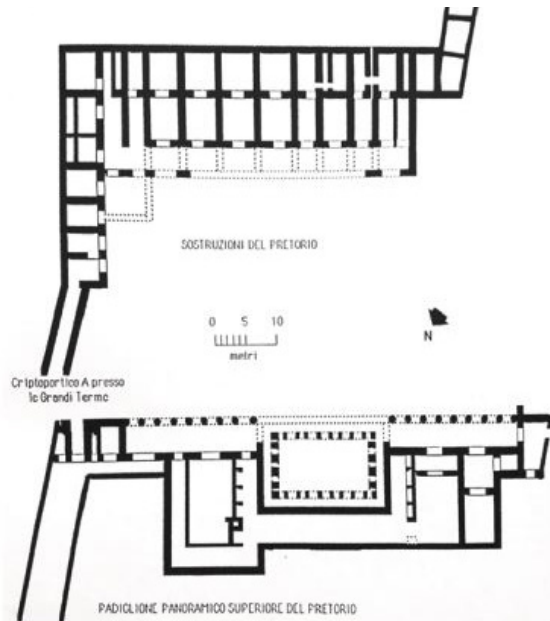




38. Model of Hadrian's Villa by Italo Gismondi, 1935, Hadrian's Villa.

the Wall of the Fountains and the Praetorium as the characteristic elements of the upper park, which instead does not seem to have a particular design. More detailed and studied is the representation of the pensionnaire Charles-Louis Boussois which shows the Height as a green space of longitudinal shape with short sides shaped like a semicircle, a clear reference to the Roman architectural typology of the "Hippodrome". Even

more spectacular and detailed is the representation of the park in the model by Italo Gismondi, built in 1935 and now kept in Villa Adriana: a garden ordered according to a regular grid with a geometric vegetation and interspersed with punctual structures that highlight the perspective and the scenery generated by the nymphaeum of the Wall of Fountains (described in the first part).



39. M. De Franceschini, *Praetorio lower floor plan and upper in Hadrian's Villa: mosaics, floors, buildings, 1991.*

As for the Praetorium, it was originally identified as the accommodation of the Praetorians but after careful studies it was understood that the building actually consists of two distinct parts: a lower and an upper one and it is believed that it was most likely built at the same time as the Great and Small Baths. The lower part of the Praetorium supports and strengthens the northern part of the hill and housed within it three overlapping

floors of cramped and non-communicating environments. The construction system is similar to that of the Cento Camerelle, a service environment that allows us to hypothesize that the function of the Praetorian was actually that of accommodation for the servants of the Villa and possibly a warehouse. On the upper floor instead the heart of the building was a central hall bordered on three sides by internal colonnades while the fourth side opened directly on the upper park, while in the back there were service rooms and at the end a probable panoramic tower of which today you can see the side retaining walls.

Hadrian built buildings for daily life, work, recreation, guest quarters and court and service facilities in the lower part of the valley, while on the high ground the spirit and, perhaps, the allusive contents were privileged. Hadrian in fact had a conservative attitude towards the Roman religion but it is relevant the assumption that he may have been initiator of the Eleusinian mysteries in honor of Demeter and Persepho-

ne: Hadrian was thus inclined to worry about death and the possibility of an afterlife. To make a hypothesis about the High Ground means therefore to take into consideration the spiritual nature of the Emperor. Some scholars identify the fundamental phases of the Eleusinian mysteries and the fundamental spaces for their development: the rite involved the procession, the secret conclave and the celebration; Therefore, the presence of a place representing Hades and the Kingdom of the Underworld (the cave of Underworld and the underground tunnels) and a building in which to set up the real mystery (the Odeon, connected to the galleries), was fundamental. Ceremonies most likely began on the scene and, as evening fell, they moved into the galleries that had therefore a double function: a functional structure and a place of religious experiences.

However, since the Praetorium hill has never been excavated, all the hypotheses advanced remain without a certain foundation and therefore the questions remain open.

B.2 | Academy Esplanade

Placement and orography

The Academy Esplanade is an artificial hill to the south-west of the Villa, dammed by retaining walls similar to those of the Praetorium hill and inserted between the valley of Canopus and the ditch of Risicoli. This is the tallest artificial terrace of Villa Adriana, about 600 m long and 150 m wide with a regular topographical trend: to date, much of the area is inaccessible because it belongs to the Bulgarini Family and is therefore not part of the state property, for this reason it turns out to be the less investigated part of all the Villa.

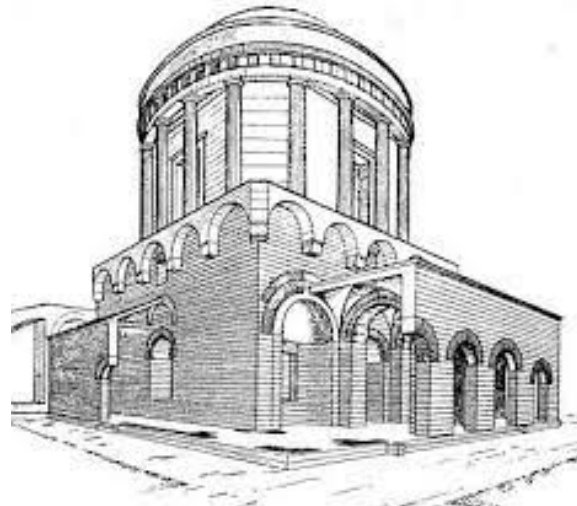
From the historical engravings of Penna, Ligorio Contini and Piranesi it is possible to say that on the Academy Esplanade there are several factories that, although inserted in a unified context, stand out for their stylistic and structural uniqueness: The four main buildings are Roccabruna, the Academy, the Mimizia and

the Odeon further south, to which must be flanked the Great Trapeze, a grandiose underground road system with tunnels dug into the tuff.

Like the Praetorium hill, the Academy Esplanade today presents a highly naturalistic landscape, in which ruin and nature blend together.

Roccabruna and Academy: description, ruins and hypothesis

Roccabruna is the first building you meet starting from the north: it is also the only factory of the Esplanade owned by the State and the only access point. The building consists of a base nut that still exists today, inside which there is a circular room with 4 niches and a dome that surmounts the entire space. Roccabruna is leaning against the substructures of the Esplanade and solves the altitude difference, like the Praetorium for the upland above: in fact, an external ramp supported by vaults set on the internal walls connects the lower and the



40. Hypothetical reconstructions of Roccabruna by G. Lugli (Palladio 1940).

upper floor, on which probably a tholos from the still uncertain description had to rise.

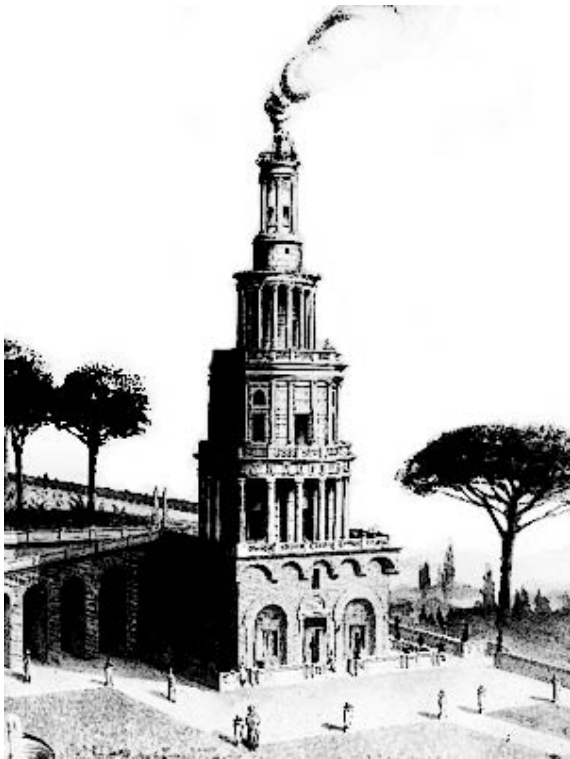
“Temple of circular figure for the outside, placed above the other described at number 23 of the letter I (the base nut). This was adorned on the outside with 16 doric order columns of white streaked marble, isolated in thickness of three and a half palms in diameter, above which was the architecture, frieze and marble frame. The part within this temple was of octagonal figure, with eight

arcs in the sides wide palms 13 and a half; and the diameter of the Temple was of vain palms 46 and a half.”

- Contini.

Although there are no certainties about the appearance of the tholos, what is certain instead is that, even today, the view from the top of Roccabruna sweeps

41. G. Gatteschi (American Academy in Rome).



42. Ruins of Roccabruna from Google earth.

all around and therefore the Temple was visible from all the surrounding area and signaled to everyone the presence of the Imperial Villa.

There are several hypotheses about the original function of this architecture and they can be distinguished in two main categories: sacred architecture and architecture linked to the observation of the landscape, thus it becomes clear how the two functions coexisted at the two overlapping levels of the entire building, also confirmed by the inclined ramp that, being outside the factory, is the only element of vertical connection

between the two parts.

To design in this place it is therefore necessary to take into account these typological and distributive considerations and try to give a new meaning to the building by entrusting it with a role compatible with the specific archaeological context, through the confirmation of its dual value of classroom and observatory.

Entering among the olive trees that still nowadays cover the esplanade, you reach the ruins of what was probably a sin-

gle complex: the Academy. Pirro Ligorio was the first to take an interest in these ruins that he identified as an imperial summer residence to which, however, even today escapes a precise interpretation as well as careful studies. This is due to the fact that the area belongs to the Bulgarini family, making the area less accessible and the systematic excavations less possible to carry out: the situation of interruption of the walls, together with the difficulty of providing adequate cleaning of the surfaces from the weeds to facilitate the analysis of the

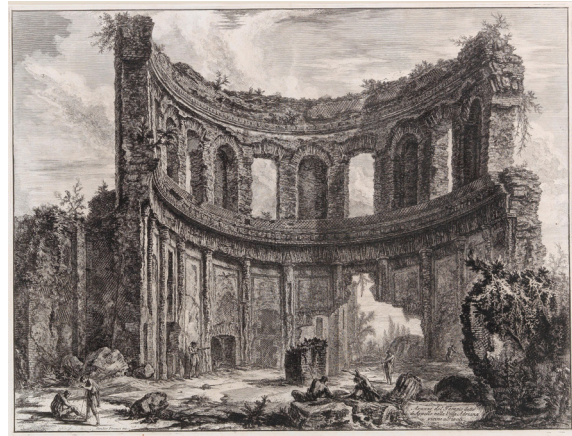
43. Ruins of the Academy and the Temple of Apollo from Google earth.



structures, has so far made this area less interesting.

Nevertheless, the factory is also referred to as Small palace or Minor Palace, a portion of the densely built Villa considered by some scholars to be the summer residence of Empress Vibia Sabina. This identification of residential complex seems plausible because it is supported by archaeological evidence that gives us a series of articulated environments of representation distributed around a large central arcade courtyard.

The Academy had a main entrance to the north consisting of the Mistilineal Pavilion, from which one entered the inner courtyard of rectangular shape (a secret garden), surrounded by a portico that on the western side was double as that of the Pecile. All around there were several rooms, among which the most imposing and important is the so-called Temple of Apollo: a grandiose circular hall with a diameter of twelve meters, which is still the best preserved part, albeit in half. To the south of the Temple opened the apse



44. *Temple of Apollo, Penna, 1836.*

that Pirro Ligorio first called Zooteca: it was another internal garden surrounded by a porch, as shown by the presence of numerous holes for the housing of the beams that supported the roof. According to Piranesi, in its floor was found the famous Mosaic of the Doves, currently preserved in the Capitoline Museum of Rome. Continuing southwards you come to the so-called Mimizia, an environment whose few surviving walls, in very poor condition, have been incorporated into ancillary buildings of the Bulgarini family. Finally at the end of the Esplanade there is the previously described Odeon.

Beyond the previously described factories, the Academy Esplanade also presented a complex system of underground paths both driveways and pedestrians, which gravitated around the Great Trapeze, formed by four tunnels of different length, dug into the tuff and illuminated by large oculus placed at a regular distance. To date, some important studies are emerging, mainly by the archaeologist Marina De Franceschini who, with her team, is conducting investigations on the underground tunnels at the Academy, in addition to a meticulous survey of the existing ruins through the support of modern technology: thanks to her work it was also possible to discover some small inaccuracies in the historical representations of the Villa.

C | THE ARCHITECTURAL PROJECT

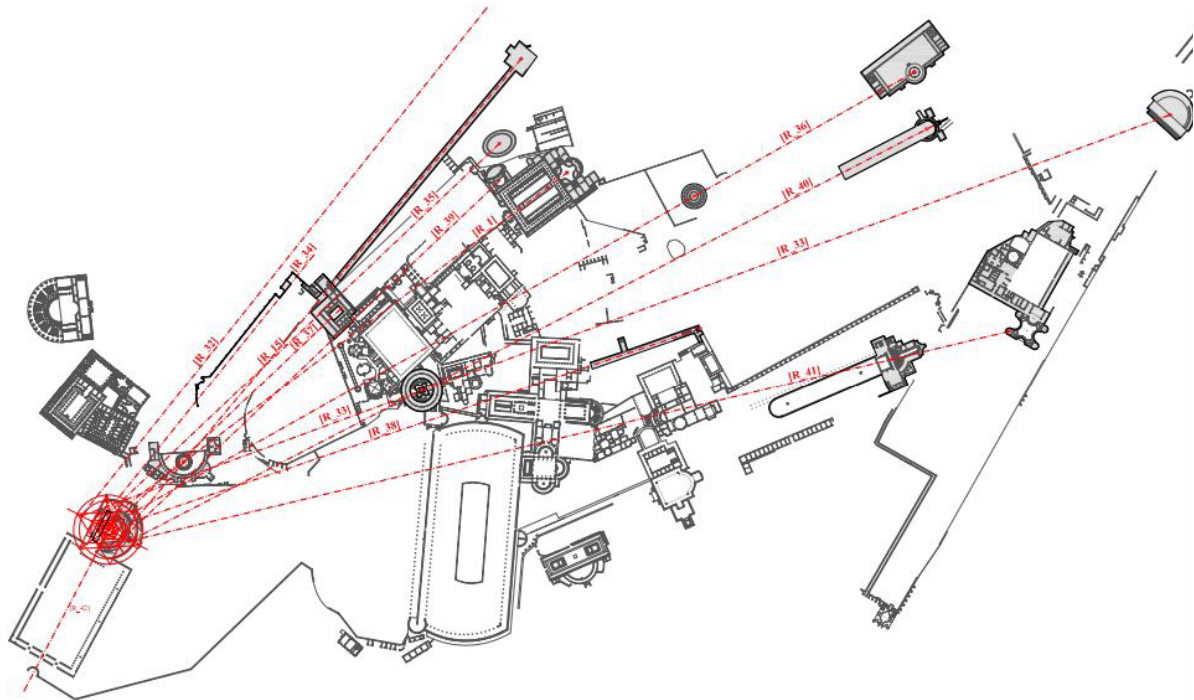
C.1 | Interpretation phase

The form of Hadrian's Villa

The disorder that at a first sight seems to govern the layout of Hadrian's Villa, is actually only apparent. The various studies that have been carried out over the years on the Villa, including the MacDo-

nald-Pinto volume, have never provided a theory that could explain the causes of this disorder. The two American authors argue that the general composition of Hadrian's Villa is mainly due to the morphology of the terrain and the surrounding valleys, to which the compositional axes of the various complex bodies of buildings adapt. The form of Hadrian's Villa, therefore, according to MacDo-

45. TAV. IV from *Tractatus Logico Syntattico* by Pier Federico Caliari: R38.

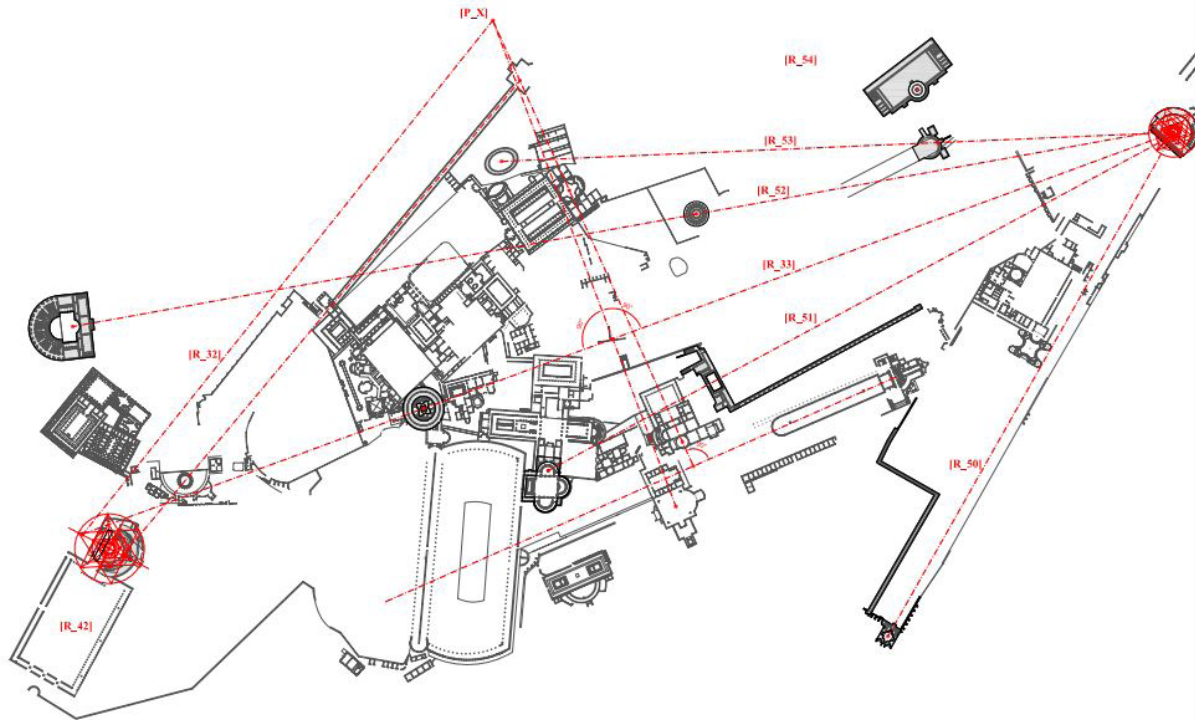


nald-Pinto, is the result of a pluri-axial paratactic composition, which, however, does not prevent the villa from showing integrity and coherence at a conceptual level.

With the aim to solve this contradiction, in 2012 the *Tractatus Logico Syntattico* by Pier Federico Caliarì was published. It completely overturns the paratactic

theory, that until then was supported by all the professionals who studied Villa Adriana, proposing a polycentric radial hypotactic theory, that is to say a homogeneous system of “principal propositions that support a complex series of subordinates”. The composition of Hadrian’s Villa, through this study, is completely detached from the morphology of the site that houses it: buildings hun-

46. TAV. V from *Tractatus Logico Syntattico* by Pier Federico Caliarì: R50-51.



dreds of meters away, at very different altitudes, are related to each other, in a network of dependency relationships that never close the circle, leaving the planimetric development open. These relations are graphically translated, in plan, in the conjunction of some sensitive points of the buildings, called centrality: the main ones are found in the Golden Square, in the Temple of Venus and Cnidia, in the Greek Theatre, in the Maritime Theatre, in the South Theatre, in the Three Exedras Building, in the Great Vestibule and in the Academy Pavilion. According to the Tractatus, the desire for complexity and palimpsest, which Hadrian wanted to experience at Hadrian's Villa, is undeniable.

Starting from the study of the Tractatus, the design intention was to make visible the principle of invisible order, mainly in the area south of the Villa that lends itself well to long prospects and the creation of escape points for the almost regular elevation trend. More precisely, the precise interventions carried out on the project layer are ordered by the axes

R38, R50 and R51, that identify the Great Southern Pincer, namely the Praetorium Hill and the Academy Esplanade, the two highest terraces of the Villa that to date are all still to be investigated and that complete the understanding of the whole Hadrian's Villa.

The ruin and the Beauty

The archaeological context of Hadrian's Villa, so fragmented but at the same time so present over the centuries, forces a close confrontation with the ruin and its being linked to a few relationships, a few forms that follow one another over time, stopped in a state of suspension between completion and interruption that demonstrates belonging to a unique and eternal time.

Fundamental is the awareness that the ruin is the essence of the last phase of life of a building but it is also the rethinking of the form itself. Generally, architecture is associated with the idea of transformation while archaeology with

the idea of conservation, as if they were two distinct materials. But we must pause to reflect that in reality the ruin of today has been designed, built and lived architecture, as well as the architecture stripped of its original use, becomes archaeology subject to new customs and customs.

The transversal theme of this thesis work is therefore the redefinition of the fragment of the Southern Pincer within a much wider context such as that of Hadrian's Villa, which interfaces with the described above principle of order. The architectural project for archaeology will try to bring out the remains as a homogeneous system trying to complete, in fact, the fragment so that ruin and new intervention can build a new system. It will also try to recover the lost relationships between the parties, to make the hidden processes readable, re-conferencing spatial value, making places recognizable and putting order.

In order to put order, the analysis of the compositional geometries, of the pro-

portions between the parts is fundamental and it is necessary to do so through a careful planimetric reading of the relief of Hadrian's Villa. It is in this way that a regulating grid of the measure of the ruin has been sought, in order to understand precisely the relationship between the parts and the whole and to be able to insert the project. A building owes much of its beauty to the right relationships between the parts, the proportion is a characteristic of the architecture that appears in a transparent way, under trace. Measure and proportion distinguish in fact something harmonious, beautiful, objectively beautiful that aspires to the human measure and that for this can survive through the centuries, because perfect and timeless. In this sense the lessons of the great Greek and Roman architects have remained unsurpassed, as well as those of Bramante, Palladio and the great modern masters such as Kahn and Le Corbusier, all of which have tried over the centuries to rework the compositional principles of Hadrian's Villa.

The Archetypes: the Stoà, the Wall and the Circle

After identifying the regulating grid and compositional modules, the thesis moved on to the research of archetypes that spoke the same language of Hadrian's Villa and had a strong evocative impact. The project tries to fit into the context and the generative logic of the existing: in fact, although most of the factories are ruins and many secrets have not yet been revealed yet, the generating principles of Hadrian's Villa have been preserved.

The first archetype identified is the Stoà: born as a religious building, it is characterized by the planimetric simplicity and the polyfunctionality that has marked the historical evolution, making sure that it fulfilled the most varied tasks. His first apparitions took place in the Sanctuaries, where the stoa was used as a place of worship. In a short time there is the presence of this architectural typology in the composition of the Agora, where it plays the role of space for political and social meeting, hosting markets and

becoming a real street of shops. Then it is declined the type for use in theaters, gymnasiums and stadiums with functions of exhibition, rest or meeting, until you find it near the ports with military or commercial function as a strategic place and storage.

In the first phase of its typological development, it is presented as a simple elongated rectangular figure, which can be used as a single opening element on a public space and at the same time as the physical limit of it; in the urban composition it can also represent a path and rest space and a place of meeting. Later, both through an operation of repetition of itself in plan and of combination with other artifacts, it defines increasingly complex spaces. The Stoa reaches its peak in the Roman period, when it becomes a popular element: in Hadrian's Villa in fact it is often used.

Another archetype of architecture is undoubtedly the Wall: since the founding act, it is the first element built and the last to leave a trace when the artifact falls into disrepair. The wall was born

together with the architecture, it is an aggregate of raw materials available in nature: the stones of any kind and shape, combined with each other express a predisposition to the structure that translates into masonry art. This element in Hadrian's Villa finds its maximum expression: straight, curved walls of various thicknesses and with various functions intersect generating Architecture.

Finally, the circle: a perfect geometric shape that often recurs in the ancient and modern world, which has taken on various meanings and connotations. The circle is perhaps the most recurring element in Hadrian's Villa: in the polar central buildings of the Tractatus that support the compositional principle of the Villa, in the Tholos and in the buildings that unite various parts of the Villa (Maritime Theatre).

The Tholos were originally funerary monuments dating back to the Mycenaean civilization, consisting of an underground circular room, surmounted by a pseudodome. In Hellenistic times it became the monoptero Greek temple par

excellence: used for sanctuaries or oracles, it represented the most important place of worship ever. The circular shape made a greater idea of perfection and completeness that symbolized an even closer contact with the divinity (often, in fact, the circular temple enclosed the sacred symbols of the divinity) or symbolized the power and the sacred authority of the city.

These three archetypes together constitute the project architectures used to mend the fragments of the Praetorium Hill and the Academy Esplanade.

D | BIBLIOGRAPHY

ADEMBRI B., (a cura di) *Guida di Villa Adriana*, Ministero per i Beni e le Attività Culturali, Soprintendenza Archeologica per il Lazio, Electa, Milano 2000.

ADEMBRI B., CINQUE G.E. (a cura di), *Nuove indicazioni per lo studio e l'interpretazione dell'edificio di Roccabruna a Villa Adriana*, Ministero per i Beni e le attività culturali del Lazio, 2012.

ADEMBRI B., CINQUE G.E. (a cura di), *Villa Adriana: la pianta del centenario 1906-2006*, Firenze, Centro Di, 2006

Aa. Vv., *Storia Augusta*, Adriano.

CALANDRA E., *Memorie dell'effimero a Villa Adriana*, in Adriano, *Architettura e Progetto*, Electa Milano 2000.

CALIARI P.F. (a cura di), *Ananke Speciale. vol. 84. XIX secoli a Villa Adriana - Interferenze e folgorazioni iconiche (118-2018)*, Firenze, Altralinea Edizioni, 2018

CALIARI P.F., MAGNI C. (a cura di), *La forma dell'effimero: tra allestimento e architettura*, Libreria Clup, 2000

CALIARI P. F., *Tractatus logico sintattico. La forma trasparente di Villa Adriana*, Roma, 2012.

CINQUE G. E., LAZZERI E. (a cura di), *Analisi geometriche e progettuali in alcuni complessi di Villa Adriana*, Roma, 2017.

CINQUE G.E., *Le rappresentazioni planimetriche di Villa Adriana tra XVI secolo e XVIII secolo*, Roma, École française de Rome, 2017.

DE FRANCESCHINI M., *Villa Adriana. Mosaici-pavimenti-edifici*, "L'Erma" di Bretschneider, Roma, 1991.

FALSITTA M., *Villa Adriana. Una questione di composizione architettonica*, Milano, Skira, 2012.

GRANDINETTI P., *Tipi architettonici e regole compositive nell'architettura e nella città antica: la Grecia, Venezia*, 1981.

GUSMAN P., *La villa imperiale de Tibur (Villa Hadriana)*, Paris, 1904.

LIGORIO P., *Descrizione della Villa Tiburtina Adriana*, 1723.

OTTATI A. (a cura di), *Costruzione e ricostruzione dell'Accademia di Villa Adriana*, in *Archeologia e Calcolatori*, n.28, 2017

PENNA A., *Viaggio Pittorico*, Roma, 1836.

PINTO J.A., MACDONALD W.L., *Villa Adriana. La costruzione e il mito da Adriano a Louis I. Kahn*, Milano, Mondadori Electa, 2002.

RUGGERI TRICOLI M. C., *Musei sulle rovine, architettura nel contesto archeologico*, Edizioni Lybra immagine, Milano 2007.

SALZA PRINA RICOTTI E., *Villa Adriana. Il sogno di un imperatore*, "L'Erma" di Bretschneider, Roma, 2000.

SAPELLI RAGNI (a cura di), *Villa Adriana. Una storia mai finita. Novità e prospettive della ricerca*, Electa, 2010.

SAPELLI RAGNI (a cura di), *Villa Adriana. Dialoghi con l'antico*, Electa, Milano 2011.

a.a. 2021/2022