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Cover Picture: *Venetian school, Allegory of the four continents, 18th century.*

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The landcape aspects of the historic city
Foreword

Guglielmo Villa[1]

The increasing interest that in the last decades scholars have shown for the landscape, intended as a visual espression of the structure of a territorial area, has opened up promising perspectives for the cities' studies, offering also new methodological keys for interpreting their building history.

The landscape that unfolds in front of our eyes is the result of land transformations induced over time by human activities, except in rare areas that have remained intact in their state of nature. Towns – both large cities and smaller rural centers – are the manifestation of these transformations. As nodal components in functional terms and the organization of material structures, they have been decisive in the building processes of human habitats, according to their size, location, and vitality. They carried a significant weight about the network of material and immaterial relations that have innervated the territory, but also to its concrete image; so as to become more or less extensive characteristic elements of the landscape, places in which cultural values had been thickened up to becoming identity components of that places.

The development, growth, and transformation of some human nuclei or even their decay, until their abandonment and reduction to ruins, have represented the outcome of socioeconomic dynamics or, less frequently, of political choices with a broader scope, except in cases attributable to the contingent conditions or exceptional events. At the same time, however, and on an equally broad scale, they have triggered profound and lasting changes in the organization of anthropic space and the definition of its formal aspects. Their impact can therefore be measured on two different, yet complementary levels: one more

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strictly pertinent to the settlement *nuclei*, portions of the man-made environment, defined by more or less established limits and endowed with specific formal connotations; the other inherent to their interactions with the territorial area of reference which, from a landscape perspective, transcend the limits of a merely dialectic interpretation, highlighting instead preponderant fields of integration.

The different scale references provide useful indications to focus on the broad spectrum of issues that help outline the landscape values of urban spaces. To specify the perimeter and establish the focal elements of an approach suited to the needs of the historical research, however, some further preliminary considerations seem to be appropriate.

Any piece of landscape is a phenomenal reality, which we can only investigate as it appears, namely in its concrete materiality. Make no exception to the declinations that belong to the urban sphere. It is not a homogeneous reality, but rather a sort of palimpsest that has been configured through successive phases of writing and rewriting, produced by the evolution of the ordering principles of society, which are the economic models that have guaranteed its sustenance, and the dynamics of population. As in a palimpsest, the current configuration preserves the memory of previous arrangements in a more or less relevant and tangible dimension: permanencies, often fragmentary, transfigured by use; but also slender traces, less evident, sometimes residual when not even latent. We could refer to the archaeological evidence that time has obliterated. It is up to the historian to illuminate these testimonies, framing them in a correct diachronic perspective, to give them a critical interpretation that allows to attempt a reconstruction of the development of the formative process or, even, the restitution of a particular frame of time. For this purpose, it will be necessary to adopt a methodological criterion that must be regressive, taking advantage not only of material testimonies, but also of written documentation that hands down the memory of the territory transformations, descriptive sources, and iconographic ones which offer indications, often not otherwise available, on its formal components.

The properly urban landscape, subject to continuous mutations due to its nature, is qualified, first and foremost, by how the built-up area relates to the natural conditions of the site: to its altimetric trend, the

water basins (where there are watercourses), lagoon canals or the seacoast, as well as, obviously, to the vegetation components. Also, there are the specific connotations of the built environment, such as the formal configuration of public spaces, and the volumetric proportions between open spaces and buildings, which decline in time and space in infinite quantitative and qualitative variations. It is then necessary to consider the altimetric and spatial relations between the different building components, concerning the most eminent buildings, whether monumental or not, which may assume peculiar semantic values; as well as the perspective or at least visual correspondences between public spaces and notable buildings, and those at a distance between buildings emerging with respect to the more minute fabric. Another significant topic useful to determine the landscape 'qualities' of urban centers is the configuration of their boundary, which continuously change according to the socio-political context and available technological resources.

The *parabola* that urban fortifications have experienced in Western Europe since Late Antiquity is emblematic. With the decline of the Roman Empire and the security conditions that its state organization guaranteed, city walls became an indispensable infrastructure for the existence of any inhabited centers. The construction of new defensive circuits, and the restoration and integration of those that already existed, although in disuse, profoundly marked the city's history, changing the structure and perception of urban space, which once again became enclosed within a concretely defined perimeter. In his *Etymologies*, Isidore of Seville had summarised the importance of this aspect in an incisive enunciation, identifying the fortification structures as the most effective *medium* of representation of a city's identity, in its meaning of material structure: «urbs ipsa moenia sunt».

During the Middle Ages, urban fortifications changed several times, depending on the expansion of the settlements and the technological development of defensive techniques, impacting considerably both in terms of *utilitas* and *forma*. Changes of even greater magnitude occurred at the beginning of the Modern age, when the technical 'revolution' given by the spread of siege artillery imposed radical transformations. The affirmation of the bastion front made the defensive apparatuses ever more gigantic and invasive, accentuating as never

before the city's enclosure and its separateness from the environment. When, at the end of the Modern age, the military usefulness of urban fortifications declined, the practical relevance of the walls and, with it, the value of a physical and symbolic limit that they had interpreted, gradually disappeared. Then the walls will be dismantled, absorbed into the urban fabric, like relics of an era that was over. Often, their structures were demolished, completely or in part, or destined for other functions; in any case absorbed by pressing urbanization. The limits of the city, thus, tended to lose their clarity, to gradually disppear into the new urban image of our contemporaneity.

The definition of the physical limits of the settlement is relevant not only to the urban sphere, but also to the territorial scale. It must be recognized as a primary element of the image that settlements project onto the territory, that is how settlements can be visually perceived in their context. An urban center perfectly delimited by a continuous wall, for example, comes across a very different way for someone who is gradually walking towards the margins of less dense suburbia. And, in the meantime, can appear infinite nuances. It is therefore a theme that has an ambivalent scale reference.

A similar role is played by the most important buildings, which also characterize how an urban center, whatever its size, can be perceived from the outside: monumental buildings, especially religious ones, but also soaring buildings such as towers and bell towers have permanently marked the profile of many cities, constituting a not secondary element of their visual identity. Examples include the cathedral in Orvieto, the towers of San Gimignano, the bell tower of San Marco, and the Redentore Chruch in Venice.

On a broader scale, the two considered aspects stand concerning the elements that constitute the structure of the territorial area in which a town is located, contributing to the composition of that interweaving of forms that determine its configuration. These include natural elements such as hillsides, watercourses and stretches of water, the coastline, for coastal villages, how the vegetation cover of the land develops, anthropic components, and artificial works created to meet the needs of society. With respect to these constructions, inhabited areas have not only had a visual impact. Their presence and the needs related to the sustainability of urban life have recently oriented deci-

sive choices in the organization of human activities on the territory, with repercussions on the landscape: in the organization of infrastructural systems, for example, in the management of water resources and forests, in some cases in the very governance of agricultural activities and in the arrangements that have become necessary for their conduction and development.

The issue of the impact of urban buildings on the landscape suggests a further thematic knot that cannot be evaded. The transformations of the structure of the territory and, consequently, of its forms depend to a large extent on functional reasons, namely how they reflect endogenous or induced changes in the way the land is used and, more generally, about the available resources. For this reason, they must be ascribed predominantly to a temporal dimension. However, specific intentions invariably contribute to the development of generative processes and, above all, constructive initiatives capable of orienting the outcomes; initiatives that not infrequently go beyond mere utilitarian instances to become factors of visual qualification both concerning the urban space and the territory, sometimes assuming representative values. The instances of visibility that underlie their conception also imply considerations regarding how the factories can be perceived, the choice of particular viewpoints, of physical places from which it is possible to have full knowledge of the formal qualities that the factories express in a vision at a distance, for themselves or in relation to other architectural emergencies.

Many of the themes outlined emerge in the papers collected in this volume discussing particular case studies. These works refer to a wide period, ranging from Antiquity to the 20th century, and very different geographical and cultural contexts. Nevertheless, a common orientation can be observed, aimed at identifying in the structural components of urban centers the formal connotations that determine their landscape value. Research has privileged the 'urban landscape' dimension. However, there are also broader perspectives that tend to reach a larger scale, focusing on the sphere of interactions of the settlement structure with the closest territorial area. The adoption of a methodological approach is largely shared, which in the critical exegesis of material sources, written sources, when available, and iconographic evidence, as well as in the diachronic perspective of the investigation,

refers back to a solid tradition of historical studies on the city, albeit from a perspective that aims more specifically at the reading of the 'landscape' characteristics of urban construction. Also common is the recognition of the cultural value of the built space, conceived as the proper expression of a society, of the systems of relations on which its organization is based, of its political and economic structures, and its customs. All in all, the texts compose a *panorama* from which can certainly draw useful hints for further thematic developments and the methodological refinement of studies on the landscape dimension of the city.

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Historical analysis of a Roman urban center.
'Hispellum' as a case study

Daniele Bigi[1]

Abstract: *The paper proposes a model of historical-architectural analysis of the urban center of Spello, Italy (Umbria). We intended to extrapolate from the plurality of data, that makes up today's landscape, the first macro-phase that can still be traced and detected on an urban scale, the one relating to the Roman period (from III-II centuries B.C. to IV century A.D.), which contributed to modify the landscape by operating on the environmental and natural framework through the action of man. The stratigraphic methodology, typical of the archeological landscape, was therefore followed, according to which the landscape should be read as the product of history. Among the various architectures that shaped the landscape of the Roman age, the fortification and the city gates built around the second half of the first century B.C. have been brought to light. The same structures have been compared with similar models existing in Umbria and Italy, belonging to approximately the same period. The final aim is to understand the significance that the fortification would have had in the political construction of the Colony of Hispellum in ancient times.*

Keywords: *Spello, cultural landscape, Antiquity, urban design, archeological surveys*

The purpose of this study is to propose a comprehensive analytical investigation into the architectural history of a specific territory[2]. Our goal is to create a technical model of study that can be applied to other urban contexts with significant architectural value and is viewed as a product of multiple historical events from a historical and landscape perspective[3]. This research focuses on the city of Spello and its surrounding countryside, which serves as an excellent example of the urban and architectural stratification of past eras. The transformations of the landscape over time have given shape, layout, and image to the urban center and the surrounding territory, which are experienced by locals and visitors alike daily.

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2. For the definition of territory: Cambi 2011, pp. 102-103.
3. *Ibidem*, pp. 103-104.

Exploring a landscape requires recognizing its historical origins, shaped by diverse human activities across both territorial and non-territorial spaces[4]. These activities were influenced by political, economic, social, and cultural factors throughout history, which have left a lasting impact on the landscapes we observe today. By examining the territory from an architectural standpoint, we can deepen our understanding of its historical and architectural value. This knowledge can inform future architectural and urban design decisions that align landscape's evolution over time and aim to maintain its present state as much as possible.

The historical analysis of the city of Spello was conducted using the stratigraphic methodology, which is typical of landscape archaeology. This approach was chosen because the city consists of several stratigraphic units. These stratigraphic units are «episodes in the history of a settlement»[5]. that, once examined and correlated, give rise to complex events and medium-term periods or time frames. The current state of Spello allows a clear and distinct examination of its stratigraphic units. This makes it possible to analyze the history of human presence in a specific area by breaking down the episodes that contributed to its formation[6]. In this case, the investigation began with the examination of the oldest stratigraphic unit, which is the Roman settlement[7]. The analysis of subsequent historical phases followed the same procedure, leading to the examination of the most recent architectural presences.

During the Roman period, a list of primary architectural structures was compiled, and in this paper, we present the results. These findings have been summarized in graphical tables, created using GIS – Geographic Information System tools (*fig*. 1). In addition to the examination of the existing literature[8] and the historical events that contributed to determining the context[9], the surveys of the main city gates were carried out and these drawings make up the carnet of graphic plates. Finally, some of the monuments that distinguish the urban form of an-

4. *Ibidem*, pp. 111-112 (see also Cambi-Terrenato 1994).
5. *Ibidem*, p. 54.
6. *Ibidem*, p. 32.
7. On the Spello configuration during Roman age: Baiolini 2002, pp. 63-120. For general historical information about the origins of the city: Bragazzi 1864, pp. 75-94; Urbini 1913, pp. 2-58; Peppoloni-Fratini 1978; Sozi 1987.
8. As far as literature about Spello city gates: Rossini 1836; Frigerio 1935, pp. 147-151; Tarchi 1936, tavv. CLXI- CLXIX; Gros 1996, p. 40; Carboni 2015, pp. 111-118.
9. For the meaning of the term context: Cambi 2011, p. 31.

cient Spello[10] have been compared to similar architectures located in neighboring urban areas of equal historical importance. Thanks to these comparisons, new evaluations can be proposed about the historical and architectural heritage of Roman Hispellum, including whether the relationship with the surrounding landscape has changed or remained unchanged over the centuries.

Considerations on the Roman *facies* of the walls and gates of the Splendidissima Colonia Iulia (definition of *Hispellum* in some epigraphs) can be advanced by interpreting the fortification as an important work of architecture in the landscape.

The ancient settlement stands on a narrow and elongated hill close to Mount Subasio of about 1 km, oriented in a north-south direction with an almost triangular shape of the slopes, very accentuated to the west and east. The plain below is bathed by the Topino River, its tributary town Clitunno, and the Maroggia stream. Due to its dominant position concerning the plain and the presence of the mountain behind it, the settlement of Spello is part of a recurring typology in the process of formation of other inhabited centers of Umbria, such as Assisi, Trevi, Spoleto, Gubbio.

The archaeological documentation[11], collected since the Renaissance in the city and the surrounding rural areas, is essential to reconstruct the historical phases of *Hispellum*, the ancient center organized as a walled city in the Augustan era. In addition, the presence of places of worship together with the town is evidenced by sporadic findings recovered in the area of Villa Fidelia[12]. As early as the VI-V centuries B.C., this area acquired a religious value and remained a structure of considerable significance in the process of modeling the *forma urbis* of Spello, which represents an evident element of continuity over time and which became, with the Rescript of Constantine (333-337 A.D.)[13].

10. Baiolini 2002, pp. 63-120.
11. Archaeological data confirm the presence of the Umbrians in the area, believed according to some historical sources, to be the oldest population among the pre-Roman civilizations (cf. Plin., *Nat. Hist.*, III, 112-113). The location of some necropolises along the main communication routes or the main access roads to the town has led to the hypothesis of the existence of various pre-Roman settlements (cf. Bonacci-Guiducci 2009, p. 56). For an in-depth investigation of the archaeological documentation: Manca 2020-2021, pp. 135-146; Sabatini-Angelelli 2019; Barbanera 2018, pp. 613-642; Camerieri-Manconi 2012a, pp. 63-80; Camerieri-Manconi 2012b, pp. 293-294; Camerieri-Manconi 2010, pp. 15-39; Manconi 2007, pp. 159-165; Manconi *et alii* 1993, pp. 145-155.
12. Famous suburban residential complex of the late sixteenth century consisting of a villa and the surrounding park, built on the remains of a Roman sanctuary of the first century B.C.
13. The Constantinian Rescript (CIL, X, 5265) is an epigraphic document on a marble slab and its most probable dating is between 333 and 337 A.D. (Manconi 1997, pp. 354-356).

The religious and administrative center of Umbria, despite the unification of the Regio with Etruria, was created with the previous regulation of Diocletian (290-300 A.D.) as *Provincia Tuscia et Umbria*. The passage through the entire Umbrian territory and therefore also through *Hispellum*, under Roman hegemony, took place towards the end of the fourth century B.C., when all the centers of Umbria were included in Rome's expansionist aims towards the Adriatic area[14]. The first real urban layout of Spello can be dated back to the III-II centuries B.C. and consists of the construction of the Forum, which can be traced at today's Piazza della Repubblica, nowadays still the center of the town, even though the forensic substructures present a stratification that suggests the existence of a fortification dating back to the VII-VI centuries B.C. The Forum is organized as a long-terraced slab, arranged adjacent to the Cardo, the north-south oriented road axis, with substructures in limestone blocks in square work, which in many cases became the basis for subsequent constructions[15].

The lack of sources does not allow us to reconstruct a detailed historical picture, but we can deduce from the *Lex Iulia de Civitate* (90 B.C.) that Hispellum was transformed from an autonomous community into a *Municipium*, registered into the *Lemonia* Tribe and governed by a college of *quattuorviri*. Thus, immediately after the triumvirate conflict, taking possession of the land confiscated from the neighboring municipalities, Hispellum became a vast colony of the Umbrian Valley enriched by two extra colonial possessions, the "ancient Arna" and the "Fonti del Clitunno"[16]. The territory was neatly divided into lots, according to a precise centuriation scheme, which can still be traced today in some points of the neighboring countryside and by the orientation of some road layouts.

14. The main historical events are listed below. An example of the progressive contacts that the Romans established with the Umbrians is the pact of equal conditions, the *Foedus Aequum* of 310 B.C., stipulated between Rome and the inhabitants of the Umbrian center of Camerti, in an anti-Gallic function. The Battle of Mevania dates back to 308 B.C. (cf. Liv., IX, 41) in which Rome came into contact with the territory of the Umbrians and made a treaty of *amicitia* with the center of *Ocriculum*, a border city between Umbria and Sabina and, after the opening of the Via Flaminia (220 B.C.), a point of exchange between the river and land roads. With the conquest of *Nequinum* (today's Narni) in 299 B.C., the Romanization of the Umbrian territory began, the city was renamed Narnia and became an important *Municipium*, crossed by the Via Flaminia. After the battle of Sentino in 295 B.C., *Mevania* and *Nuceria* came under the control of Rome, which began to regulate relations with the subject centers through *Foedera* (bilateral treaties). The process of Romanization of Umbria was completed with the foundation of the colony of *Spoletium*, which took place in 241 B.C., and then with the opening of the Via Amerina and the Via Flaminia.
15. On primitive urbanization: Manconi 1997, p. 438.
16. Plin. Iun, *Epistolae*, VIII, 8.

On the occasion of the foundation of the colony, a grandiose project was carried out, conceived with the desire to trace an indelible mark on the environment of the valley, designed down to the smallest architectural details to be perfectly integrated into the natural landscape. A wall with a refined building technique was built directly on the rocky slope, in whose perimeter, 1800 meters long, there are doors of large apparatus and posterns; the previous substructures that made up the base of the hole undergo alterations. An important aqueduct was built. Thanks to a spring located on the mountain about 5km away, it provided water to the whole city, and to the surrounding public area and, with the help of cisterns, could also serve the parts of the town located at higher altitudes. Finally, a road system was built inside the walls[17].

The most important urban transformation of *Hispellum* took place in the first century B.C. when the center was elevated from *Municipium* to the rank of colony, administered by *duoviri*. This process is part of an even greater phenomenon that sees the entire area of central Umbria to the left of the Tiber affected by a renewed political arrangement. The date of foundation of the colony dates back to the triumvirate era after the military episode of the *Bellum Perusinum*[18] but before 27 B.C., the year in which Octavian received from the Senate the title of Augustus, a title that from then on is present in the name of all the new colonies which, instead of Spello, were called *Splendidissima Colonia Iulia*.

At the same time as the town, to the north-west of the urban area, on a pre-existing sacred area, an important sanctuary was founded, near the road that connected Spello with Assisi and Perugia, in a large foothill area, a hinge to the city, architecturally predisposed to welcome and open to the municipalities' neighbors. The construction of the sanctuary complex, organized on hilly terraces, was part of the architectonical program of the *Colonia Iulia* and was configured as an operation of the Augustan policy aimed at the recovery of local religious traditions[19]. The public area with a sacred character was completed by a theatre, bu-

17. Manconi 1997, p. 438; Camerieri-Manconi-Cruciani 1997, p. 377.
18. The *Bellum Perusinum* was fought in Perugia and the surrounding territories between 41 and 40 B.C. and saw Lucius Antony and Octavian deployed. During the war, *Hispellum*, unlike *Asisium* and other municipalities, had supported Octavian, and the triumvir, immediately after emerging victorious from the conflict, promoted the foundation of a *Colonia Iulia*.
19. The only cult practiced inside the sanctuary of which we have certainty today is that one of Venus, to whom a chapel placed in an eccentric position on one of the highest terraces was dedicated, but the main deity was certainly an Iuppiter associated with ceremonies of a triumphal nature. The shrine dedicated to Jupiter must have been probably symmetrical to that of Venus.

ilt on the plain following the axis of symmetry of the terraced sanctuary and, later in the first century A.D., it was equipped with an amphitheater (*fig*. 2), located closer to the town[20].

The colonial walls[21] are currently one of the best-preserved examples of ancient fortification in Italy (*fig*. 3). The wall is composed of an inner core in *opus caementicium* arranged in well-compacted layers and bedded one on top of the other. It is externally covered with a face in *opus vittatum*[22], consisting of blocks of local limestone, pinkish in color, parallelepipeds, and organized in horizontal rows adjusted to height. To emphasize the uniqueness of the fortification, the millimetric layer of mortar between the blocks even presents, like the limestone ashlars it binds, a pink-beige tint and is installed with a fine pink and white crushed stone. Finally, the foundations anchored to the underlying rock are also made of concrete work[23].

The architect Sebastiano Serlio (c.1475-c.1554)[24] was the first in modern times to bring to the attention of his contemporaries, evoking the controversy over the dating, Porta Venere[25] (*figs*. 4-5), the element of the city walls of Spello that stands out the most, more than the other monumental city gates, such as Porta Consolare (*fig*. 6), Porta Urbica (*fig*. 7) and Porta dell'Arce (*fig*. 8): a dichotomy that existed in antiquity between the world *intra muros* and the world *extra muros*, recurring in *Hispellum*

20. The case of Spello is one of the Italic terraced sanctuaries, architectural complexes rebuilt between the second and first centuries B.C. due to the systematic use of cement. For the reference models for this type of sacral architecture, including the best known the sanctuary of Fortuna Primigenia in Palestrina and the sanctuary of Ercole Vincitore in Tivoli: D'Alessio 2008, p. 21.
21. The chronology of the city walls ranges between 40 and 20 B.C. There are no reliable sources for a precise dating of the fortifications, just as the precise date of the foundation of the colony of *Hispellum* is not known. A widely accepted hypothesis is that of two distinct phases in the construction of the city walls: the first, datable to around 40 B.C., immediately after the *Bellum Perusinum*, consists of the exclusive construction of the Consular Gate, a monument that is off-center and jutting out from the edge of the circle. The second phase, a few decades later, saw the construction of the other gates and the wall circuit and could coincide with the restoration works of the Via Flaminia promoted by Augustus and begun in 27 B.C.
22. In the construction of the walls of Spello of the first century B.C., entirely covered with an *opus vittatum* (small ashlars of limestone from Subasio arranged in horizontal rows), a unique solution was implemented for the time, which strengthened the hypothesis of a well-structured architectonical project by the architects working at the court of Octavian. The use of the opus vittatum is an innovation of the late Republican age; starting from the Augustan age, in fact, this technique «was widely used in the provinces, from Spain to Gaul (where it was the "prince" technique until the second century A.D.), from Africa to Asia Minor» (Zanforlini 2015, p. 8).
23. For a detailed description of the city walls of Spello: Fontaine 1990, pp. 245-303.
24. Serlio 1544, p. LXX.
25. The accuracy of the reliefs of Porta Venere produced by Serlio has been discussed in Moretti 2014, p. 229.

as in all the colonies built in *Imago Romae*[26]. Together with the defensive function, an important need fulfilled by urban fortification and conceived since the archaic age is represented by the need to distinguish urbs and ager, where the walls symbolize the materialization of a magical line aimed at concretely delimiting, but also symbolically separating the city and what is not a city[27].

Looking at the composition of walls and gates, many aspects can be brought to support a hypothesis, already strongly accredited, according to which the fortification of Spello would represent «the last manifestation of Hellenistic architecture in Italy»[28]. First of all, the tendency, typical of the Augustan or Julio-Claudian era, which sees the city walls as a projection of the city towards the outside, that is a structure intended to define the urban space and to give the city prestige and autonomy, rather than a work designed for defensive needs[29]. The design idea of the *Hispellum* colony is functional to the visual effect that the entire wall structure must have on the external observer: on the one hand a peaceful and welcoming impact and on the other a signal of the prosperity, wealth, and defensive capabilities of a founded city. Thanks to this observation, it is possible to highlight that Spello, immediately after Perugia, would be among the first examples in central Italy, in which the change of the wall's conception in the urban design is evident, and the walls pass from a defense function to be the image of the city[30]. It is not a coincidence that the most monumental Roman gates, Porta Venere, Porta Consolare, and Porta di San Ventura, are in the western and southern part of the town, along the portion of the walls overlooking the plain of the Umbrian Valley where the *Colonia Iulia* could be most seen and appreciated, a stretch that is still perfectly preserved today for a length of about 800 meters.

In general, the walls of the colony of *Hispellum* represent the culmination of a process of transformation that concerns the conception of the

26. Varr, *De Ling Lat.*, V-143 (Traglia 1974, p. 145).
27. Gros 1996, p. 28.
28. *Ibidem*, p. 42.
29. Gros 1992, p. 211.
30. Torelli 2008, p. 277. This concept was perpetuated throughout the early imperial age, a period in which in the Roman colonies in Italy and the Provinces walls were built to meet aesthetic rather than defensive needs, creating a landmark in the territory. A striking example is the renovations of the main entrances to Verona during the Claudian period, the Porta Borsari and the Porta dei Leoni, where the decorative aspect of the entrance arches and loggias on the upper floors prevails over the engineering-military layout of the access (Gros 1996, pp. 43-58). Outside Italy, on the other hand, the example that best expresses the dual defensive and representative function of the city walls is the walls of Nîmes, aimed at communicating the prestige of Rome in Narbonne Gaul (for further information: Varène 1992, p. 179).

walled city in the Roman world, a process that had affected Etruscan and Italic constructions since the fourth century B.C. and had seen the progressive introduction of Hellenistic fortification techniques in our peninsula[31].

Concerning the idea of classifying the gates of Spello into two distinct architectural series, the oldest building type, the one that has been experimented with for the longest time, refers to those entrances characterized by a single arch with a full arch vault of less than three meters: the Porta dell'Arce and the Porta Urbica. The two arches are almost equal in span (10 feet) and height (about 16 feet that of Porta San Ventura and about 16 feet that of Porta dell'Arce, considering the part of the monument now underground) and open simply in the alignment of the fortification. The two gates, however, have a different function: Porta dell'Arce still retains the signs of the defensive system, a factor that together with the presence of the travertine cladding (visible only in a small portion) creates a connection with Porta Venere[32]. Porta Urbica, on the other hand, lacked the entire locking system and, like Porta Consolare, it is positioned at the end of a straight axis that conditions the centuriation of the land[33].

Certainly, the most innovative solution of the accesses is represented in Spello by the typology of the gate with the courtyard (*cavaedium*) to which belong the two most imposing entrances, Porta Consolare and Porta Venere, which both had a double façade and in both the only façade that remains today, the one towards the outside, preserves the three original openings, with the central one larger. Porta Consolare is located on the road coming from Rome and connecting to the Via Flaminia, in a place where the fortification descends to the plain, clearly demonstrating the desire to abandon the needs of defense[34]. The contrast that emerges from the analysis of the masonry between the bare appearance of the façade, obtained with the use of reused blocks on the façade[35],

31. Bérard-Broise-Jolivet 2000, pp. 69-80; Torelli 2008, p. 271.
32. Among all the openings in the Roman walls of Spello, only in Porta Venere and Porta dell'Arce can a crack be found to house the cataract. However, in the three-arched structure of this door, the crack is present only in the central arch, so much so that it can be deduced that it would seem to have been built to express a symbolic meaning rather than to perform a defensive function. The absence of locking systems also characterizes other city gates built immediately after the so-called Pax Augusti of 29 B.C., such as the Arch of Augustus in Rimini (27 B.C.) and the Arch of Augustus in Fano (9 A.D.).
33. Camerieri-Manconi-Cruciani 1997, pp. 406-408.
34. For a survey of the monument: Bigi 2016, pp. 10-11.
35. Blocks positioned above the white limestone door of Subasio with the holes of the ferrei forfices in view would seem to have been recovered from previous construction and reworked before being put back in place.

and the more decorated character of the other entrances leads us to think that Porta Consolare must have been associated with the establishment of the colony and is, therefore, the first work built on the walls; this is also demonstrated by the fact that the structure composed of façades and courtyard is independent of the wall fortifications that lean against it. In addition, the location of the territory at the beginning of the uphill road determines a change that has already taken place in the political organization of the city.

The best-known features of Porta Consolare are found in Porta Praetoria in Aosta (*fig*. 9 - colony *Augusta Praetoria Salassorum*) founded in 25 B.C.: a rectangular courtyard arranged in width and without an internal compartment for minor passages, a sturdy pseudo-isodomic masonry in ashlar leveled in correspondence with the arches, a flat frieze at the crown. Except for the side bastions, the Aosta gate has the same plan as Spello gate, but with doubled internal dimensions.

If the construction of Porta Consolare can be attested in a time frame in which the programs for the reorganization of the city are not yet definitively fixed, this assumption does not apply to the construction of Porta Venere a few decades later[36], whose design is studied and adapted precisely to the rugged morphology of the terrain on which the monumental entrance stands[37].

It is interesting to study the size of the gate about the presence of the large, terraced sanctuary not far from the North. Porta Venere, which opens in the direction of the extra-urban sacred area identified under Villa Fidelia, compared to the other doors is designed according to more rigid proportion criteria. The span of the central opening is twice as long as the span of the side openings, and the same module is repeated for the height of the entrances. In addition, the towers are also built according to a precise modular ratio, resulting from the measurement of the side of the base dodecagon, six feet long, which is exactly one-tenth of the height of the elevation of about 60 feet. It can therefore be deduced that in the construction of Porta Venere, the architectural complex that still identifies the skyline of the city of Spello in the Umbrian landscape, the reference to the use of a proportional scheme could also be motivated by the privi-

36. The presence of two phases of construction of the wall could be further confirmed by the observations, which emerged from the surveys: the courtyard of Porta Consolare occupies an area of 37 feet wide and 20 feet deep. On the contrary, the shaft of Porta Venere is doubled in depth (40 feet) and wider in width (45.5 feet).
37. The hypothesis on the works of adaptation of the land to allow the construction of the elaborate plant of Porta Venere is put forward by Giuseppe Moretti (Moretti 2014, p. 233; Marroni 2005).

leged position of hinge between city and countryside that the monument assumes on the sacred area of Villa Fidelia. The architectural structure seems to emphasize a direct contact between the fertile countryside and the city from which the procession starts in the direction of the Sanctuary, under whose protection the entire community is placed. Thus the Gate, also crossed on the occasion of the religious itinerary, is emphasized by the use of materials, ashlars of white travertine on the façade and the same masonry apparatus of the walls in the covering of the towers, and in the almost triumphal structure, open towards the sacred area. Not to be overlooked, finally, is the competitive aspect that the center of *Hispellum* supported with the nearby *Asisium* and *Perusia*, which had probably played an important role in the construction of a more majestic gate than all. In the imposing and grandiose complex, the architecture of the two towers certainly has a significant weight in conveying the image of the colony to the outside. Their polygonal shape makes the towers a type that can be found, beyond Spello, in other city gates in northern Italy, for example, the towers of Porta dei Leoni in Verona (*fig*. 10), Porta Palatina in Turin, and Porta Praetoria in Como. In these buildings, the presence of the shaft, the polygonal shape of the architectural body, and the development in the height of the towers[38] led to theorizing a model experimented on one of the first times in Spello and then exported to Northern Italy as part of an all-Augustan architectural program. In addition, Porta dei Leoni in Verona, dated to the Caesarian age, has the layout of the façade with a gallery framed by towers39, while Porta Palatina in Turin, built on the foundation of the colony *Iulia Augusta Taurinorum* in 27 B.C., seems to be the closest model to the case of Spello[40].

Thanks to the polygonal shape, the towers would be close to the provisions that Vitruvius wrote in the same years as the construction of Porta Venere[41]. The Roman treaty writer argued that the towers must have a round or polygonal plan, to avoid easy damage due to the blows of war machines[42]. Finally, the Hellenistic-Roman matrix of the entire structure is evident: the towers of Porta Venere are inseparable

38. The development in height of the towers cannot concern the cases of Como and Verona, of whose structures only traces remain in the foundations.
39. Gros 1996, p. 45.
40. Richmond 1930.
41. As is well known, the chronology of *De architectura* has always been much discussed by philologists (Ferri 1966, p. 250). It is thought, however, that most of the texts were composed around 27 B.C.
42. Vitr., *De arch*., I-5, 5.

from the walls of which they are part and have the same building technique that makes up the external cladding of the wall, an *opus vittatum* technique in squared blocks of pink limestone from Subasio Mount.

To fully understand the significance of the architecture that made up the ancient walls of *Hispellum*, designed according to a Hellenistic ancestry[43], comparisons are now proposed with the Etruscan fortification of Perugia, datable between the fourth and third centuries B.C.[44]. It is also strongly Hellenistic in style[45]. The comparisons concern Porta Venere, the so-called Arco Etrusco, Porta Consolare, and Porta Marzia, even though there is a temporal distance of about a century and a half. Porta Venere, facing north-west, open-closed towards Perugia and Assisi (cities with which there was a competitive relationship), has an imposing appearance, is located on a high ground compared to the other two monumental gates of Spello and is outlined as an architecture with a majestic and tight character, but at the same time triumphant. Like the *Arco Etrusco* in Perugia[46], open in the direction of Gubbio, the monumental entrance is marked by two towers. On the other hand, Porta Consolare is conceived as a triumphal arch with three arches for the friendly welcome of those coming from Rome, in the same way as Porta Marzia in Perugia, which even welcomes visitors from Rome[47] with the high-relief sculptures of the Gods Zeus-Tinia and the Dioscuri-Tiniasclenar, positioned on the upper part of the façade and facing outwards from a *coenaculum*. In further substantiating the thesis that in Spello the city walls have a more symbolic rather than military significance, both Porta Consolare and Porta Venere are in the overall project not functional to the principles of the Scaean Gates[48] (whose entrances, as is known, are located on the left of those who access) and therefore contrary to Vitruvius's provisions about poliorcetics[49].

43. On the Hellenistic influence in the fortifications' design in Italy: Bérard-Broise-Jolivet 2000, pp. 69-80.
44. For the dating of the Etruscan walls of Perugia to the 4th-3rd century B.C.: Roncalli Di Montorio 1989, pp. 11-49. On the other hand, in Torelli 2008, p. 274, the fortification is dated between the end of the third and the beginning of the second century B.C.
45. Torelli 2008, p.276.
46. The Etruscan Arch or Arch of Augustus dates back to the second century B.C. and is later than the city walls of which it is part (Roncalli Di Montorio 1989, pp. 11-49).
47. Torelli 2008, p. 275.
48. The Scaean Gate (cf. Hom., *The. XXII*, 6). See also Bigi 2016, p. 20, footnote 58.
49. Vitr., *De arch*., I-5, 2.

The walls of Spello, unlike the Etruscan walls of Perugia, do not have housings for war machines or other polyorcetic devices. To tell the truth, the two so-called Propertius's towers [50] of the Porta Venere complex seem to perfectly follow the Vitruvian principle, according to which the towers must be protruding to allow the enemy to be hit more easily51. There is, however, a substantial difference between the towers of the two gates of Spello and Perugia. In Spello, the towers are incorporated into the fortification and allow communication between the two floors of the gate as they are internally hollow[52], while in Perugia the two towers that flank the Arco Etrusco are solid and leaning against the masonry for purely defensive purposes.

In conclusion, we can confirm the theoretical concept already expressed during Antiquity (VII century A.D.) by Isidore of Seville who emphasizes precisely the very close connection of identity between walls and city: «Urbs ipsa moenia sunt»[53]. The city coincides with its walls. The walls of Spello, an important work of landscape architecture about the Roman phase, are designed more as a landmark than to fulfill defensive purposes. Thanks to the peace reached under Octavian, the political purpose of the architecture was to demonstrate the new status of 'colony' achieved by the city.

50. This name derives from the famous verse of the Elegies of Propertius (Prop., IV-1, vv. 124-125).
51. Vitr., *De arch.*, I-5, 2.
52. Fontaine 1990, p. 288.
53. Isid., *Etym.*, 1, XV, 2.1.

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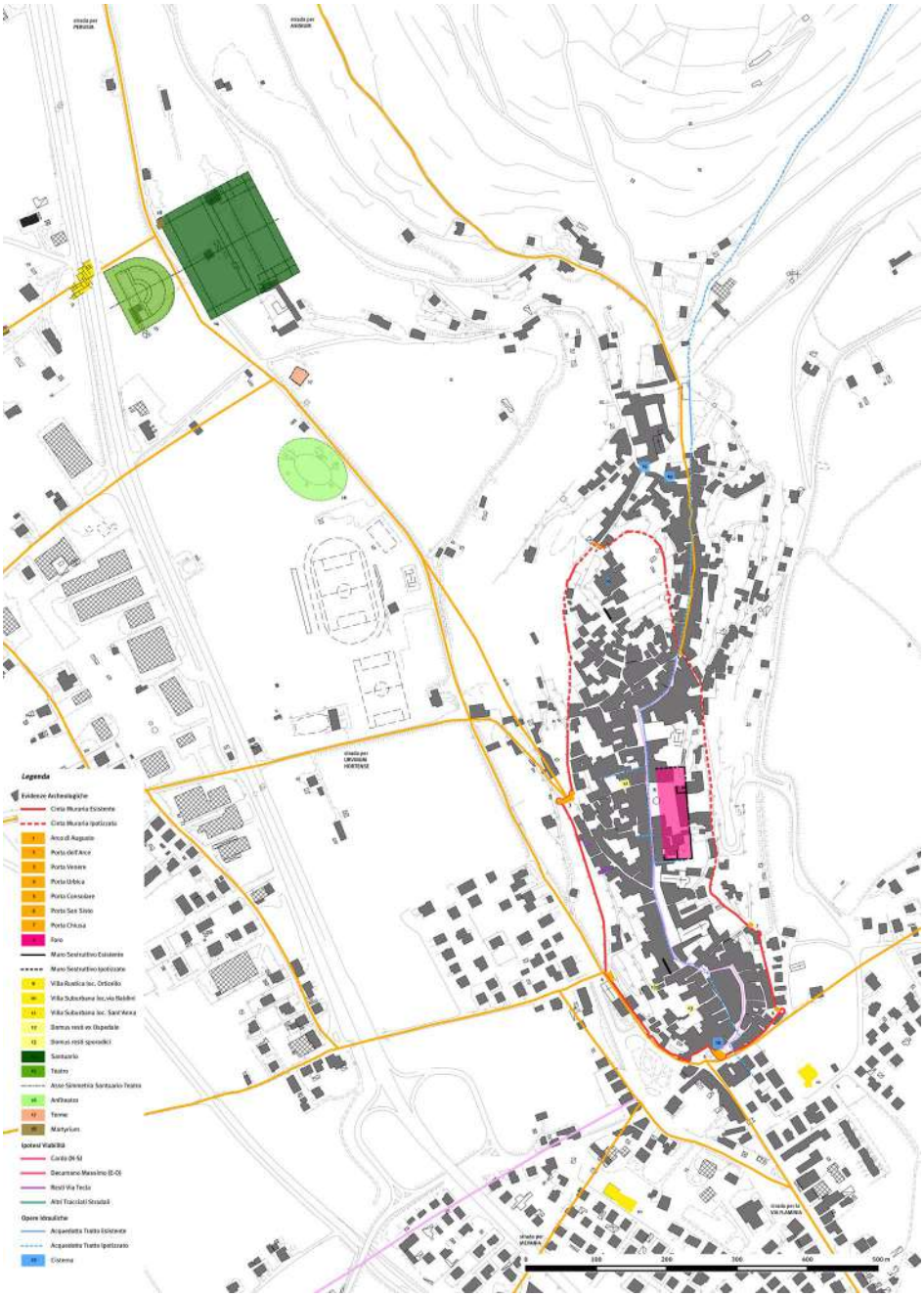

Fig. 1 – Analysis of the main archaeological evidence related to the Roman phase (GIS).

Fig. 2 – Area of the Roman sanctuary (in red) in respect to the center of Hispellum (GIS applied on an orthophoto).
Fig. 3 – Northwest view of the city walls of Hispellum (photo, 2023).

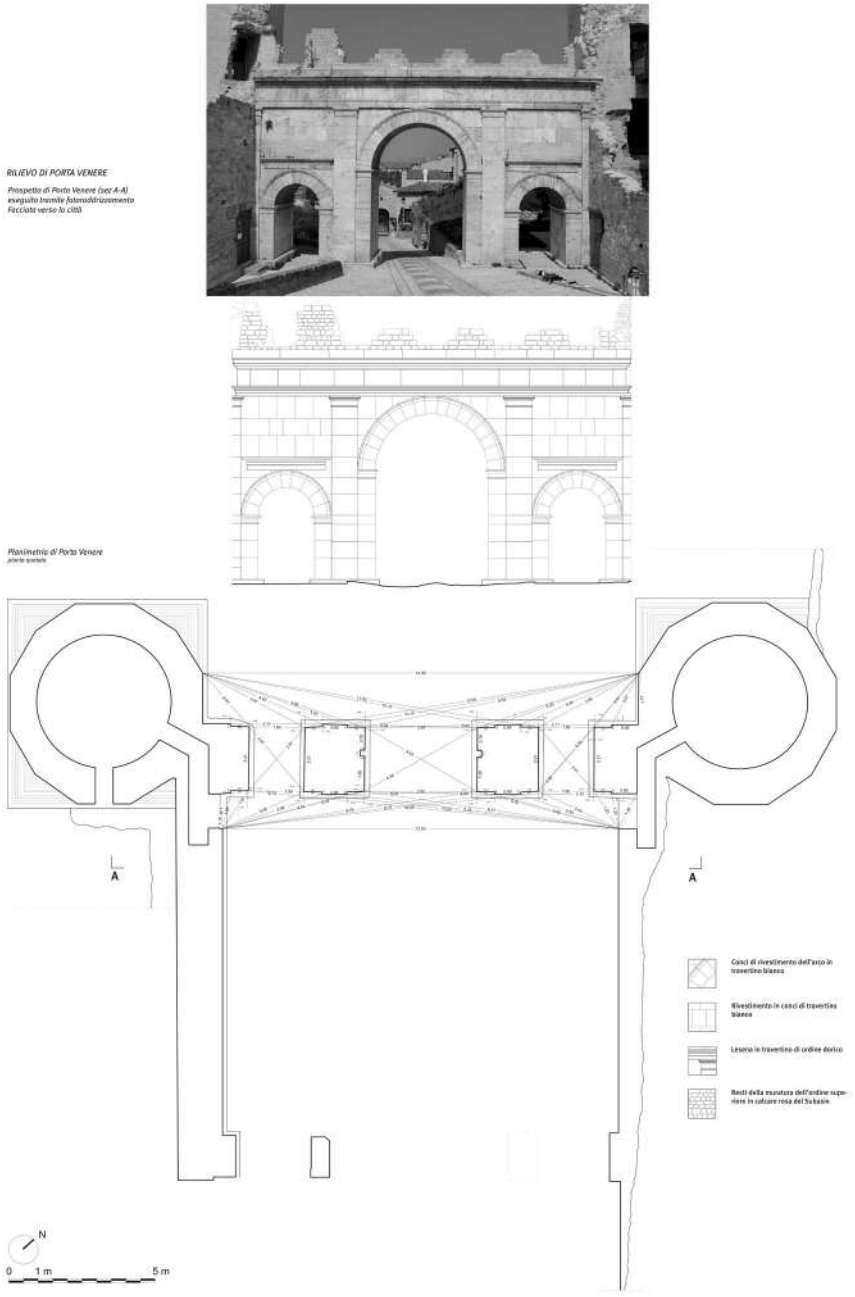

Fig. 4 – Archaeological survey of the internal façade of Porta Venere (Author's elaboration).

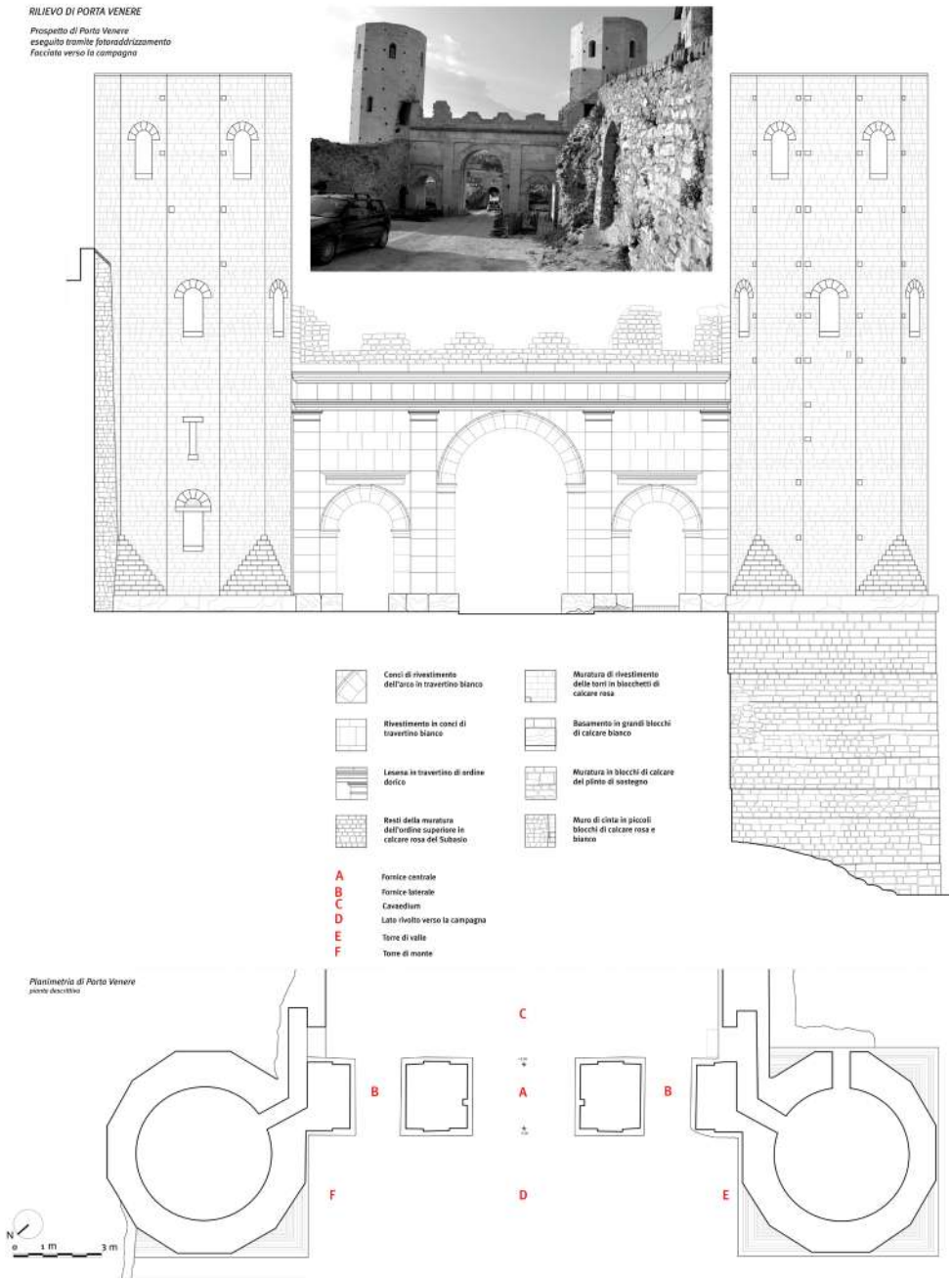

Fig. 5 – Archaeological survey of the external façade of Porta Venere (Author's elaboration).

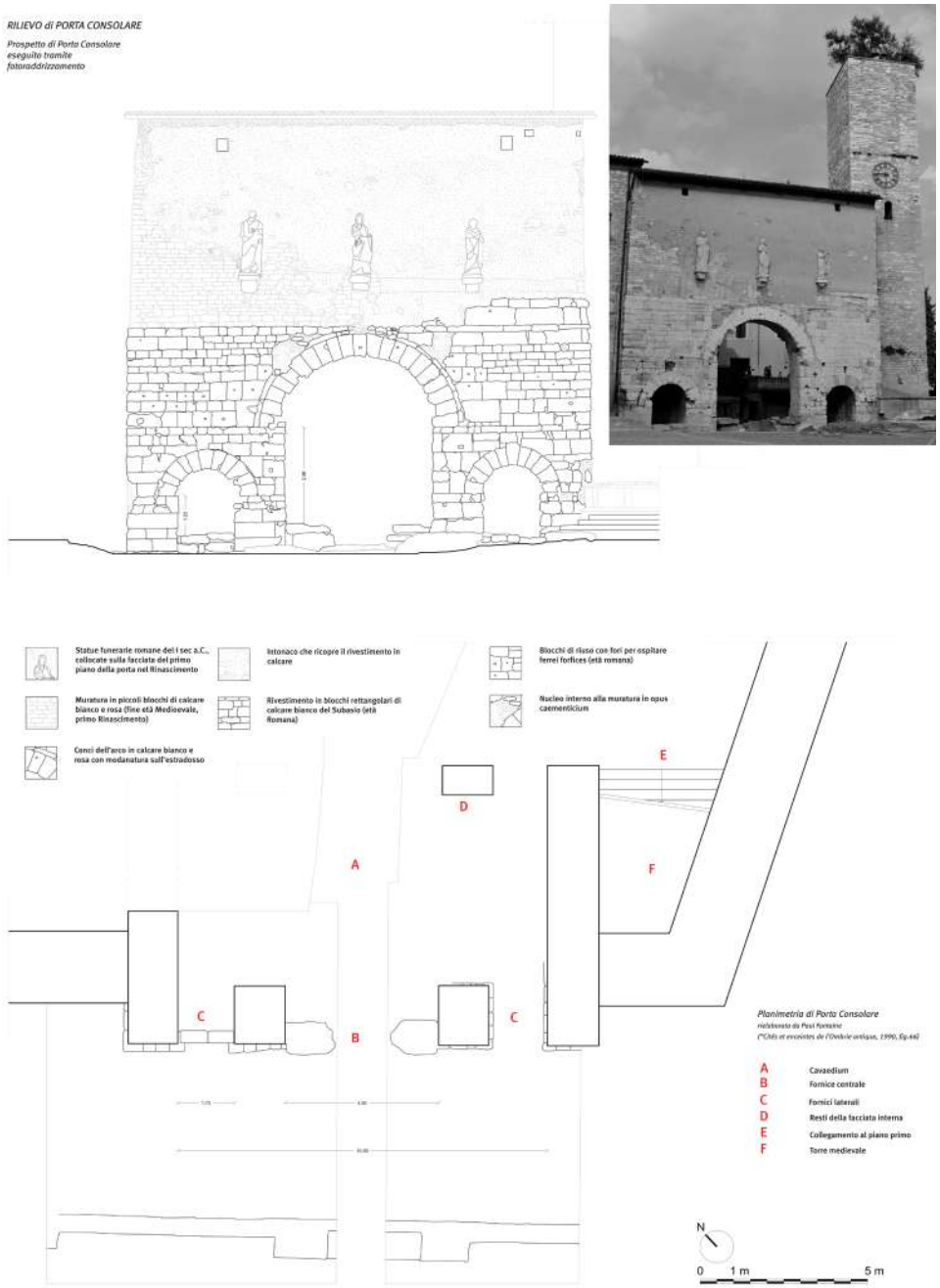

Fig. 6 – Archaeological survey of Porta Consolare (Author's elaboration).

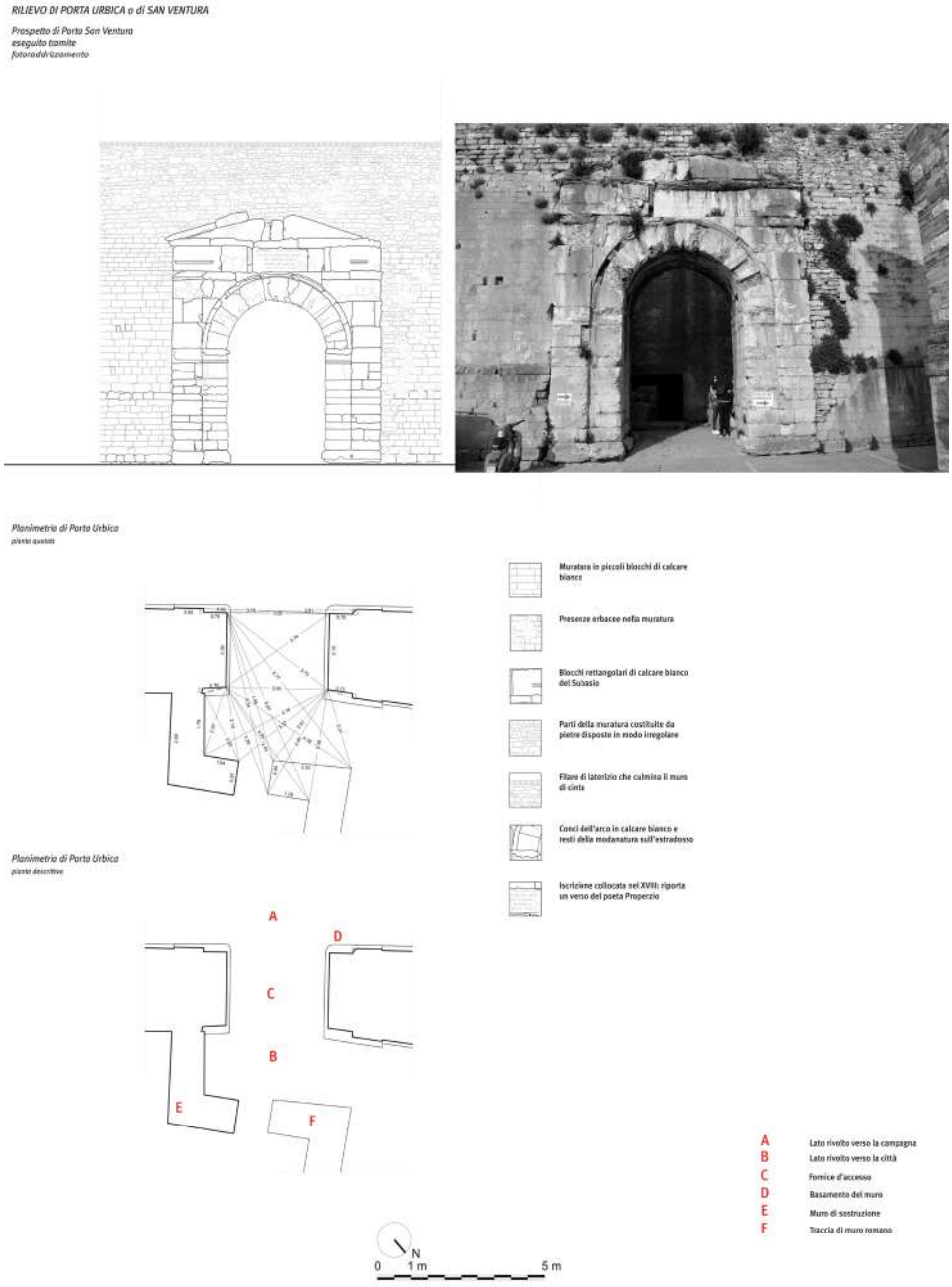

Fig. 7 – Archaeological survey of Porta Urbica (Author's elaboration).

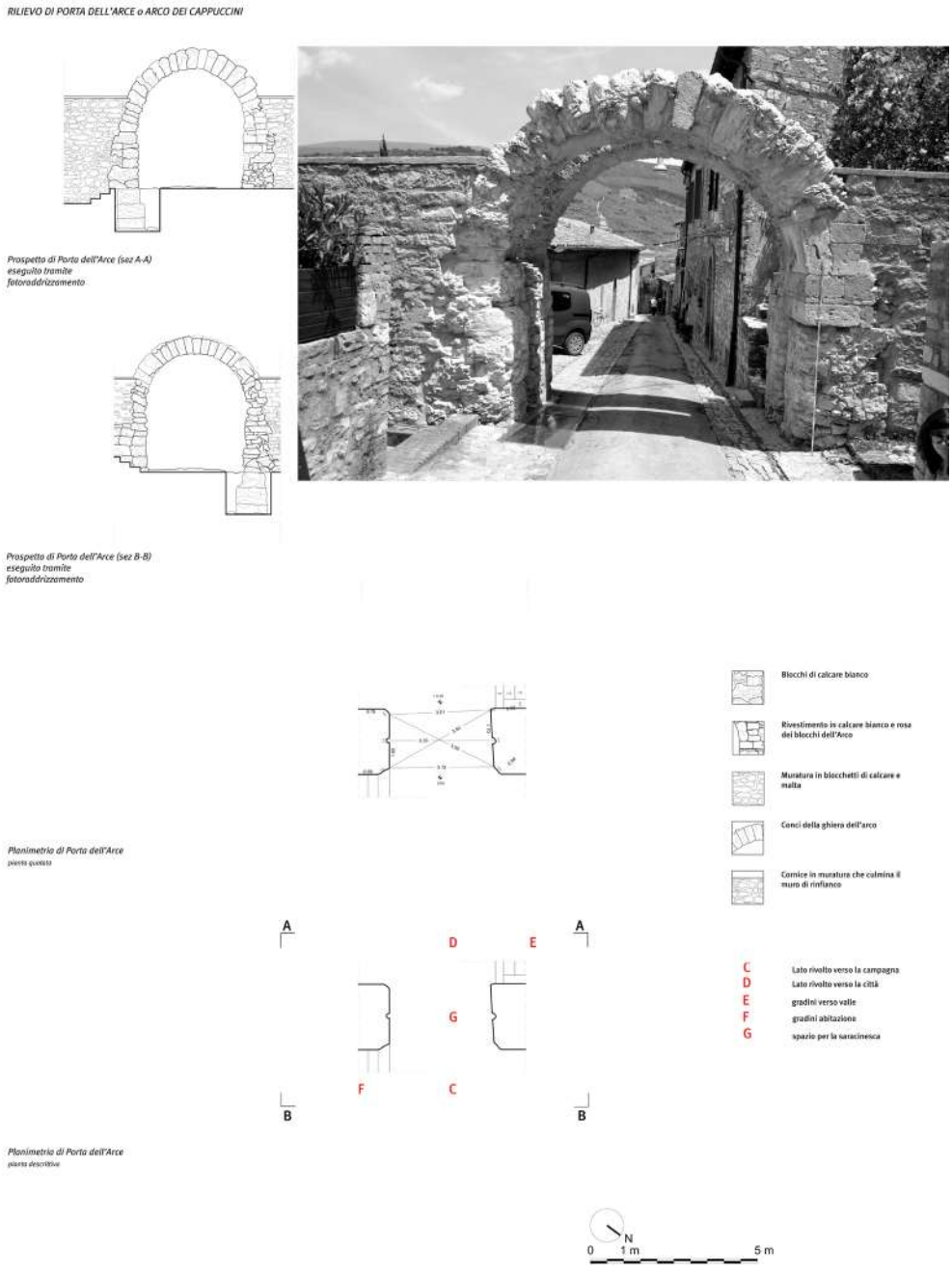

Fig. 8 – Archaeological survey of Porta dell'Arce (Author's elaboration).

Fig. 9 – Aosta, Porta Praetoria, external façade (photo, 2017).

Fig. 10 – Verona, Porta dei Leoni, external façade (photo, 2017).

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Oriental Dreams.
Reimagining Paradise in the Urban Context

Nael Chami[1]

Abstract: *The integration of gardens into the urban fabric of Muslim cities has a rich historical background, dating back to the early days of Islam and influenced by classical and Persian cultures that cherished the idea of incorporating gardens into urban designs. As a result, gardens became an inseparable aspect of Muslim cities, intricately woven into their urban structures. This architectural trend extended far beyond geographical boundaries, spanning vast regions of the Muslim empire from Arabia, Greater Syria, and North Africa to Spain, Iran, and India. Gardens held a profound and symbolic importance for Muslims, closely intertwined with their religious beliefs. The Quran, the sacred scripture of Islam, frequently referred to the concept of 'gardens', assuring followers of the prospect of dwelling in lush gardens in the realm of paradise. This heavenly vision inspired the creation of earthly gardens, providing a tangible way to experience and connect with the essence of paradise during mortal life. Islamic gardens emerged as a quintessential element of Muslim cities, embodying the values and aesthetics of Islamic culture. Beyond their visually stunning appearance, these gardens also served practical purposes, offering shelter from the sun, refreshing water features, and ample space for social gatherings. This article aims to explore the significance of gardens in Islam, delving into their embodiment of the promised paradise. It will trace the origins of these gardens, examine their diverse forms, analyze their spatial organization, and unravel their multifaceted functions within the landscapes of Muslim medinas.*

Keywords: *Muslim cities, Islamic culture, Quran, urban grid, landscape design*

In the 7th century, the emergence of Islam in the Arabian Peninsula occurred in a geographical context that lacked significant urban planning and developed landscape features. Islam, as a religion, displayed a remarkable capacity for adaptation, incorporating elements of philosophy and art from preceding cultures. Central to this integration was the Muslim belief in mathematics and the veneration of perfect geometric forms as symbolic representations of divine perfection, and consequen-

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tly, of God. This profound conviction led to a deliberate fusion of mathematical knowledge with various artistic disciplines, including art, architecture, and landscape design, resulting in the creation of distinctive 'perfect' forms. This amalgamation of mathematical precision and artistic expression became a defining characteristic of Islamic art, with geometrical shapes and arabesque motifs serving as exemplars of these idealized forms. These art forms extended beyond mere aesthetic appreciation to influence architecture, landscape design, and the planning of gardens. Gardens held a significant symbolic role within the broader context of landscape design in Islamic culture. They were conceived as more than mere physical spaces; rather, they embodied profound symbolism, serving as a bridge between humanity and nature. In this symbolic framework, gardens represented human efforts to structure and represent the natural world, effectively bridging the gap between the divine and the human-made.

On the one hand, they offered an earthly interpretation of the divine order, while on the other, they provided individuals with an oasis from the demands and complexities of urban life, fostering a sense of connection with the divine. The scholarly fascination with Islamic gardens can be traced back to the 17th century, a period when Western scholars developed a growing desire to explore the allure of the exotic Orient. However, it was not until the 20th century, during the era of Western colonization in the Islamic world, that the study of Islamic gardens gained significant momentum. This colonial influence sparked the curiosity of European scholars, compelling them to initiate comprehensive research and analysis into the captivating world of Islamic gardens[2].

Sacred Serenity: Exploring the Significance of Gardens in Islam

Islam perceives gardens as a representation of paradise on earth, a concept echoed in numerous verses of the Quran that depict the various elements of heaven. The Quran regards gardens as a central symbol of the spiritual ideal, where the divine and human creativity harmoniously intertwine. Additionally, these gardens serve as a space where untamed

2. Most notably the book of the English Constance Villier Stuart "Gardens of the Mughal", and of the Polish Marie Luise Gothein "Die Indische Garten".

nature is tamed, transforming the wild and unpredictable, *Locus Ferax*, into a serene and pleasant environment, *Locus Amoenus*.

The notion of space within the Arab culture that evolved in the desert is inherently focused on preserving living space, thereby establishing the enclosure as a fundamental symbol of distinction, not only separating the nomadic from the sedentary but also distinguishing between oases and deserts, irrigated and arid lands.

The Quran consistently associates paradise with gardens. Throughout its verses, the Quran vividly portrays paradise as a realm adorned with lush gardens, abundant trees, flowing fountains, and meandering rivers.

> The righteous have a reward: gardens and grapevines [An-Naba': 31-35]
> God has promised the believing men and women a garden with rivers flowing beneath it, wherein they will abide, and a good dwelling in Paradise. And they are more pleased with God. That is the great victory [At-Tawbah: 72]
> These are God's limits, and whoever obeys God and His Messenger, He will admit him to gardens beneath which rivers flow, wherein they will abide. And whoever disobeys Allah and His Messenger and transgresses His limits, He will cause him to enter a fire to abide therein, and he will have a humiliating punishment [An-Nisa': 13-14].
> And those who believe and do righteous deeds, We will admit them to a garden beneath which rivers flow, wherein they will abide forever. God is truly counted, and who is more truthful in word than God [An-Nisa':122]

The Quran gave seven different levels of Paradise: *Jannat Adan* (Garden of Eden, of everlasting bliss), *Jannat al Ferdaws* (Garden of Heaven), *Jannat al Naim* (Garden of abundance), *Jannat al Ma'wa* (Garden of retreat), Jannatu al Khouloud (Garden of immortality), *Dar ul Maqaam* (Garden of safety), *Dar al Salam* (The adobe of peace). Therefore, according to Islamic belief, paradise is depicted as a multi-layered garden. Described in the Quran, paradise encompasses flowing rivers, lush plants, abundant fruits, towering trees, soothing shade, and radiant sunlight – all the elements of a magnificent garden (*fig*. 1). The Quran's promise of a heavenly paradise highlights the significance of the oasis as a stark contrast to the harshness of desert life, emphasizing the importance of water.

The concept of gardens permeated the entire expanse of the Muslim empire. The prevalence of gardens in the Islamic world can be attributed to three key factors. Firstly, a religious factor is at play, as these gardens symbolize the earthly manifestation of the promised paradise

for Muslims. Secondly, climatic conditions played a significant role. Considering that the Islamic empire primarily encompassed hot desert regions, and gardens with their water features, vegetation, and shaded areas were crucial for improving the quality of life. These gardens epitomized the captivating interplay of sunlight and shade, offering respite from the scorching heat that pervaded the lands of the Islamic empire. The Islamic Garden, whether designed for private or public use, served primarily as a sanctuary of privacy. It was carefully enclosed and shielded by towering trees to guarantee seclusion for those within. This notion of an enclosed garden finds its roots in the Quran's depiction of paradise, which describes it as being encompassed by gates and guarded by gatekeepers.

> Those who feared their Lord will be driven to Paradise in groups. Until, when they arrive to it, its gates will open, and its keepers will say to them, Peace be upon them. May you be well, so enter it for eternity [Al-Zumar: 73]

The mention of the gates of Paradise, symbolized as a garden, instilled in Muslim architects the belief that their earthly gardens should be enclosed and safeguarded by walls, with access granted through gates. This religious notion corresponded to the idea of protecting the living elements within the gardens, a significant consideration given their scarcity in the arid desert environment that initially characterized the Arab Muslim world.

It is worth noting the striking contrast between the colder countries where the primary concern revolved around protection from rain, hence the need for a roof, and warmer countries where Islam originated, shielding oneself from the desert sands and the relentless heat of the sun was paramount, leading to the necessity of walls and enclosures. Intriguingly, this concept extends to the Arabic language, where idiomatic expressions like "a roof over one's head" in English, signifying a place of residence that safeguards against external threats, find equivalent meaning in Arabic through phrases such as "a wall" or "an enclosure". Moreover, the Arabic word *ma'wa*, translated as "shelter" in English, places greater emphasis on the presence of a protective wall rather than a roof. Even the word *dar*, meaning "house" in Arabic, originates from the notion of encircling or enclosing, further emphasizing the concept of an enclosed space.

Lastly, the influence of royal pleasure gardens, originating in pre-Islamic Persia, left an indelible impact. These majestic gardens had existed in Persia since the 6th century BCE, and when Islam reached the region, Muslims were influenced by and continued to incorporate these garden concepts into their own designs.

Tracing the Origins of Islamic Garden Design

The inception of organized Islamic gardens can be attributed to the early days of Islam, particularly during the early Abbasid period (750-1258 A.D.). As the Muslim capital shifted from Damascus in the Umayyad period to Baghdad in 762 AD and Samarra (836-892 A.D.), in Mesopotamia under the Abbasid dynasty in the 8th and 9th centuries, Muslims came into contact with the gardens of Mesopotamia that had been cultivated since the 6th century B.C. Evidence of this can be found in Babylonian literature dating back to 2000 B.C., which describes the planting of trees in the king's palace, providing shade and fruits over 4000 years ago[3].

Samarra was home to one of the earliest gardens of the Abbasid period[4]. Before the advent of Islam, Mesopotamia was under Persian rule, and its gardens had been famous since the Babylonian and Assyrian eras. These gardens were built within cities to replicate paradise[5]. The construction of such gardens would not have been possible without the use of advanced irrigation systems, which were developed by the civilizations who inhabited Mesopotamia due to the need to protect themselves from frequent floods and droughts. The origins of these complex irrigation systems in the region can be traced back to the 5th and 6th millennium BCE[6].

The Assyrian king Tukultī-Ninurta I (1233-1197 BCE) provides one of the earliest known references to irrigation systems in Mesopotamia. He describes the opening of his "canal of justice" to bring water to arid land near the Tigris River[7]. These canals were considered remarkable engineering

3. Dalley 1993, p. 1.
4. Northedge 2023, p. 1.
5. Dalley 1993, p. 1.
6. Lerner-Meacham-Burns 1998, p. 14.
7. King 1904, p. 43.

feats by the Assyrian kings, as evidenced by their frequent mention in royal inscriptions[8]. This advancement in irrigation systems and canals enabled the Assyrians to create gardens within their cities and palaces, giving rise to a landscape phenomenon that was previously unimaginable.

British Assyriologist Stephanie Dalley identifies five types of gardens used in the Assyrian period: courtyard gardens, hunting parks, city gardens, temple gardens, and hanging gardens[9]. This classification highlights the intentional planning and diverse functions of these gardens, underscoring the importance the Assyrians placed on these landscapes by creating a specific type for each of the functions needed. Going forward, during the Persian conquest of Mesopotamia in the 6th century BCE, the Persians gave a lot of importance to the gardens as well, as a representation of their paradise. The Greek historian Herodotus mentioned the love of King Darius I for gardening. Xenophon, the Greek philosopher and historian, mentions the use of the word paradise to describe the Persian gardens.

> And more than this, continued Socrates, at all the places which he dwells in or visits, he [the Persian king] takes especial care that there shall be gardens which they call 'paradises', filled with everything good and beautiful that grows there naturally. And it is in these gardens that he spends most of his leisure, unless prevented from doing so by the time of year[10].

In fact, the word paradise in English was derived from the word *pairi-daeza* meaning an enclosure or a park in old Avestan, an old Iranian language that predated Persian. The Greeks used the word *Paradeisos* from the Persians, and they applied it to refer to the supreme bliss of Eden or the rewards of the faithful as promised by the Quran and didn't limit its meaning to the sublimity of the Persian garden[11].

The Persians reflected their religious beliefs about the world in the design of their gardens. Using the concept of the division of the world into four, a concept adopted by the Zoroastrians[12], the Persians considered their universe as divided into four parts, hence reflecting this design in their gardens and creating a type of gardens called the *chahar bagh*, which is a quadripartite garden design from *chahar* meaning "four" and *bagh* meaning "garden" (*fig*. 2).

8. Wilkinson *et alii* 2005, p. 27.
9. Dalley 1993.
10. Xenophon, 1876 [1971]. *The economist of Xenophon*, New York: B. Franklin, p. 26.
11. Lehman 1980, p. 31.
12. Boyce 2001, p. 113.

Bruce Lincoln tries meticulously to identify the origin of the word Paradise and its use by the Achaemians. He concludes that the word *Paradeisos* wasn't

> a vacation spot, a national park, zoological garden, dream palace, or diversion for royal collectors, still less, the Disney World of antiquity. Rather, if I am not mistaken, it was a space of re-creation in the most precise and most profound sense. The surviving descriptions of paradeisoi consistently emphasize their exquisite beauty, their abundance of water, and the pro-fusion of plants and/or animals with which they were filled: that is, the elements which constitute the sustenance – and, more important – the happiness of mankind, as is signified by the name of a paradeisos attested in two of the Persepolis Treasury texts: Old Persian vispa- siyatis, "All Happiness"[13].

Hence, paradise in the Persian culture was not a simple garden, it was a place of recreation, a perfect place that reflects the power of the creator. One of the best examples of a *chahar bagh* is the garden of Pasargadae, considered one of the earliest Persian gardens using this typology. This garden was built during the reign of Cyrus, and whether he was Achaemenian or Zoroastrian is not relevant here, yet the Zoroastrian concept of dividing the world into four parts is evident in the design of his garden in Pasargadae. The garden of the city has a rectangular shape, divided into four parts by two perpendicular axes, and is built in the center of the palace, surrounded by a portico with colonnades (*fig*. 3). Inside this portico, there was a royal throne with seats for the nobles who could contemplate the garden from inside, or even go out to enjoy its vegetation. The garden has two entrance gates with two irrigation canals that lead the water inside[14].

The importance of this garden is that it puts the foundation of the concept of the garden city, which is an ensemble that incorporated a garden inside a palace, and that was the prototype used in the Achaemenid empire. Many other examples of these garden cities using a quadripartite typology have been built during the Achaemenid period, including Bishapur, Gur, and Siraf.

This concept continued to be used with the arrival of Islam, and it was exported to Syria, Andalusia, and central Asia, as a place of perfect harmony, a concept that was promoted by Islam as a perfect divine shape.

The earliest known Islamic gardens are the gardens of Baghdad and Samarra. While some gardens in Syria, and Jordan have been identified

13. Lincoln 2003, p. 153.
14. Stronach 1989.

by an unpublished article by Antonio Almagro and D. Fairchild Ruggles, entitled "Early Islamic Gardens in Syria, Jordan, and Iraq" in the Umayyad settlements of Qusayr Amra, Rusafa and Qasr al Hallabat, it remains relatively hard to certainly identify these gardens, knowing that buildings can somehow be identified over time even by rubbles of stones, while the gardens are planted spaces, and over time, the vegetation is erased.

From the grand hanging gardens of Babylon to the exquisite palace gardens of Mari, Mesopotamia exerted a significant influence on the development of Islamic gardens during the Abbasid period. This concept, emphasized by Islam, found its roots in the Mesopotamian landscape.

Although the dominance of the *chahar bagh* style was not prominent during the Abbasid period, and no known examples of Abbasid quadripartite gardens with four rivers, characteristic of Persian gardens[15], exist, the influence of the *chahar bagh* continued to shape Muslim gardens in later periods, ultimately becoming the quintessential Islamic garden concept. Particularly significant is the description in Hadith[16], referring to the four rivers that emerge from paradise: Euphrates, Nile, Sayhān, and Jayhān. This description aligns with the division of gardens into four parts, characteristic of the *chahar bagh*.

The Muslim fascination with the *chahar bagh* garden stems from the connection between Islam and the pursuit of perfection. Islamic art, renowned for its precise shapes and straight lines, seamlessly integrates with the rectangular form and orthogonal division of the *chahar bagh*. Thus, the *chahar bagh* perfectly aligns with the principles of Islamic art, becoming an enduring symbol of Islamic gardens.

The Art of Islamic Garden Design: Exploring Order, Space, and Form

Several factors played a role in the design of Islamic gardens, leading Muslims to seek a reinterpretation of the *chahar bagh*. When examining Islamic art, it becomes evident that there is a deep appreciation for perfect shapes highlighted through the use of geometry. Islam skillfully merged mathematics and geometry with art, aiming to achieve impeccable forms that symbolize God and His perfection (*fig*. 4). Thus, when

15. Al Samarrai 2002, p. 7.
16. The hadith is the second written source of Islam after the Quran. It's a series of stories told by the Prophet Mohammad.

Muslims encountered Persian gardens, they wholeheartedly embraced the geometric beauty of the *chahar bagh*. This exquisite design featured a perfect rectangle divided by two perpendicular axes, resulting in four impeccable sections. Muslims across the empire enthusiastically adopted this concept, incorporating it into their own gardens.

By examining gardens throughout the Muslim empire, one can gain insight into how Muslims embraced the *chahar bagh* typology. From Andalusia (Spain) to India, numerous examples showcase the adaptation of Persian garden principles, capturing their inherent order, space, and form.

The concept of order in gardens originates from the aspiration to reflect the divine, giving rise to symmetrical layouts and proportionate elements. The pursuit of achieving perfect shapes creates a sense of balance. An exemplary embodiment of this principle can be observed in the Humayun's Tomb Garden located in Delhi, India, dating back to the 16th century. The design of this garden showcases a progression from the *chahar bagh* tradition, featuring a more intricate subdivision of the internal garden area, resulting in a visually pleasing and harmoniously balanced matrix. At the core of this garden lies the Tomb of Humayun, acting as the focal point where all the garden's axes converge (*fig*. 5). This convergence is further accentuated by the implementation of mirror symmetry, wherein the shapes and elements of the garden are mirrored at its center. Additionally, Humayun's Tomb Garden incorporates four gates that lead towards the central area, with water canals serving as connecting elements, linking all the components of the garden together (*fig*. 6).

While some gardens are pleasure gardens to be enjoyed by the living, some gardens specifically in India, like the case of the garden of Humayun's Tomb are made to be used by the living as well as the dead, hence having the mausoleum in the center of the garden[17]. This garden highlights the order as a crucial element of the Islamic garden, where the garden is organized around a central element, whether a pavilion or in that case a mausoleum.

The concept of order is prominently expressed through the overall design and orthogonality, while the perception of space is often influenced by the size of the garden. The size of the garden plays a significant role in creating a sense of intimacy or a more open and expansive atmosphere. This distinction in the understanding of space within gardens

17. Lehman 1980, p. 62.

becomes more evident when comparing two different examples from various regions of the Muslim empire. One such example is the Garden of San Giovanni degli Eremiti in Palermo, Italy (*fig*. 7). Despite being built by the Normans in the 12th century, the Arab Moorish influence is unmistakable, «particularly in the charming scale of the enclosure, with its luxuriant planting bounded by straight paths»[18]. The small size of this garden suggests its intended use for private and intimate purposes.

In contrast, the Garden of Chashme Chahi in India presents a completely different ambiance and sense of scale. Built in the 17th century, this garden continues to follow the principles of the *chahar bagh* layout, but its larger size indicates a more inviting and public character. The spatiality of the Garden of Chashme Chahi diverges from the Garden of San Giovanni degli Eremiti, creating a distinct atmosphere and usage.

Examining these two gardens offers a deeper understanding of how size influences the perception and utilization of space. The Garden of San Giovanni degli Eremiti evokes privacy and intimacy, while the Garden of Chashme Chahi presents a more expansive and public-oriented environment. This contrast showcases the diverse approaches to spatiality within Islamic gardens across different regions.

The perception of space within the Islamic Garden is strongly influenced by the enclosure, with the shape of the enclosure defining the overall form of the space. Typically, the enclosure takes a rectangular shape, providing a clear boundary for the garden.

Entrance gates play a significant role in shaping the experience of the space inside the garden. These gates create a specific perspective that directs the visitor's gaze toward particular elements and emphasizes the central focal point. In a way, the gates act as quadrants of a painting, highlighting the intended focal points and guiding the visitor's attention. The convergence point of the garden is always at its center, and regardless of which of the four gates the visitor enters from, he is invited to focus on the central area while simultaneously perceiving the entire garden as a whole. This arrangement surprises the visitor by presenting the entirety of the garden at once, thanks to the orthogonality of the space, rather than gradually revealing it over time.

The architects of Islamic Gardens skillfully integrate various organic elements into a cohesive, proportioned, and orthogonal form, thereby

18. *Ibidem*, p. 214.

creating a distinct spatial experience. This design approach ensures that visitors are instinctively drawn towards the central area of the garden while allowing them to appreciate the garden as a whole from their vantage point. The role of the garden designer in the Muslim tradition is to harmoniously combine diverse organic elements, transforming them into a unified and structured composition.

> The gardens form was considered as a highly structured geometrical scheme, it became a powerful metaphor for the organization and domestication of the landscape, and even more this function promoted it as a symbol of political territory[19].

Although the overall form of the Islamic Garden remains consistent, characterized by the rectangular enclosure of the *chahar bagh* and the internal division created by two perpendicular axes, certain factors influenced variations in this design. Specifically, the climate and landscape of the garden's location played a significant role in shaping these adaptations. While the fundamental layout of the garden remained unchanged, Muslim architects had to carefully consider and adjust their designs to suit each site's specific climatic and topographic conditions.

Looking at the garden of Medinat al Zahraa in Cordoba, Spain, the form of the garden has been shaped by its landscape to the sense that the garden planners had to consider the site's slopping when designing the gardens, leading them to build it on two levels, the upper garden and the lower garden. In fact, it is not surprising to see the adaptation of the *chahar bagh* typology in the gardens of Medinat al Zahraa, since the influence of the Abbasside on the caliph of Cordoba was enormous; it wasn't only a political rivalry, but an artistic borrowing as well. The 'Abbasidization' of Al Andalus had started in the 9th century[20], one century before the work started on Medinat al Zahraa.

Similar to what the Abbasides did in the Jawsaq and Balkuwara palaces in Samarra, Abdel Rahman III and his planners in Medinat al Zahraa, incorporated their buildings into the landscape to create predetermined views of the exterior. The site was divided into three levels cut into the mountain, and from the middle level, the Salon Ricco opens on the upper-level garden and its center axis follows the center axis of the upper garden, hence converging to its center (*fig*. 8-9).

19. Ruggles 2008, p. 39.
20. Ruggles 1990, p. 74.

The concept of having two gardens in Medinat al Zahraa is a unique feature of the city. Maribel Fierro, in her article "Madinat Al-Zahra, the Paradise and the Fatimies" associates this idea with a verse from the Quran, which is explained by Al Tabari[21].

> And within them are fruits, diverse and plentiful. [They will be] of every kind, two spouses [Quran 55:52].

Fierro interprets this verse as a representation of the fruits depicted on the walls of the Hall of Salon Ricco[22], hence the presence of a pair of each, one on the walls and the other in the garden itself. However, this verse can also be linked to the presence of Medinat al Zahraa, referring to the idea of a pair of each. The Umayyads of Andalusia, in their rivalry with the Abbasids, felt the need to design gardens that showcased their capabilities and aligned more closely with the Quranic description of paradise[23]. This explains why the gardens of Madinat al Zahraa adhere to the description found in the Quran and in 'Abd al-Malik B. Ḥabīb's book, "Kitāb Waṣf al-firdaws", while also following the typical layout of the *chahar bagh* seen throughout the Muslim empire, thereby establishing their connection to other Muslim lands. The Umayyads used the garden to promote it as a symbol of political territory[24], hence connecting themselves to the Muslims of the East.

Conclusion

Islam has consistently demonstrated its adaptive nature as a religion. While it emerged as a novel social, economic, and cultural concept that stood in contrast to its predecessors, it did not discard the rich cultural heritage that preceded it. The Muslim *medina*, on the one hand, drew significant inspiration from classical urban planning in the Western world, while on the other hand, its gardens were influenced by the opulent Persian empire of the East. The Islamic Garden stands as a testament to the

21. Al Tabari 1905, p. 86.
22. Fierro 2004, p. 307.
23. The Umayyads of Andalusia were diligent in adhering to the teachings of the Quran. In this context, they notably heeded the verse aforementioned, which stipulates the provision of two pairs of every type of fruit.
24. As mentioned by Ruggles 2008, p. 39.

religion's ability to embrace and incorporate multiple cultures, filling in a missing piece of the cultural mosaic that defines Islam.

> For most of its history, and especially in Antiquity, this [the area of Bilad Al Sham] was a frontier area, or a buffer zone in modern terms, between the main regional powers: Egypt and the successive Mesopotamian empires; Persia and Greece; the Seleucid and Ptolemaic kingdoms; Rome and Parthia; Byzantium and the Sassanians. As a result, it not only witnessed war, invasion, and destruction, but also fruitful economic and cultural interchange. This frontier was lifted twice: first, during the reign of Alexander, and, secondly with the rise of Islam[25].

Islam has achieved the unification of cultures worldwide, blending elements from both the East and the West. This metamorphosis is evident in the adaptation of cultural and artistic concepts within Islamic traditions.

The Islamic gardens, originally conceived as a paradise for Muslims in the afterlife, underwent a remarkable transformation and became a prominent feature of the landscape in the Muslim *medina*. Appreciating the significance of mathematics and geometry, Muslims incorporated the *chahar bagh*, a quadrilateral garden divided into four sections, into their culture. This adoption, which held cultural and architectural importance in both Muslim and Persian societies, harmoniously complemented the concept of Islamic art. As Islam expanded and evolved, so too did the concept of Islamic gardens, with the *chahar bagh* remaining a foundational blueprint for their design.

The design of Islamic gardens draws upon a combination of religious, climatic, and cultural factors. The influence of ancient Mesopotamian gardens, with their advanced irrigation systems, played a significant role in shaping the notion of creating lush oases within desert landscapes. Islam's emphasis on perfection and geometric forms led to the integration of mathematics and art, resulting in the use of precise shapes and straight lines in both Islamic art and garden design. The Quran's portrayal of paradise as a multi-layered garden further solidified the importance of gardens in Islamic culture.

Today, Islamic gardens stand as serene sanctuaries that seamlessly blend nature, art, and spirituality, providing a tangible link to the divine. They serve as a testament to the rich cultural heritage of the Muslim world and continue to captivate and inspire people around the globe.

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25. Arce 2008, p. 491.

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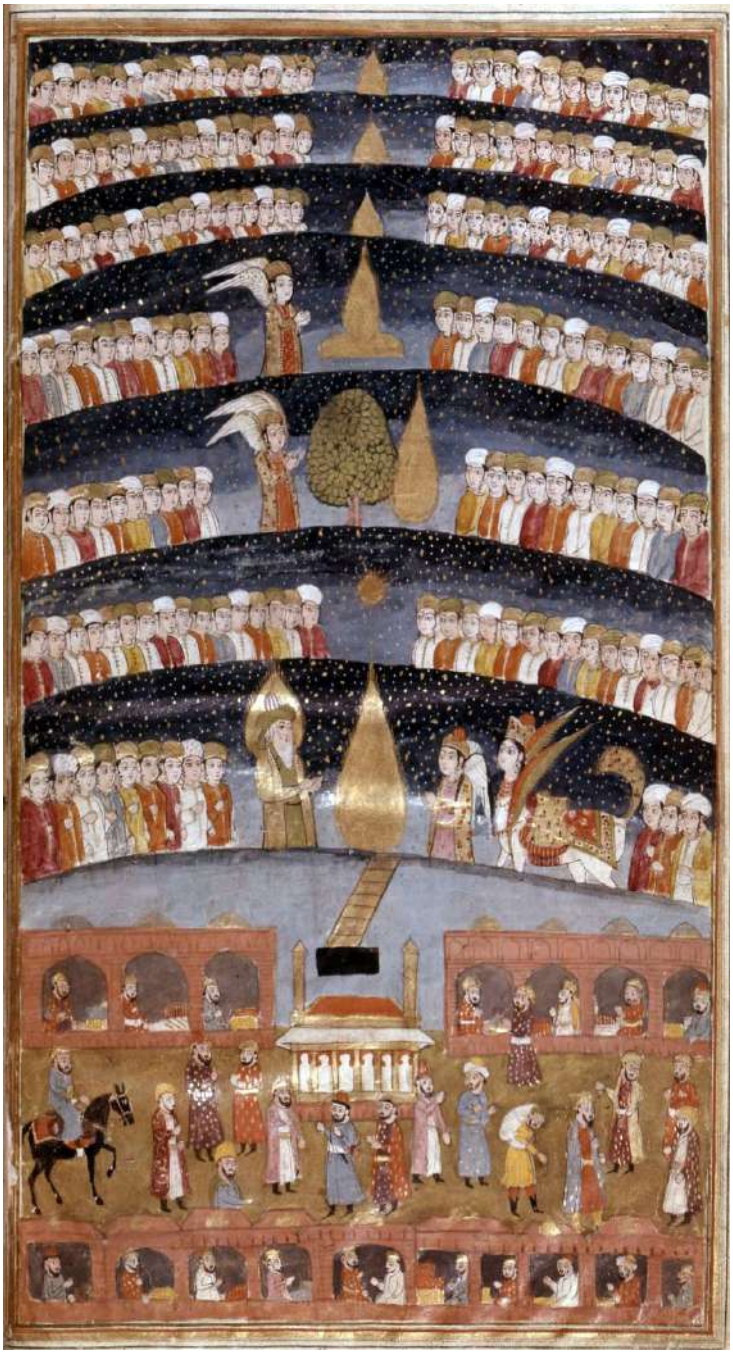
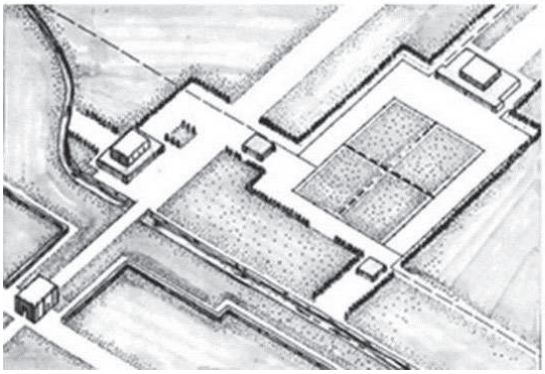
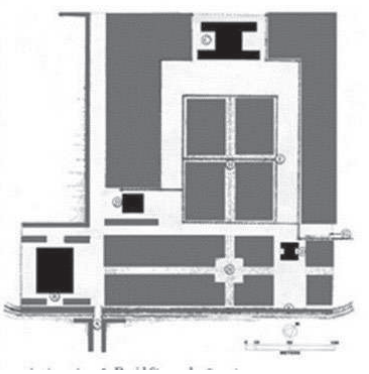


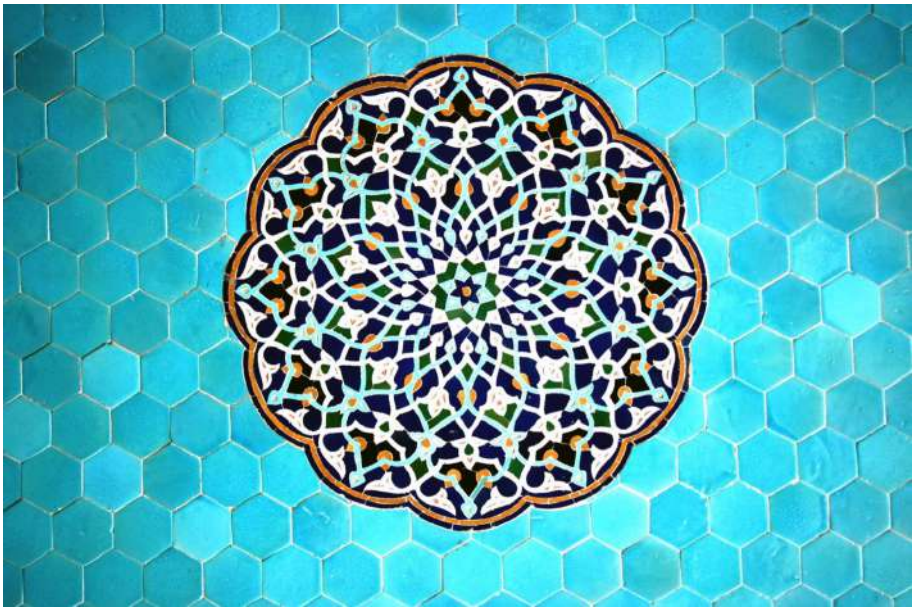
Fig. 1 – A Persian miniature depicting paradise from The History of Mohammed (Bibliothèque Nationale de France, Paris).

Fig. 2 – Charbagh *on an incomplete Persian 'garden carpet', 17th century.*

Fig. 3 – Garden of Pasargadae after David Stronach, 1978.







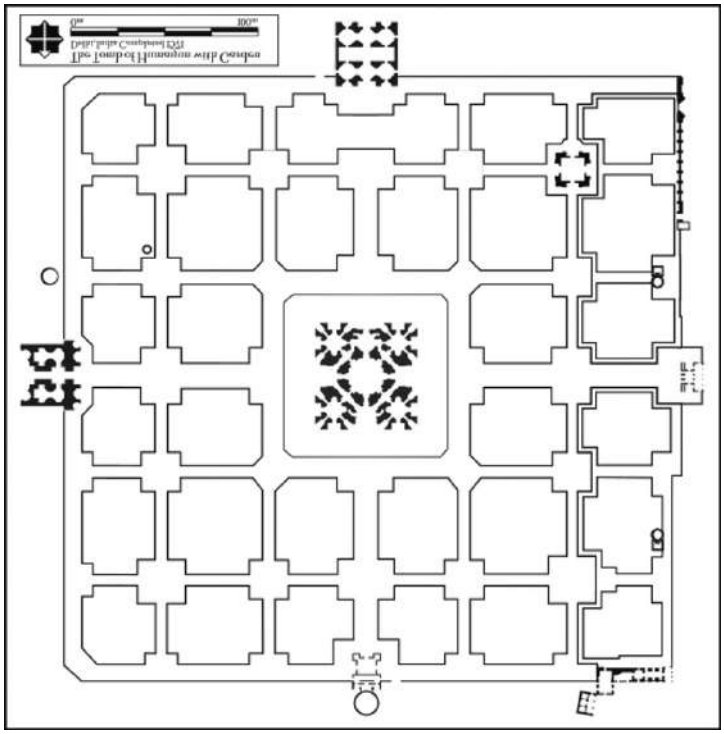


Fig. 4 – Yazd (Iran), Art of tiles inside the Jame Mosque.

Fig. 5 – Nizamuddin Delhi (India), Plan of the Emperor Humayun's Garden Tomb (BilliTheCat, CC BY-SA 4.0)

Fig. 6 – The tomb in the centre of the garden of Humayun's tomb shows the water canal passing through the garden (Udit Kapoor, CC BY-SA 4.0).
Fig. 7 – Palermo, San Giovanni degli Eremiti, cloister, palickap (CC BY-SA 4.0).

Fig. 8 – Cordoba, Salon Ricco at Medinat al Zahraa (R Prazeres, CC BY-SA 4.0 DEED)
Fig. 9 – Cordoba, Salon Ricco at Medinat al Zahraa (Justojosemm).

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The urban strategy of Pope Paul III
The conclusion of the Trident of Piazza del Popolo

Angela Michela Convertini[1]

Abstract: *During the sixteenth and seventeenth centuries, the transformation of Rome promoted by the Papal Government aimed not only to answer to the needs of a modern state but also to represent the Papacy as an absolute monarchy. The visit of Emperor Charles V in 1536 became the opportunity to improve urban connections and to build architectural complexes such as the Capitoline Hill. The importance of these places was highlighted by putting them at the head of new streets: Pope Paul III made the Capitol visible from Via del Corso, renovated in 1538 as a part of the Campo Marzio general urban plan. If Pope Leo X imagined two streets (Via del Corso and the new Via di Ripetta) leading into the square in front of Porta del Popolo, and Clement VII began the third axis, it was Paul III who should be properly considered as the inventor of the trident of Piazza del Popolo. On the other hand, the pope experimented with the employment of straight roads that organized the territory as symbols of power also in his residence in Caprarola, an effective laboratory of absolutism.*

Keywords: *Rome, Pope Paul III, Emperor Charles V, the Trident, urban strategies.*

It's at least from the fourteenth century that the opening of long straight roads and the building of regular squares became the way through which the Papal Government reorganized Rome as a modern capital city and, on the other hand, affirmed itself as an absolute monarchy. However, unlike what happened in many other European cities, in the *Urbs* rarely these interventions were acted uniquely by the pope, representing instead the result of the many interests involved, among which there were also private ones[2].

In this sense, the urban approach of Pope Paul III Farnese (1534-1549) was unusual[3]. The arrival of Charles V (1500-1558) in 1536, for

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2. In order to understand the dynamics related to the growth and the development of Rome during the sixteenth and the seventeenth century, see Antinori 2008.
3. For an overall look at the urban policy of Paul III: Guidoni-Marino 1982.

whom a triumphal entrance was arranged from Porta San Sebastiano, continuing through Via di San Gregorio and the *Forum*, and from there, through Via di Marforio, up to Piazza San Marco and Via Papale, revealed how Rome was far from appearing like a modern capital city[4]. The visit became the opportunity to improve some important connections and to build, simultaneously, urban and architectural complexes, such as the one of the Capitoline Hill. Since the beginning of his pontificate, Pope Paul III invested substantial resources in this project: the fifteenth-century San Marco palace – and, in particular, the annexed *viridarium*, the so-called *Palazzetto* – was directly connected, through an overhead passage, to the top of the hill, where, later, next to the church and the convent of Santa Maria in Aracoeli, was erected the new papal residence, known as the Tower of Paul III. At the same time, the northern side of the hill was interested in the opening of the new Via Macel de' Corvi, later called di Marforio, while on the southern one, the transformations concerned first the link between the church and the Arch of Settimio Severo, then the configuration of the square designed by Michelangelo Buonarroti, although the project was completed some decades later[5] (*fig*. 1).

The importance of such a complex was highlighted by placing it at the center of a privileged point of view: the pope undertook the improvement, among the others, of via del Corso (*fig*. 2). Since 1538, the section of the road that connected Piazza San Marco to the no more existing Arch of Portugal was expanded and embellished, while the part leading to Piazza del Popolo, almost uninhabited, was completed around 1542[6]. In the same years, Pope Paul III worked also on the opening of Via Capitolina, the current Via dell'Aracoeli, which would have linked the southern side of the Capitoline Hill to Piazza del Gesù and Via Papale (*fig*. 3). Although the first interventions for the construction of the street have to be dated back to the years 1537 and 1538 – when a series of buildings in the ancient Piazza degli Altieri were destroyed – and went on at least to the seventies of the sixteenth century, the project can be considered as a part of the works

4. Paul III held a fundamental role in the mediation of the conflicts that animated the greatest European powers in the sixteenth century. A detailed analysis of the works for the triumphal entrance of Charles V in Rome is in Salatin 2017.
5. The transformations of the Capitoline Hill, from the tenth to the nineteenth century, are described in Brancia di Apricena 2000.
6. About the intervention of Paul III on Via del Corso: Lanciani 1975.

promoted for the visit of Charles V, probably to insert the Capitol in the paths of the papal processions, from which the hill had been excluded till that moment[7]. After all, when the square designed by Michelangelo and the access stairway were finally completed, and also the Via Capitolina was gradually rectified, the street itself became very relevant – as long as this was not intended since the beginning – as a canal of observation of the new complex. On the other hand, this was not the first time that Pope Paul III imagined long straight roads that were also axes of visual enhancement for the buildings they connected. It is the case, among the others, of Via Paola which starts from Piazza di Ponte Sant'Angelo, begun by Pope Clement VII Medici (1523-1534) and renewed to frame the new façade of the church of San Giovanni dei Fiorentini (*fig*. 4), but also of Via dei Baullari and the Farnese palace (*fig*. 5). The opening of this last street, that represented just the final intervention on the area, caused, as the construction of the square, a series of demolitions in the urban fabric that was extraordinary for that time. The system consisting of the street and the palace, to which it has to be added also the regular space of the square, becomes even more complex considering the unfinished Michelangelo's project, who imagined connecting the residence with the Farnesina building on the other side of the Tiber River, creating a continuous sequence from Via dei Baullari and Piazza Farnese, through the vestibule designed by Antonio da Sangallo the Younger, and its repetition in the rear end of the palace, up to the garden and, finally, the bridge[8].

The refashioning of Via del Corso was not only intended to satisfy the needs of access and visibility of Capitoline Hill, but it has to be considered as a part of the urban process that started at the beginning of the sixteenth century. Although some of the cadastral documents date back to the first land concessions in 1509, it was Pope Leo X Medici (1513-1521) who operated consistently in the area[9]. The pope aspired, on one side, to link the ancient city, through the preexisting

7. About the opening of Via dell'Aracoeli and its meaning: Bedon 2008 and Simoncini 2008.
8. The system street-palace as conceived by Paul III is largely discussed in Guidoni 1981.
9. Rome State Archive (ASR), *Ospedale di San Giacomo - Canoni delle case*, vol. 1504 (1661). The analysis of the so-called cadasters or books of the rents of the ecclesiastical bodies that in the sixteenth century owned lands in the Campo Marzio district – among which the church and the hospital of San Giacomo degli Incurabili stand out – is systematically conducted in Fregna-Polito 1971a, Fregna-Polito 1972 and Bilancia-Polito 1973.

Via Sistina and the new Via di Ripetta, to the northern entrance of the city, Porta del Popolo; on the other, to connect two important poles, the church of Santa Maria del Popolo and, through Via di Ripetta and the subsequent lengthening of Via della Scrofa, the *Studium Urbis* and the unbuilt Medici palace in Piazza Navona[10]. The new street along the river, very similar to those Via Giulia and Via della Lungara already opened by Pope Giulio II della Rovere (1503-1513), had to be part of a project that should have enhanced the church of Santa Maria del Popolo and the near door by the arrangement of a new square and a *bivium*, consisting of Via di Ripetta and Via del Corso, and leading into the same place: two *motuproprio* issued by Pope Leo X refer to such a plan, that particularly emphasized the building at the joint of the two streets, while no references are made to a third axis, the future Via del Babuino[11].

The opening of this last one is traditionally placed under the pontificate of Pope Clement VII Medici, thanks to an inscription, nowadays lost, that assigns the so-called Via Flaminia *trifaria*, that is tripartite, to the two Medicean popes[12]. Nevertheless, the analysis of other evidence allows us to anticipate the concessions of land in this area to the first years of the sixteenth century[13]. However, the most consistent part of the works has to be attributed to Pope Paul III, after whom the street was initially named. Already Rodolfo Lanciani found a reference, in 1536, to a «via noviter facta prope Beatam Mariam de Populo versus montem», where the mount was, reasonably, that one on which the

10. About the intervention of Leo X on Via di Ripetta: Zanchettin 2005.
11. Just one of the two *motuproprio* of Leo X reached us. In the document, in which there are many references to the previous one, particularly concerning the project for the new Piazza del Popolo, the pope asked the people responsible for the plan – that is to say the Camera Apostolica, the Maestri di Strade and the architect Antonio da Sangallo the Younger – to strictly respect the dispositions already given. The project was about the configuration of the square on the side of the church of Santa Maria del Popolo and, on the opposite one, the entrance in the same space from Via di Ripetta and Via del Corso. Another document, dated back to the 14 December 1520 and transcribed in Günther 1985 (Appendix I, doc. IV, nn. 1-4), gives some details about the lot of land at the joint of the two streets, corresponding to the area in which still existed the monument known as *Trullo* or *Meta*: the tenants of the building had been constricted to realize in a short while a structure to cover with travertine marble on the three visible sides, and to put on it the emblem of Leo X. The prescription clarifies how the pope thought to a monumental head of the square as this resulted from a *bivium*, and not from the current *trivium*.
12. The inscription says: «Leo x et Clemens vii Medices, fratr. Patruel. Pontt. Maxx., Flaminiam intra urbem trifariam, divisam adhibitis vicor. Magistris, direxerunt sectiones de suo nomine, leonianam clementiasque, appellari iuxerunt, anno iubilei». The year of the Jubilee was, presumably, the 1525.
13. Fregna-Polito 1972.

church of the Santissima Trinità stands[14]. The cadasters of the rents of the ecclesiastical bodies that owned lands in the area, and that, at the time of Pope Leo X – and also before, as we have seen – started to concede their properties to private citizens to build in there, providing interesting information. Thanks to the cadaster of the church and the hospital of San Giacomo degli Incurabili, it is possible to retrace, among others, the history of the land owned by Domenico de' Massimi, extended between Via del Corso and the Mount Pincio, that «fu poi per ordine di papa Paolo III divisa in due parti con occasione di far la strada nuova, che dal nome del pontefice fu detta Paolina»[15]. A similar annotation appears in the cadaster of the company of the Santissima Annunziata, referring to the lands owned by the same Domenico de' Massimi, bought in 1551 by Giovannino de Lupatis «alias Margut», after whom the later Via Margutta took its name, lands «dove fu fatta la strada nova a tempo di papa Paolo III»[16]. In the end, the letter sent to the Cardinal Ercole Gonzaga by his agent Nino Sernini on 4 March 1542, in addition to attest the continuation of the works under the pontificate of Pope Paul III, clarifies how the street was conceived, in the idea of the pope, as part of a more articulate system: «Nostro Signore disegna fare un'altra strada et vole che entrando dalla porta del Populo se ne truova tre dove al presente ve ne sono due: l'antica [Via di Ripetta] et questa nuova di l'arco [Via del Corso]. L'altra ha da traversare sotto la Trinità per quelle vigne et credo che habbia da riuscire al giardino di messer Agnolo del Bufalo»[17] (*fig*. 6). An indirect reference to the construction of the third street of the Trident, can be deduced also from the cadaster of the monastery of San Silvestro in Capite, the properties of which, placed between the end of Via del Babuino toward Piazza di Spagna and Via della Trinità, in the segment that corresponds, nowadays, to Via dei Condotti, were interested in a strong allotment just after the 1550 and the completion of the works for Via del Babuino and the same Via della Trinità, proving an increased interest of private citizens in those lands due to the creation itself of the new valuable streets[18].

14. ASR, *Collegio dei Notai Capitolini*, Not. Alessandro Consoni, prot. 626, c. 209. The information can be found in Lanciani 1975.
15. ASR, *Ospedale di San Giacomo - Minuta di catasto*, b. 120 (1551-1690).
16. ASR, *Compagnia dell'Annunziata - Catasto dei beni*, vol. 825, c. 226v (1574).
17. State Archive of Mantova, *Archivio Gonzaga*, b. 1912, c. 63r. The document is in Rebecchini 2020.
18. ASR, *Monastero di San Silvestro in Capite - Catasto dei canoni*, vol. 5613 (1712-1715).

The intervention of Pope Paul III aimed, in fact, not only to build the Trident but also to define the transversal axis, consisting of the current Via dei Condotti, Via della Fontanella di Borghese, and Via del Clementino, that from the *Platea Trinitatis*, still an amorphous widening at the base of the church of the Santissima Trinità – the façade of which would have been visible from the new road – goes to Piazza Nicosia, creating another connection between the ancient city and the new expansion of which Via del Babuino was intended as a guideline. The new street can be considered as the real link between the two tridents created by Pope Paul III: one of Piazza del Popolo and the other one of Piazza di Ponte Sant'Angelo. In this last case, on one side the pope renewed Via Paola begun by Pope Clement VII, on the other one, he doubled the road symmetrically concerning the current Via del Banco di Santo Spirito, opening the new Via di Panico and obtaining a second, smaller, *trivium*, to connect the *Città leonina* and the *Urbs*[19] (*fig*. 7).

In either case, the trident constitutes a strong sign on the city, and his employment, even duplicate, is the unmistakable expression of a definitely absolute power. On the other hand, while Paul III in Rome built long straight roads with prospective values, in other cases, outside the city, and in particular in Caprarola, created a model of urban settlement in which the city and the whole territory were geometrically organized: becoming a significant precedent for the great royal residences of the seventeenth and the eighteenth centuries, from Versailles to Caserta, that one of Caprarola was, in all respects, a real laboratory of the absolutism.

The interventions in the Capital city can be observed in the same light. The trident as a formal device is an extremely rational structure, and this is clearer when it is inserted in contexts, such as the one of the ancient city, developed for progressive addictions and so strongly diversified. If the trident of Piazza di Ponte Sant'Angelo was imposed in a stratified ambient of this kind, that one of Piazza del Popolo can be seen, instead, as a generating element of an expansion not yet begun in the Campo Marzio district and destined, in this way, to a more regular growth in respect to that one of the river bight. If Leo X and Clement VII foresaw in which direction the city would have

19. About Paul III's ideas for the trident of Piazza di Ponte Sant'Angelo: Lanciani 1975.

been expanded at the beginning of the sixteenth century, Pope Paul III transformed that first idea into a finally modern sign, to the point that, rather than concluding the Renaissance season, he gave birth to that series of urban interventions that culminated in the pontificate of Pope Alexander VII Chigi (1655-1667).

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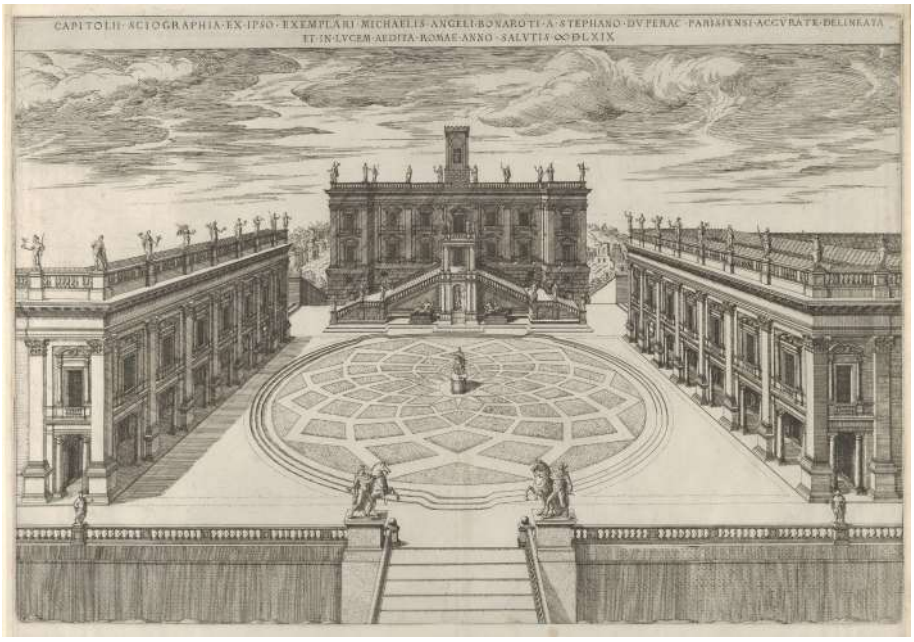

*Fig. 1 – Etienne Du Pérac, Piazza del Campidoglio according to Michelangelo's project, 1569 (*Speculum Romanae Magnificentiae*).*
*Fig. 2 – Giuseppe Vasi, The San Marco Palace and, on the background, the Tower of Paul III seen from Via del Corso, 1747-1761 (*Delle Magnificenze di Roma antica e moderna*).*

*Fig. 3 – Giuseppe Vasi, Piazza del Gesù and Via Capitolina in direction of the Capitoline Hill, 1747-1761 (*Delle Magnificenze di Roma antica e moderna*).*

Fig. 4 – San Giovanni dei Fiorentini from Via Paola (online photo).

Fig. 5 – The Farnese Palace from Via dei Baullari (on-line photo).

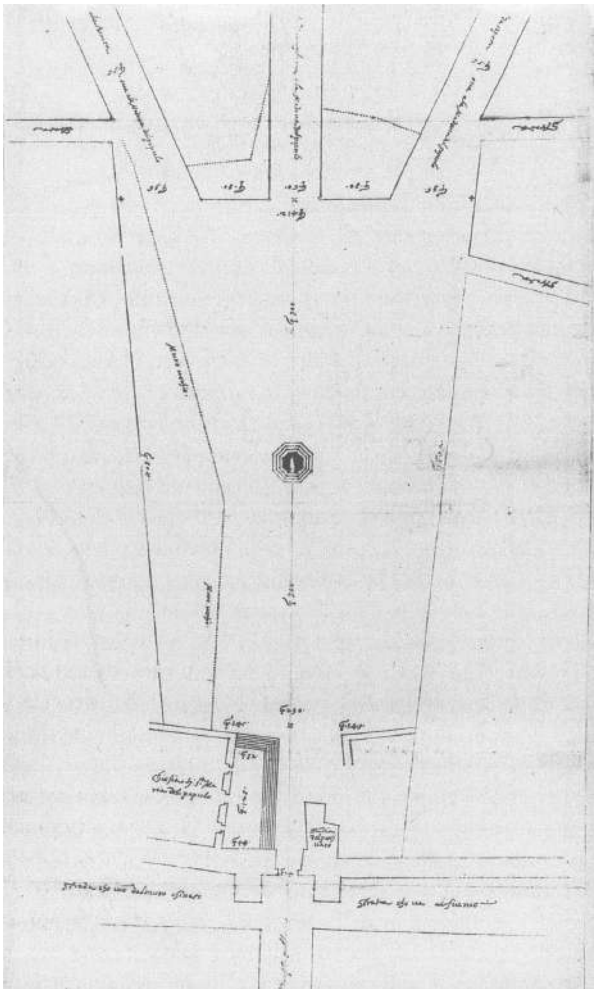

*Fig. 6 – A drawing of the second half of the sixteenth century representing Piazza del Popolo. The trace of a «muro vecchio» in front of the convent of Santa Maria del Popolo allows to reconstruct with good approximation the enlongated shape of the square before the opening of Via del Babuino (*Zanchettin *2005).*

*Fig. 7 – Matthijs Bril, The Trident of Piazza di Ponte Sant'Angelo, fresco, 1580 (*Günther *2002).*

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The Missions of San Antonio, Texas.
Architecture as a holistic representation of the environment

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Abstract: *This paper analyzes the development of San Antonio missions' cultural landscape to address the dialectic relationship between urban models created for the New World, European ideologies, and the role and contributions of the Indigenous population. During the 18 century, the need to improve the Christianizing of the Americas, associated with the urge to defend the territory of the Viceroyalty of New Spain, prompted Franciscan missionaries to open new settlements in Texas. Five of these are still standing in the current metropolitan area of San Antonio. The region's marginal location and the site's strategic position favored the growth of such Franciscan Missions under the protection of the Spanish Crown. The territory, in itself fertile, was re-shaped through substantial infrastructural and technological innovations. A complex system of artificial canals allowed the development of agricultural fields – the* ejidos*, or common lands – characterized by high and regular productivity, being able to feed the Mission population. Furthermore,* rancherías *(i.e., ranch lands) were established and designed for gazing. The local native population, commonly known as Coahuiltecos, rapidly converted from a nomadic, hunter-gatherer lifestyle to begin farming. The construction of fortified villages was the core of these newly founded communities. They had the specific role of controlling the territory and shaping Indigenous people's customs to be integrated within the novo-Hispanic society. The Mission settlements originated utilizing specific layout principles, hybridizing European models, such as the ones of medieval abbeys and architectural and military treatises. These settlements embody one of the most successful examples of Franciscan utopia.*

Keywords: *San Antonio, missions, acequias, novo-Hispanic society, cultural landscape.*

The current metropolitan city of San Antonio, Texas (U.S.), extends over a relatively large area, once characterized by agricultural fields belonging to an urban center – the Villa San Fernando – and the five Franciscan missions established in the area. The original urban civil settlement was founded as a *villa* in 1731 by migrants from the Ca-

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nary Islands (*Isleños*). It was founded next to an existing *presidio* and in the vicinity of two already established Franciscan *misiones*, which increased to five in the same year. Placed one next to the other along the San Antonio River, the five missions acted as a bridge between natives and settlers, introducing Indigenous people to European customs and beliefs. Missions also had the role of supporting the *Virreinato* in defending the Spanish borders as military outposts.

The cultural landscape that took shape in this area embodies a unique frontier social, economic, and infrastructural system with peculiarities and differences from typical Novo-Hispanic settlements. In particular, the San Antonio missions represented an extraordinary case of interweaving between European and Indigenous cultures. For these reasons, since 2015, the vestiges of the missions have been included in the UNESCO World Heritage List.

Shaping the land

Concerns about French colonization in Louisiana in the early 1700s and encroachment into Texas in 1685 by Robert Cavalier (1643-1687) la Salle's expedition, led the Spanish government to strengthen its hold on Texas[3]. On 13 June 1691, the first *entrada*, made of Spanish explorers and Franciscan missionaries (from the Alcantarine family), came across a river valley inhabited by a *rancheria* of Payaya Indians[4]. Fray Damian Massanet renamed the place 'San Antonio' in honor of the saint whose feast fell that day[5]. The expedition's diaries described the natural beauty of the land, with broad plains – «the most beautiful in New Spain»[6] – and with river bordered by many trees such as cedars, willows, cypresses, osiers, oaks, cottonwoods, mulberries, and many vines[7]. A few years later, in 1709, another *entrada*, one of the Espinosa-Olivares-Aguirre expedition, intended to initiate contacts with the indigenous population and prevent them from establishing trade relationships with the French[8]. It reached the San Pedro Springs on April

3. Cruz 1988.
4. Quirarte 2002, p. 17.
5. "San Antonio: The City of St. Anthony", *St. Anthony Messenger Magazine*, 2004 (Americancatholic.org).
6. Chabot 1937, pp. 10-11.
7. Tous 1930, p. 5.
8. Cruz 1983.

13, 1709. Franciscan Friar Isidro Félix de Espinosa's (1679-1755)diary described the site and named the two springs San Pedro Creek and the San Antonio River with one of the copious springs raised near a populous *ranchería* of Indians.

Hydrological factors, predominantly proximity to potable water, exerted a definite influence on the specific choice of sites – featuring all with streams and springs by the earliest European settlers.

A few years later, in 1718, a first mission was opened along the San Antonio River. It was dedicated to San Antonio de Valero, named for New Spain's viceroy, Baltasar de Zúñiga y Guzmán, 1st Duke of Arión, 2nd Marquess of Valero (1658-1727)[9].

The exact location of the original first mission settlement, which had to utilize the river's waters to irrigate the fertile fields nearby, is still debated. Brigadier Pedro de Rivera y Villalón (†1744) witnessed the settlement's inception. He arrived in San Antonio in 1717 accompanied by the engineer Álvarez Barreiro to check the status of the outer defenses, and Barreiro offered his assistance in building the mission[10]. To provide sustenance to the settlers and the soldiers assigned to the *presidio*, the construction of an artificial irrigation system was started, comprising dams, gates, and canals – known as the *acequias* system. The artificial canals allowed both to fence the fields and practice extensive farming, taking advantage of the vastness of the territory. In addition, *sacas de agua* (or *desagues*) improved the resilience of the water system, preventing floods or unexpected droughts. This hand-dug, gravity-flow, small-scale, farmer-managed irrigation endeavor can be considered the first social act of cooperation involving Spaniards, missionaries, and natives (1719).

Ideally suited to the sub-tropical Mexican Gulf climate, the *modus operandi* of constructing artificial gravity-based watercourses was introduced by referring to well-established Spanish examples. Even in the European peninsula, hot summers and mild winters with irregular rainfall have always characterized the succession of seasons. Such climatic conditions prompted the Arabs who settled there during the Middle Ages to implement engineering solutions to improve environmental conditions (the term *acequia* is derived from the Arabic *alsaqiya*). This legacy survived in the Andalusian cities after the 15th-century *Reconquista*[11] and,

9. Baltasar de Zúñiga Guzmán Sotomayor y Mendoza, 1st Duke of Arión and Marquess of Valero (1716-1722).
10. Moncada Moya 2020, pp. 13-14.
11. Moreno Olmedo 1965.

although not addressed in Renaissance treatises of the early 16th century, it became widespread throughout the New World due to its obvious effective operating convenience[12].

As a result, San Antonio's natural watercourses – such as the homonymous river, the current San Pedro Creek, and the more peripheral Alazán Creek – were augmented with numerous artificial canals (named *Acequias Madre*). These canals quickly became the principal infrastructure serving the civil and the Indigenous communities, the latter living in the missions. They were farmer-managed, requiring community activity to construct, keep clean, maintain, and apportion water for the residents' use[13].

The first component of the *acequia* system to be constructed would have been «a device to contain and direct the water into the channel, such as a diversion dam»[14]. The *Acequias Madre* would have extended from this structure. The *Acequias Madre* was also intersected by secondary distribution canals, creating a vast capillary network of collectors turning the surrounding territory into fertile farmlands. The canals' slopes had to be carefully calculated so the water would flow continuously without becoming stagnant but at a slow enough rate not to cause erosion.

A gradient of 0.5% – such as the one featured in the Espada *acequia* – was ideal for a slow and steady flow. Water flowing in such a capillary canal network could be controlled and diverted to specific fields through *compuertas* (i.e., sluice gates).

Water from the *acequias* irrigated the land, organized into *labores* (i.e., fields) large blocks of farmland. Within each *labor*, the land was further subdivided into *suertes* (i.e., lots), with the allocation of these smaller sections determined by a drawing of lots. This kind of organizational structure was common in historical agricultural communities to efficiently manage the distribution of land resources. While labores focused on private cultivation and ownership, in the Novo-Hispano land management system, the *ejidos* (or common land) aimed at promoting communal welfare and preventing land concentration. Both concepts reflect the complex interplay between communal and individual rights to land. Rules addressing water control and distribution

12. Porter 2009, pp. 31-32.
13. Rivera 1998, p. 98.
14. Cox 2005, p. 32.

were incorporated into the early laws governing all Spanish territories in the New World. Early land grants included, together with the property, irrigation rights, with a standard water allowance of two days of water, as specified in early deeds, known as a *dula*[15].

The *acequia*'s efficiency depended on the river's lushness and the rational organization of the canals to avoid unnecessary waste. In this sense, the time-honored Spanish tradition led here, as in the rest of the American possessions, to the structuring of the missionaries' settlements by successive aggregations along the course of the river, as can be seen from the geographical position of the various sites that were gradually occupied.

The smooth operation of such a landscape design and the strategic location along one of the main traffic routes towards unexplored North America favored the success of the settlement, immediately leading to the foundation in 1720 of another mission dedicated to San José y San Miguel de Aguayo[16].

The slow but steady process of cultural appropriation and transformation of a natural landscape can be better understood by comparing a 1730 cartographic map (which shows the situation of San Antonio around 1722) and a later representation of the area in 1764 (*figs*. 1-2).

In particular, the 1729-1730 plan, although not correctly proportioned, is extremely helpful in understanding the various landscape features of this early settlement. The location of the various already established communities can be seen, with the Mission of San Antonio de Valero on the east side of the San Antonio River and the first location of Mission of San José y Miguel de Aguayo at the confluence of the arroyo de San Pedro and the river. The notes clarify that the «presidio de S.[an] Antonio» was squeezed between the «Rio de San Antonio» and the «Rio de San Pedro» surrounded by «tierras aptas para lavor sacandoles riego». The *presidio* was protected on both sides by the two watercourses, which merged into one majestic river further south and could easily protect the agricultural area behind it, concretizing a productive, self-sustaining territorial organization. The southern fields seemed to be adequately protected in case of attack or siege. Also, the plots north of the *presidio* could be easily defended due to the close-by

15. Almaraz 1989, p. 15.
16. Leutenegger 1975, pp. 3-8.

presence of the military outpost. In addition, the plan shows an artificial canal built on the north of the fortress for a *lengua* (about 6 km), linking the two natural watercourses, clearly creating a line of defense against the attacks and delineating a buffer zone for the *presidio*.

The farm fields extended «para [cultivar] maiz y frigo de una lengua à cada Acequia». Thanks to their proximity to the fortress, they provided food and participated in military defense strategies. The absence of trees allowed efficient surveillance, which was very useful in that area, given the constant hostile raids conducted by both the Apache Indians and the French troops (usually coming from the east)[17].

The landscape generated by the system of the *acequias* was indeed part of the very survival of the early settlement: a relevance soon increased by the political-administrative role attributed to these canals as boundary markers between the properties.

The 1729-1730 plan was a document created to prepare for the arrival of other communities in the area. The Spanish Crown sought to increase the civilian population, a project that was finally carried out in 1731 with the arrival of settlers from the Canary Islands[18] (the first arrival dates back to 9 March of that year). The program was interrupted the following year due to the high costs involved[19].

Several valid reasons pushed for settling in San Antonio and investing in its development. In addition to the lush nature (absent elsewhere in Texas) and the safety provided by the presidio, the site was one of the main stops of *El Camino Real de los Tejas*, which linked the remote region of East Texas – where the Spaniards attempted to halt French expansion from Louisiana – with the rich Mexican center of Zacatecas, where it connected with the *Camino Real de las Provincias Internas*[20]. Furthermore, other routes moved from here toward the still unexplored California.

The Franciscan friars from the Collegio de la Santa Cruz de Queretaro used to good advantage of San Antonio's strategic location, abundance, and safety by relocating in 1731 three additional missions, which had already been established in the westernmost parts of East Texas: Mission San Francisco de los Tejas was renamed San Francisco de la Espada, while Mission San José de los Nazonis took the name

17. Velázquez 2016, p. 112. The attacks took place in 1685, 1714, and 1719.
18. Parsons 1983.
19. Serrano Alvarez 2013, p. 243.
20. Dominguez 1989.

San Juan Capistrano. Lastly, Mission Concepción, founded in 1716 near the village of the Hainai population (part of the Caddo-speaking Hasinai confederation), moved along the San Antonio River at the confluence of San Pedro Creek and the river[21].

In relocating the missions, Franciscans adopted a novel settlement strategy: rather than being erected close to Indian villages, isolated and unprotected, in the case of San Antonio, the missions were located in sites close to the main communication routes and far from indigenous settlements.

The pipeline system observed in the 1729-1730 plan, which served to develop and defend the early settlement, was therefore expanded along the river to create a chain of five Missions and the *villa* San Fernando. The interrelated settlements stretched for about 15 miles along the San Antonio River, with the implementation, in different periods, of eleven main *acequias* used by various groups of people.

The Missions' acequias

The chain of the five mission settlements grew slowly due to site-specific challenges, such as Apache attacks, constraints in finding construction materials, and the absence of specialized master masons to erect the main buildings. The 1764 plan, drafted by Luis Antonio Menchaca (1713-1793), shows the development of this system of *presidio*/*villa*/*misiones* settlements.

The 1764 map depicts both of the area's principal water sources. The San Antonio river spring, known as "Blue Hole," was drawn as a circle and had a carretera nearby; the *ojo of the arojo de San Pedro* is also clearly marked as a circle, bordered by many trees and lush vegetation. Each mission had its principal waterway, modified and extended over time according to needs.

Mission San Antonio de Valero *acequia* diverted on the east side of the river, south of its spring and approximately two miles north of the Mission's site, at a point recently identified at what is now the Witte Museum[22]. The dam, crossing the river, was a stacked stone structure

21. Early 2006, p. 89; Ivey-Fox 1999, p. 5.
22. McKenzie 2017.

and its configuration can be seen in an 1865-68 plan by city engineer Gustave Freiesleben (*fig*. 3). This acequia is considered one of the oldest acequia and its overtime implementation irrigated the most extensive farmland of the entire area.

It probably started in 1719, when Mission San Antonio was settled on the river's west bank; in 1727, Mission San Antonio had a two-and-a-half-mile-long irrigation ditch, as described by Brigadier Rivera. This earliest *acequia* is most probably the one depicted in the 1764 map: from the intake, the *acequia* ran southward, supplying farmlands – later known as *Labor de los adaisenos* – along its west banks. The *acequia* continued running southward, passing the mission's complex and rejoining the river nearby at the great bend.

The 1772 inventory, describing in detail the mission's property, provided relevant information also of the agricultural lands: this «mission has three farms, each of a league long; all three are fenced with poles, and there is plenty of irrigation by mean of deep irrigation ditch which receives water almost from the very origin of the [San Antonio] river and runs it in division throughout the area of said fields. One of the farms is presently planted of late corn»[23]. Féliz Almaráz claimed that the three *labores* of San Antonio de Valero extended north of the *plaza* along the river's east bank until the dam diverted the water into the *acequia*. Southward, the farmland ended just below the mission's complex, in an area later called *La Villita*[24].

Therefore, none of San Antonio's mission southern *labores* are depicted in the 1764 map. Evidently, the *Acequia Madre* was expanded southward only at a later time. In the last three decades of the 18th-century – traditionally considered a period of decadence – the *Acequia Madre* de Valero was expanded southward to reconnect to the river in the current King William neighborhood. In addition, on the east of the mission's compound, a compuerta de reparto was created to distribute the water of the main ditch into an eastern and a western branch. The two branches joined again into one stream. Before joining the river, the *acequia madre*'s southern branch featured additional secondary ditches, irrigating additional south-eastern fields, such as the *Labor de Afuera*, implemented in early 1792 when fourteen Caddo-speaking

23. Almaraz 1989, p. 31.
24. *Ibidem*.

Adais families moved here from east Texas. On the southeast, the *Labor de los Mochos* distributed, during secularization, to the 14 family heads and unmarried adults of the mission[25].

The maximum length of the *Acequia Madre* de Valero as depicted in later documents – such as the 1912 Rullman map – was 2,5 kilometers in length, and the other later and lateral additions extended the total length of the system to approximately 16 kilometers (including later additions)[26]. The ditches mainly were 'unlined', having a consistent size, approximately 2 meters wide with a depth of 1 to 1,5 meters. In some locations, like in the southern extension, the ditch walls could have been lined with quarried limestone blocks varying in thickness from 25 to 35 centimeters and in length from 27 to 104 centimeters[27].

The south branch of *Acequia Madre* de Valero crossed the long-established neighboring wide Concepción *Acequia* through a canoa, a hollow log, that was later replaced, likely during the mid-1800s, with a stone aqueduct[28]. There is no detailed information on the technical solutions utilized where the two acequias crossed to ensure the necessary slope for both channels.

If the southern branch of the *Acequia Madre* de Valero was created only after 1778, the *acequia* serving Mission Concepción was another of the earliest acequias. It was pre-existing in the 1731 Mission Concepción foundation, made in the 1720s for the first site of Mission San José[29]. The existing canal was a decision-making factor in selecting the Concepción mission's location, and it was immediately re-utilized when the relocated mission was established on the site. This channel began on the east side of the river, at one of its highest points, with a diversion dam hooked to a 5-acre island, later known as Bowen's island, which became rich in pecan and fruit trees, wild mustang grape vines and flowering magnolias. The 1772 Missions' inventory describes this dam – *presa* – as «completely made of stone [...] with an intake area of water that is made of stone and lime. It is five quarters high and one vara wide»[30].

25. Cox 1997. The term mochos may be an archaic, derogatory term for a common soldier (Burkholder 1976).
26. Cox 2005, p. 22.
27. Cox 1997.
28. *Ibidem*, p. 30.
29. Ivey 2018, pp. 252-253. Cf. Ivey-Fox 1999, p. 2.
30. Almaraz 1989, p. 36.

At Mission San José, the *acequia* providing water for irrigation of the fields and for the use of mission inhabitants, originated at a dam on the river south of Mission Concepción at the ford for the Mission Road crossing. The dam thrusted upstream into the river, diverting the water to the west bank. Here, a channel snaked southward in a curved path along the shallow contours of the terrace east of the road. The *acequia* was designed to irrigate only the land between the channel and the San Antonio River and thus established the limits of the mission *labores*. Just below the dam, the *acequia* divided into the *acequia media*, the middle *acequia* – branching to the east – and into the *acequia de afuera*, the outside *acequia*, continuing south on the west edge of the fields, with high efficiency of water supply to the fields north, east, and south of the mission.

As of 1764, the *acequia* had already extended south, considerably beyond the mission's compound, until the riverbank opposite the fields of San Juan Capistrano[31]. In the vicinity of the mission's compound, the *acequia* ran along the north side of the mission buildings and then in an arc around its east side. Side channels may have supplied water for the Indians and friars. Governor Jacinto de Barrios Leal y Jáuregui (fl.1751-1759) report in 1758 described a stream of flowing water and a bathing pool for each row of houses around the plaza, still unfortified[32].

The San José *Acequia* was in operation by 1724, with irrigation fields to the point that the mission produced an excess of corn. The fields slowly increased as the mission improved: in 1749, an area of about 51 acres was planted; by 1755, this had risen to about 79 acres with half a *fanega*[33] of additional fields planted. In 1757, a new section of *acequia* was cut, more than 83 meters long, and a new field of a little more than 105 acres was opened.

The excavation of the canals of Mission San Juan and Espada began in 1731, immediately following the Missions' foundations. It took some time until they became operational: the San Juan *acequia* was completed by February 1740 because of disease and frequent clashes with Apache Indians. It was built along the river's east bank, with its intake almost directly opposite the present site of Mission San José. A

31. *Ibidem*.
32. Habig 1968, p. 504.
33. A *fanega* correspond to 8.81 acres (3,5 hectars). Almaraz 1989, p. 15.

90-meter-long diversion dam was constructed of large river cobbles, hydraulic lime mortar and mixed with caliche. It projected from the west bank to direct water into the channel. The *acequia* stretched for more than 5 kilometers until reaching the mission. The 1764 map clearly shows this *acequia*'s location in relationship with the mission's compound. An additional southern branch, approximately four kilometers long, was added later, providing water for the Mission's lower labores, as large as the upper ones.

Farthest downstream was Mission San Francisco de la Espada. The *acequia* for Mission San Francisco de Espada began at a dam spanning the river midway between Missions San José and Mission San Juan, diverting water into the channel along the western side of the San Antonio River. The Espada dam is currently the last surviving and functioning of the Spanish colonial dams. It was constructed of limestone and lime mortar and arched downstream of the river flow. The Mission Espada *acequia* measures 9 kilometers from the Espada dam to its outflow into the San Antonio River. It was broken into two segments near the mission – the *acequia media*, the middle *acequia*, and the *acequia de afuera*, the outer *acequia*. Both are primarily unlined dirt ditches around 2 meters deep. Later, an eastern branch, approximately four kilometers long, was added to irrigate additional fields. At two and a half kilometers down the Espada *acequia* in the 1730s, it was necessary to construct a massive long stone masonry arched aqueduct to convey water across a natural creek – the Piedras Creek (*fig*. 5-6).

The aqueduct was described in 1772 as a conduit of lime and stone of thirty-eight varas in length (32.30 meter-long), six in height (5.18 meter-high) with a «punta de diamante» (indicating the buttress to divert water), and «dos ojos» (or arches), which allowed the creek's currents to pass[34]. The Espada aqueduct is considered the only Spanish-era surviving aqueduct in the southwest of the United States, and the Espada *acequia* is currently the most intact of all the *acequias*. They are both relevant contributing features to the UNESCO World Heritage Designation.

34. Fray Juan José Sáenz de Gumiel, *Inventory of the Mission San Antonio de Valero: 1772*, translated by Benedict Leutenegger, Austin, Texas Historical Commission, Office of the Texas State Archeologist, Special Report, 1977, vol. 23, p. 7.

The site of each of the five San Antonio missions was determined because of the adaptability of the surrounding lands to irrigation[35]. This particular hydrologic factor is quite different from mere proximity to water. Here, the primary considerations in the site choice were the proximity to the irrigable land, potential takeoff points for the irrigation system, and specific topographic features to create an adequate slope for gravity-based water channels. In addition, thanks to the long-lasting European waterways building tradition, peculiar construction and site challenges, such as crossing streams along the *acequia* path, could be easily overcome.

In addition to hydrological factors, another important consideration would have been the agricultural potential of the land to be farmed, which may have been based both on the irrigation and the naturally occurring vegetation and soils. The three upper missions, San Antonio de Valero, Concepción, and San José were surrounded by large areas of what today would be classified as "Prime Farmland", with the soil featuring an ideal combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other crops with minimum inputs of fertilizer, pesticides, and labor, and without intolerable soil erosion[36]. The *labores* of the southern two missions, San Juan and Espada, were created on land that today would be identified as "Unique Farmland", primarily appropriate for producing specific high-value food and specialty crops. The Frio clay loam of this area is noted as the most suitable for pecans. However, the lower missions' *labores* have been farmed continuously until today – for two and a half centuries – and have produced a large variety of traditional crops, with a telling effect on the successful operation of what was once the missions' land.

The construction of the *acequias* allowed the growth of San Antonio's agricultural economy. The missions housed the native converts, providing shelter from attacks and dangers. They organized as independent communities developed according to idyllic schemes such as the *Rhetorica Christiana* (1579), proposed by Diego de Valadés (1533-1582)[37] where farming was promoted through a conscious land administration.

35. Brownlee *et alii* 1959, p. 4.
36. https://efotg.sc.egov.usda.gov/references/public/VA/PrimeandUniqueFarmlands.pdf (2024-02-12).
37. Cruz Gonzalez 2018, p. 54.

Missions and civil settlements: similarities and differences

During the first half of the 18th century, San Antonio Missions' settlements appeared as unfortified *pueblos*, roughly following the Laws of Indies. Due to the continuous attacks of other Indian populations – Apaches or Comanches – all the missions' compounds were reorganized to become fortified, providing the Indigenous residents an effective defense independently from the nearby *presidio*. The 1764 Menchaca map depicted the missions' compounds as compact settlements, probably built based on the examples of Novo-Hispanic military models[38]. The Franciscans' beliefs of ideal communities informed the mission complexes' image, which had regular perimeters and were based on elementary geometries (the square and the rectangle) to organize the internal blocks and the various production activities efficiently. Some of the principal and tallest masonry buildings (such as the church and the *Convento*) were placed in proximity to the compound's walls; others – such as the granary or the neophytes' dwellings – were eventually embedded in the external walls to create a solid fortified enclosure.

The compounds' walls and corner bastions often overlooked the countryside, while church towers served as watchtowers. Featuring a monumental scale and designed following counter-reformation principles, the churches dominated the entire mission compound, performing multiple community tasks simultaneously. Churches were the places to pray, but they were also the locations where community assemblies took place and were places for refuge in case of need. Built using stone masonry construction – mostly made of different types of limestone[39] – churches and conventos also featured the implementation of masonry vaults, which also reduced the risk of fire (which was very dangerous and probable).

In 1731, the *Isleños* settled, and the progressive work in the fields began to bear fruit, providing a successful social balance. They dug communal *acequias* and built dams diverting water from the San Antonio River to irrigate their *labores*, gardens, and orchards. Upon their arrival, the *Isleños* first received the *solares* for homes and orchards around the main plaza of the community of San Fernando de Béxar and irrigated

38. Lombardi-Benincampi 2023.
39. Ewing 2008, pp. 50-54.

farmlands south of the new town between the river and the *arroyo de San Pedro*. *Vecinos* (i.e., settlers) of all backgrounds grew garden vegetables, beans, chiles, potatoes, and maize for their subsistence and later produced enough surplus maize to create a local market[40].

The typical *cuadricula* of 16th-century Spanish American foundations, with the main *plaza*'s four corners pointing to the four cardinal points, had to be adjusted in Texas to the specific peripheral condition of the region. The 1730 *Plano de la población*, drawn by Joseph de Villasenor, of the newly founded center of *Villa* San Fernando de Béxar was designed as a regular grid, devoid of fortifications (*fig*. 7). Although relevant modifications were made to this plan – the orientation and site location were changed and the blocks' layout reduced in number and location – the civil settlement continued to be unfortified throughout the 18th-century[41]. Compared to the neighboring missions, this is a surprising fact. However, if we consider the *villa*'s geographical position between the *presidio* and Mission San Antonio de Valero, it appears the crucial role played by the missions' settlements because they contributed to the protection of the area, working in synergy with the natural defense offered by the river of San Antonio.

If there was a close relationship between various settlements along the San Antonio River, conflicts could arise due to the divergent interests of the inhabitants. Self-appointed as an *élite*, the newcomers *Isleños* eventually came into conflict with the missions, demanding privileges and attention from the authorities[42]. Their overbearing attitude undermined the initially stable relations with the friars. After all, the civil population and religious orders depended on the Spanish Crown, and all were involved in the broader Christianization project the Church of Rome promoted. These frictions are confirmed by some moments of crisis, such as when in 1736, Fray Mariano Francisco de Dolores y Viana – minister in San Antonio de Valero – had the bridge across the river of San Antonio removed to prevent the soldiers stationed there and the population living in San Fernando de Béxar from reaching the mission to take part in the Eucharistic celebration[43]. The San Fernando's parish priest also complained that the tiny and dilapidated

40. Poyo 2018, p. 20.
41. Reps 1965 [1980], pp. 27-31, 34-36.
42. Poyo 1991, pp. 41-58.
43. Habig 1968 [1997], pp. 48, 272.

presidio chapel was inadequate as a town church until the governor ordered in February 1738 that a church would be built as prescribed in the Laws of the Indies on the town *plaza* of San Fernando.

By the middle of the 18th century, the political situation in San Antonio was stable. Thanks to the missionaries' efforts, the clashes between natives and European settlers had somehow diminished, and the expansion towards Colorado had slowly enshrined the Spaniards' control over the area.

In 1772, the reorganization of the northern defense of New Spain – formalized in the *Reglamento e Instruccion para los Presidios que se han de formar en la linea de frontera de la Nueva Espana* – made San Antonio de Béjar the new provincial capital of Texas, with the permanent residence of the governor. Due to the arrival of 60 families of former residents of Los Adais[44], the *Villa* population increase required additional space and a reorganization of the urban area (*fig*. 8). The 1777 new urban project of *Villa* San Fernando was proposed. The city appeared unfortified, arranged within a quadrangular perimeter to contain courtyard houses for a preset number of 100 families. Such layout followed the model of an 'enclosed city', with an unusual precinct made of rows of trees along moats surrounding the entire settlement. Also, the central plaza featured rows of trees along its four sides. Incorporating public 'green' belts into the urban design was an innovative strategy since the Novo-Hispanic city lacked public 'green' infrastructures until the second half of the 18 century[45].

The interest in the presence of the green axis within the urban core grew with the conception of the public space as a place for leisure, social interaction, and place-making.

If in Europe the street was conceived as an expansion of the dwelling, becoming par excellence the public space, beyond the Atlantic such a public role was given, in the 16th century, to the central *plaza*, based on the guidelines provided by the 1575 Laws of Indies[46]. The church dominated the central *plaza*, featuring the city's main institutional buildings. The central square had the specific role of fulfilling political and cultural representation goals and being the physical and symbolic core of the surrounding built and rural environment. A

44. Early, 2004, p. 104.
45. Reps 1976 [1979], p. 6; Mattos-Cardena 2004, p. 81.
46. *Ibidem*.

shared, public, open space was one of the primary elements for the ideological construction of a civil settlement, and it was also present in the missions, as certified by the capillas apiertas. However, while the rigid Spanish urban layout, based on the mandatory Laws of Indies, had very little modification, in the missions, the space for the community was considerably modified overtime in an attempt of synthesis or a search for syncretism aimed not so much at domination but at the coexistence of different cultures.

The settlements' articulated organization of the 18th-century cultural landscape of San Antonio was shaped by its role as a military outpost. Like in the rest of the Ibero-American regions, such as the late 18th-century Californian settlements, the *pueblos*, *presidios*, and *misiónes* were the critical elements of the territorial government in San Antonio, this system becomes profoundly interconnected and interdependent, framing a unique model of hybridization[47]. Initially, Franciscan utopian ideals shaped the missions' landscape as autonomous and autarchic communities. Over time, the missions' urban design, due to the continuous raids of belligerent Indians, moved away from the models of the laws of the Indies and was based on the hybridization between humanist ideas and European military treatises.

The *villa*, *presidio*, and *misiónes* of San Antonio became an integrated continuum to define a high-performing network[48]. Their interdependent relationship is confirmed by the Baroque architectural transformations the missions undertook in the middle of the 18th century. The linear design imposed by warlike reasons, with specific defensive needs, was combined with the models of medieval abbeys, conceived as independent centers, obviously updated according to the customs of that time. The urban space characterizing the city was also applied in the mission layout, establishing their unique identity that, on one side, led the Spaniards to understand the missions and their role; on the other side, the missions showed the natives a European living environment. During the 17th century, ideas regarding the importance of urban space in modeling the behavior of citizens and recognizing a link between social customs and house form had become prominent in urban design texts

47. Ettinger 2007, p. 161.
48. Poyo 2018, p. 16.

in Spain[49]. Without suggesting a direct influence of these texts on the architectural layout of the missions, it would seem fair to assert that these ideas were an underlying factor in the imposition of a newly built order[50].

However, the rich decoration of the façades of the San Antonio Missions' churches and the design quality of the layout do not seem to be found in the *Villa* de San Fernando. General pauperism imposed by the economic difficulties probably limited the local grandeur of the *villa* and its more representative buildings, such as the 'Governor palace'. Instead, in Missions' settlements, the emphasis on the Indigenous people's catechesis produced churches with a monumental scale and rich and articulated iconography. Missions, in fact, were dedicated to «infidelium conversioni, ac omnium animarum saluti, & Sanctae Romanae, & Universalis Ecclesiae dilatationi, ubique indefesse insereviatur»[51]. These were the ideas expressed in the *Breve Sacrosancti apostolatus officium* promulgated by Pope Innocent XI Odescalchi (1676-1689) in the spring of 1682: an act with which the pontiff authorized the Franciscans to open a new «seminariorum, seu Collegiorum hujusmodi» in the Spanish overseas viceroyalties[52]. Through the papal Congregation of Propaganda Fide, the Catholic church directly implemented a capillary action in the catechization process at a global scale[53]. In New Spain (Mexico), the Colegio Apostólico de Propaganda Fide de la Santa Cruz de Santiago de Querétaro was founded by the Alcantarine fathers of the Franciscan Order in 1683 as the first papal headquarters in the Americas[54]. From here, the Franciscan friars moved toward the Spanish Crown's northern domains to evangelize those uncontaminated territories, such as Texas and California. In San Antonio, four missions were under the care of the Quereteran friars. Another important college was also founded in 1704 under the auspices of the one of Querétaro, the Colegio de Propaganda Fide de Nuestra Señora de Guadalupe de Zacatecas, which was the one in charge of Mission San José y Miguel de Aguayo.

49. Fraile 1997, pp. 26, 57, 117.
50. Ettinger 2007, p. 182.
51. Perusini 1752, p. 273.
52. Leutenegger 1979, p. 11.
53. Mattos-Cardenas 2004, p. 81.
54. Rubial Garcia-Escandon 2012, p. 1017.

The missions conceived as «haciendas»

In her Ph.D. thesis, *The Indians of the San Antonio Missions, 1718-1821* (1980), Meredith Keithly Schuetz culled information to vividly describe daily life in the missions, analyzing the missions' social structure. Her work was expanded by a government report, *Historical and Cultural Landscape Study of the San Antonio Missions* (1982), in which various authors address essential topics associated with the material culture. Among these are the availability of archival materials, the environmental ecology, agricultural methods, the economy of the missions, and Indian tools and artifacts[55]. The analysis of such documentation reveals the territories' careful governance implemented by the Franciscans.

Missionaries and the indigenous population were bound by the system of *encomienda*. The king charged the trustees or *encomenderos*. As a condition of their grant, Franciscan missionaries – as *encomenderos* – had to provide «protection, conversion, and civilization» for the natives who owned the land.

The San Antonio missions, although fortified with a clear defensive role[56], at the same time functioned as real *haciendas*. *Haciendas* were, first of all, self-sufficient production units, producing all the foods needed for its operation, together with the commercial items: agricultural products as well as meat and dairy products to feed its residents/workers; draft and pack animals for farm labor and transport, and the production of leather, wool, sebum, wood, and charcoal for supplying all necessities of the community[57].

The high-performance functionalization of the settlements, advocated by the friars, was therefore implemented not only through a representative architecture and in the education of the converts but also in the management and implementation of economically competitive, resilient, self-sufficient, and eventually wealthy communities: idyllic communities reflecting the Franciscan monastic utopia, which was constantly present in the evangelization of the New World[58].

Successful agriculture was essential to the success of a mission, especially in a hot-humid climate like the one in South Texas. In the

55. Hinojosa 1990, p. 9.
56. Lombardi-Benincampi 2023b.
57. Habig 1968 [1997], p. 50.
58. Lara 2004, p. 57.

San Antonio missions' farmlands, the documented abundant production of corn, potatoes, beans, chiles, and – to a lesser extent – other crops testifies to a thorough organization of the agricultural output aimed both at satisfying the needs of the residents' varied, healthy, and complete diet and to produce the surplus that could have been sold or traded[59]. Agricultural success depended on the indigenous population's acquired knowledge, skill, and labor.

In 1722, it was noted that sugarcane could be grown in Texas if the frost was not too early[60]. In the missions, sugarcane was therefore grown to become one of the major crops at Mission San José[61] as a result of the creation of a new section of *acequia* in 1757, where two tablas (about 21 acres) of sugar cane were planted, using 106 long rows of cane.

Sugar was grown and treated on-site. Governor Barrios y Jauregui noted the presence of a sugar mill at Mission San José, which Fray Marmolejo described in 1755. The sugar production was carried out in a sugar mill, a jacal 15 varas long and 6½ varas wide (12,5 meters long and 5,5 meters wide), with a thatched roof made of tulle or native cane; the site of the jacal has not been determined. Inside was wooden machinery for crushing the cane, three cauldrons for boiling the syrup, and a trough for conducting the syrup from the mill to the vats. The sugar mill and boilers in use in the 1750s continued operation until 1794 at an unknown location.

The 1794 *Ymbentario*, drafted by Fray Manuel Muñoz on occasion of Mission San José partial secularization, provides another detailed description of the sugar industry operation and tools: «Un dicho [molino] en corriente para moler cafta. Un fondo de metal con peso de trese arrobas nueve libras con payla de cal y canto para cocer el caldo de la cafta de Castilla para hacer piloncillo. Un perol grande de cobre para lo mismo con peso de seis arrobas, seis libras. Quinientas y cinquenta y quatro formas para piloncillos. Se entregaron y recibieron dos cientos siete mil ciento ochenta y seis caftas de castilla en ciento ochenta y seis surcos que ocupan quatro tablas»[62].

59. Report Historical and Cultural Landscape Study of the San Antonio Missions (https://digital.utsa.edu/digital/collection/p15125coll10/id/10901).
60. James & Juarez 1995, p. 11.
61. Solís 1767 [1931], p. 50.
62. Habig-Leutenegger 1981.

The presence of 554 wood moldings for making piloncillo and the large amount of sugar cane in the site demonstrates that its large production had to go beyond the community's needs. Piloncillo (also called panela, rapadura, or chanaca in other regions of Latin America) was a conical-shaped brown sugar "cube" of approximately 200 grams in weight and with a smoky caramelly and deep dark flavor. Like in other regions of 18th-century New Spain, sugarcane byproducts, such as the piloncillo and the liqueur aguardiente, were some of the major products – together with cattle – that were able to gain acommercial value, to be integrated into the local and extra-regional trading circuits. Also, corn, beans, and cotton (row and manufactured) were highly used as commercial products; instead, other products, such as garden fruits and vegetables, eggs, or chickens, were eventually used for smaller-scale commerce or barter.

Corn harvest and other grain were stored in the missions' granaries. Granaries are, therefore, architectural types that embody communities' connection with their agricultural landscapes. Their function as a location for food storage makes them the most important structures for sustaining life on a mission.

Each of the San Antonio missions had a rectangular-plan granary built in stone masonry – eventually vaulted like Mission San José's case. Their location to the settlements was wisely chosen, using the layout of European monasteries as a reference. In the case of early granaries, like the ones of Mission San Antonio de Valero or Mission Concepción, the granary was built as a part of the convento compound, eventually located in the monastery's second courtyard, which was dedicated to craftsmanship and production. Later, the granaries were placed along the external walls of the missions' compounds and also had a defensive purpose, like in the case of Mission Espada and Mission San José.

The 'enlargement' of the granary at Mission San José reveals the crucial role of efficient management of the territories, as well as how the directions to plant wheat together with corn, given in 1777 by Theodoro de Coix, was immediately translated into a renovation of the associated infrastructure: at San José, the renovation of the 'storage' of the community wealth was carried out to guarantee better conservation and refining of the diversified agricultural products. In

response to another order of the Viceroy issued in 1779 to establish wheat farming at all the missions, wheat cultivation was extensively introduced in 1789. Most of the San Antonio Missions built flour mills[63].

At Mission San José a grist mill was mentioned for the first time in the 1794 inventory written by Father Muñoz: «un molina para moler trigo en corriente con la falta de una cortina» (i.e., a water-powered mill to grind wheat, lacking a curtain) whose remains were found during an excavation in 1934.

In addition, the documented presence of fruit trees in the *huertas* close to the Missions' compounds certifies the search for a balance between the Americas' food traditions and the European ones and showcases some of the ingredients embodying a *mestizaje gastronómico*: a complex integration, which intertwined the customs of Texas indigenous people, two-centuries of Novo-Hispanic agricultural know-how and cuisine as well as newly imported European technical knowledge and worldview.

Cotton was grown in missions' fields and the Missions' flock of sheep provided wool. Rural life, agricultural production, and the successions of seasons marked the time and the activities of the indigenous communities of the Missions.

Indigenous people had to embrace a different conception of connection with the land, introduced by the Franciscan friars, that required intensive labor in the farmlands and the *rancherias*. The harvesting of farmland products and the agricultural seasonal cycle were seen by the religious as an act of the manifestation of God. Thus, religious buildings played another key role in the life of these newly funded Novo-Hispanic communities: More specifically, the solar alignments identified within the churches of the Missions' compounds could also be connected to a specific desire to measure time, both associated with the liturgical time and with the seasonal cycle of the year – tied to agricultural production, essential to the survival of a neo-agricultural society. Religious ancestral local practices tied with the worship of the Sun, the Cristian Easter rebirth, and nature's Spring revival were intertwined in developing the Missions' holistic vision[64].

63. James & Juarez, pp. 2-23. Cf. Habig 1968 [1997], p. 100.
64. Lombardi-Benincampi 2020; Lombardi-Benincampi 2021.

Products original of the Americas	Sowing period	Harvest period	Products introduced by the Europeans	Sowing period	Harvest period
Corn	May	From August to December	Wheat (from the late 18th century		June-July
Pumpkin (calabaza)			Rice		
Chile		From August to September	Olive		
Beans	Fall-Winter Season Cycle: September Spring-Summer Cycle: June	Fall-Winter Season Cycle: December Spring-Summer Cycle: August-September	Lentils		
Potatoes	March	September	Lima Beams		
Avocado			Chickpeas/Garbanzo		
Peanuts			Oatmeal		
Pecan			Coffee		
Cocoa*			Cherry		
Pineapple			Cucumber		
			Peaches (1500s)		June - July
Tobacco			Apple		
Tomatoes			Oranges		
Vanilla			Lemon		
			Pears		
			Banana		
			Melon		
			Sugarcane	May-June	End of October
			Cabbage		
			Vine		
			Onion		
			Garlic		
			Zaffron		
			Cotton	March-April	August-December
Turkeys			Beef		
			Chicken		
			Pork		
			Horses		

Whereas the farmlands supplied the Missions' settlements, locally created manufacturing activities provided the needed work tools for farming, triggering positive, virtuous production circles to lead to autarkic, autonomous, and, eventually, prosperous communities.

In addition, all missions needed sitios de ganado mayor to raise livestock, such as cattle, horses, donkeys, and mules[65]. Eventually, other farm animals – like hogs, sheep, and goats were also raised. The *rancherías* – or *ranchos* – were developed at a greater distance. These small, isolated clusters of houses, similar *haciendas* – for instance, in their layout – developed in central New Spain around agricultural production and animal husbandry[66]. Each Mission's land included, at a greater distance, other types of rural settlements, such as the *ranche-*

65. Almaraz 1989, p. 15.
66. Ettinger 2007, pp. 16, 171.

rias, which were directly managed by the Indigenous people. *Rancherias*, which, together with the farmlands, were composed of primarily landed estates or latifundium under the control of the Missions. The interconnection between Rancho de Atascoso and San José Mission or between Rancho de las Cabras and Espada Mission fully exemplifies such center/periphery relationship, reproducing in the Americas the European traditional dialectic città/contado (city/countryside), a synergic link of mutual dependence.

Fray Gaspár José de Solís visited the Rancho de Atascoso in 1768; he counted ten droves of mares, four droves of asses, thirty sets of harnesses, 1,500 cattle, 5,000 sheep and goats, and all the necessary farming implements, such as plowshares, hoes, axes, and bars[67]. The 1745 visit of Fray Francisco Xavier Ortiz described the pastureland of Mission San Antonio de Valero as a big ranch east and north of the Mission, with about 2,300 head of cattle, 1,317 sheep, and 304 goats[68].

The 1772 inventory of Mission San Antonio de Valero describes its *rancho* – 'La Mora' – located 18 or 20 leagues from the *pueblo* (settlement). The *rancho*'s structures consisted of three stone houses of sufficient size with good wooden roofs for every comfort, but also the rancho counted about 4,000/5,000 cattle. Also, other cattle were pastured closer to the missions for weekly supply[69].

Mission Conception's associated *rancho* was called 'El Pasthle' (*Paistle*) and was located 12 leagues (50 kilometers) in an easterly direction, probably near present-day Seguin. The 1772 inventor reported that this *rancho* had houses made of stone that were abandoned in 1767 due to attacks by hostile Indians who took all the horses. Francisco Sanchez reported that in 1767, the *rancho* had 1,200 cattle. Of paramount importance to the livestock industry of several missions was the Rancho Monte Galvan, from which the Franciscan received «weekly rations of meat from two or three heads of cattle» Mission Concepciòn, Mission San Antonio de Valero, and Mission San Juan Capistrano shared rights on this *rancho*. This ranch had «a spacious corral made of pole fencing. Next to Monte Galban, there is another corral»[70].

67. https://www.tshaonline.org/handbook/entries/rancho-del-atascoso (2024-02-12).
68. Habig 1968, p. 50.
69. Almaraz 1989, p. 31.
70. Leutenegger 1976.

The Missions' cultural landscape as a critical driver for heritage protection and promotion

The historic landscape features of San Antonio became, during the 20th century, a fundamental reference for developing a conservation awareness, debate, and methodological process, specifically addressing what was called the 'Spanish' heritage. The conservation debate stemmed initially from the interest in preserving iconic places associated with the War of Independence of Texas (1835-1836). It soon shifted to include other Novo-Hispanic sites, in which buildings were only one of the components of a broader cultural landscape.

The water infrastructure of the *acequias*, although mostly progressively dismantled during the 19th century, continued to be considered one of the reasons for San Antonio being a «charming place», with «clear crystal spring, with rising in volume from unknown, mysterious depths, deep translucent pools and bubbling brooks, a swirling river of pure living waters and the arborous accompaniments of foliage»[71]. The 1890 Corner guidebook devoted a whole chapter to the 'Acequias or Ditches", with the author making the case that San Antonio owed its very existence to the correct estimate that early settlers put upon the value of the valley's water and their quick appreciation of the facilities for its distribution.

The *acequias* systems of San Antonio de Valero and Concepción Missions, the first to be built, were the first to be severely affected and progressively dismantled, starting from the transitional period between Spanish sovereignty and Mexican independence, due to the urban expansion and the political decisions made by the city council. The location and condition of Concepción presa were considered, in the development of the urban center of San Antonio, a potential cause of floods when recurrent rain storms occurred. The pastor of San Fernando Cathedral also proposed its removal[72].

In the area, only Mission Espada and Mission San Juan *acequias* system remained active over time, used to irrigate its fertile farmlands. The Espada *acequia* operated regularly until the 1880s, when it fell idle. A few years later, in 1895, the water rights owners along the Espada ditch organized a private company to exploit the irrigation po-

71. Corner 1890, p. 41.
72. Almaraz 1989, p. 36.

tential of the old *acequia*. In order to do so a first restoration initiative of the *acequia* was carried out: they cleaned, widened, and deepened the ditch, repaired the diversion dam, and changed the canal's course. At the end of the last century, farmers in the Espada system were so fortunate to be able to grow an average of one bale of cotton per acre. In addition, truck farmers raised various vegetables «in the greatest profusion» on Espada lands from early spring until the first frost[73].

In the 1920s, interests in the city's cultural heritage coalesced into the San Antonio Conservation Society. The Society was founded in 1924 by thirteen women, led by the charismatic Emily Edwards (1888-1980)[74]. The Society's contribution was pivotal in raising awareness and promoting the historical and cultural significance of the Novo-Hispanic Cultural Landscape. The missions were considered significant for their foundational role in interweaving indigenous and European cultures and developing the unique cultural landscape of San Antonio. Its most impactful legacies are the various initiatives to safeguard the 18th-century remains of the Spanish missions and their landscape, rediscovering also and interpreting agricultural and material culture. Pivotal was the purchase and 'restoration' of a dilapidated vaulted stone masonry building at Mission San José that once served as the mission's granary. The granary restoration, carried out by the architect Harvey Paul Smith (1889-1964), was followed by the reconstruction of the San José Indian Quarters and the San José Grist Mill, whose physical evidences were lost over time.

The memory of the grist mill was lost over time, mentioned only in the 1794 inventory drafted on the occasion of the mission's partial secularization. The reservoir was accidentally found in 1934 during the cleaning of the nearby *acequia*. The whole structure was excavated, and findings included enough elements – such as the stone-lined plastered cistern and the mill race – to allow its reconstruction[75]. The efforts of the architect Harvey Smith and the engineer Ernst Schuchard, together with other craftspeople, with the economic support of the Colonial Dames of America, the Pioneer Flour Mills, and other benefactors culminated in its reconstruction sometime in 1937.

73. Taylor 1902, p. 54.
74. Even today, The Conservation Society of San Antonio still aims to promote the protection of the city's heritage by supporting preservation and restoration initiatives and research projects and being actively engaged in the community.
75. Fisher 2016.

The granary restoration was the first of many projects that opened the stage for creating the first State Historical Park in Texas: Mission San José State Park was inaugurated in 1941, a few years after the 1935 Historic Site Act.

The National Historic Sites Act was first introduced in the House of Representatives by the Texas Democratic Congressman Fontaine Maury Maverick (1895-1954), a native of San Antonio. Maury's paternal grandparent was Samuel Maverick (1803-1870), one of the signers of the Texas Declaration of Independence (1836). Maury was, therefore, a strong proponent of the political, historical, and cultural significance of the sites associated with the major battles of Texas independence – such as the famed battle of the Alamo (1836) – and the San Antonio missions, in general. Politically, he showed his engagement in emphasizing the significance of the historic sites of the country's West, associated with Spanish colonization, to counterbalance the preservation of Anglo-Saxon and Eastern architectural heritage, which was already widespread in the nation. Therefore, the conservation of San Antonio's Spanish heritage was critical to proudly place Texas in the larger discussion of the nation's cultural roots. Preventing the collapse of individual monuments was not enough since the context and its 'atmosphere' were also significant aspects of these sites. Immediately after the enactment of the Historic Sites Act, Maverick formally pushed for the nomination of the San José Mission as a National Historic Site. Mission San José was the first permanent National Park Service area established in Texas and was one of ten national historic sites in the country[76].

The San Antonio Conservation Society shifted in the 1950s to actively protect the environment of the Missions' farmlands and water infrastructures. Already in 1937, the Society purchased a 0,6 hectares strip of land that contained the 200-year-old arched stone masonry aqueduct that carried water to San Francisco de la Espada Mission[77]. A few years later, in 1957, the Society acquired 10 hectares of pecan bottomland near the acequia of Mission San Juan Capistrano to preserve the area's environment by commercial development. The San Antonio River channelization started in 1954, involving 50 kilometers of the

76. James & Juarez 1995.

77. https://www.saconservation.org/who-we-are-2/saved-properties/#1519420107429-288d566d-56d0 (2024-02-12).

San Antonio River to protect the area from continuous flooding. Such infrastructural work altered the relationship between land and humans, wiping out the traditional river ecological system, among which the acequias dams. The Society therefore joined local landowners in filing a water rights and water flow lawsuit against the San Antonio River Authority. The suit was won in 1962, resulting in a restructuring of the floodgates to maintain the river's water flowing into the San Juan Acequia[78]. The Acequia Park was established, including former farmlands of San Juan, and Espada and, in 1966, its aqueduct was designated a National Historic Landmark. The Acequia Park was one of the major areas included in the San Antonio Missions National Historical Park, created in 1978 by the United States Congress. The National Park Service, since 1983, is managing the Park, which includes the four lower missions and part of their acequia and farmlands[79].

In the city, instead, various fragments of obliterated acequias, buried in its urban fabric, were found since the 1930s, eventually sparking limited restorations or larger investigations80. The 1966 National Historic Preservation Act marked an important paradigm shift in heritage conservation and interpretation for the 'physical evidence'[81] of San Antonio's historic water infrastructure that shaped its cultural landscape. The mandatory archaeological evaluation of all federally funded projects, prescribed by the 1966 Act, is a critical tool for uncovering and preserving forgotten tracts of *acequias*.

During the 1968 construction of Hemisfair Park, a branch of the Alamo *Acequia Madre* was uncovered, rebuilt, and designated a historic landmark, on the occasion of the 250th anniversary of the city's founding. The San Antonio Acequia system was also declared a National Historic Civil Engineering Landmark, thanks to the initiative of the local branch of the American Society of Civil Engineers.

To conclude, eight of the eleven *acequias* built in the territory of San Antonio disappeared, embedded in the city's urban form[82]. The others are now part of the San Antonio Mission National Historical Park[83] and

78. https://www.saconservation.org/who-we-are-2/saved-properties/#1512332836088-f7b6b264-68ae1ef5-68470d98-c949 (2024-02-12).
79. Thurber *et alii* 1993, p. 331.
80. Cox 2005, p. 72-75.
81. Brandi 1963, p. 9.
82. Cox 2005, p. 18.
83. Kitchens 2017, pp. 174, 176, 190.

are contributing components of UNESCO World Heritage Sites. The National Park Service, in charge of the management of the Park, continues to develop protection action and restoration of the irrigation ditch system to this day.

Conclusions

Mission settlements introduced Western civilization customs and technologies to uncontaminated lands already inhabited by indigenous groups. The San Antonio missions promoted the development of agriculture and introduced indigenous people to European cultivation practices. This resulted in an irreversible transformation of the cultural landscape of the region. It is still debated if missions' endeavors pursued effective cultural interweaving, respectfully responding to the place's environmental conditions and integrating local pre-existing practices. It is doubtless that the San Antonio Missions represented a driving force for the formation of the place's cultural identity, as it is today. The historic landscape included *misiones*, *presidio,* and *villa*, and the rural landscape was one of the main components. Such a landscape was made of farmlands, irrigated by artificial canals – the *acequias* – and the *rancherias*.

Currently, the historic urban landscape of San Antonio is still shaped by the different and complex physical and cultural factors established during the Novo-Hispanic period, when the agricultural irrigation system of the *acequias* and the organizing function of the river played a major role in the settlements' layout.

The city's urban areas along the San Antonio River – from the area that includes Brackenridge Park toward the North to the southern part of the city until the Mission of San Francisco de la Espada – still preserve important and widespread traces of the Novo-Hispanic period. In the more densely built urban core, these traces are not only famed historic landmarks, such as the Alamo – included in the UNESCO World Heritage site list –, the Spanish governor's palace (1722), and the local cathedral of San Fernando (1738-1750), but also the unique characteristic morphology of the city blocks and the street patterns. The study of urban morphology interprets the city as a 'palimpsest',

identifying how the agricultural landscape patterns and the 18 century blocks of the *Villa* San Fernando are still embedded in the built fabric. Urban morphology study is also a critical tool for the development of management plans as appropriate technical tools and regulatory frameworks, inspired by urban conservation principles, in line with UNESCO guidelines.

In the southern part of the city, Mission Espada and San Juan still preserve highly intact their associated Novo-Hispanic *acequias*' landscape forms. The land use, however, changed over time, with a change of ownership and agricultural productivity. Here, functional vernacular structures that historically served rural communities, such as granaries or mills, are highly contributing components to the local material culture, historic food production, and culinary tradition. They should all be considered as an unicum with the surrounding landscape. Here, a process of rediscovery and interpretation of the historic land use and ancestral practices could help the reconnection of the people of today with the people that in the past inhabited these places.

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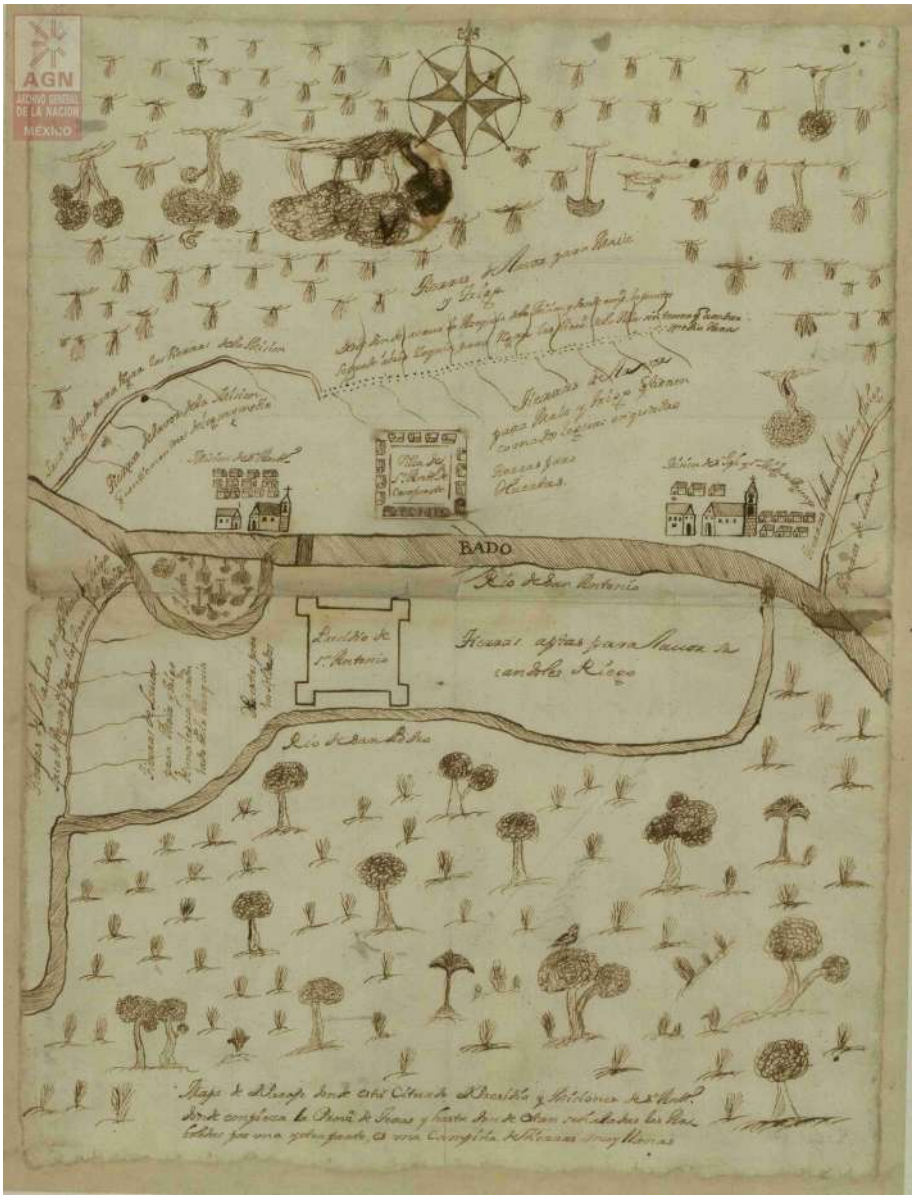

Fig. 1 – Marques de San Miguel de Aguayo, Map of the place where the presidio and the Missions of San Antonio are located, where the Province of Texas begins and here the trees are marked on both sides, and it is a countryside of very flat lands*, 1730 (Archivo General de la Nacion, Mexico, Provincias Internas, volume 236). At the Map far left, the* acequias *for the new* presidio *and the Mission San Antonio de Valero are shown. They watered farmlands on both sides and had helped the fence of the sites.*

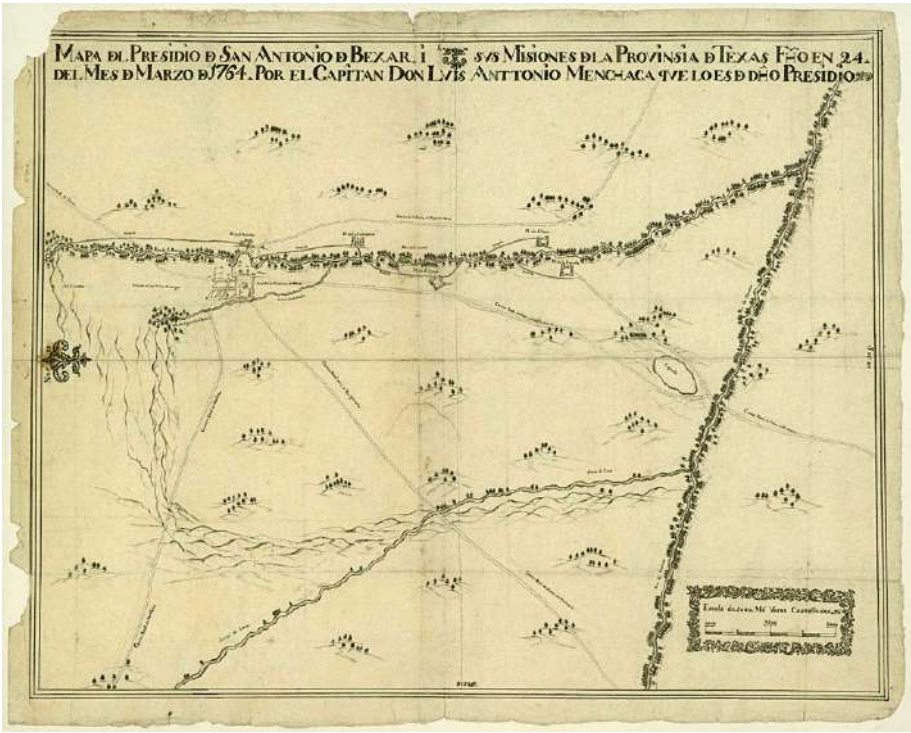

Fig. 2 – Luis Antonio Mechaca, Map of the presidio de San Antonio de Bexar, its Missions of the province of Texas*, 1764 (© Carter Brown Museum). This document is extremely important to understand the 18th-century land use. The* acequias *serving the five Missions are clearly marked together with both the springs of the San Antonio river and San Pedro Creek.*

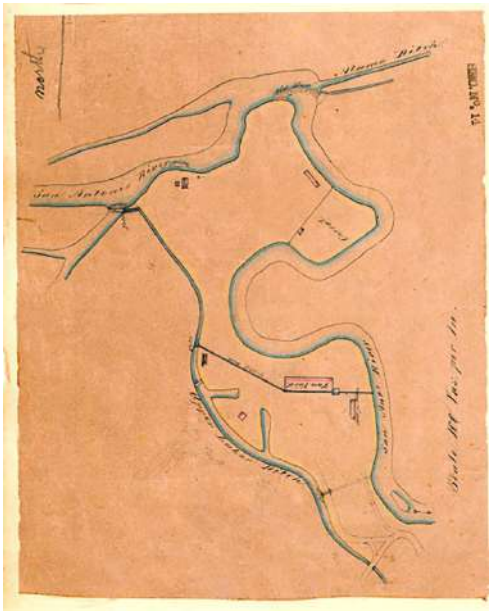

Fig. 3 – Map by Gustave Freisleben, 1867 (Image courtesy of City Engineer's Office, City of San Antonio, Texas, Municipal Archives 1865-1868 Confederate Tannery Sketch Map). On the drawing's top right the curved dam structure of Mission San Antonio de Valero Acequia Madre *is clearly depicted. It is also shown the city's* labor de arriba *with its dam and its* saca de agua*.*

Fig. 4a – San Antonio (Texas), Remnants of a stone compuerta*, or sluicegate, in a functioning* acequia *at mission San Francisco de la Espada (photo, 2024).*
Fig. 4b – San Antonio (Texas), Reconstructed compuerta*, or sluicegate, near mission San Juan (photo, 2024). Reconstruction was made using contemporary materials such as reinforced concrete and metal.*

Fig. 5a – San Antonio (Texas), Functioning acequia *at mission San Franciesco de la Espada (photo, 2024).The overgrown acequia is flanked by a small road reflecting a traditional land use pattern.*
Fig. 5b – San Antonio (Texas), Restored acequia *at mission San Juan along a bike trail part of the recently San Antonio river ecosystem restoration project (photo, 2024).*

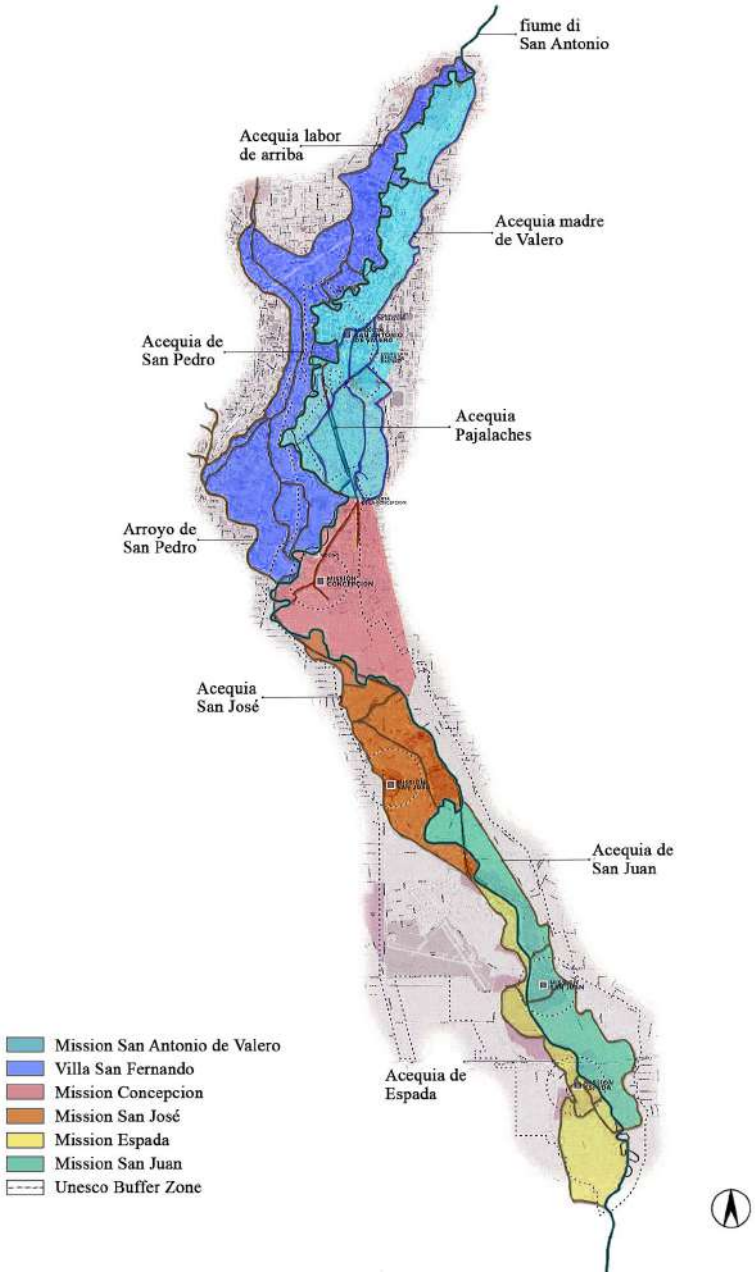

Fig. 6 – San Antonio (Texas), territorial organization just prior the 1794 secularization. Highlighted in different colors are the farmlands of each mission and the ones of Villa *San Fernando (Authors' elaboration).*

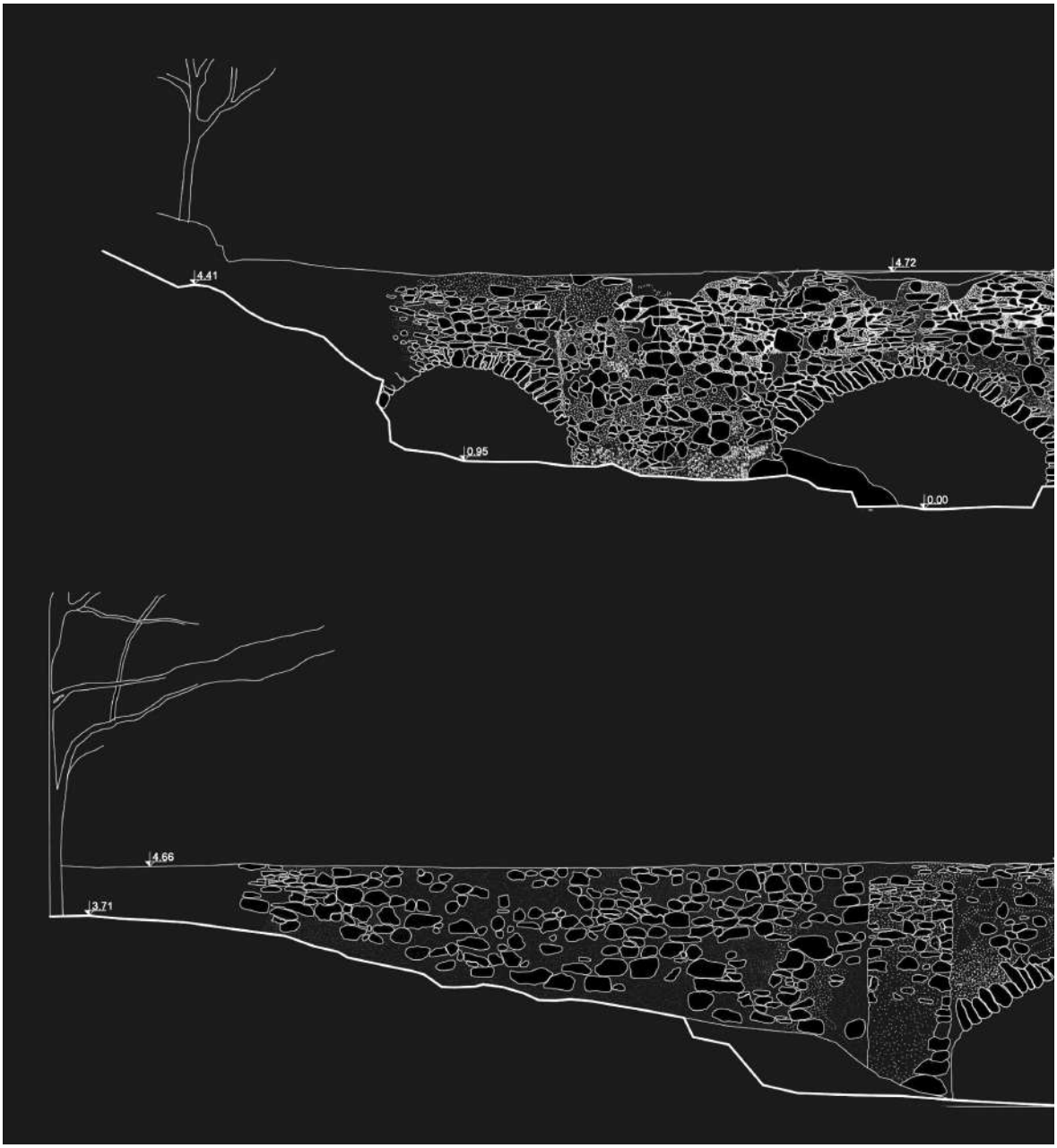

Fig. 6 – North and South elevations of the stone masonry arched Espada aqueduct in San Antonio (Texas). The acqueduct allowed the crossing of the Espada acequia *with the natural water feature of Piedras creek (drawing by Ydnechachew Maru's master thesis, 2021).*

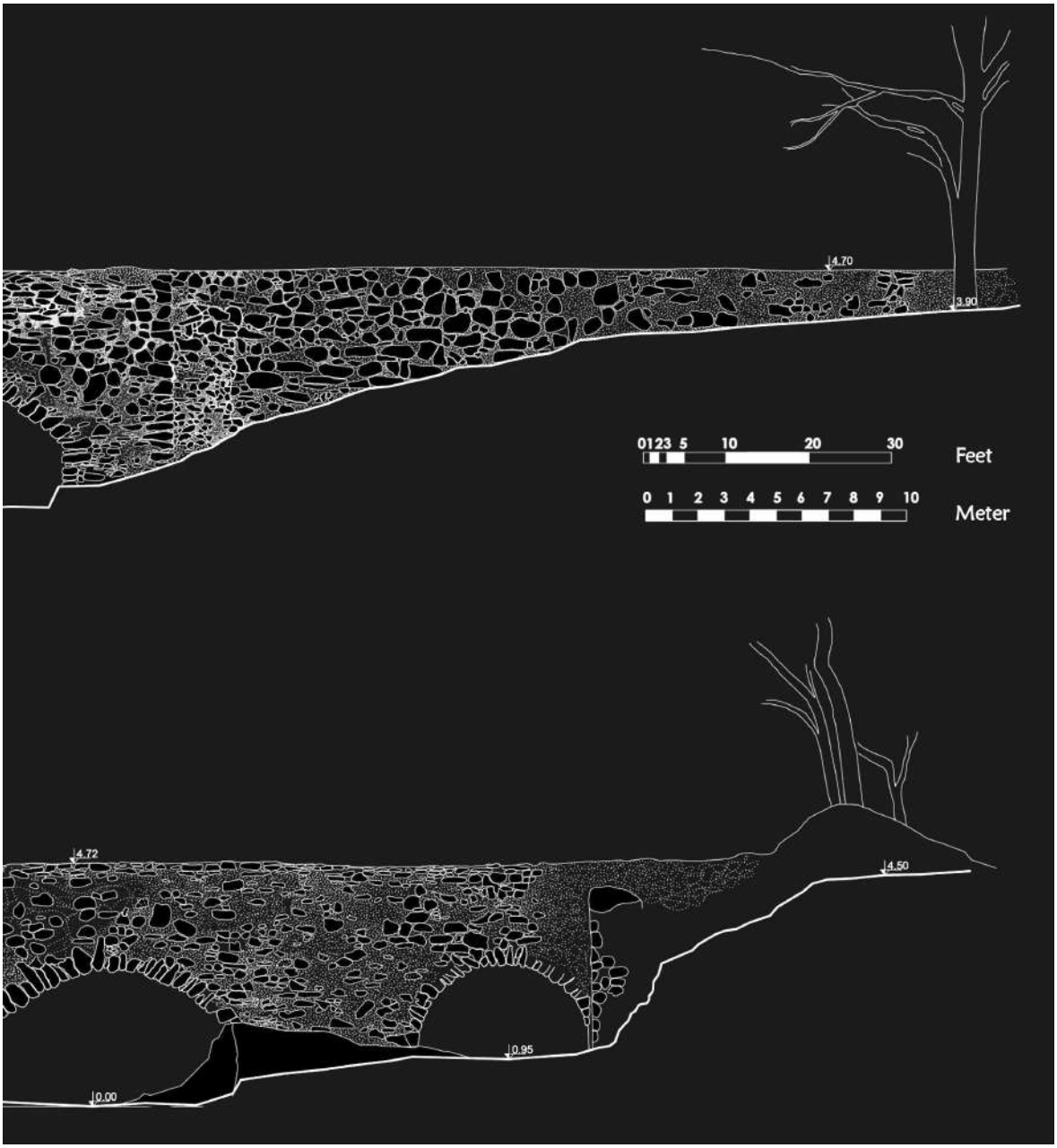
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Fig. 7 – San Antonio (Texas), Mission Espada Aqueduct at the end of 19th century, photograph of Ernst Wilhelm Raba (SACS Library, San Antonio, TX). The aqueduct was described in 1772 as a conduit of lime and stone of thirty-eight varas in length, six in height with a «punta de diamante» (indicating the buttress to divert water), and «dos ojos» (or arches), which allowed the creek's currents to pass.

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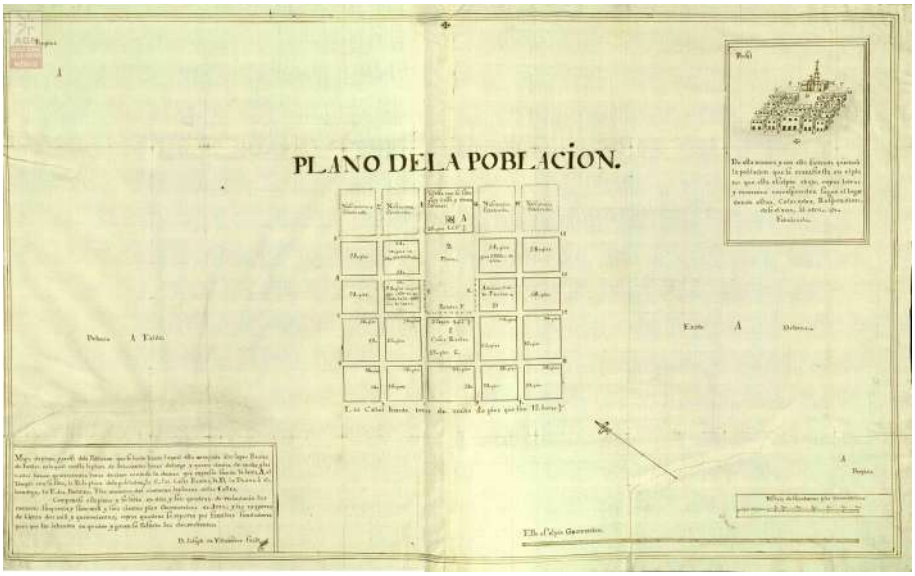
Fig. 8 – Joseph de Villasenor, Map of the plan and 3D profile of the settlement of the Villa San Fernando which had to be built according to the Royal Laws of Indies*, 1730 (Archivo General de la Nacion, Mexico, Provincias Internas, volume 326).*

Fig. 9 – Symmetric settlement of San Antonio (Texas) surrounded by trees and a ditch, 1777. The innovative plan, oddly featuring urban green elements, included one hundred houses with their own patios. In the central plaza *the Casas Reales was located on the opposite side of the Church (Reps 1965 [1980]).*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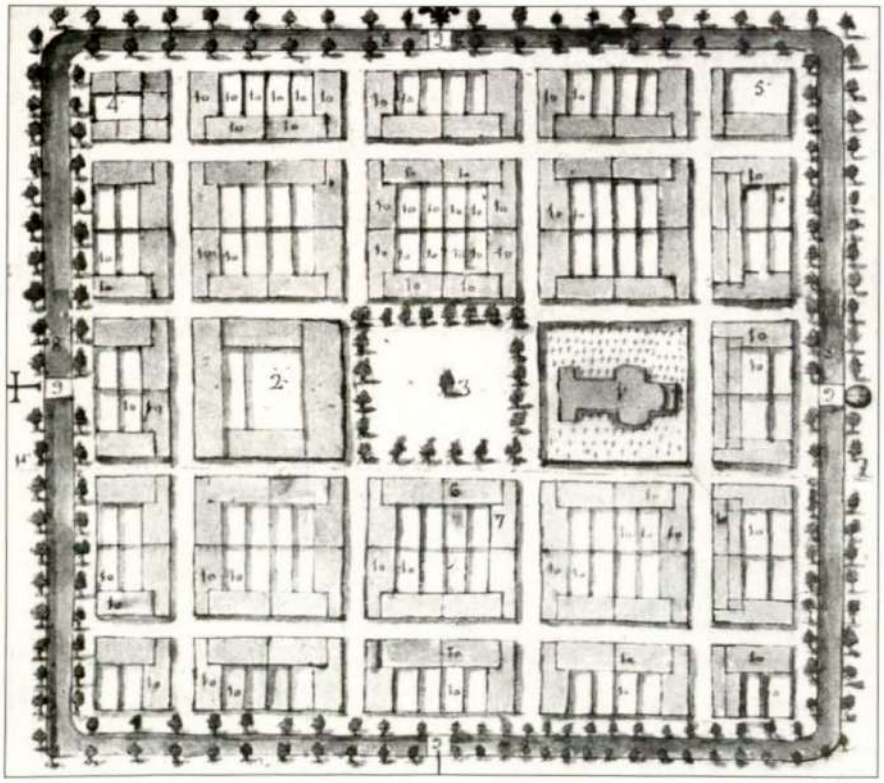

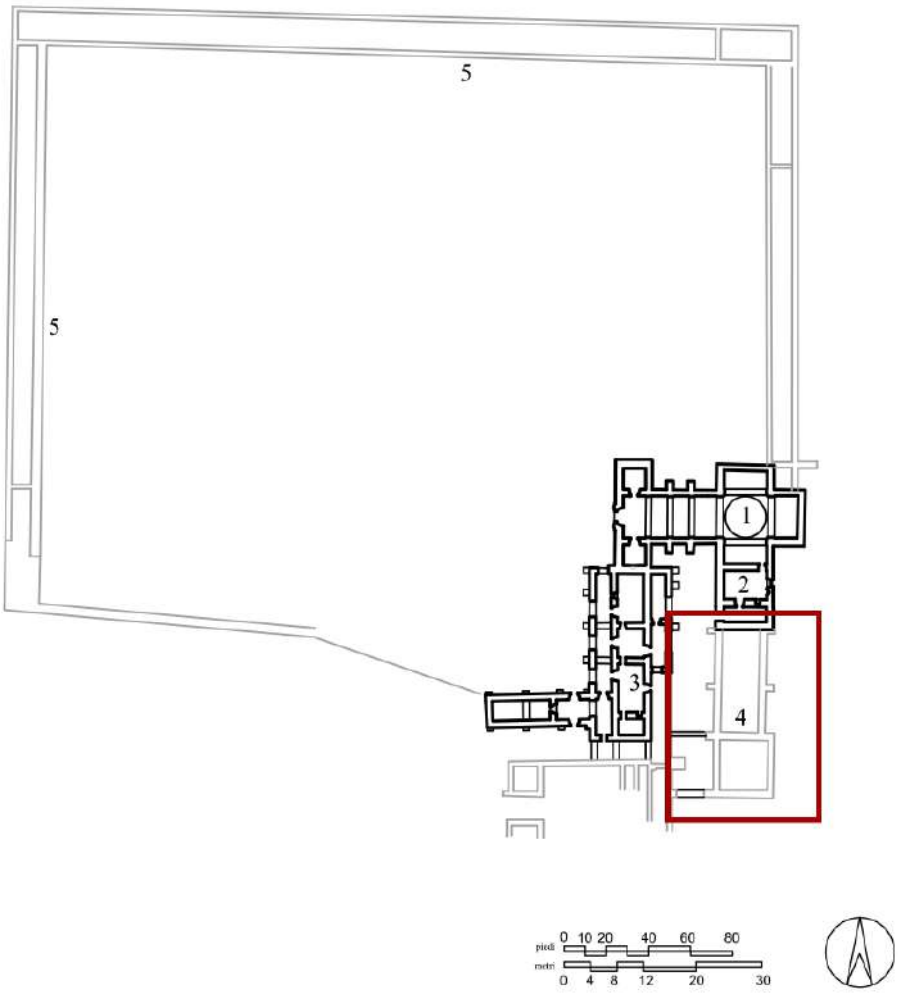

Fig. 10 – Plan of Mission de la Purissima Concepción de Acuna (San Antonio, Texas, US). The granary (marked in red) was conceived as a part of the Convento*. 1. Church; 2 . Sacristy; 3. Convent; 4. Foundation walls of constructions no longer existing; 5. hypothetical Mission wall.*

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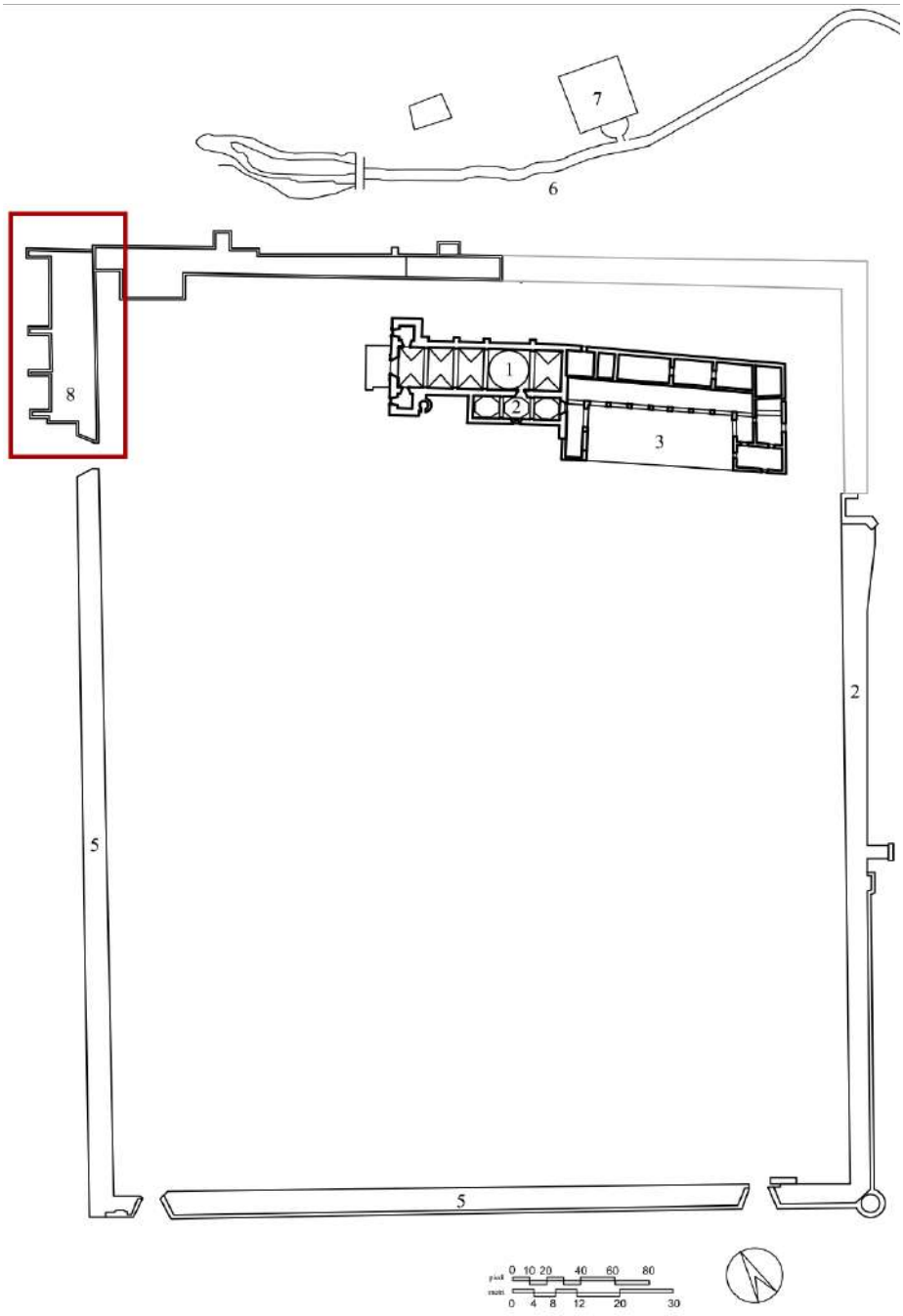
Fig. 11 – Plan of Mission San José y Miguel de Aguayo (San Antonio, Texas, US). The granary (marked in red) was part of the compound walls, its roof was therefore used as a defensive outpost. 1. Church; 2 . Sacristy; 3. Convent; 4. Gate; 5. Mission walls with local houses leaning against the walled enclosure; 6. Acequia; 7. Mill; 8. Granary.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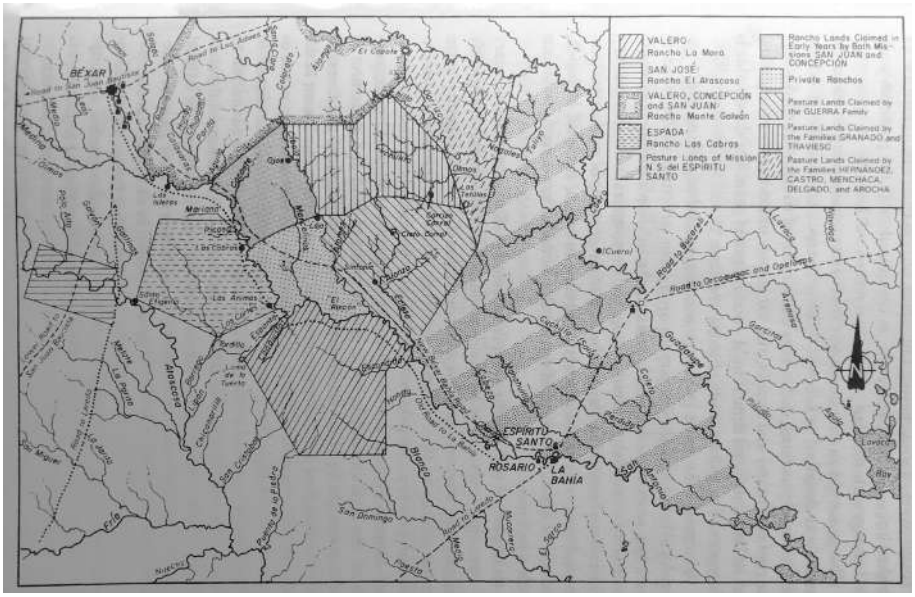

Fig. 12 – Map of the 18th-century rancherias *associated with the Texas missions (Alamaraz 1989).*

Fig. 13 – A section of the Acequia Madre *of Mission San Antonio de Valero behind the Irish flats located on the north Alamo street of San Antonio, 1938 (UTSA library).*

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New porticoed streets for ancient Istanbul
Innovation and historicism in eighteenth-century Ottoman urban culture

Alper Metin[1]

Abstract: *This paper analyzes the emergence of new porticoed commercial arteries in the Ottoman capital starting from that of the Damad İbrahim Paşa complex. Precisely around 1720s, Istanbul became a laboratory for new architectural and urban ideas, thanks to both internal dynamics of the empire and to the intensification of the interactions with foreign cultures. More directly than ever, the architecture of the city started dialoguing with remote sources, exponentially enriching its formal and typological vocabulary. The present study tries to explore the background of this urban novelty with a fresh look, taking in consideration all the factors which rendered eighteenth-century Istanbul a unique crossroad of people, cultures, and ideas. Interactions with Western Europe, the conquest of new territories in the Aegean, and the possible role of the local Ottoman and pre-Ottoman references are thoroughly discussed to depict a complex a panorama which spans over seven decades, till the completion of the Mihrişah Valide Sultan Complex in 1801.*

Keywords: *porticated arteries, Damad İbrahim Paşa Complex, colonnaded streets.*

Much has been said about the traditional fabric of the Ottoman city, presenting its apparent lack of rigid geometric rules in dichotomy with the Western European urban planning principles of the Early Modern Era. If the Renaissance city ideal represented the culmination of the urge for rationalization, with its clear geometric layouts and attentive hierarchical and proportional relations between the parts[2], the Ottoman counterpart was often seen as a rather unplanned and spontaneous organism, especially in its residential areas. Certainly, in some of the ambitious public enterprises of the rulers or high-ranking personalities related to the imperial power, orthogonal layout was largely used, such as in the complexes of Bayezid II in Edirne (1484-1488) and Çoban

1. Department of the Arts, University of Bologna (alper.metin2@unibo.it).
2. These ideals could not always materialize but they nevertheless left a solid mark on the urban culture of the period. The literature on the Renaissance city is very ample. See, inter alia, Calabi 2001, which concisely synthetizes the subject and highlights its more relevant aspects.

Mustafa Paşa in Gebze (around 1522-1524)[3]. However, these enclosed and inward oriented complexes remained strongly self-centered, relating only partially with the surroundings with a few access points. Therefore, they are to be considered as vast architectural projects rather than reflections of a crystalized urban idea.

Few and quite well-known exceptions in the capital Ḳosṭanṭīnīye (today Istanbul)[4], such as the complexes built by Mehmed II (initiated in 1463) and Suleiman I (1550-1557)[5] manifested an evident desire for better established geometric rules between the single buildings and the urban structure surrounding them. In these cases, even though the complex remained quite self-referential, hints of an intent of unitary idealism with the immediate urban context can be found. In the first example, between the madrasas proper and the preparatory schools (*tetimme medresesi*) facing them were shaped long and perfectly rectilinear streets. Since these educational buildings were not surrounded by enclosing walls (differently from the mosque, the hospital, and the guesthouse), the streets among them displayed a public character rather than that of an internal path to the complex. However, both the madrasas and the preparatory schools were introverted buildings with austere elevations. Moreover, the madrasas had their entrance from the outer courtyard of the mosque located at the opposite edge. Thus, these streets were rather secondary, and did not display major differences from those between the enclosing walls of the mosque and the hospital. The buildings flanking them do not really take advantage of this urban situation and seem almost ignoring their existence. The situation is similar (if not more evident) in the complex of Suleiman I (*fig*. 1). Moreover, in all these cases, a remarkable divergence from the Western sphere emerges also in typological choices: till the very end of the eighteenth century, Ottomans did not adopt rectilinear arteries for residential purposes[6].

3. On the former, see Necipoğlu 2005, pp. 94-95 and Kuban 2007, pp. 197-200; while on the latter Necipoğlu 2005, pp. 53-54 and Kuban 2007, pp. 234-236.
4. On the Ottomanization of the city after 1453: Kuban 1996, pp. 198-286. On our period of interest more specifically: Cerasi 1988, Cerasi 2008.
5. Both complexes are among the most studied Ottoman works of all times. The former is better known as Fatih (the conqueror) complex, while the complex of Suleiman I is known as Süleymaniye. For a concise yet exhaustive analysis, see Kuban 2007, pp. 177-180 on the former, and *ibidem*, pp. 277-294 and Necipoğlu 2005, pp. 205-222 on the latter.
6. An attempt of comparison between the rectinilear arteries in the Western and Ottoman contexts can be found in Wolf 2011.

In conclusion, even though introducing a rectilinear grill to the otherwise irregular urban fabric, these streets can in any way be compared to the arteries of the Antiquity nor to those of the Renaissance.

Direklerarası: the turning point of a gradual change

We need to wait till the end of the so-called Tulip Age to find the earliest rectilinear Ottoman artery in the capital to display a strongly intentional character, excluding obviously the Roman (and later Byzantine) *Mese*, which after 1453 became *Divanyolu* largely keeping its original functions[7]. Born as *Çārşū-ı Cedīd* (New Market) and quickly came to be known as *Direklerarası*, this new throughfare of the city was inaugurated in 1728-1729 as the commercial component of the Damad İbrahim Paşa Complex (whose remaining parts were already in use from 1720-1721)[8]. In contrast with traditional caravanserais, inns, and bazaars, which were frequently included in this kind of philanthropic complexes to generate revenue, *Direklerarası* was nothing but a double-porticoed street (*fig*. 2). Its forms, as we shall see, were both novel and familiar to its users. The name itself, entered in use shortly after its inauguration, literally meaning "between the columns", is particularly significant to understand its immediate reception and appropriation by the dwellers of the city.

Before this example, commercial buildings of the philanthropic complexes were monolithic volumes, further articulated with the introduction of a central courtyard in the most luxurious examples[9]. Moreover, whether with or without a courtyard, they remained as introverted structures, like the madrasas we have mentioned. Thus, both functional and visual contacts with the exterior public space were limited. In this case, however, the building seems split in half becoming two independent volumes which flank a rectilinear public street. Therefore, the external perimeters, which once constituted the image of an austere building, tend to disappear, leaving visible only what used to be an internal part, the arcades.

7. On this street and the continuity of its use and prestige during the Ottoman period: Cerasi 2005.
8. Studies on this complex are surprisingly limited (Eyice 1993; Kuban 1993; Tosun 1994; all encyclopedia entries) and its relevance in the Ottoman urban history seems never fully appreciated. A recent study on its social aspects is Tunç Yaşar 2023, from which I reported the original naming (p. 125).
9. For an overview: Kuban 2007, pp. 393-406; Cezar 1985, pp. 17-38.

Each volume was made of a regular row of shops preceded by a continuous portico, in a fully modular composition (*fig*. 3). If we look from a larger perspective, we can recognize that contrarily to Romans or Byzantines, Ottomans built autonomous porticoes only around enclosed spaces with well-defined architectural functions, such as the courtyards leading into mosques, and did not make use of similar arrangements for framing transitional urban spaces, whether linear or not. Ottomans did not surround their squares with porticoes, either. For instance, neither the Hippodrome (*At Meydānı* in Ottoman Turkish) nor the large space surrounding the Tophane Pier, which have been persistently kept as squares (or at least as void spaces within the intense urban fabric) underwent operations like those of Piazza San Marco in Venice or Place des Vosges in Paris[10]. Therefore, even though the portico was a deeply rooted element in the Ottoman tradition, its use was quite strictly codified and did not include such urban applications.

An architectural type frequently used especially during fifteenth and sixteenth centuries, the *ārāsta* (today rendered as *arasta* in Turkish)[11], was an elongated bazaar usually consisting of two opposite rows of shops. However, except two well-known examples, these were covered buildings like inns and caravanserais, and did not generate a public urban space. Among all Ottoman buildings, the ones which may have offered the closest references to Direklerarası are certainly the *arastas* of the complexes of Sokollu Mehmed Paşa (*fig*. 4) in Lüleburgaz (completed in 1570) and that of the Sultan Ahmed (Blue) Mosque in Istanbul (1617)[12]. In both cases, an open-air street is created, which generates a similar urban situation.

Notwithstanding, thanks to its architectural features, Direklerarası results even more strongly intentional compared to its sixteenth-century predecessor. If the *arasta* of Lüleburgaz is formed mostly by shops which are addorsed to other structures (hammam and madrasa

10. Calabi proposes the Byzantine forum as the origin of these porticoed quadrilateral squares, which became a leitmotiv of the Renaissance city. Other than those already mentioned, we can remind the Piazza Ducale of Vigevano (1492-1494), and the Plaza Mayor of Madrid (starting from 1590). See Calabi 2001, pp. 46-61.
11. Kuban 2007, p. 398.
12. Necipoğlu 2005, pp. 348-355; Kuban 2007, pp. 399-400; Wolf 2011, pp. 239-241. In this latter study the author compares the *arasta* with two other examples built by the same patron (in Payas and Aleppo). However, these are covered buildings, like many others around the empire, thus it does not seem very convenient to put them in relation from the point of view of the urban morphology.

in the southern section and caravanserais in the northern one), in *Direklerarası* this situation only applies to the first seven shops of the northern row adjoining the remaining structures of the complex. In other words, taking into consideration the Sultan Ahmed experience, *Direklerarası* shaped predominantly by free-standing rows of shops which were manifestly thought for an urban purpose, rather than enriching the edges of other buildings with the insertion of shops. From the opposite part of the Damad İbrahim Paşa complex; the southern row of shops neighbored the premises of the janissary barracks known as *Eski Odalar* ("Old Chambers")[13], with which it could not have any permeability for obvious reasons. Moreover, the *arastas* of Lüleburgaz and Sultan Ahmed did not feature porticoes, which were with no doubt the most characteristic element of *Direklerarası*. Thus, even though the eighteenth-century project may be conceptually influenced by these precursors, in terms of architectural configuration it clearly differs from them. In conclusion, these factors put together allow us to speak of a gradual evolution of an Ottoman idea of rectilinear artery in which *Direklerarası* represents the purest and the most crystalized example prior to the bold introduction of the Western European urbanism criteria into the imperial capital during the sultanates of Selim III (1789-1807) and Mahmud II (1808-1839).

If there were not perfectly matching Ottoman predecessors, which models the architects of *Direklerarası* may have been looking at? For answering this question, we are obliged to consider the complex architectural and urban dynamics of the city at the beginning of the eighteenth century. With the return of the court to Istanbul in 1703, after a long absence in which the sultans resided in the imperial palace of Edirne, the city has gained a new momentum in both architectural patronage and urban development. The increasing search for a fresh architectural and decorative language, strengthened by the urban ambitions of the patrons who desired a new self-affirmation both on the local and the global stage, led to an extraordinarily prolific century. Inaugurating first the so-called Tulip Age, and starting from 1740s, what today is usually referred to as the Ottoman Baro-

13. On the history of this building: Sunar 2015.

que[14], the architects of the capital have profoundly renovated their forms and expertise coming from multiple sources. The main source of novelty seems to have been the West (see below), even though especially at the initial stage the intercultural traffic with Persianate and Mughal East was also not neglectable[15]. Moreover, the West is to be understood a cultural sphere rather than geographical designation, territories politically belonging to the Sublime Port but carrying an Italian artistic background such as Crete, Peloponnese and Chios played a pivotal role. To this bidirectional opening of horizons, we also need to add a more intimate and retrospective (yet not less interesting) inner look of the Ottomans to the legacy of their own core lands, such as Greek, Roman, Byzantine but also Seljuk and Anatolian *beylik* heritages. For the purposes of this essay, the reconsideration especially of the pre-Islamic local heritage will be an interesting component of our reflection[16].

Possible references: at home, abroad or in between?

How 'local' could be the origins of *Direklerarası*? As Kuban has already pointed out, the portico itself (*revāḳ*) was among those elements which the Ottomans inherited from Late Antique and Byzantine structures which they permanently used, restored, and transformed[17]. Nevertheless, in this observation Kuban refers more precisely to those which preceded structures of prestige, such as the case with mosques starting from the fourteenth century (see for example the imaret-mosque of Orhan Bey in Bursa, 1339-1340)[18]. As frequently observed in architectural history, this new element, which must have first appeared for formal reasons, quickly gained a secondary

14. Numerous studies have been conducted on these periods. For the most recent ones: Kuban 2007, pp. 499-570; Hamadeh 2008; Rüstem 2019; Metin 2022a. On more specifically urban aspects: Cerasi 1988; Hamadeh 2007; Kuban 1996, pp. 336-362.
15. Important aspects of the contacts with Iran, Central Asia and Mughal India have been highlighted in various points of Hamadeh 2008 (see for example pp. 85-86 and pp. 199-200).
16. I have started working on this vast subject with a conference paper entitled *Precursing the novel, recalling the bygone: material and ideal presence of the past in 18th-century Istanbul constructions*, to be published in late 2024 (Brill Publisers).
17. Kuban 2007, pp. 124, 128-129, 165. See also Ögel-Ağır 2005, which offers an interesting comparative lecture on loggias/ porticoes around the Mediterranean.
18. *Ibidem*, pp. 83-85.

significance endowing it also with a functional role. When preceding a mosque, these porticoes are more specifically called *son cemā'at maḫfili* / *maḥalli*, which translates as "space for latecomers"[19]. Who arrives late should ideally stay at the portico so as not to disturb the prayer (*namāz*) that has already begun. However, the formal purposes were certainly stronger (and perhaps more valid), since throughout the inventive sixteenth century this element was introduced for ennobling also other architectural types. For instance, in 1556 Sinan added an elegant portico to the public bathhouse in front of Hagia Sophia, commissioned by Hürrem Sultan (known as Roxelana in Western languages)[20].

Shortly before the conquest of Constantinople, the Üç Şerefeli Mosque in Edirne (1438-1447)[21] already featured a courtyard with a four-sided portico (came to be known as *avli* or *avlu*, borrowed from Greek *αυλή*, which also gave *aula* to Latin). The kinship of this new architectural configuration with Late-Antique and Byzantine atrium / *quadriporticus* (which in turn derived from earlier forms of peristyle of the *domus*) is rather self-evident[22]. However, the origin of the idea of a porticoed public street is not as easy to pinpoint as that of a single *revāḳ* or a four-sided *avlu* for multiple reasons. The first one is chronological. The single portico reminiscent of the church narthexes appeared already in the initial phase of the Ottoman civilization when the center of cultural gravity was between Iznik (Nicaea) and Bursa (Prusa)[23]. On the other hand, the emergence of the four-sided *avlu* corresponds to the shift of the imperial references to more Western territories including Edirne (Adrianople), the Balkan peninsula and more importantly Istanbul (Constantinople)[24]. Contrarily to those, *Direklerarası* was born centuries later, when the Ottoman artistic and architectural norms crystalized between the three imperial capitals (with their respective pre-Ottoman references) witnessed a slowdown of new citations throughout the seventeenth century.

19. Metin 2022a, p. 44. For a concise look at the relationships between the early Ottoman architectural culture and the local Byzantine heritage: Ousterhout 1995.
20. Kuban 2007, pp. 346-347.
21. A detailed analysis of the mosque and its courtyard can be found in Kuban 2007, pp. 143-148.
22. An emblematic building which kept intact its atrium till our day is the Hagia Eirene Church in Istanbul.
23. An overview of the Late-Antique and Byzantine Iznik can be found in Concina 2003, pp. 139-145. The Turkification process of Iznik is analyzed in Tanyeli 2021 pp. 242-246. On Bursa: Tanyeli 2021 pp. 230-235. A joint analysis of Bursa and Iznik in Early Ottoman architectural and urban culture is Kuban 2007, pp. 68-71.
24. On Edirne: Tanyeli 2021 pp. 235-242 and Kuban 2007, pp. 71-73.

Certainly, Ottomans inhabited several Greco-Roman cities with streets flanked by columns or porticoes[25], among which Ephesus (once called Ayasuluk, today Efes/Selçuk) might be the best example (*fig*. 5)[26]. Also the Levant area was rich in significant cases such as Antioch (Antakya) and Palmyra (Tedmür, modern-day Syria)[27]. Istanbul itself had a porticated street which flanked the Forum of Theodosius and was concluded by the monumental triumphal arch of the same emperor[28]. By the time of the Ottoman conquest, any of these porticoes was in integral state. In some cases, they might have been still recognizable[29]; however, we can not speak of a continuity in use like in many other architectural types or urban configurations. This is a key point: we do not possess sufficient evidence to claim that Ottomans had studied the Antiquities via fragments in archeological state, as it was a common endeavor in Renaissance Italy. They certainly acknowledged and appreciated the grandeur of the monuments they inherited, and clearly learnt from those, but not necessarily from the examples which were not anymore inhabitable. While Sinan was emulating Hagia Sophia or the Roman aqueducts, these were still in use and in good conditions. However, such was not the case with the Greco-Roman porticated streets, which already lost their architectural integrity and functional consistency long time be-

25. A recent publication explored the history of the street in the Western context in much detail (Tartakowsky 2022), on the Antiquity see part I. A detailed discussion about the urban environment that Turks have found upon their arrival in Anatolia is Tanyeli 2021 pp. 59-82. An interesting study focusing precisely on the afterlife of the porticated streets following the fall of the Roman Empire is Dey 2015, pp. 65-126. Less coherent appears the comparison with ancient stoas as proposed in Tunç Yaşar 2023, because of explicit differences in urban morphology.
26. After a long Byzantine stage, Ephesus belonged to the *beylik* (emirate) of Aydın between 1304 and 1425, becoming Ottoman thereafter. Thus, Ottomans found a city which has already been controlled, inhabited, and modified by Turks for over a century. See Foss 1979 (on the *beylik* and Ottoman stage, pp. 141-180); Concina 2003, pp. 96-102 (on the Byzantine modification of the Late-Antique city); Tanyeli 2021 pp. 198-203.
27. Numerous studies have been conducted on the area and its porticoed streets by Catherine Saliou, see Saliou 1996 in particular on Palmyra. The mid-eighteenth-century drawings by Giovanni Borra in Dawkins-Woods 1753 show Palmyra and its porticoes in a perfect state and thus are to be considered mostly as restitution rather than survey drawings. The accompanying text clearly states how they were defaced. On Antioch and its intersecting porticoed streets: Concina 2003, pp. 50-52. Moreover, Cerasi reminds the case of Anjar, however it seems less pertinent because of the scarce relevance of the region under the Sublime Porte.
28. On the porticoes of Byzantium / Constantinople: Kuban 1996, pp. 43-44; Mango 2001. For an overview of the Byzantine Constantinople; Kuban 1996, pp. 149-188; Concina 2003, pp. 3-46. More specifically on the afterlife of the colonnaded street of the city: Dey 2015, pp. 77-84.
29. For instance, in Aleppo the colonnaded street was enclosed with walls becoming part of the *souq* (market) of the Islamic city.

fore the shaping of the Ottoman civilization. On the other hand, both architects and patrons were certainly keen to preserve the practice of spoliation also throughout the eighteenth century, for example the Nuruosmaniye Mosque's porticoed courtyard was built (1748-1755) with shafts coming from Pergamon (Bergama)[30]. Notwithstanding, the material spoliation did not necessarily bring along the importation of architectural or urban ideas, neither in the Ottoman context nor in any other society.

If the idea of a porticated street stemmed from local sources, the closest possibility might be the core areas of the bazaars, which in most cases was nothing else but the exponential expansion of a street with shops facing each other. By roofing this street an *arasta* was obtained, before finally evolving into much complex urban-scale buildings (*bedesten*) or building ensembles (*çarşı*)[31]. The peculiar (and in most cases multilayered) structure of the *çarşı* was distinctively Ottoman, and it marked the main core of the city more than any other architectural or urban work (*fig*. 6). In newly annexed territories similar market areas shaped either following intentional plans and commissions either quite spontaneously, but the results somehow always fitted in recognizable patterns and the city gained an Ottoman *çarşı*. However, this genesis process took place much before than the emergence of *Direklerarası*, most examples of Ottoman *arasta*, *bedesten*, and *çarşı* dating to previous stages, especially to fifteenth and sixteenth centuries. It is hard to claim that an Ottoman architect could have eyewitnessed the gradual flourishing of a *çarşı* starting from an initial core similar to a porticoed street already in the seventeenth century. With no doubt Ottoman market areas continuously grew and got transformed to meet new demands also in the following centuries, so the dimensions kept increasing, but this does not seem to have conducted to more specific reflections on the origins we have just analyzed. In other words, we do not possess any evidence to claim that a local architect could have 'skinned' these intricate architectural and urban complexes to ideally extract the initial core to be taken as a reference for *Direklerarası*.

30. Rüstem 2019, pp. 122, 152, 201. A register taken during the construction of the complex gives detailed account of from which points of the empire the materials and the builders were provided.
31. Kuban 2007, pp. 393-406 (especially 395-398). A detailed study on the evolution of the Ottoman çarşı and its relevance within the urban dynamics is Cezar 1985 (pp. 57-90). More specifically on the eighteenth-century developments: Cerasi 1988.

We might conclude that even though the Ottomans frequently found themselves in comparable architectural and urban situations, the idea of *Direklerarası* could difficultly be an extrapolation or abstraction of already familiar forms and building habits. Nor it can be readily accepted as a sign of archeological erudition, since we have enough information on how Ottomans viewed the ruins of the cities of the Classical past (differently than the buildings which were still in use) till the very end of the eighteenth century[32].

Multiple faces of the "West"

Which could have therefore been the origins of this novelty? Given the political dynamics of the period, we might immediately think of the abundance of possible Western models, such as the double-porticoed streets of North-Eastern Italy. In cities like Bologna, Padova (*fig*. 7), Vicenza and Treviso, the historical urban fabric is recognizably rich in porticoes (around 40 kilometers of portico can be found only in the medieval areas of Bologna)[33]. In these places – where the Ottomans were surely present for numerous reasons, mainly commerce – cases in which two porticoes face each other defining a public street are quite common. More unlikely is a link with (fewer and les consistent) French examples such as Louhans in Burgundy, even though France and the Ottoman Empire where strictly tied commercial and political partners.

If the roots of *Direklerarası* are to be searched in Western Europe, Venice with many *sotopòrteghi* flanking her channels and *calli* must be considered the most presumable point of contact. The bazaar of the Damad İbrahim Paşa Complex strongly reminds the porticoes of the goldsmiths' street Ruga dei Oresi (or Ruga degli Orefici, Italianized version), a throughfare not far from Fontego dei Turchi (Turks' Inn) which connects the Rialto Bridge with the hectic market area of the

32. In Eldem 2011 is offered an interesting panorama, where the author analyzes how the «blissful indifference» of the Ottoman authorities towards the ruins of the Antiquity started changing only starting from around 1812 (pp. 281-295). The situation for the patrons of architecture was no different. The witness of Western European engravings and travelers' descriptions are also quite eloquent on the subject and confirm Eldem's thesis.

33. A publication centered around the peculiarity of Bologna's porticoes but with an attempt of contextualizing them in the Italian and European panorama is Bocchi-Smurra 2015 (on Bologna: pp. 11-36). On Padova, whose central area is equally relevant: Maretto 1987.

lagoon (*fig*. 8). Here, like in Istanbul, two rectilinear volumes whose main feature is the portico were added (and in a certain sense imposed) to a rather irregular urban fabric, as inserts giving geometric order and monumentality to the market area after the devastating fire of 1514. The Southern building is the Drapperia (drapery), while the Northern one is part of the Fabbriche Vecchie by Scarpagnino[34]. Given the centuries-old exchanges between Venice and Istanbul, Ruga dei Oresi was certainly well known to the wealthiest Ottomans. Among its customers were many statesmen; for instance, as early as the in the sixteenth century, the lavish four-crown helmet of Suleiman the Magnificent (1532) was made by Rialto craftsmen, presumably here in Ruga dei Oresi[35]. Furthermore, it must be underscored that the complex of the grand vizier was the first major urban work to be built after the Peace of Passarowitz (1718) which finally ended the centuries-long Ottoman-Venetian wars inaugurating a new season of cultural and diplomatic exchange between the two powers.

Within the Venetian context, this nomenclature was also significant and interesting per se, since *ruga* (which shares the same late-Latin etymology with *rue* in French) is a *calle* flanked by contiguous buildings, which in most cases hosted shops at least at the ground floors[36]. This need for further specification in naming, in a city like Venice where the commerce was vital in every age, must have stemmed from similar sociolinguistic processes which led the Istanbulites to coin the peculiar name of *Direklerarası*. As this naming also suggests, dwellers of the Ottoman capital certainly acknowledged the novelty of this urban operation. If in Western Europe, after the opening of Via Giulia in Rome (starting from 1508) the creation of new rectilinear and ample streets had become a characteristic feature of the Early Modern urban culture, the Ottomans seems to have continued their urban habits based on architectural complexes till the eighteenth century. Thus, *Direklerarası* constituted a radical turning point since for the first time the boundaries of the previous *modus operandi* got decisively eroded.

34. Calabi-Morachiello 1987, pp. 61-78. A few decades later, Sansovino completed the architectural and urban development of the market area with the addition of the Fabbriche Nuove (1553-1555). *Ibidem*, pp. 142-159.
35. On this helmet: Necipoğlu 2005, pp. 27-28; Necipoğlu 2019, pp. 129-131.
36. Boerio 1826, p. 515. Initially *ruga* seems to have been a synonym of *calle*, witnessing by time a semantic narrowing. Other significant examples are Ruga dei Spezieri (of spice merchants) and Rugagiuffa (where Armenians from Julfa traded).

We do not know who the architect was or who may have ideated the porticated street. Allak reports the name of a certain Ebubekir[37]; however, there is no further information about either who he was or his hypothetical role in the design of the complex. Pamukciyan, on the other hand, lists the complex among the works of the Ottoman-Armenian architect Araboğlu Hacı Melidon Kalfa, born in Kayseri[38]. Kuban suggests, based on the well-known bibliophilia of the patron, that it may have been the grand vizier himself, inspired by a Western book, who ordered it in such features[39]. However, to be taken in consideration, this hypothesis would certainly need further substantiation since we do not possess an exhaustive inventory of books possessed by the patron[40]. Furthermore, in addition to the commercial ties we have already underscored, hints of an indisputably direct knowledge of the Venetian forms, types and know-hows frequently appear in the architectural and urban culture of the time, thanks also to the newly established Cretan network following the conquest of the island[41]. These new connections with the Venetian cultural sphere were even more far-reaching than what could have offered the printed material or a simple visit to the lagoon, since they were based on the movement of architects, artists, and master builders with a complete set of expertise, much beyond the merely formal issues.

Indeed, as archive evidence proves, similar porticoes were built also in Venetian Candia (today Heraklion, known by the Ottomans as Ḳandiye). Following the models of the lagoon, they appeared both in administrative, commercial, and residential architectures. Other than the Loggia, which was a porticoed building in a strongly complementary re-

37. Allak 2017, p. 22.
38. Pamukciyan 1993, p. 292.
39. Kuban 1993, p. 549.
40. Rüstem 2019, pp. 206-207. The list published in İrepoğlu 1986 on the Western books found in the library of the imperial palace certainly helps us to have an idea about the circulation of those at least among the uppermost circles of the capital. However, lamentably, on a few of them bear some indications on the terminus *ante quem* these book might have reached the Ottoman capital. For instance, a set of *Nouveau Theatre d'Italie* by Joan Blaeu, which features annotations in Ottoman Turkish (in most cases direct translations largely loyal to the original text) certainly reached Istanbul before 1732/1733 (still five years after the completion of *Direklerarası*), as suggests the signature of İbrahim Müteferrika on the flyleaf of vol. 1 (Topkapı Palace Museum Library, H. 2724) and the reverse of the frontispiece of vol. 3 (H. 2751).
41. On the architectural ties with Crete: Metin 2022a. Here is a list of page numbers where the topic is discussed: 216, 253-256, 283-284, 335-339, 396-397, 417-421, 436-437, 446-448, 453-454, 503, 546, 562, 600, 632-633, 646, 651, 662-663, 666-671.

lationship with the square, an examples of commercial artery with porticoes (a *ruga di botteghe*) could be found in the area flanking the city gate called Porta di Piazza, or more often by its name in vulgo, *Voltone*[42] (*fig*. 9). In 1577, adjacent to this monumental gate at the heart of the city was designed a vast building containing 29 shops with a continuous portico on the ground level (of which only 23 are visible in the drawing reproduced here). Above the portico were warehouses for fodder and wheat on three floors, thus the building had an entirely commercial character. Across the street was the Palazzo Ducale, which also had shops preceded by a portico on the ground floor, even though in this case with wooden posts supporting the eaves of a jutting awning, as visible in a 1590 drawing by Geōrgios Klōntzas (*fig*. 10)[43]. Therefore, this street, which was a double-porticoed rectilinear commercial throughfare flaking an important government building, was strikingly similar to what *Direklerarası* would become for Istanbul about 150 years later.

As thoroughly analyzed by Calabi, the restoration of the gate and the construction of this new commercial artery were among the main efforts of Giacomo Foscarini, the governor of Regno di Candia (the name given to Crete during the Venetian rule), to establish a new sense of order and prosperity on the island after the Battle of Lepanto against the Ottomans (1571)[44]. Also residential constructions of the period, such as the Quartiere San Giorgio, featured similar porticoes. These operations followed the architectural conventions of the motherland which we have already mentioned (the portico flanking the *Voltone* Gate clearly recalls, also in its architectural composition, the Fabbriche Vecchie inaugurated half a century before). Evidently, Foscarini desired to revive this regional capital endowing it with features which would recognizably echo Venice, where porticoes were abundant.

Thanks to a detailed register published by Kolovos, we know that right after the conquest of the city in 1669, Ottomans found 17 shops flaking the Voltone (all in good conditions) and 19 under the Palazzo Ducale (16 in good conditions)[45]. Thus, the porticoed street was apparently still in use preserving its architectural and urban consistency.

42. Calabi 1998, pp. 268-274; Georgopoulou 2001, pp. 45-47; Kolovos 2018, pp. 79-81.
43. Georgopoulou 2001, pp. 90, 94-95.
44. Calabi 1998, pp. 269-271.
45. Kolovos 2018, pp. 79-81 (on the mentioned buildings). The register in question is kept at Başbakanlık Osmanlı Arşivi in Istanbul (Tapu Tahrir 798).

Ottomans kept using and, over time, repairing these buildings. At the same time, they seem to have imported the architectural configuration of the *Voltone* to Istanbul precisely during the conquest of Candia. The imperial pavilion of the *Yeñi Cāmi'* ("New Mosque") in Eminönü district (around 1665), which constitues an outstanding novelty for the local architectural culture with its centrally positioned monumental vault, faithfully follows its Cretan reference[46]. Moreover, following the conquest of the remaining three Venetian possessions on the island and the reconquest of Peloponnese in 1715 (thus the complete annihilation of the risk of a potential vengeance of the Serenissima), Crete started a new flourishing in both economical and architectural terms.

In other words, even though in a distant province, some Ottomans were already familiar with the idea which led to *Direklerarası* at first hand. Furthermore, it should be noted that our patron, Damad İbrahim Paşa got promoted to grand vizierate also thanks to his participation in the 1715 achievements. During this last Ottoman-Venetian battle, he accompanied as a bureaucrat the general and the grand vizier of the time Silahdar Ali Paşa (later known as *Şehid*), whose library in Istanbul (1715-1716) is also strongly reminiscent of Venetian architectural culture with its peculiar L-shaped external staircase[47]. Hence, it would not be discording with the patterns of the period nor exceptional within the architectural dynamics of the early eighteenth-century capital if also *Direklerarası* had a Veneto-Aegean ancestry. In fact, in multiple construction sites of the period, we have archival evidence on the presence of Aegean professionals (see for instance the document mentioned on note 27), giving further strength to this hypothesis.

Possible ties with the Veneto-Aegean sphere are not merely limited to urban aspects, either. The cross-vault roofing instead of hemispherical domes (*fig*. 3), the use of round arches instead of the traditional pointed ones are also among the novelties to be considered (*fig*. 2). More importantly for our purposes, the peculiar Doricizing and palmette capitals used in the porticoes must be the earliest examples of non-traditional capitals carved by the Ottomans in the city[48].

46. The most detailed study on this complex is Thys-Şenocak 2007, pp. 187-268. The author mentions the triumphal references to the conquest of Crete in its calligraphic inscriptions, my contribution is therefore highlighting the architectural ties, to complete the picture.
47. For an exhaustive analysis of the building and a comparison with the Veneto-Aegean models: Metin 2022a, pp. 333-341.
48. Since we do not possess a scientific survey nor complete photos of the street, it is not possible to

The portico flaking the *Voltone* of Candia was built supported by piers, however columns with similar capitals were widespread both in Cretan cities and Venice. For instance, a portico with Doricizing columns and round arches (and no upper floors) on the Ruga Maistra ("main street") of Candia can be seen in another drawing by Klōntzas depicting a Corpus Domini procession[49]. In Venice, dozens of porticoes of late medieval and fifteenth-century origin also bear Doricizing capitals, such as the *fondamenta* of Giacinto Gallina among many other possible examples (*fig*.12).

Completed just few years later, the entrance portico of a religious building, the Mosque of Hekimoğlu Ali Paşa (1734-1735) featured two non-traditional capitals, of which the four central ones offer a more elaborate version of the Doricizing *Direklerarası* model while the first and last ones clearly reflect the influence of Venetian references (*fig*. 11). These medievalizing capitals with beveled corners[50] were very widespread around the whole area of influence of the Serenissima and scholars have labeled them with multiple names, such as *San Lazzaro-type*, or *Verona-type*[51]. In the Cretan context, those and variants can be found in the San Marco Cathedral and San Pietro Church in Candia, and Santa Maria dei Barozzi Church near Rethymno. Also in the case of this mosque, the patron was a grand vizier, and more interestingly, his personal background somehow intersected with the Aegean. His father who gave him this nickname (*Hekimoğlu* meaning "son of the doctor") was the chief doctor Nuh Efendi from Crete, possibly a renegade of Venetian origin according to some sources[52]. Whether this might be true or not, he could have naturally kept some ties with his father's place of origin as it was not rare in the Ottoman world. Pal-

determine today which capitals featured palmette reliefs and which one did not, and whether if there was a precise rule regarding the capitals in the overall design.

49. Biblioteca Marciana, Ms. Graec. VII, 22 -1466, fol. 134v, reproduced in Georgopoulou 2001 as fig. 67. Even though I believe it must be possible, I was not able to identify the building yet.
50. I believe that in the Venetian context these capitals might have stemmed in their turn from more geometric Byzantine examples. However, that would be an inquiry for another study. What appears clear that those of the Hekimoğlu Ali Paşa Mosque are certainly related to the Venetian cultural sphere rather than to any other source, given their forms, proportions and relations between different parts.
51. It is quite significant that the name of the San Lazzaro type refers to the church used from 1717 by the Armenian- Catholic Mechitarists whose most members were coming from the Ottoman lands (further considerations can be found in Metin 2022a, pp. 394-395). On this capital type and the church in question: Scolari 1984.
52. Aktepe 1998.

mette capitals also appeared in other works of the time, such as in the small complex of Mehmed Emin Ağa on the Kabataş shore (completed in 1741-1742). With the tripartition of its cemetery precinct wall obtained with peculiar pilasters (note also the fluted-and-reeded profile of the capitals and the treatment of the lateral surfaces), and its novel decorative repertoire, this work shares overt similarities with the Bembo Fountain in Candia (dated 1554 or 1558)[53].

The legacy of Direklerarası

Prior to its gradual disappearance in 1910 (*fig*. 13), *Direklerarası* had not only been an important commercial artery but also became a significant cultural hub, particularly in the nineteenth century[54]. Therefore, we can affirm that the efforts for a new urban culture of the intellectual grand vizier had chance to create concrete outcomes, at least in the capital. More than elsewhere in the Nuruosmaniye Complex (1748-1755), the most prominent and interesting architectural work of the century commissioned by the charismatic sultan Mahmud I (r. 1730-1754)[55], the lesson was wisely emulated. The Northern border of the complex, where we find the luxurious library of the emperor at the Eastern part[56], is elevated on a platform under which are housed two rows of stores which encounter each other forming the corner (*fig*. 14). This operation is a clear architectural response to the surrounding urban fabric. Due to the presence of the Grand Bazaar and numerous inns and shops, this was the most intensely commercial area of the entire city during the Ottoman times. The northern edge of the platform, which joins with that of the mosque, creates a long arcade in front of an important commercial structure in the city, Çuhacı Han, an inn commissioned by Damad İbrahim Paşa, the patron of Direklerarası. With such features, the work is strongly influenced by the grand vizier's work in Şehzadebaşı, which was completed two decades earlier.

53. On the fountain: Calabi 1998, pp. 274-278. On its ties with the eighteenth-century Ottoman architecture: Metin 2022a, pp. 417-421.
54. Tosun 1994 and Tunç Yaşar 2023.
55. This complex was thoroughly studied in Rüstem 2019, pp. 111-170 and Metin 2022a, pp. 68-176. The tie with *Direklerarası* was already recognized by Maurice Cerasi.
56. More specifically on the library building: Metin 2022b.

Şahin and Cerasi, starting from the profiles of the capitals, associated this portico with city's Byzantine cisterns[57]. However, from both typological and urban points of view, this association would result quite less convincing than the Venetian connection. In fact, both because of the synthetic Doric capitals used and of morphological and urban aspects, one rather has the impression of glimpsing a corner of the commercial part of a medieval Venetian city, whether on the lagoon or within the Stato da Mar.

The eighteenth-century Ottoman architectural and urban culture was admittedly complex and thus not easy to decipher. However, acknowledging and appreciating the multitude of its sources (among which the intense ties with the Italian cultural sphere and the role of the Aegean territories) opens new possibilities of research. Towards the end of the century, more precisely under the rule of Selim III, the Ottoman capital entered a new phase with much clearer references directly to Western European sources and models, both in the conception of the single buildings and in that of the urban conceptions. Emblematic of this period is the Mihrişah Valide Sultan complex commissioned by the mother of the sultan (1792-1796, completed with the addition of the maktab in 1801), endowing the Ottoman capital with a novel rectilinear and monumental street in an accentuated Westernizing key (*fig*. 15)[58]. The intermediary step represented by *Direklerarası* and the Nuruosmaniye complex is therefore particularly significant for its sophisticated syncretism in skillfully bringing together local and outlandish forms and know-hows, melting them in a pot, and wisely taking out of it unique and original results.

57. Şahin 2009, pp. 247-248; Cerasi 2008, p. 488.
58. This complex frames the Coronation Street (*Cülus Yolu*) between the Bostan Pier and the Eyüp Sultan Mosque, which hosted one of the most important imperial ceremonies at the inauguration of a new sultanate. I am currently working on a book chapter entirely dedicated to the complex with a particular emphasis on its urban value. The title of the chapter is *Matronage and "Urban Design" in a Changing Capital: Ottoman sultanas shaping Istanbul from Turhan Hatice to Mihrişah (1660-1801)* and it will appear in *Women as Builders, Designers, and Critics of the Built Environment, 1200 -1800* (Routledge, edited by Shelley E. Roff).

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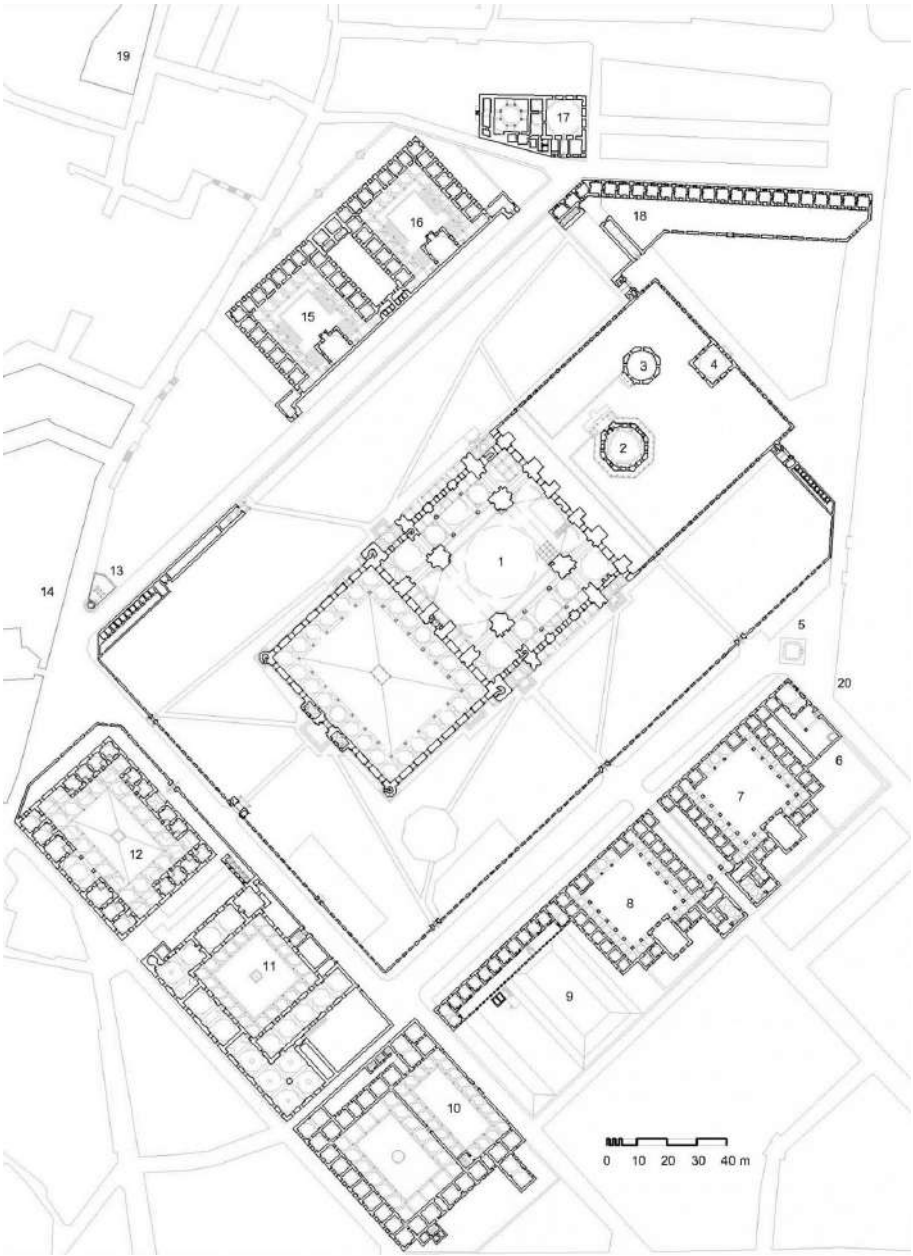

*Fig. 1 – Arben N. Arapi, Plan of the complex of Suleiman I in Istanbul (*Necipoğlu *2005, p. 205). Note the orthogonal disposal of the secondary buildings pivoting around the main core (1. mosque, 2 - 3 sultanic mausoleums). Especially 10. hospital, 11. hospice and 12. guesthouse, generate a rectilinear artery conditioning the urban fabric.*

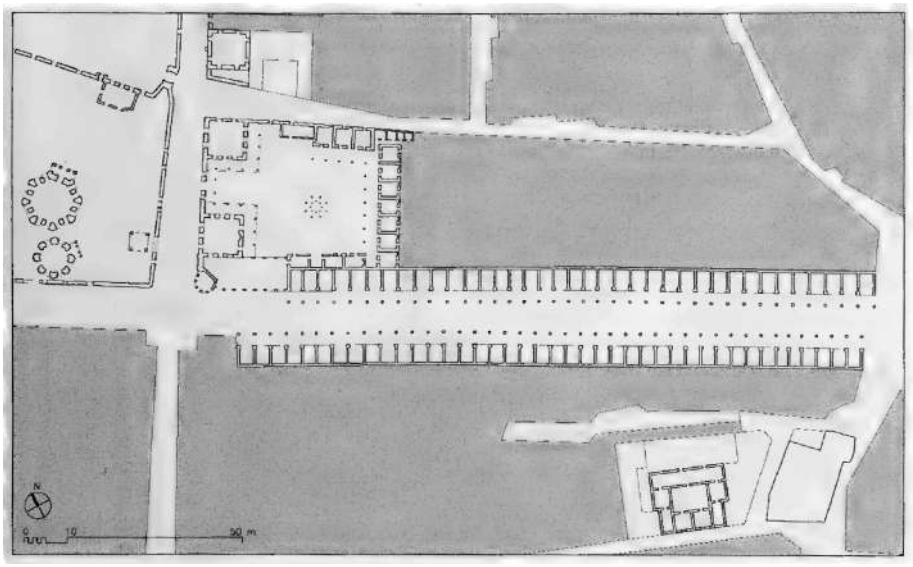

Fig. 2 – Istanbul, Direklerarası *(shopping porticoes of the Damad İbrahim Paşa Complex), completed in 1728-1729. Postcard with a photograph by Nikolas Andriomenos (© SALT Research, id. no. AHISTFATI05, with permission).*
Fig. 3 – Istanbul, Plan of the Damad İbrahim Paşa Complex (Cerasi 2008).

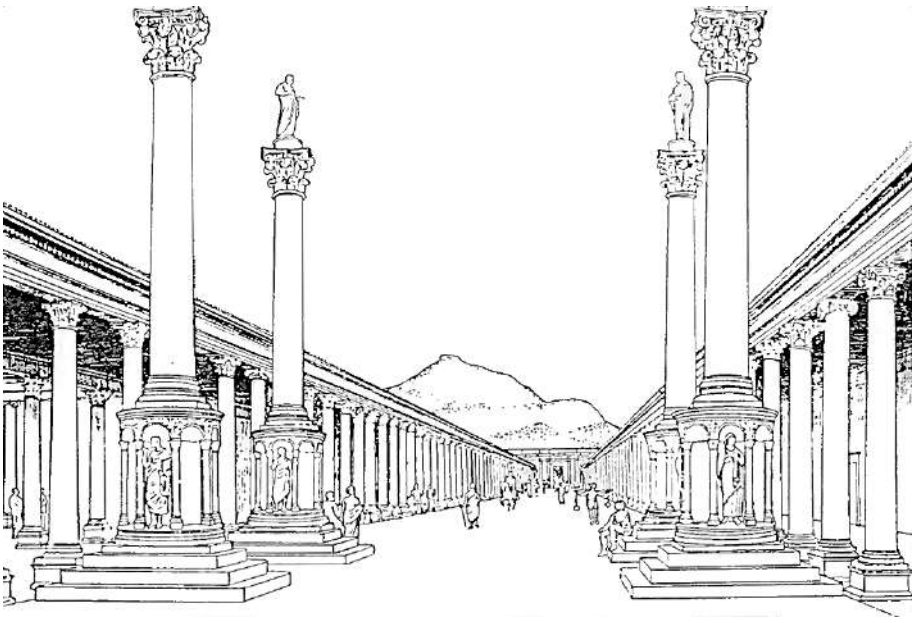

*Fig. 4 – Luigi Mayer, the shopping street (*arasta*) of the Sokollu Mehmed Paşa Complex in Lüleburgaz by Sinan (*Views in the Ottoman Dominions*, London: P. Bowyer, 1810).*
*Fig. 5 – Restitution drawing of the Arcadian Street with the Tetrakionion in Ephesus (*Wilberg-Heberdey *1906).*

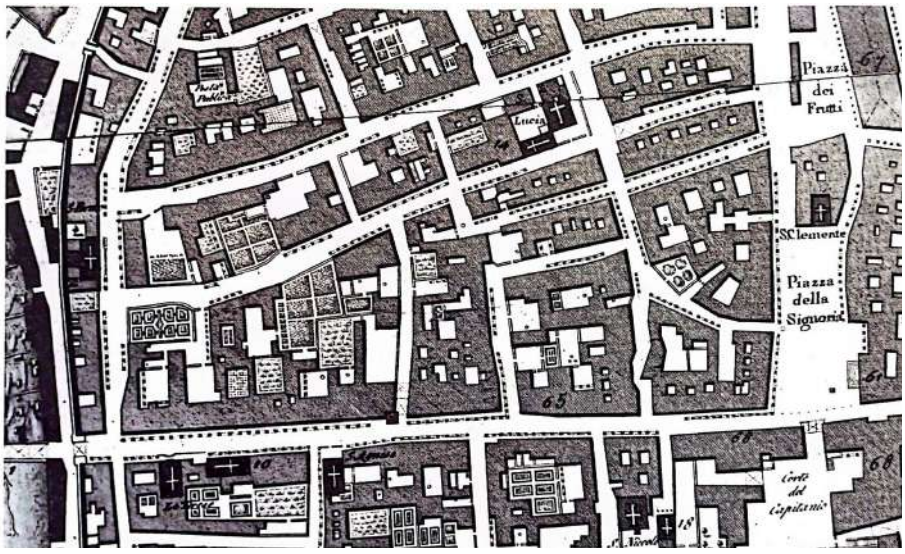

*Fig. 6 – Istanbul, Grand Bazaar (*Kapalıçarşı*), the carpet sellers' street, one of the earliest cores of the complex, possibly born as an unroofed throughfare (photo, 2023).*
*Fig. 7 – Plan showing the porticoes of the central areas of Padova (*Maretto *1987).*

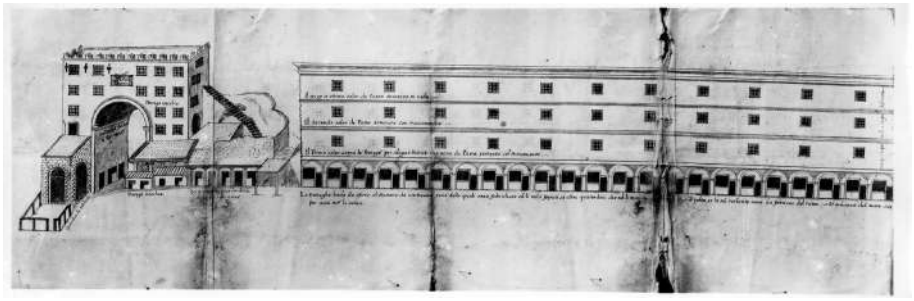

Fig. 8 – Venice, portico of the Fabbriche Vecchie with the Draperia on the left. Between them runs the Ruga dei Oresi, the main porticoed street of the Rialto Markets (photo, 2023).
Fig. 9 – The Porta di Piazza (or Voltone*) Gate (at left) and the porticoed street of shops (at right) in Candia, modern-day Heraklion (*Archivio di Stato di Venezia, *S*enato, Dispacci, Provveditori da terra e da mar e altre cariche*, b. 506, filza 740, disegno 1, with permission id. no. 11/2024).*

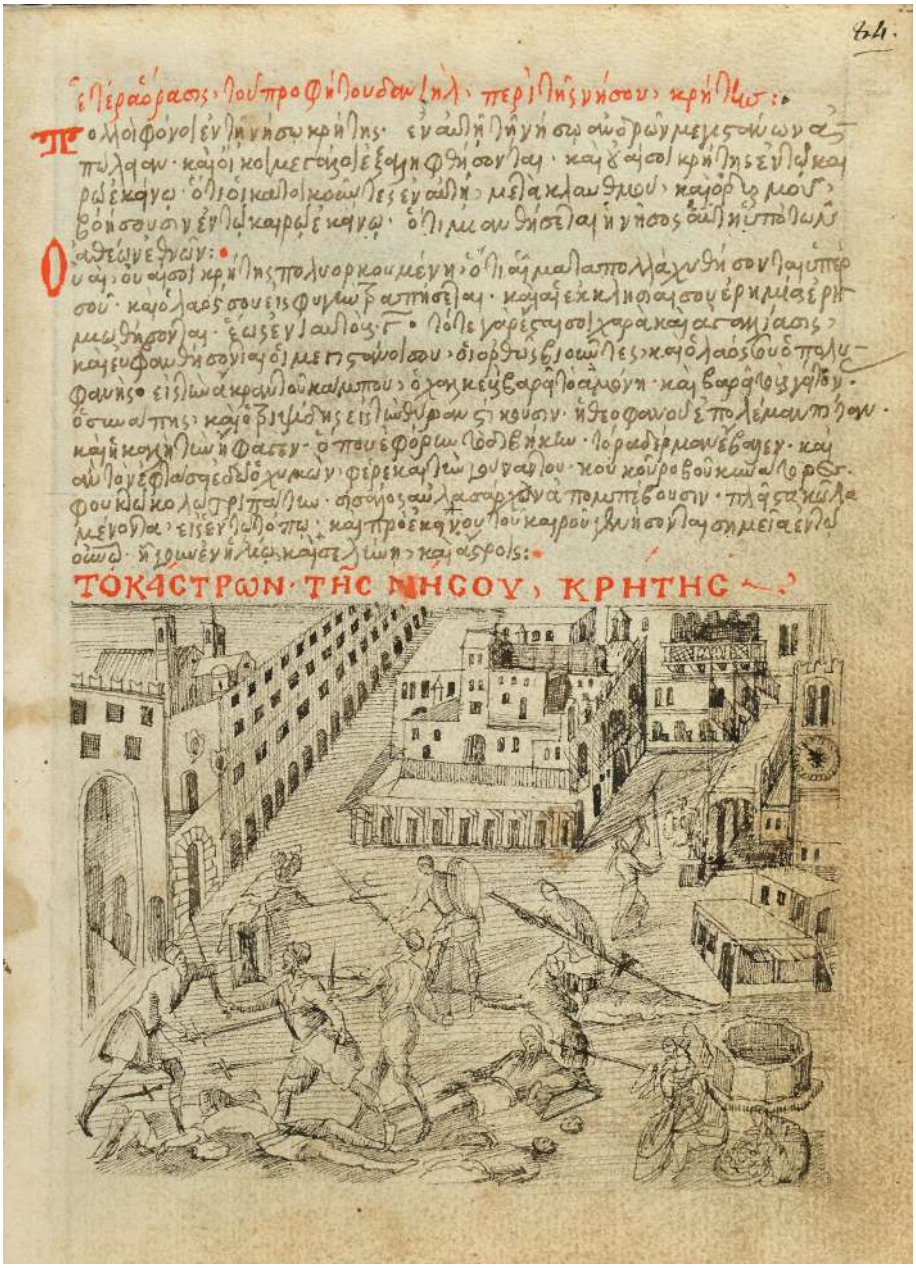

Fig. 10 – Geōrgios Klōntzas, view of the ducal palace in Candia in 1590, from Istoria ab origine mundi *(Venice, Biblioteca Marciana, Gr. VII, 22 [=1466], f. 84r, with permission id. no. 7/24).*

Fig. 11 – Istanbul, entrance portico of the Hekimoğlu Ali Paşa Mosque (1734-1735), detail from the capitals (photo, 2023).

Fig. 12 – Venice, Fondamenta Giacinto Gallina covered by a portico with Doricizing capitals (photo, 2023).

Fig. 13 – Istanbul, Direklerarası *as it stood after the gradual destruction started in 1910, photo (© SALT Research, id. no. AHISTSEHZ008, with permission).*
Fig. 14 – Istanbul, North-Western corner of the Nuruosmaniye Complex with the curvy polygonal courtyard of the mosque (on top) and the portico with shops (photo of Jean Pascal Sébah and Polycarpe Joaillier).

*Fig. 15 – Istanbul, the Coronation Street (*Cülus Yolu*) in Eyüp, framed by the Mihrişah Valide Sultan Complex since 1792 (photo, 2023).*

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Landscape and Antiquity
Artists, scholars, and Travelers in the Roman Campagna (XVIII-XIX c.)

Barbara Tetti[1]

Abstract: *During the last quarter of the eighteenth century and the first decades of the nineteenth, the flow of foreign artists, scholars and, aristocrats enlivened the Italian and especially the Roman scene, the fulcrum of artistic, antiquarian, and archaeological interests. Focusing on the field of the 'Campagna' such different approaches emerge and some recurring elements, as well as innovative visions and singular sensibilities. Dissemination of publications and prints was decisive in the elaboration of the individual and collective experience, including depiction of antiquities as they appeared to the eyes of observers, and of the fantastic images recalling perceptions and emotions.*

Keywords: *Rome, Grand Tour, architecture, restoration, Roman Campagna.*

Since the liveliest season of the Grand Tour, numerous foreign presences enlivened the Italian and especially the Roman scene, the fulcrum of artistic, antiquarian, and archaeological interests, making contributions related to different cultural matrices and personal sensibilities[2]. The flow of foreign artists, scholars, and aristocrats fuelling the movement of tourists was interrupted by the Napoleonic wars and, due to direct hostilities between France and England, the British presence was reduced to a minimum. British, both resident in Rome and England, tended to perceive the Napoleonic invasion as the final moment of the Grand Tour, seeing the multiplying effect of the formative journey dissolve, an experience that from the personal dimension is transmitted to the community with the return home. During the years of French domination of Rome, ordinary visitors, and students of architecture, unable to travel to the papal city, went to the Richard Dubourg Museum in London to observe models of Roman monuments, displayed and illustrated by guides who attempted to replicate the tour

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2. Tozzi-D'Amelio 2014; Valenti Prosperi Rodinò 2014; Tozzi 2014; Pearce 1999; Lolla, 1999; Buchanan 1999; Bann 1990; Momigliano 1950; Tetti 2017; Lolla 2002; Salmon 2000; Riccio 2003; Pinto-Barroero-Mazzocca 2003.

itineraries[3]. However, with the return of Pope Pius VII to the capital of the Papal States, travel and sojourn possibilities were reopened and a phase of enthusiasm for travel in search of classicism was renewed. However, many things changed: numerous works were transported to Paris, laws and regulations on antiquities have been upgraded and modified several times, and the systematic work of clearing large areas has been undertaken[4].

In this framework, a solid network of relationships emerges, in some cases limited to the acquisition of data or impressions brought back to the land of origin, while in others, more sharply, aimed at a mutual exchange of methods, which will impart decisive impulses to the study of antiquities and its relationship with the context. Therefore, different approaches to ancient remains and landscape emerge and stimulate exchanges of considerations that particularly concern the reading, representation, and interpretation of places, monuments and remains that, circulating among the capitals of Europe, in continuous cross-references, generate consequent reflections on the subject. In particular, in the British *milieu*, as the 'commonplace' of classical education, Rome and its Campagna became an unfailing stop for travelers – including voices of women, often less considered –, and the visit, made in the first person, proved to be a decisive experience in the process of growth and understanding, from which various readings and restitutions originated. This fed a continuous flow of ideas capable of transporting attention to the ancient into a new phase of interest – individual and collective – that initiated on the substratum of the last quarter of the eighteenth century, would manifest itself more clearly in the following century.

Focusing on the field of the Campagna such different approaches emerge and some recurring elements surface, as well as innovative visions and singular sensibilities[5]. These were the years Tischbein returned to Italy, preparing the famous portrait of Goethe against the backdrop of the Roman countryside, among the ruins of the Appian Way and the outline of the Alban Hills, destined to become an iconic image of the Grand Tour. After all, the image of the Roman countryside landscape had been widely circulated. Exemplary is the work of Ma-

3. Salmon 2000, pp. 47-49. Some of the models, reproduced to scale and made of cork, are still preserved at Victoria and Albert Museum of London; Gillespie 2016.
4. Jonsson 1986; De Seta 2005; Debenedetti 2006-2008; Garric-Pasquali-Pupillo 2021.
5. In progress, as this contribution is being written, is the exhibition *La via Appia nella grafica tra Cinquecento e Novecento* (Rome, September 19, 2023-February 5, 2024), by Gabriella Bocconi.

riano Vasi (1744-1822) who, starting from the engraving models of his father Giuseppe, devoted himself to the publication of the numerous plates *Delle magnificenze di Roma antica e moderna*, published in ten volumes from 1747 to 1761[6]. Each series was thematically devoted to a section of Roman architecture and, in particular, several views refer to localities, ruins, and monuments around Rome. It is worth recalling how Giuseppe Vasi's workshop had also been frequented by Giovanni Battista Piranesi[7], who from the mid-1740s began engravings for *Vedute di Roma*, a series he enriched with plates devoted to monuments outside the city.

Views of the Roman countryside were thus familiar to travelers, usually educated in classical culture, who sought in Rome the 'theatre' in which the events narrated in the writings of Latin authors, learned when they had been schoolboys and students in their formative years, took place. This resonated for a very long time, and still in 1927, Thomas Ashby, in his volume *The Roman Campagna in classical times*, referred to the hill of Monte Sacer as a «historical scene» of *secessio plebis*[8]. In *Description of Latium*; *or, La Campagna di Roma*[9], composed between 1778 and 1800 and published in 1805 by Ellis Cornelia Knight, the first lines specify how the volume is dedicated to a British audience with a desire to know the places: «a desire of treading that earth which their early studies have taught them to love and respect»[10].

The locations where the events narrated by the best-known authors took place are defined as scenes, with the word 'theater':

> In the Roman Campagna we read, with the more peculiar satisfaction, the works of Livy, of Virgil, and of every other writer who has either related the greatest action performed on this interesting theatre[11].

6. Coen 2001; Grelle Iusco 2005.
7. Around 1742 he attended, perhaps only briefly, Giuseppe Vasi's studio, deepening his knowledge of etching techniques, The brief period of apprenticeship with Vasi is already mentioned in a letter to Giovanni Gaetano Bottari from Naples in 1748; Minor 2001, p. 419; Bevilacqua 2015.
8. Ashby 1927, p. 84: «Immediately after the bridge a hill rises on the right of the road, known as the Mons Sacer. This mount was the historic scene of the retirement of the plebs in 494 B.c. It will be remembered how, in resentment at what was considered an unjust law, the army marched out of Rome and settled here, intending to found a new city; and how the famous speech by Menenius Agrippa on the belly and its members reconciled them to Rome. Nowadays it is a far from pleasing spot, owing to unprepossessing surroundings; but has a glorious view of the surrounding hills, and would have been a fine site for a town better laid out and built than the misnamed garden suburb (on the lucus a non lucendo principle) which now occupies it».
9. Knight 1805.
10. *Ibidem*, pp. IX-X.
11. *Ibidem*.

The volume is accompanied by twenty drawings of the locations described and a map illustrating the area southeast of Rome (*fig*. 1). The landscape is presented as particularly beautiful because of the variety of the elevations, the recesses in the rocks that add much to the beauty of the 'scene'. Concerning the stretch of road between Albano and Ariccia, Knight writes:

> The road from Albano to Laricia, following the direction of the Via Appia, is peculiarly beautiful: it divides a park belonging to Prince Chigi, whose late father never suffered the trees to be cut down, that artists might enjoy the advantage of studying them in their natural state, and in every stage of their vegetation and decay. The inequality of the ground, and the frequent caves in the rocks, add much to the beauty of the scenery; rustic gates and fountains contribute also to favor the landscape, and they occur at very trifling distances[12].

Still concerning the ancient Latin poets, in October 1789, they began their journey in the footsteps of Horace, Richard Colt Hoare – archaeologist, antiquarian, writer, and English traveler – and Carlo Labruzzi – painter, drafter, and engraver –. The two set out from Rome with the idea of traveling along the Appian Way to Benevento to describe the territory and architecture. The itinerary would be reported in a text, illustrated by a series of views: Hoare would describe the sites and monuments that Labruzzi would return in his drawings[13]. The fruits of this expedition were for Hoare the publication, between 1815 and 1819, of *Recollections Abroad and a Classical Tour through Italy and Sicily*[14], while for Labruzzi over eight hundred drawings and watercolours in which he depicted in particular the architecture and ancient remains. However, of Labruzzi's extraordinary output only twenty-four plates were engraved, which the artist had published in Rome and London in 1794 under the title *Via Appia illustrata ab Urbe Roma ad Capuam*. It is possible to envisage in Labruzzi's work the search for a personal method of representing places. A first nucleus of drawings should be ascribed to the initial phase of the journey, during which the artist made the *in situ* drawings that constituted the models for

12. *Ibidem*, p. 75. Interestingly, the author reports that the greenery is left in its natural state for artists to make vegetation studies from it.
13. Of the whole, 226 folios bound in five folio tomes are preserved today at the Vatican Apostolic Library. The entire collection was kept intact in the Hoare Library at Stourhead until 1883; later, through a series of passages on the London antiquarian market, it was purchased in 1899 by Thomas Ashby, former director of the British School in Rome, only to be sold by his widow to the Vatican Library soon after her spouse's death in 1931. A second set of 188 drawings is in the Sarti Library at the Roman Accademia di S. Luca; Leone 2004.
14. Hoare 1819. Hoare himself designed many of the most famous monuments, made by his own hand. Malice 2017; Hornsby 2000.

the drafting of the monochrome sepia views[15]; a second nucleus – mainly consisting of Thomas Ashby's purchase of a *corpus* circulating in England – includes the monochrome watercolors characterized by greater detail and fineness characteristics intended for the final drafting of the series[16].

The views with vestiges immersed in the landscape gave impetus to the dissemination of the image of the best-known ancient architecture as well as more recent finds, contributing to the creation of imagery, particularly declined on the relationship between landscape and ruins (*fig*. 2). Labruzzi's prints became a reference and were the inspiration for several works for decades, including collections of engravings taken from drawings depicting precisely the sites of the Roman countryside: published during the first decade of the nineteenth century by Piero Parboni and Antonio Poggioli with the title *Le antichità d'Albano delineate nei suoi avanzi da C. Labruzzi ed incise da P. Parboni e A. Poggioli*, the one edited by Agostino Rem-Picci in 1844, entitled *Monumenti e ruderi che veggonsi lungo i lati delle prime due miglia della via Appia*, as well as being an inspiration for similar undertakings, including one by Luigi Rossini who published the series *Viaggio pittoresco da Roma a Napoli...* in 1839[17]. It is not surprising that many British travelers refer to the landscape of the countryside as 'scenery'. The term, particularly prevalent in the English language between the last quarter of the eighteenth and the first quarter of the nineteenth centuries, highlights the link between viewing a place with prominent features as a backdrop for a scene, precisely because it can mean either a view of a natural area, with waters and vegetation, or a backdrop structure or setting for a stage[18].

In 1820 James Hackewill published *A picturesque tour of Italy*, including numerous views of places surrounding the papal city. Hakewill sojourned in Rome between 1816 and 1817[19] and, upon his return home, drew up a series of travel directions, which he gave to William Turner,

15. Today preserved at the Sarti Library of the Academy of San Luca in Rome and from the testamentary bequest of Labruzzi himself.
16. The collection is now housed in the Vatican Library.
17. De' Polignac 1993; Raspi Serra 1993; De Rosa-Jatta 2013, p. 178, nr. 22; Le Pera Buranelli-Turchetti 2003, pp. 33-38; Ashby 1903; Clifford-Dickinson 2012; Fusconi 1984, f. 2, p.10; n.11 p. 28; Marchesi 2018, p.78; Massafra 1993.
18. www.collinsdictionary.com, *scenery*, definition e recorded usage, *ad vocem*.
19. Hakewill 1820, *Preface*. Numerous drawings are preserved in the British School at Rome Library and published in Cubberley-Hermann 1992. Hakewill attempted to devote a second specific publication to Italian museums, Outlines of the principals Galerie of Sculpure in Italy, which, however, he failed to complete.

commissioning him to produce a series of drawings for the volume. Turner arrived in Italy in August 1819 and produced copious amounts of sketches and watercolors, keeping diaries of notes and sketches that reveal the attention to the landscape that would lead to the highly refined outcomes of phenomenology, the most intense manifestations of which he depicted. In his volume, Hakewill included, among others, an engraving devoted to the view of Ariccia and one of the mausoleum of Cecilia Metella, taken precisely from Turner's drawings. In La Riccia's engraving, in the foreground, the layout of the Appian Way, at the edges of which some remains of ancient vestiges can be seen, and the vegetation, here less lush but populated with human and animal figures; further on, the architectures of the city (*fig*. 3a). Hakewill also associates the table with the poet Horace; the commentary reports:

> We are here upon the ancient Via Appian, the large nagged stones of which (for such was the Roman fashion of making roads) are still visible in many parts. In front is seen the village La Riccia, anciently Ariccia, the first night's resting place of Horace in leaving Rome to join the suite of his patron Maecenas, who was himself proceeding to meet the legates of Antony at Brundusium, with a view of effecting a reconciliation between him and Augustus. The humorous description of this journey, made near two thousand years back, is still the companion of every tourist on the route from Rome to Naples[20].

In the view of the Metelli tomb, the remains encompassed by the *castrum Caetani* stand out in the left half of the view, while on the other half, the sequence of buildings that line the Appian Way can be seen against the backdrop of the city's skyline, characterized by hills and maritime pines. In this perspective, Turner brings into play the relationship between the route dotted with ruins to the denser core of the urban center. Again, people and animals are included in the landscape, as well as the wild vegetation that covers the ancient remains, with climbing, drooping plants and small shrubs (*fig*. 3b). Although Turner's travel notebook includes numerous sketches of each place portrayed, taken from longer or closer distances, from multiple viewpoints, with central, highly angled perspectives or with projections that form a personal path of study of the object and its context, some of the views included in the volume take up drawings drafted by Hakewill in 1817, known to Turner[21], with more conventional framing.

20. Hakewill 1820, pl. *La Riccia*.
21. See Tate Gallery, Joseph Mallord William Turner, Albano, Nemi, Rome Sketchbook, D15384 Turner Bequest CLXXXII 47 and 48, and Moorby 2012. Turner was certainly familiar with Hakewill's drawings and, in particular, had already completed a watercolor of the tomb based on another Hakewill

From a vantage point close to that chosen by Turner is the view from the high ground toward the tomb of Cecilia Metella and the city portrayed by Alessio De Marchis in the early eighteenth century[22]. De Marchis had come to Rome in 1701 to devote himself to study in the workshop of Pieter Philip Roos, who set him up as a landscape painter, establishing him as a «spiritoso pittore di paesi, vedute, massi, fabbriche, rotte antiche»[23]. His drawings of the Roman period depicted mainly the countryside and were characterized by a broad technique, based on the use of a brown watercolor, spread over pencil[24]. In the illustration, one recognizes characteristic luminous contrasts, the detailed architecture portrayed, framed in a barely hinted environment[25]: the tool of drawing more than to investigate the existing reality, manifests the intention to render an image in which the ancient element appears within an ideal context that celebrates the ruin as a characterizing element of the landscape. Some Roman views by De Marchis were preserved in the collection of Italian drawings of the architect James Gibbs, who returned home after his stay in Rome in the early eighteenth century, in a dedicated album. In *A Collection of Drawings of Roman Bridges, And of Ornaments in Perspective, of Temples, Houses, Monuments...* – which also includes Italian drawings drafted decades after his stay, demonstrating the deep connection established with the city – the sheets related to the theme of antiquity constitute a prime example of the growing attention to the legacy of the past that emerged during the eighteenth century and reverberated throughout Europe[26] (*figs*. 4a, b).

In the same year 1820 in which Hackewill published *A picturesque tour of Italy*, engraved by Elizabeth Frances Batty, was given to the presses in London *Italian scenery*. In the first lines, it is clearly expressed how travel was considered necessary for young people initiated into classical education, not least because it was «the scene of some of the poets' most delightful narratives»[27].

drawing before his 1819 Italian tour.

22. Oxford, Ashmolean Museum, James Gibbs collection, *A Collection of Drawings of Roman Bridges..., Alessio De Marchis, Monochrome sketch of the tomb of Cecilia Metella on the via Appia*, III-37-c. https://www.calcografica.it/disegni/inventario.php?id=D-FC125211
23. Enggass-Enggass 1977.
24. Chiarini 1990; Barbone Pugliese 2016; Busiri Vici 1976; Chiarini 1967; Di Carpegna 1956
25. Oxford, Ashmolean Museum, James Gibbs collection, *A Collection of Drawings of Roman Bridges…*, III-31. Also in the collection is the unattributed drawing, Landscape in water-colour wash seems close to De Marchis's ways; the drawing would seem to be aimed more at recalling an atmosphere than restoring buildings and landscape.
26. Tetti 2016.
27. Anon-Batty 1820, pag. 1-2: «To have seen Italy is […] by many considered the necessary complement

A recurrent inspiration of the tourists, a verse by the Latin poet Horace opens the chapter in which the landscape near Ariccia is described, of which – like Hakewill – Batty inserts a view[28]. The description is matched by a view that reveals special attention paid to the close connection between vegetation, ancient ruins, and architecture[29]: the road layout, characterized by basalt paving and the lush vegetation recur, occupying most of the illustration, while beyond it the tops of the architecture are discernible (*fig*. 5).

In this setting, of particular interest appears the figure of architect Joseph Woods[30], who reached Rome on January 1, 1817. Following his stay in the papal state capital, Woods published in 1828 in London *Letters of an Architect from France Italy and Greece*, in the form of an epistolary. In the text, the author emphasizes how for an architect the need to visit Rome and experience, first-hand, its environment and landscape is inescapable, and how no other way is equally valid for understanding its values:

> In spite of all that may have been seen elsewhere of magnificent buildings, and all of the views and drawings which have been published of the eternal city, Rome is still a new world to an architect. You may know in detail the appearance of every building here, but you can't feel nothing, you can't imagine nothing of the effect produced, on seeing, on finding yourself thus among them[31].

His reflections urge the contemplation of architecture in relation to places, points of view, and the mutual relationship they establish in space, and thus to the landscape:

> nothing has astonished me more than the numerous fine points of views which the ancient city must have offered. The hills were insignificant in themselves, but they seem made to display the buildings to the great advantage; [...] the hills and country about Rome are well disposed for architecture, and for uniting its object with those of the landscape[32].

of a classical education. The theatre of some of the most pleasing fiction of the poets».

28. *Ibidem*, p. 123: «Egressum magna me accepit Aricia Roma Hospitio modico», cf. Q. Horatii Flacci, *Sermones*, Liber I, satura V.
29. *Ibidem*, p. 124 «from Rome, at a distance of sixteen miles ; at least, it was as far as Horace thought proper to proceed the first day of his "Brundusium iter", the Appian Way, the "Queen of Roads" along which the poet proceeded, and the pavement of which is seen in the view, is still passed over by those who visit La Riccia […] The modern town stands upon the summit of the hill, surrounded by olive groves and gardens»; plate XXXVII.
30. Joseph Woods (1776-1864) was a botanist and geologist, member of the Society of Aniquaries, honorary member of the Society of British Architects; in 1806 first president of the London Architectural Society. In 1816 he visited France, Switzerland and Italy and published in 1828 *Letters of an Architect from France Italy and Greece*.
31. Woods 1828, l. XXIII, p. 327.
32. *Ibidem*, l. XXIII p. 329; January 1817.

Wood devoted himself to the exploration of the countryside and, concentrating particularly on the observation of ruins, he considered as most notable the said ruins of *Roma Vecchia* in the area southeast of the city[33], reserving several pages of his work for it (*fig*. 6). Specifically interested in architecture, in his letter entitled *Neighbourhood of Rome*[34], Wood describes the buildings that seem to him to be most notable; but while rich in detail are the descriptions of the better-known buildings, it seems to be more difficult for him to describe the ruins that spread widely:

> we are now on or near the Appian way. Names have been given, but without authority, and the ruins are mostly mere masses of rubble, to which no form can be assigned. Some however are larger, and contain vaulted chambers, others are domed. Indeed the form, the extent, and the materials of the more perfect remains all vary, but it would be tedious to enumerate them[35].

However, referring precisely to the Campagna, commenting on the perception of it in an overall view, the architect describes the elements he recognizes as characterizing it and does not fail to refer to the ruins that dot the area as factors that enter into the formation of the image, enriching the "picturesque" view of the scene.

> You perhaps imagine, from having heard of the dreary and desolate Campagna, that there are no agreeable walks about the city, but if you have formed any such notion, you are very much mistaken. The ground about Rome is exceedingly well disposed for pleasant scenery; the country being intersected by several valleys of no great width, each bounded by steep banks of moderate height, from the top of which you catch the gently varied line of Monte Albano, and the distant Apennines. […]. Wherever art has interfered to adorn these slopes, or where some natural patch of wood is suffered to grow, the effect is highly pleasing, especially if in addition, some picturesque ruin crown the summit. Sometimes when the eye is elevated above these slopes, such features enrich the nearer landscape, while the long lines of the ancient aqueducts give an interest to the middle distance.

In addition to the depiction of antiquities, as they appeared to the eyes of observers, much enthusiasm came from the possibility of delineating the image of the ancient city. To draw up ideal reconstructions, probably commissioned by Duchess Elizabeth of Devonshire, architect Charles Robert Cockerell[36] returned to settle in Rome for a second stay in 1816.

33. *Ibidem*, letter XXXIII, p 38: «This groupe of ruins is sometimes called Roma Vecchia, but there is another Roma Vecchia more considerable, on the Appian way, of which I shall give you some account in my next walk».
34. *Ibidem*, letter XXXIV, *Neighbourhood of Rome*, Rome, May 1817, pp. 40-52; on Via Appia pages 40-48.
35. *Ibidem*, p. 42.
36. Charles Robert Cockerell stayed in Rome for the second time from late 1816 to spring 1817; in May 1810 he traveled to Greece, Asia Minor and Sicily; based on these trips he published drawings and texts. In late 1814

Cockerell drafted several versions of the ideal vision of Rome that long influenced the European imagination: his vision was spread by the reproduction drafted by George Scharf[37] entitled *Rome in the Augustan Age, a Restoration by C. R. Cockerell R. A.*, and then included on the title page of Thomas Babington Macaulay's[38] successful volume *Lays of Ancient Rome*, a collection of poems related to heroic episodes in archaic Roman history, which sold tens of thousands of copies in the first ten years alone. Among the most popular texts of the first half of the nineteenth century is *The lasts days of Pompeii* by Edward Bulwer-Lytton[39] in which the intent behind the reconstructions, literary and artistic, is clearly expressed:

> The burning desire to rebuild those beautiful ruins, and animate the bones scattered over the surface of them [...] traverse the chasm of eighteen centuries, evoking to new existence the City of Death[40].

Moreover, dedicating the volume to the topographer, draughtsman, and engraver William Gell, with whom the author had explored Pompeii during his Neapolitan sojourn, Lytton mentions several times the evocative capacity of the images: «the only erudition that demands a work of this kind, is that antiquity transfixed, so to speak, in images»[41].

William Gell arrived in Italy in 1814 in the retinue of Caroline of Brunswick, wife of King George IV of England[42]. Staying between Rome

he reached Italy and visited Naples and Pompeii; in 1815-1816 and was in Rome where he made important friendships, including one with the French painter Ingres; Bordeleau 2014. The correspondence between Duchess Elizabeth of Devonshire and the architect includes a letter from 1818 in which the noblewoman, praising the drawings, describes them as «valuable explanations» of ancient Rome. Cockerell had already done similar work for some ancient architecture in Athens, which he called 'restoration', to be understood as 'restorations'; Salmon 2000.

37. The impact of this publication is investigated in Edwards' 2007 contribution. Copies of the engraving are at the Marco Besso Foundation, *Antico Foro Romano*/ T*empio dei Castori già Giove Statore*/ *Tempio e recinto di Vesta l'antico Foro Romano* by C.R. Cockerell, and Istituto Centrale per la Grafica (FC 36777).
38. *Lays of Ancient Rome* collects poems by Thomas Babington Macaulay, four of them related to heroic episodes in archaic Roman history, with tragic and dramatic themes; sells over 18,000 copies in the first ten years.
39. Bulwer-Lytton 1834.
40. *Ibidem*, Preface; an Italian translation of the first version of the text that appeared in Italian is given by E. Bulwer, *Gli ultimi giorni di Pompei*, Naples 1836.
41. *Ibidem*.
42. William Gell, was among the members of the Society of Dilettanti, the Society of Antiquaries of London, the Institute of France and the Royal Academy in Berlin and a Fellow of the Royal Society. He published several volumes concerning antiquities including *Geography and Antiquities of Ithaca and Itinerary of Greece, Topography of Rome and its Vicinity, e Pompeiana*. In the retinue of Caroline of Brunswik, wife of King George IV, he was in Pompeii as an escort of Sir William Drummond, Keppel Craven, John Auldjo, Lady Blessington and Sir Walter Scott. For a profile: Riccio 2013; Sweet 2015; Clay 1976.

and Naples, he immediately began work on the ruins of Pompeii, applying what he had learned from the education imparted to him by Thomas Blare[43] – his mother's second husband, a topographer and scholar of antiquities – and published *Pompeiana* in 1817[44], together with the architect John Peter Gandy[45], with whom he had participated in expeditions to Greece on behalf of the Society of Dilettanti. In the volume, two illustrations are repeatedly placed side by side for the description of a single monument: one in its ruined state and one with its ideal representation, enlivened by vivid scenes of daily life[46]. Such a way of depicting antiquities fulfilled and at the same time fed the desire to visualize the ancient world through images, with components of fantasy, but it also proved to be of fundamental importance because of the rigorous methods adopted: in fact, the graphs were drawn up by Gell based on the most up-to-date scientific techniques – particularly with the aid of the *camera lucida* – with the aim of obtaining reproductions of the ruins as faithfully as possible and making known to the reader those cases in which the appearance of the places had been partially altered[47]. The confrontation of the existing situation with the ideal reconstruction was destined for wide success and persistence. It was precisely to the description of the places closest to the city, between the walls and the plain below the Alban Hills, that two large plates were devoted, entitled *Monumenti della via Appia dalla Porta Capena al miglio XI*, by Paolo Cacchiatelli and Gregorio Cleter, published in 1878[48]. The two etching illustrations, of considerable size, consist of twenty-one depictions each illustrating the monuments along the road, while in the centre stands a bird's-eye view – in central perspective – to the south: in the first plate

43. Thomas Blore (1764-1818), a member of the Society of the Middle Temple and the Antiquarian Society, makes numerous studies on the topography and antiquities of the Hertfordshire. Riccio 2013.
44. Gell-Gandy 1817-1819.
45. John Peter Deering, previously Gandy (1787-1850), in 1805 as a student at the Royal Academy; in 1810 he exhibited two drawings An Ancient City and The Environs of an Ancient City; from 1811 to 1813 he was in Greece with a Society of Amateurs expedition, where he came into contact with Lord Elgin. In 1814 he exhibited again at the Royal Academy The Mystic Temple of Ceres; Burnet 1885-1900.
46. W. Gell, *The Temple of Fortuna Augusta and The Temple of Fortuna Augusta*, Restored Perspective; Gell-Gandy 1817-1819, pl. XX e XXI.
47. The working method is already specified in the preface of the first edition of the volume Gell-Gandy 1817-1819, Preface: «it may be proper to state, that the original drawings for this work were made by the camera lucida, by Sir William Gell. To render the subject clearer, a slight alteration has in two or three instances been made, but always mentioned in the text»; the same note is also given in the second edition.
48. Paolo Cacchiatelli, Gregorio Cleter, *Monumenti della via Appia dalla porta Capena al miglio XI quali si trovano nel 1859* e *Monumenti della via Appia dalla porta Capena al miglio XI restaurati*, Roma, Gabinetto Disegni e Stampe, Fondo Nazionale; folder FN215.

are the representations reflecting what the draughtsman's eye could see while in the second the respective ideal view. Gell's collaboration with the Italian archaeologist Antonio Nibby, which was a turning point in the study of antiquity, is also to be referred to as the first two decades of the XIX century.

The collaboration between the two scholars made a decisive contribution to topography, through the integration of a systematic survey of places, the reproduction of physical parameters of the territory, and the search for precise identification of ruins. Nibby and Gell devoted themselves to the editing of the volume *Le mura di Roma*, published in 1820, which included the map *Pianta de' recinti di Roma*, with the characteristic graphics of the English topographer, as well as thirty-one plates depicting gates, stretches of walls, towers, substructures, enlivened by scenes of daily life. The structures are rendered in perspective images, delineated with great attention to the constituent elements, enriched by human figures that enliven the scene and aid understanding of size and proportion. Detailed also appear the elements that frame the monument, and precise is the representation of the vegetation that grows freely on the monuments and forms part of the same image of what remains of the ancient city. When the two scholars' interest expanded to the antiquities of Latium, Gell drafted a detailed map, completed in 1822 and published in 1827 under the title *Tentamen Geographicum*[49]. Widespread among travelers, in 1834 the map was published again in London, engraved by James Gardner senior, under the title *Rome & its environs*, from a trigonometrical survey, appended to the double volume *Topography of Rome and its vicinity* with texts by Nibby, printed thanks to funding from the Society of Dilettanti. The map depicts a wide area, extending from the Latium coast to the slopes of the Abruzzi Apennines, surveyed through the method of triangulation, in an accurate elaboration attentive to the measurable parameters of orography, hydrography and routes and accompanied by indications of ancient and contemporary place names[50] (*fig*. 7). In the engraving, executed by Filippo Troiani, Gell's contribution is particularly recognizable: in accordance with the ways of British representation, as made clear in the preface, the map is presented in very strong colors, especially in the depiction of the highest mountain

49. In Frutaz 1972, I, LV, 3, fig. , III, fig. 239; on the subject Masetti-Gallia 2016; Iovine 2013-2014.
50. Compare illustratively W. Gell, *Albano Lake*, Topograpgy 1, notebook 4, study for *The topography of Rome and its vicinity*, London 1834; https://ipervisions.digitalcollections.bsr.ac.uk/gell e Gell 1834, p. 28

ranges, and the toponymy is given in particularly minute characters, with the aim of always leaving the physical state of the soil legible[51]. It emerges how Gell's attention remained focused on the search for the most suitable methods of restoring places rigorously, reporting their tangible characteristics as much as possible, as much in the case of illustrations from which to derive ideal reconstructions as in the case of the drafting of maps needed by scholars and tourists.

Alongside rigorous historical research, Romantic tendencies privileging the perception of the environment and landscape began to appear, which would be tastefully embodied by Turner who stopped in the same notebooks in which he drew the vestiges of the Roman countryside, the emotions aroused by the spectacle of incredible natural events[52]. The narrative of personal experience was a turning point in the perception of the elements that constitute space and architecture with its memory value, encouraging reflections on the personal and collective past. Visiting the countryside, and traversing such a layered palimpsest of history came to be recognized as an experience that also passes through the senses, stimulating reflections on one's own memory and identity, contributing to the emergence of personal characteristics and sensibilities. Here, too, there is no shortage of female voices, rarely invested in professional roles, fully embedded in the spirit of an era and a society. The accounts of Charlotte Eaton, who published the three-volume collection, *Rome in the Nineteenth century*, with letters written during her sojourns between 1817 and 1818, are emblematic of the enthusiasm that accompanied the visit to Rome, which, recently freed from French domination, was also taking on a decisive role thanks to archaeological excavations and antiquarian studies: «at Rome, it is not the present or the future that occupies us, but the past»[53]. Eaton highlights the relationship between city and landscape, describing a peculiar unity between the present and ancient city. From the top of the Capitol tower, she describes the view to the south, where the Campagna is recognizable at a great distance by the route of the Appian Way:

51. Quilici Gigli 1994; Asor Rosa *et alii* 2007; Bevilacqua 2005; Sponberg Pedley 2004; Clivio Marzoli, 1985; Geymonat 1985; Laureti 1985; Lo Sardo 1987; Brancati 1990. Nibby 1837, I, p. X: «[...] era necessario mantenere nella tinta quella gradazione di colore che fosse proporzionata all'altezza rispettiva de' monti, in modo che nerissimi apparissero i più alti, e successivamente men tetri i meno elevati».
52. Tetti 2019; Tetti 2023.
53. Eaton 1820, vol. I, p. XIII.

> We ascended to the summit of the lofty Tower of the Capitol. What a prospect burst upon our view! To the north, to the east, and even to the west, the Modem City extends; but to the south, Ancient Rome reigns alone. The time-stricken Mistress of the World, sadly seated on her deserted hills, amidst the ruined trophies of her fame, and the moldering monuments of her power, seems silently to mourn the fall of the city of her greatness. On her solitude the habitations of man have not dared to intrude: no monuments of his existence appear, except such as connect him with eternity. A few decaying contents and churches, amongst which the Basilica of St John Lateran stands proudly pre-eminent, are the only modern buildings that meet the eye. From the Capitol (the ancient Citadel) on which we stand, we behold her hills, now heaped with ruins and shaded with the dark pine and cypress – the wide waste of the Campagna – the plain of Latium, bounded by its storied mountains, and intersected by the far, distant windings of the yellow Tiber, the grass-grown Forum at our feet, with its shattered porticos, its fallen columns, its overthrown temples, and its triumphal arches, fast moldering to decay […] backed by the turreted walls of the city – the Tower of Cecilia Metella – and, far beyond, the long black line of the Via Appia, marked by moldering and forgotten tombs – and ruined aqueducts stretching over the deserted plain in majestic loneliness to the woody hills which terminate the view[54].

In the words of Jane Waldie, Charlotte's sister, who traveled with her, and who published in 1820, *Sketches Descriptive of Italy*, the flow of emotions emerges and again the landscape as theatre, now a metaphor for the human story, individual and collective: «When we reflect, indeed, on all the changes and commotions of which Rome has been the theatre, we are led rather to wonder that any, than that so few, vestiges other ancient magnificence should remain to our days»[55]; while the visit to *Roma Vecchia* stimulates the expression of the characters of spontaneity and subjectivity, even of dream and melancholy:

> Beyond this, the ruins of Roma Vecchia mix among the tombs that line the Appian Way. Though thus indistinct, and "unknown to fame" because unnamed by classic authors- there is something very striking about this cluster of ruins. A melancholy, somewhat allied to pleasure, ever steals over the soul amid the deserted habitations of a great nation; - and the very obscurity that hangs over these fragments adds, perhaps, to this feeling, by leaving the imagination to people them as it pleases[56].

From the briefly outlined picture emerges a series of elements that gave rise to different approaches that, nurturing a flow of ideas, brought the perception of the relationship between landscape and antiquity into a new phase. An uninterrupted reflection linked the exploration of the places narrated in the Latin classics – for which travel became the search for the

54. *Ibidem*, vol. I, letter XXI, pp. 328, 333,334.
55. Waldie 1820, p. 23.
56. *Ibidem*, p. 370.

'scene' of events, the 'theatre' of exploits – with the antiquarian interest that stimulated the reconnaissance and collections of views of antiquity, in which in addition to the city, the Campagna also played a leading role – as in the case of Labruzzi's fortunate views that had a very long echo –.

This aroused interest in ideal reconstructions of the most celebrated monuments and sites but also of the large, recently excavated areas; this kindled the imagination of the daily life that took place in antiquity and thus of the ancient environment and landscape, in more fantastic or increasingly rigorous forms – as emerges from Gell's work and the fruitful collaboration with historian Nibby –. Exploration outside the urban centre of the city of Rome, which expands to the Campagna, is configured, in a broad sense, as a test of knowledge, a stimulus to search for what is not directly known, an ability to relate to what is different, and an experience of the emotional relationship with what is foreign. Thus travel takes on a relevant subjective dimension and becomes part of the process of self-discovery, from which originates the construction of a renewed personal identity. Narrated also through the telling of emotions, the journey taken became decisive in the elaboration of the experience of each of the travelers, and then of the collective one, with the dissemination of publications and prints. This also contributed decisively to the investigation, deep understanding, and then consideration of the ancient and its intimate relationship with the landscape of which it is a part, fuelling a process that would bring a new vision in the decades to come.

Travels and explorations were recounted, by women and men, by intellectuals, artists and architects, in accounts of words and images, in the picturesque tours, which precisely in the exploration of the Campagna returned in one-way recurring patterns and another different sensibilities and the peculiar interests.

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*Fig. 1 – C. Knight, M*ap of the Campagna *(Knight 1805)*.

Fig. 2 – C. Labruzzi, Continuazione dei Sepolcri antichi sulla Via Appia *(Labruzzi 1794, tav. 18)*.

Fig. 3a – W. Turner, La Riccia *(Hakewill 1820).*
Fig. 3b – W. Turner, Tomb of Cecilia Metella *(Hakewill 1820).*

Fig. 4a – A. De Marchis, Paesaggio Laziale *(Rome, Biblioteca Corsini; Gabinetto Disegni e Stampe, Fondo Corsini; Fondo Corsini; scatola 70).*
Fig. 4b – A. De Marchis, Tomb of Cecilia Metella with a view of the Via Appia Antica *(Oxford, Ashmolean Museum, Western Art Print Room, Western Art, WA1925.342.41.3)*

Fig. 5 – E. Frances Batty, La Riccia *(Batty 1820, pl. 36).*
Fig. 6 – J. Woods, Temple of Rediculus *(Wood 1828).*

Fig. 7 – W. Gell, The Topography of Rome and its Vicinity*, 1834 (BSR 600.784.3).*

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The Italian urban landscape tradition.
Sapienza University Campus and the shape of the green

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Abstract: *Between 1932 and 1935, Marcello Piacentini (1881-1960) was in charge of coordinating the project of the new University Campus of Rome. The modern Studium Urbis would have grouped the colleges located in the city center, creating dedicated buildings, and reducing together people's pressure on historical neighborhoods. Such an opportunity affected the design, suggesting the architect imagine an autonomous citadel inspired by American and European successful experiments: particularly, the campus of Madrid and the University of Virginia. Each building was entrusted to a professional. Piacentini managed the construction of the Rectorate, assigning the surrounding faculties and the access propylaea to his trusted studio collaborators to guarantee uniformity. In addition, Piacentini developed Sapienza's master plan by referring to the Renaissance tradition, proposing a rigorous layout dominated by voids and greenery. He adopted a basilica plan, proportioning the transversal axis using the width of Piazza Navona as a model, and manipulated the orography to align the monumental university gate with the ground floor of the Rectorate. Finally, he took advantage of the expressive properties of the perspective methods, using both the trees and traditional visual devices to generate a controlled, linear, and monumental urban space.*

Keywords: *Rome, Sapienza, Marcello Piacentini, cultural landscape, garden design*

The construction of the Sapienza University campus in Rome represented one of the most difficult Italian architectural projects carried out during the first half of the twentieth century. Apart from the political reasons that prompted the Fascist regime to support the foundation of the campus, the huge building site represented a formidable challenge. The chief architect Marcello Piacentini (1881-1960) coordinated professionals and workers. He also planned an organic urban environment, en-

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hancing the singular design activity and preserving the monumentality as well. This was an ambitious goal that was pursued through both carefully mediating the various project drawings with the designers and thoroughly preparing the general masterplan, to whose definition contributed Piacentini's personal experience as a designer, the local urban fabric of Rome, the Italian perspective tradition, and the attentive selection of the arboreal essences to be planted[3].

The city-making mechanics involved in the project

The plan for the new *Studium Urbis* provoked mixed reactions when it was presented in 1933 (*fig.* 1). Ugo Ojetti (1871-1946) opened a debate on the pages of the newspaper "La Tribuna", blaming the chief architect for removing the «arches and columns» from the general elaboration to give way to anonymous compositional methods descending from the European contemporary trends[4]. He was in stark contrast with Piacentini for the support he previously offered to the proposal for the Florentine train station of Santa Maria Novella presented by the young architect Giovanni Michelucci (1891-1990) in association with some other exponents of the so-called rationalist "Tuscan Group"[5]. Particularly, Piacentini's hypothesis of a «centrist progressive party»[6] opened to rationalist fashions could be neither beneficial nor healthy. According to Ojetti's opinion, the tradition was «the starting point, not the arrival one; it is a laboratory of experiments, not a dormitory»[7].

On the other hand, the renewed columnist Renato Pacini had immediately grasped the political essence and the effects of Piacentini's cultural initiative, cautioning the detractors of the project of the university campus. The intellectual claimed that «the most serious mistake committed by some too hasty critics» consisted of considering the faculty buildings independently and not together. According to his experience, the campus had to be examined as a modern «monumen-

3. Azzaro 2020.
4. Muntoni 2010, p. 100. Cfr. *Gli archi, le colonne e la modernità di oggi, risposta a Ugo Ojetti per la polemica su Le Colonne e gli archi*, «La Tribuna» (2 February 1933), in Mitrano 2008, p. 53.
5. Lupano 1991, p. 79. Cfr. Ojetti 1933, p. 257.
6. Danesi 1976, p. 21.
7. R. Papini, "Architettura razionale", *La Rivista Illustrata del Popolo d'Italia* (4 April 1928), in Cennamo 1973, p. 198.

tal quarter because the architects' efforts aimed precisely to create this typology of urban complex, so that the idea of isolating a building from the whole project would be the same as isolating a wing from a building, and considering it independently from the design of the whole building»[8].

Indeed, the reporter exactly understood the intentions of the three-dimensional model presented. Eschewing any complexity for its own sake, Piacentini promoted a severe composition and the establishment of fixed parameters as basic guidelines: two win-win design cornerstones. Using elementary geometric components and pursuing an expressive program of reduced decorativeness, he could reduce time and costs for the proper completion of the project. However, this solution allowed to obtain an impression of majestic assertiveness through insistent research on a monumental scale. In addition, by establishing common compositional criteria, which were shared with the other designers involved, a homogeneous development was ensured regardless of the individual personalities. Accepting common formal characteristics, such as the adoption of a similar size for all the windows or the use of travertine and local yellowish bricks to embellish the façades, the masterplan created an underlying kinship between the buildings, irrelevant for the observers but useful to convey a uniform feeling of unity. The idea had been suggested to the architect by the historic districts of Rome, where the architectural products of different historical periods perfectly fit together thanks to both a common architectural vocabulary and syntax.

In his introduction to the special issue dedicated to the inauguration of the campus (1935)[9], Piacentini proudly stated that «the architecture of the University City of Rome, in its absolute simplicity, does not renounce any postulate of modernity, but its general conception has always been conceived in a classic Mediterranean climate». Having said that, he peremptorily affirmed that the appearance of each building had been intended to be appropriate to the specific function performed: «all the buildings had been harmonized to be part of the general complex», while each building expressed autonomously its «aesthetic and functional reason through the distribution of the mass-

8. Pacini 1933, p. 4756.
9. Piacentini 1935.

es and the sincere application of the external materials: even the color of all the buildings had been plastered in the typical brown-red of Rome, with slight variations due to the diverse qualities of the bricks or the travertine»[10].

This concordance was not the only arrangement pursued by Piacentini. The mere careful selection of materials and geometric combination of the elements were insufficient to achieve the solid image of an effective national university campus requested by the promoters. The Fascist government intended to give a strong Roman look to the campus, suitable for political reasons. It was appropriate to lay down deeper ties, which could guarantee a strong cohesion inside the new *Studium Urbis*, providing however a clear connection to Rome's traditional image. This link could not be based just on the rhetoric of classical language since – as Benito Mussolini (1883-1945) declared – the Duce was in favor «of modern architecture, which is the architecture of our time», considering absurd any aversion to the rational and functional architecture[11]. It was, therefore, necessary to find a balance between the architectural style grown after the unification of Italy – that is, the Eclecticism that the esteemed architect Pio Piacentini (1846-1928) exceptionally taught to his son Marcello – and the renewal movements of the Thirties, which embodied for Renato Pacini «what is now the sentiment not only of the majority of Italian architects, but also of the public, of that public in which the lovers of traditionalism believed they would find the most faithful allies, and which instead proves to be anything but then in favor of the anti-modernism flatteries»[12].

Such mediation was not an easy architectural task, but it could be possible by recognizing the common origins of both fashions, namely what Piacentini called the «classic Mediterranean climate». Paraphrasing the words of Joseph Hoffman (1870-1956), in 1921 Piacentini already stated that the Austrian architect found out «in the mighty buildings of our Renaissance the eternal beauty of a smooth wall, [and] the sufficiency of a simple stringcourse of real stone to underline the division of two floors»[13]. The root of the modernity of the «Latin spirit» was

10. *Ibidem*, p. 6.
11. Sapienza Historical Archive (ASUR), C.E.R.U.R., b. 2, n. 27: *Per l'architettura del nostro tempo: Sabaudia e la nuova Stazione di Firenze. Resoconto di una udienza con S.E. il Capo del Governo*. [Report on the construction of Sabaudia and the new train station of Florence].
12. Pacini 1933, p. 178.
13. Piacentini 1921, p. 50.

there. Piacentini had already figured it out, and in fact, he would repeat in 1941: «No Romanticism, no Baroque. Classicism in spirit, very modern in construction»[14].

In this sense, the severe aggregation represented the main characteristic of this common cultural root. Consequently, it appears to be possible to develop a proportional rule on which to arrange the architectural framework of the campus. Inspired by what was produced in Rome during its thousand-year history and taking advantage of the possibility of testing live the effects of certain spatial relationships, the project leader assumed the width of Piazza Navona as a reference for designing the transversal axis of the campus layout[15], stretching the longitudinal axis to reproduce the traditional Latin cross plan (*fig.* 2). As a result, the empty space assumed the same value of the filled one, establishing a successful harmonic combinatorial rule, in which the general design fitted the singular projects improving the expressive qualities according to the Renaissance *modus operandi* suggested by the humanist Leon Battista Alberti (1404-1472) and largely appreciated by Piacentini[16].

Such a contrived design has been recently pointed out by Franco Purini, who discovered specific altimetric relationships in the layout of the University City of Rome, based on the Renaissance legacy. The most interesting is the monumental gate, which is marked by the propylaea entrusted to Arnaldo Foschini (1884-1968). The gate was located at the same height as the floor level of the entrance of the Rectorate[17]. Not surprisingly, this building was designed by Piacentini, who oversaw the two lateral wings. Committed to his trusted collaborators Gaetano Rapisardi (1893-1988) and Foschini, these faculty buildings configured a graduated connection between the main building of the campus and the others, offering a controlled vision to the visitors who descended the perpendicular main road in front of them.

To make it work correctly, however, such a design also required a deep knowledge and control of the perspective, that Piacentini learned again from the tradition. First of all, he refined his masterplan by giving a clear hierarchy to the heights of the buildings, as confirmed by the expected prominence of the Rectorate which was later disregarded lowering the Bib-

14. Piacentini 1941, p. 265.
15. Melograni 2008, p. 106.
16. Baratelli 2020, p. 70.
17. Purini 2012, p. 247.

liotheca Alexandrina (*fig*. 3). Secondly, the architect planned an independent urban system concerning the new nearby neighborhoods, to give to the campus a proper architectural identity. According to this general intention, Piacentini encouraged the adoption of refined quotations from the most representative Renaissance monuments of Rome, as certified by the drawings representing a loggia flanked by stairs that were similar to that one ideated by Michelangelo (1475-1564) over the Capitoline Hill[18] (*fig*. 4).

Nevertheless, Piacentini's decision to tighten the layout of the campus could be interpreted as a step backward in the cultural debate on the urban development of Rome, since he rejected the open scheme previously prompted by Gustavo Giovannoni (1873-1947)[19]. Extrapolating from the Renaissance lesson the image of a rational and functional urban space, whose quality did not rely on the ornaments but was the result of the complex volumetric combination of buildings and paths[20], Piacentini attempted to achieve a regular symmetry that would dignify the campus, providing magnificence to create an autonomous center leading the contemporary Rome, separated from the consolidated fabric but close to it. As Giorgio Ciucci sharply highlighted, it was the same desired objective that Piacentini indicated in his *pamphlet* published in 1916[21], but with different design purposes[22]. After all, as the architect claimed in 1944, the «most subtle and singular characteristic that presides [...] over the composition of the Italian cities' squares, especially those of Rome, is this: the variety and individualities set on an orderly and symmetrical base. It is essentially a smart way of using this order and, above all, this blessed symmetry, which is the substantial core of our classical mentality»[23].

The role of vegetation

As well as the regularity of the planimetry promoted a respectable official image of the new University City of Rome, and the geometric purity of the buildings globally conveyed an idea of power, also the

18. Regni-Sennato 1984, p. 18.
19. Di Marco 2016, p. 307.
20. Portoghesi 2012, p. 149.
21. Piacentini 1916.
22. Ciucci 2012, p. 225.
23. Piacentini 1944, p. 40.

reasoned placement of trees contributed to this celebratory purpose. The famous critic and designer Agnoldomenico Pica (1907-1990) explained in an article published in the magazine "Casabella" in 1936 that a good well-arranged "city of studies" needed a large green open space between the buildings. Such an arrangement could mitigate students' condition of isolation, favoring the creation of meaningful relationships with the outside urban contest[24].

An anonymous plan on a scale of 1:500, currently kept in the deposit of the Historical Archive of the University of Rome 'Sapienza', attested to the complementary role played by greenery, providing a precise indication of the typologies and their location (*fig.* 5). The trees to be purchased were carefully thought, according to precise figurative intentions. The distance and the distribution, that emerges by observing the representation, confirm this interest. It seems that the unknown designer – probably an employee of the technical office whose activity was under Piacentini's supervision – tried to achieve a well-balanced mix of Mediterranean plants, highlighting the perspective along the main axes and enriching picturesque views whenever possible. The avenue in front of the Rectorate should have alternated pines (*Pinus pinea*) and holm oaks (*Quercus ilex*), as proposed in earlier times for the archaeological walk of the Imperial Fora[25], while minor routes would have been flanked by rows of oleanders (*Nerium oleander*) and medium shrubs, such as the Acacia Baileyana.

In the south head of the 'transept', the School of Mathematics designed by Gio Ponti (1891-1979) should have been framed by two rows of holm oaks, and flanked by limes and Japanese lime trees. This is the effective current situation, partially replicated on the opposite side, where the Institute for Mineralogy and Geology entrusted to Giovanni Michelucci doesn't profit from the perspective, showing at the center of the façade a compact masonry covered with travertine. The gates lined up with driveways, where cedars of Lebanon (*Cedrus libani*), pines, and oleanders would liven up the neighboring areas. Behind the Rectorate, in correspondence with the lawn located in front of the Aula Magna, the edges of the walkways would have been marked by pine trees. Instead, two rows of American elms (*Ulmus americana*) would

24. Baratelli 2019, p. 139.
25. De Vico Fallani 2017, p. 22.

have enhanced on both sides the faculty of Botanic commissioned to Giuseppe Capponi (1893-1936) and Michelucci's building designed to host Environmental Physiology. Lastly, as the legend of the drawing explained, the image of the campus would have been enriched by magnolias (*Magnolia grandiflora*), Himalayan cedars (*Cedrus deodara*), oaks (*Quercus rubra*), eucalyptus (*Eucalyptus globulus*), chestnut of India (*Aesculus Hippocastanum*), laurel trees (*Laurus nobilis*), hornbeam and white cedars (*Carpinus betulus, Thuja occidentalis*)[26].

As revealed by the photos published to celebrate the inauguration of the *Studium Urbis* in the rest of the peninsula and abroad, the hypothesis of a well-thought-out organization of green areas represented in the project changed during the execution, including other tree species like palm trees and less bulky flower essences (*figs*. 6-7). However, the layout shown by this historical plan dated back to January 13, 1934, remains an extraordinary proof of the impressive natural variety that was foreseen from the very beginning of the construction of the campus, according to the most important and modern American and European campuses, characterized by a strong landscape component.

However, the ornamental character must have been the main concern of Marcello Piacentini and his collaborators. This can be seen from the request that the architect submitted on January 16, 1934, to the presidency of the Consortium for the Construction of the Royal University of Rome, urging the board to immediately approve the relative tender to «plant the tall trees during the period February-March, obtaining large and impressive trees in time for the opening ceremony»[27].

It is evident from reading the "Special tender specifications - Gardening works". The document pointed out both the economic aspects of the purchase and sale procedure and the services demanded from the contractor. It was also stated the quality of the trees to be planted, which would have been «exclusively of the type with immediate effect and, for the central areas, with immediate and great effect». In addition, it was explained that the main trees would have been surrounded by rose bushes, myrtles, jasmines, and hedges[28].

26. ASUR, C.E.R.U.R., b. 8, n. 72: Anonymous, *Planimetria del Parco* (13 January 1934).
27. *Ibidem*: letter sent by Marcello Piacentini to the president of the Consortium for the construction of the Royal University of Rome (16 January 1934).
28. *Ibidem*: *Capitolato Speciale di appalto – Opere di giardinaggio* [Special Tender Specifications].

The care with which the selection of the trees was carried out also emerges from some historical photos stored in the Sapienza archive (*fig*. 8). This collection of pictures was assembled during the decision-making phase, after visiting *de visu* the nurseries which applied to the public tendering procedure opened at the beginning of 1933. As is evident from a report titled *Revisione dell'offerta dell'appalto delle opere di giardinaggio* (i.e., "Review of the gardening works' tender") a delegation visited in Pistoia the two main contractors gathered from the public consultation. The document – signed by Piacentini and dated March 12, 1934 – explains that the companies of «Mr. Martino Bianchi» and «Capecchi & sons» both offered guarantees in terms of reliability and training. Both nurseries might have completed the work quickly, having at their disposal a large number of plants, which were enough to achieve the project goals. Consequently, considering the construction site delays determined by the laying of the foundations[29], the chief architect believed that the best solution was to split the contract into two different commissions, maximizing the execution speed: «Capecchi & sons – observed Piacentini – made a slightly better economic offer, but it is difficult to evaluate small price differences. Mr. Bianchi, instead, can supply more effective plants, if required». Thus, it was convenient «to arrange a different distribution of work, entrusting to the Capecchi the area between Viale della Regina and the central square, while Bianchi would intervene in the area bordered by the central square and Viale del Policlinico, according to the approved planimetry. In this way, there would be a fair distribution of the duties with the possibility of adorning the large avenue with the best plants. The solution also offers some advantages, stimulating the emulation between these two very important companies and allowing Sapienza administration to complete the works even if one of the two contractors was to leave the construction site, for any reason»[30].

In front of his son Massimiliano, Torello Capecchi signed the contract on May 30, 1934. Martino Bianchi did the same on June 19. The works should have been finished before March 31, 1935, since the campus had to be inaugurated twenty days later.

29. Ciranna 2017, p. 151.
30. ASUR, C.E.R.U.R., b. 43, n. 347: *Revisione dell'offerta dell'appalto delle opere di giardinaggio* (12 March 1934), pp. 8-9 [Garden tender revision].

By carefully balancing costs and benefits, Piacentini ensured the excellent result that is still partially visible today. Placed in competition, the two companies opted for the best species of trees they had to make a good impression on the Fascist officials, while the presence of both companies ensured a rapid completion of the work despite the technological setbacks and political uncertainties that affected the construction of the majority of the buildings. For example, the Institute of Botany became a source of disputes between Elia Federici's construction firm and the technical office of the consortium at the end of 1933[31].

However, the long lead times had a positive impact on the decisions originally taken. Compared to the rigidity of the «park plan» approved by the management, the old photos suggested a widespread complementary function of the greenery, which only in certain circumstances was forced to satisfy purely technical tasks. The rows of holm oaks along the transversal axis were effectively planted at a very short distance to facilitate the rapid development of a dense and compact canopy, useful for reinforcing the optical telescope converging on the entrance to the School of Mathematics: a situation that has remained unchanged until today. On the other hand, a deliberate exoticism characterized the lawn behind the Rectorate, where the palms (*Phoenix canariensis*) became, since then, prevalent. The concept, therefore, was reduced to a clear interpretation of the dignity of the vegetation, which was called upon to face the buildings' pure shapes, actively improving their architectural public facades. According to the analyses provided by Ebenezer Howard (1850-1928), which were very popular and highly regarded in those years by urban planners, Piacentini imagined making the «greenery collaborating with in general design, to form – as he will postulate in 1953 – an attractive and silent framework»[32]. The only exception was the experimental botanical garden, whose opulence quickly emerged. Of the more than eighty tree species present within the campus, about fifty percent found a place there, for a total of 734 individuals that made (and still make) this space one of the lushest areas of the University City of Sapienza[33].

31. ASUR, C.E.R.U.R., b. 13 n. 121: *Relazione sui lavori eseguiti dall'Impresa Federici Elia per la costruzione di alcuni fabbricati nella Città Universitaria redatta dal dott. Ing. Salvatore Farinetti* (31 December 1933) [Report on the works carried out by the Federici Elia and his company].
32. Piacentini 1953, p. 53.
33. Gratani *et alii* 2017, p. 16.

Conclusions

The approach that Marcello Piacentini had with drawing the spaces that had to be used as green areas in the *Studium Urbis* put into practice what the architect proposed in 1916 when he published a pamphlet about the future development of Rome. Thinking about the global effects of the transformation of the old papal *Urbe* into a modern capital city, Piacentini intended to establish a ring made of the parks that survived the real estate speculation, converting this 'green' system into an architectural component of contemporary Rome.

This natural path would have included the historic noble villas outside the Aurelian walls and part of the landscape of the so-called *Agro Romano* (Roman countryside)[34]. After returning from a trip to the United States[35], at that time the architect advanced the suggestion of a symbiotic relationship between man and Nature, following the example of the South Park in Chicago but without forgetting the tradition as a reference. One of the goals of his proposal would have been the inclusion into the network of the ancient Roman Fora archeological park[36]. Twenty years after those first evaluations, Piacentini elaborated a more conscious program. Punctuated by a series of autonomous "lungs", the inhabitants of Rome would have found relief from the metropolitan chaos in places specifically designated for peace and serenity: oases where people could have spent their time lazing or studying. The University City of Sapienza would have been one of these places and, as the columnist Renato Caniglia correctly quoted, «the tumult of metropolitan life will press in vain on the court of this "city"», since it was created «to keep off the noise of the streets, allowing to each Institute to carry out its activities without interfering with the others. The free space will therefore be arranged as roads, parks, and gardens, with wide driveways which, through secondary entrances, will lead onto the adjacent streets»[37].

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34. Turco 2017, p. 52.
35. Nicoloso 2018, p. 29.
36. Piacentini 1916, p. 26.
37. Canaglia 1934, p. 5.

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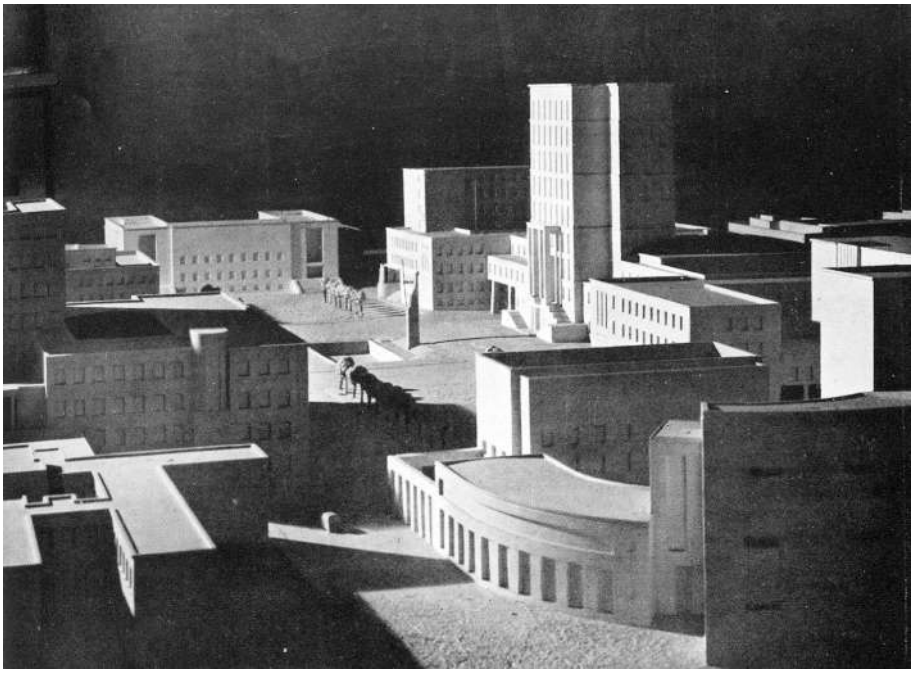

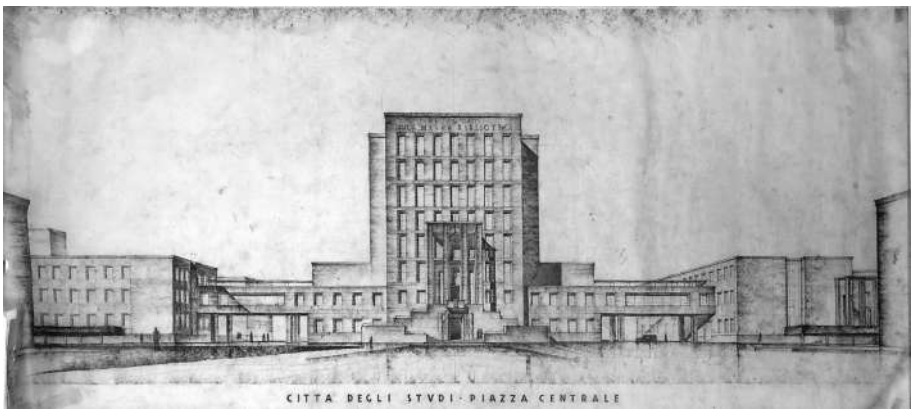

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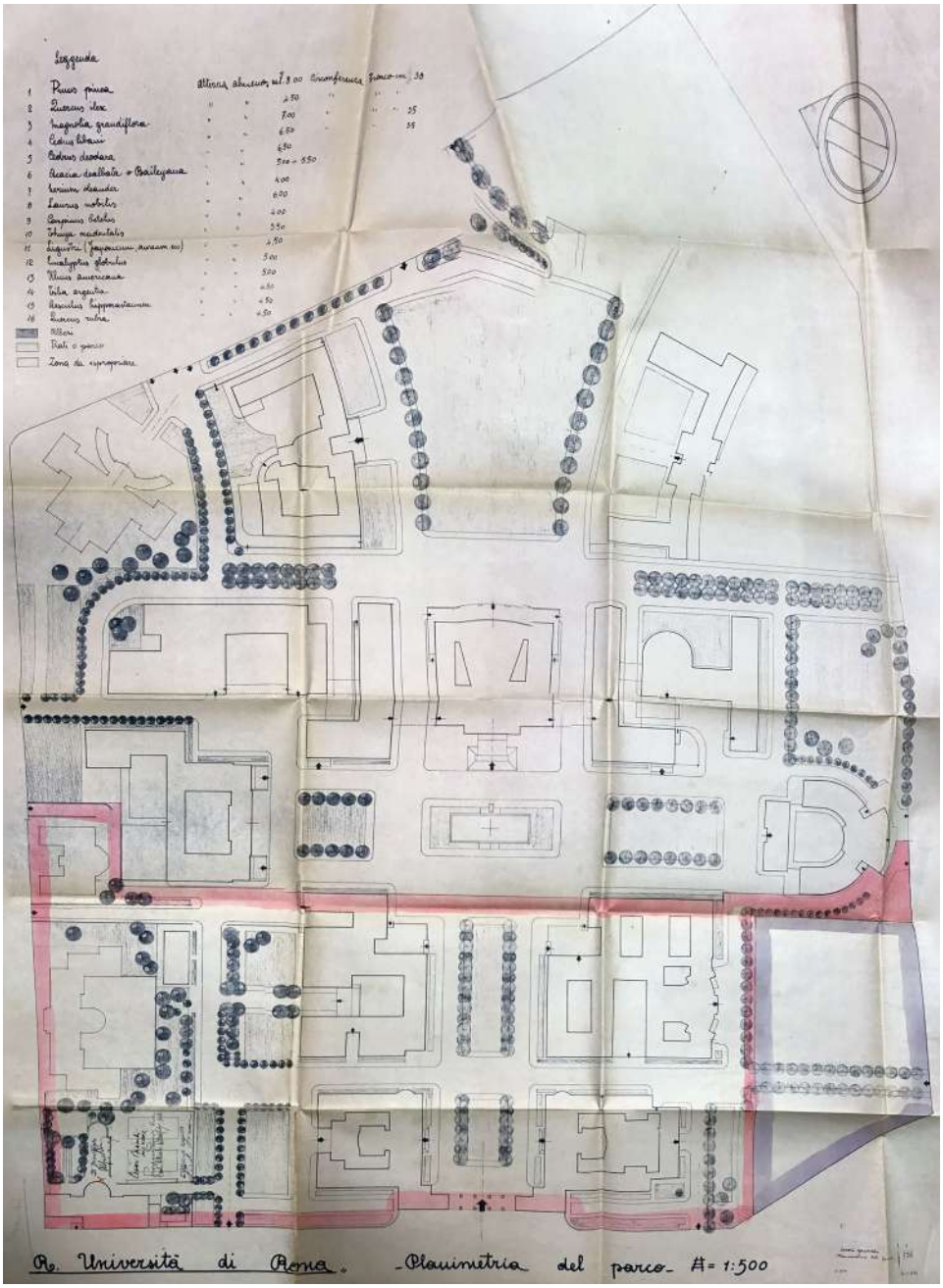

Fig. 5 – ASUR, C.E.R.U.R., b. 8, n. 72: Anonymous, Planimetria del Parco *(13 January 1934).*

*Fig. 6 – Rome, The University city, historical photo, 1936 (*Architettura*, XV, special issue).*
*Fig. 7 – Rome, The University city, historical photo, 1936 (*Architettura*, XV, special issue).*

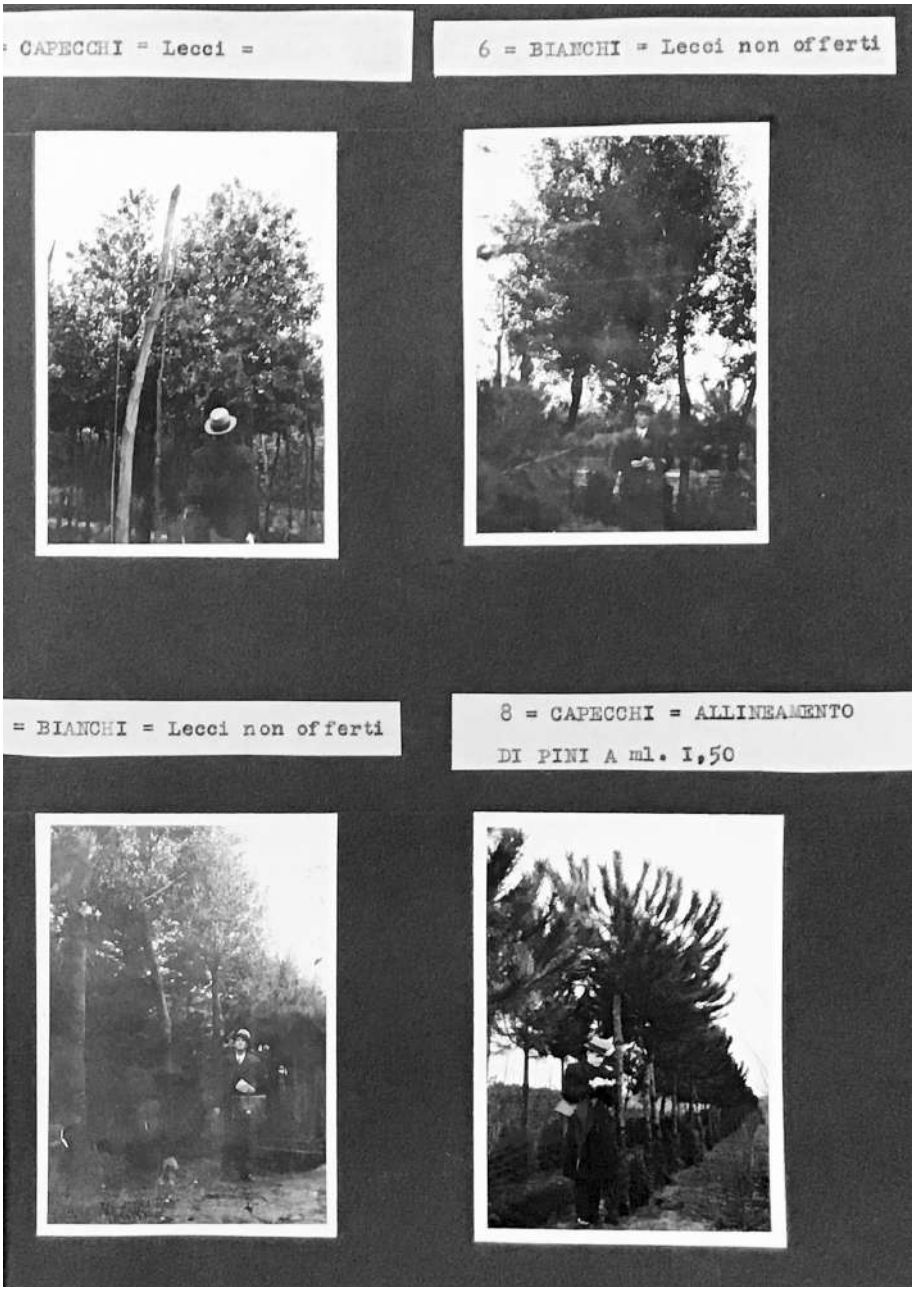

Fig. 8 – ASUR, C.E.R.U.R., b. 43, n. 347: Pistoia, Trees selected for the University City of Rome, 1934.

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The Sanctuary of Hercules Victor.
A renewed image in the Tiburtina landscape

Laura Bernardi[1]

Abstract: *The paper explores how ordinary green maintenance in an archaeological site can contribute to an overall reinterpretation of the architectural artifact itself using as a case-study the management experience of the Sanctuary of Hercules Victor, Tivoli. The complex, located in a scenically significant position, boasts a two-thousand-year reuse that has allowed it to be preserved up to the present day. Starting from the "Progetto Strategico – Grandi Progetti Beni Culturali", the preliminary cleaning operations of the greenery of the northern front have provided a renewed vision, particularly from the other ridge of the Aniene river, enabling us to draw a parallel with the contemporary structures of the Canevari Canal. Ancient and contemporary features are confronted again as part of an overall reinterpretation of the landscape.*

Keywords: *Sanctuary of Hercules Victor, Tivoli, Cultural landscape, Historical palimpsest*

Located in a strategic position on the obligatory passage between the upper and lower basin of the Aniene River, along the road that connects the Tyrrhenian coast to the Adriatic one, the Sanctuary of Hercules Victor is one of the major Roman architectural complexes of the late Republican age. Due to its position, since its origin, it played an important role in the phenomenon of transhumance, which found its tutelary deity precisely in Hercules.

The complex was built around the end of the 2nd century B.C. in a dominant position, close to the ancient city of Tibur, high above the surrounding countryside. The urban traces are so strong that the ridge of the hill was reshaped to accommodate the large terraces of the sacred building and the main access to the city, the Via Tiburtina Valeria, is incorporated into the substructures, creating an exceptionally covered path, the *Via Tecta*. The monumental site, which occupies approximately three hectares, with a frontage of 188 meters and a side of 140, is arranged on two functional levels, developing overall

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a total of five floors: in the upper part there was the religious space, while in the lower one the place had a commercial connotation, that constituted its economic fortune for two thousand years.

The monument is characterized by continuous use over the centuries, through a progressive re-functionalization of structural spaces, adapted and modified according to new and diversified needs. The site developed in the post-ancient era as an agricultural vocation and a monastic settlement[2], then an industrial one due to the presence of available water for productive purposes; this reusing effectively avoided the definitive abandonment of the places[3]. The peculiar history of this architectural complex has made it a rare case of a site that has undergone substantial changes, becoming an inseparable unit of ancient structures, religious reuses, and industrial artifacts.

The north façade seen from the Sanctuary of the Madonna di Quintiliolo

Over the centuries, Tivoli and the Sanctuary of Hercules Victor evoked great fascination in writers and artists, especially foreign travelers of the Grand Tour[4]. Although their journey towards Italy considered Rome as the main destination, intellectual interest also turned to the surrounding countryside. Tivoli, already featured in sixteenth-century travel reports, between the seventeenth and the nineteenth centuries, became a not to be missed experience for artistic practice and education, in particular that of landscape painters and engravers, due to the ancient ruins and the fascination of Nature. There was a notable diffusion of depictions, among which the series that Piranesi dedicated to it certainly stands out (*fig*. 1).

The vestiges of the Sanctuary, largely believed to be the Villa di Mecenate, maintained great visual appeal. Next to the representations of the numerous vaulted spaces of the *Via Tecta*, the substructures facing the Aniene River became the privileged subject to portray, along with the local landscape, the steep hill, the vegetation, and the spectacular views towards Rome across the lowlands, dotted with rural buildings, bridges, churches as the late ancient Tempio della Tosse, Roman ruins,

2. Giuliani 2019.
3. Angelucci 2014, pp. 129-211.
4. D'Alessandro 2021, pp. 109-112.

and behind which often stands the great bulk of Villa d'Este. In particular, the Sanctuary of the Madonna di Quintiliolo is a privileged point of view, located on the opposite riverside, on the site formerly occupied by the Roman Villa di Quintilio Varo. From here the northern front of the Sanctuary stands out, together with the numerous industrial 'establishments' lined up along the Aniene River ridge.

Built overlooking the valley, the north frontage of the monumental masonry structure is preserved today for a height of 40 meters, behind which there is a complex and rational system of rooms connected to *Via Tecta*, conceived as structurally independent from the wall facing the Aniene[5] (*fig*. 2).

At the lowest level, a compact substructure in *opus incertum* is established on the ancient river valley, opening only in correspondence with two exhaust manifolds serving the entire Sanctuary. This first level was crowned by a projecting cornice, supported by travertine corbels, two of which remain visible, in addition to the imprint of a string course used as an external service path, in the outline of the pillars above. Currently, this level is the least perceivable from the opposite side of the valley, as it is mostly hidden by the thick river vegetation, but the two exhaust manifolds are still recognizable.

The upper level is formed by an east-west sloping series of eight arches visible for a length of 52 meters, where the first four ones on the left rest directly on the ground, while in correspondence with the lower substructure, the height of the pillars reaches 7 meters. Behind the front runs parallel, leaving free a passable interspace, a second wall of similar thickness connected by declining partitions that suggest the presence of two construction phases. Today this level, still legible in the original arrangement, is partially modified by the insertion of some openings suggesting the creation of several floors within the counter-façade. In the rooms created inside the hollow space, the Chapel of Saint Ignatius[6] is

5. Giuliani 2004, pp. 32-73.
6. In 1539 Saint Ignatius of Loyola had sent his friend and disciple Cardinal Gaspare Contarini the first version of the Formula of the Institute of the Society of Jesus, known as the Five Chapters, read to Pope Paul III in the Rocca Pia in Tivoli; *Monumenta Ignatiana, Constitutiones Societatis Iesu*, 1934-1948, 4 Voll., Rome: I, 14-21 / I, 16-20. In 1548 the church of Santa Maria del Passo (that means of the passage) along with the Teobaldi residence and garden were donated to Saint Ignatius during his permanence in the Tiburtina area, thus becoming the headquarters of the first Jesuit school on the Italian peninsula and a substantianl contribution in the birth of the Jesuit religious order. After his death, a chapel was dedicated in his name, created within the Sanctuary's substructures. This has been miraculously preserved together with part of the original stucco decoration; Fiore 2006, p. 42; Giuliani 2009, p. 21.

still a tangible sign of the passage of the Jesuits within the complex in the sixteenth century[7].

The next order, corresponding to the level of *Via Tecta*, is still standing for 23 bays divided by as many buttresses for a total length of 140.90 meters. The lower half of these is made of large travertine blocks integrated with small panels of *opus incertum*, while the upper part presents the same technique with edges of small travertine blocks. Also, between this and the lower level, there was a frame supported by shelves, which allowed the external service path.

The first five panels from the left were blind, as the arches above, although the framework of the arching was present. The alternation of the openings in the frontage allows us to read the ancient compositional scheme: four large rooms, lit up by two large windows, interspersed with as many pairs of smaller ones, developed on two superimposed levels. This scheme responded to static as well as functional needs. The buttresses ended at the top with an inclined plane, without touching the overlying frame from which the semi-columns are set, slightly off-axis.

This level is one of the most modified of the entire structure, although the massive buttresses are still recognizable. Almost always covered by thick vegetation, which makes it difficult to see, it shows considerable alterations on the left side, where the arches have been opened, on the previously blind wall. At a later time, these gaps in the wall became windows for a series of service rooms, alternating with larger ones, definitively breaking the rigid ancient rhythm. Lastly, industrial drains, new service terraces, and big adding volumes, that occupy entire wheelbases, were inserted. But it is the final part that most testifies to the vicissitudes related to the site. First of all, we can read the traces of the modifications made by the Teobaldi family that built their palace there, equipping it with a series of windows that illuminate the vaulted rooms behind, separated by an attic from the lower part of the *grottoni* which collapsed over the centuries. Later on, many modifications were made in this sector by the installation of one of the ironworks buildings, the current *Antiquarium*.

Finally, the insertion of the nineteenth-century Canevari Canal completed the change: the homonymous Turret, built according to the

7. Giuliani 2004, pp. 28, 30, 83.

shapes of the dovecote of Teobaldi palace[8], so often depicted in Grand Tour images (*fig*. 3), provided for the passage of water under high pressure intended to feed the underlying Mecenate power plant for hydroelectric purposes.

At the level corresponding to the sacred area and the currently preserved *Triportico*, the façade is marked by 14 arches framed by Tuscanic semi-columns, preserved for about 80 meters. The semi-columns, 6.25 meters high, without a base, rest on a shell shelf that forms the stylobate, originally plastered and painted red. Similarly to the lower level, the first five arches once had blind mirrors, surely already in the design phase. The whole structure forms one of the first examples of a suspended colonnade applied to a wall, which reaches a total height of 41.80 meters at the top of the preserved attic.

Less altered than the others, this level still has the visible ancient architectural scheme and some traces of the original wall facing. Together with the opening of the first five arches on the left, it bears witness to the passage of the industrial phase of the paper mill: the Dutch tanks, intended for the production of paper from rags, were lined up in the internal nave together with the old windows and masonry parapets.

Crowning the frontage there was a fifth level corresponding to the upper *Triportico*, which was at least 8-9 meters high in the ridge of the roof, the temple dedicated to Hercules Victor and the so-called Basilica. The façade must have had a continuous wall, illuminated by a few small rectangular openings, and marked by semi-columns with architraves: today there is a continuous wall, the result of successive industrial reuses – here was placed the *Stracceria*, a fundamental space within the cycle paper production – which conceals a large terrace, with some arched openings.

Contemporary reuse: the Tiburtina industries and the relationship with the landscape

The strong presence of the hydraulic energy of the ancient Roman aqueduct, derived from the Aniene river and the subsequent construction of numerous canals in the medieval and Renaissance era, together

8. The dovecote remained structurally intact until the beginning of the 17th century, when the papal armoury was built; Fratini-Moriconi 2011, p. 42.

with the construction of Villa d'Este and its fountains which generated a large mass of water to be disposed of (*fig*. 4), gave the establishment a prominent industrial vocation[9]. In fact, there have been countless productive uses, that transformed the site into a unique example in the world of structural stratification of historical phases.

From the seventeenth century, the industrial vocation is marked, so much that the area definitively lost its sacred and commercial nature to make way for the manufacturing one: it will be necessary to wait almost four centuries before there is awareness of the Sanctuary again as an archaeological and historical-architectural emergence[10]. Thanks also to the proximity to the hydraulic energy source and the availability of large-covered rooms, numerous manufacturers and proto-industrialists arrangements settled here. The Camera Apostolica set up an arms factory (1612) and a powder magazine (1633). Between 1658 and 1740 the manufacture of the wool took place. The iron-works activity is still attested by: the Papal armory of 1795, Ferriera di Porta Scura, the foundry for cannons in 1802 (managed by Luciano Bonaparte), textile and iron and steel industry since 1815, Ferriera di Villa Mecenate since 1830 (Battista, Graziosi, Carlandi). Finally, in 1846, the Società Romana delle Miniere e sue lavorazioni di ferro purchased the area[11].

Water and industry between the nineteenth and twentieth centuries

Deeply involved in the city events, once again the Sanctuary was the fulcrum of a great change that affected the whole urban layout. The last river flood in 1826 urgently imposed a change from the reconstruction carried out up to that point: in 1835 Pope Gregory XVI inaugurated the definitive deviation of the course of the Aniene into the Gregorian tunnels, inside the Catillo mountain. Since then, water control has been centralized in a few private companies, which has increased the exploitation of the kinetic energy of the falls. This fast process, between 1884 and 1928, also ruled by the Società delle Forze Idrauliche, recorded the multiplication of river canals and power stations (*fig*. 5), with the main

9. Milanetti 2012, pp.101-104, 119, 121.
10. Angelucci 2014, p. 197.
11. Bulgarini 1848; Pacifici 1978.

hub right in the Sanctuary: designed by the engineer Canevari, all the ancient aqueducts that flowed into the Aniene river came here, conveyed for hydroelectric exploitation. From this moment on substantial changes to the ancient structures began and caused the disappearance of the Waterfalls of Mecenate, which had always characterized the northern front of the site.

These waterfalls were channeled forever into forced conduits, that had to comply with the hydraulic laws to feed the power plants. Due to the particular conditions of this complex, Tivoli, on the 26th of August 1886, was the first city in Italy to have public lighting with alternating electric current, thanks to the newly finished canal and the innovative Gaulard and Gibbs transformer. On the 4th of July, 1892 electricity was conducted from Tivoli to Rome, accomplishing the first significantly distant transport in the world[12]. This station played a fundamental role in the abandonment of gas lighting in Rome in favor of electricity[13].

Exploitation for hydroelectric purposes continued uninterrupted until 1994, when ENEL – National Agency for Electrical Energy – gave up using the stretch of canal included in the Sanctuary, to allow its study and archaeological excavation, just started in the eighties[14].

Paper production at the city level has always been linked to the industrial reuse of water; already active from the sixteenth century, it found a place along the left ridge of the Aniene valley, as evidenced by the concentration of establishments in this area still visible today: Marziale, Amicucci-Parmegiani, Graziosi-Carlucci, Sibilla and the Mecenate paper mills, located in the Sanctuary (*fig*. 6).

Therefore, the latest industrial processing implanted in the complex, the paper production took place in an area historically devoted to industrial use, still noticeable today from the panoramic point of view offered by the Sanctuary of Quintiliolo. Set to the left of the Sanctuary of Hercules Victor, the old paper mills mentioned above, with their huge size and mostly in a state of abandonment, are aligned along a road, which partly runs through a tunnel, built specifically for industrial purposes, still called Via degli Stabilimenti. It is worth mentioning that the "Progetto Strategico – Grandi Progetti Beni Culturali", a significant state funding, involves the Amicucci-Parmegiani

12. Borgia 2018.
13. Milanetti 2012, pp. 15-27.
14. *Ibidem*, pp. 247-250.

paper mill in an important restoration project, together with the Sanctuary: new parking lots, an auditorium, and the museum of industrial archaeology are planned.

The Mecenate paper mill, later to become Società Cartiere Tiburtine, was built by the Segrè family in 1887, arranged mainly close to the *podium* of the Temple and the northern part of the *Triportico*. In the first half of the twentieth century, the years of maximum expansion of paper production some ex-novo structures flourished, built close to the Roman ones. The pavilions built in 1887, renovated in the thirties and fifties, in iron and reinforced concrete, contributed to the partial conservation of the ancient testimonies, becoming themselves an extraordinary heritage of industrial archaeology.

The paper mill's activity, which ended in 1956, closed definitively in 1967: the introduction of plastic, which replaced the use of wrapping paper, together with the logistical difficulties in reaching this obsolete site, drove the new property, the Dutch United Paper Mills, to transfer the factory in a different headquarters built near Ponte Lucano[15], a flat area along the river. This event also concluded the process of industrial reuse of the Sanctuary, whose area was finally recognized as archaeological significant and in the early seventies it was transferred to State Property.

Starting in 1976 it was progressively handed over to the management of the Ministry of Culture, which initially used it as a judicial deposit for archaeological finds deriving from confiscations for the territorially competent Superintendency. Thanks to several restoration projects, over the years it was possible to open the site gradually and occasionally to the public, until the Sanctuary became daily accessible with its assignment to the Autonomous Institute Villa Adriana Villa d'Este, in 2018.

The Canevari wall

The Canevari Wall, a tufa stone structure with two orders of superimposed arches of differing widths (*fig*. 7), belongs to the phase in which the Sanctuary of Hercules Victor was overseen by the engineer Raffaele

15. Greco 1999, p. 43.

Canevari, the mastermind behind the Tiber floodwalls in Rome. This construction is the visible part of the homonym canal, whose project dates back to 1876: an architecture with a hanging duct[16] that enters the site in an elevated position as compared to the ground level, effectively creating a bridge under the public road, the aforementioned Via degli Stabilimenti (*fig*. 8). Its construction aimed at collecting water from the Vesta power plant, located roughly 1 km to the east, and, in addition, at diverting the water from the canals along the northern ridge, including the wastewater from industries and the drain off from nearby Villa d'Este. The construction of the canal, which still runs through the upper level of this high wall, was decidedly more invasive than all previous reuses of the site. Besides the considerable interference with the ancient structures, whose spatial continuity and relationship with the surrounding landscape was definitively broken, this entry also entailed the filling in of the southern part of the complex, enhancing the already centuries-old agricultural use.

The Canevari Canal, finished in 1892 (*fig*. 9), continued its journey inside the site through the Temple, which had been transformed into a cargo cistern[17], then crossed the *Via Tecta* and turned sharply, with the help of an overflow tank, along the perimeter wall of the Sanctuary. Through the vertical pressure conduit, hidden in the Canevari Turret, the water reached the turbines of the Acquoria power plant below, located halfway up the coast with a height difference of 50 meters above the river.

From 1902, an increase in production led to the construction of a new power plant at river level, that exploited the entire drop of 100 meters and, following subsequent renovations, is still in use today[18]. The water supply system was also modified, using new deeper pressurized pipes, which definitely replaced those of the Canevari canal, underutilized during its decade of activity. A further underground facility, the San Giovanni conduit, together with some piezometric wells still visible on the site, was also added in 1928, built with the exclusive use of pressurized pipelines[19].

16. Milanetti 2012, pp. 242, 246.
17. *Ibidem*, pp. 251-252.
18. *Ibidem,* pp. 34-37, 45, 59-61, 110-112, 118, 125.
19. *Ibidem*, p. 81.

Observing the architectural structure of the Canevari Wall, from the opposite bank, it is not difficult to notice how the double contemporary arches and the high pillar that divides the façade into two parts somehow recall the northern front of the Sanctuary, located a few meters to the right. The arches chase each other horizontally, on a landscape sloping towards the valley, in continuous succession, interrupted only by the vertical mass of the buildings serving the old paper mill, that was the caretaker's building next to the Canevari Wall and the *Stracceria* located to the left of the north front, currently intended for offices, event rooms, the Laboratory and the Anthropology Depot. The circular body of the fire escape, added to this pink building in the nineties, whose verticality contrasts with the straight cast of the Canevari turret, seems to mark the beginning and end of the northern front of the complex, in the forms enriched by the time in which it reached us.

Routine maintenance of green areas and a new reinterpretation of the architectural scheme

In order to convey and disseminate the values described so far, the Sanctuary is involved in an important ministerial project. The "Piano Strategico - Grandi Progetti Beni Culturali" aims to relaunch territorial competitiveness in the country with investments in assets and sites of notable interest and national importance for which it is necessary and urgent to implement organic protection projects, redevelopment, valorization, and promotion, with the aim of increasing the offer and the application for use. The project is based on a strategy that regards culture and tourism as essential components for employment and development of the national economy. In this respect, the plan integrates and completes the programming of the Ministry of Culture within the development and cohesion policies, sharing their goals[20].

Inside the Sanctuary, it is planned to restore the large-vaulted rooms, overlooking the *Via Tecta*, called *grottoni*, which, thanks to the structural consolidation, surface restoration, and creation of new visit routes, will be made accessible to an increasingly larger public, without physi-

20. https://programmazionestrategica.cultura.gov.it/progetto/tivoli-santuario-di-ercole-vincitore/ (2024-03-02).

cal and virtual architectural barriers[21]. The expansion of the visitable part of the site will significantly enhance the site's cultural offer, already open with a circular route that includes the exhibition halls (Sala Mecenate, Sala Anio, *Antiquarium*), the vaulted gallery, the *Triportico*, the view over the remains of industrial archeology and its substructures located to the north, the theater, and the green external area of the Votani. In fact, the vaulted halls overlooking the *Via Tecta* develop a large surface area that is suitable for multiple uses, from temporary exhibitions to events, from conferences to study and research classrooms, always completed by a renewed narrative of the Sanctuary in the eras that most represented it.

The cleaning of the weedy greenery on the northern front of the site is a preparatory activity for the internal restoration operations. The removal of the vegetation, for the first time in a while, has in fact made the frontage legible again in its entirety: the theory of ancient arches has become visible again, together with the modern modifications and contemporary additions. From a close and foreshortened view (*fig*. 10), no less interesting than the view that can be enjoyed from the opposite river ridge, it is possible to appreciate the details of the original architectural scheme, which will later become typical of Roman buildings. The ancient remains are not separable from the traces of the most recent modifications, each of which tells a part of the process of paper production or the passage of water for hydroelectric purposes, though these traces are sometimes not readable, given the partial elimination in the nineties of many elements belonging to the industrial phases.

However, it is still possible to appreciate the remains of attics and passages outside the façade which, similarly to the hanging paths of ancient times, responded to the service needs of a complex functional building, together with the flues, often placed against the ancient buttresses, combined to the various chimneys located within the site. The windows belonging to the paper mill are no less interesting, continuing in some cases without interruption between the third and fourth levels of the site, indicating the close correlation of the industrial activities from the top to the ground floor: the paper cycle involved, in fact, the

21. Contract n. 14 (11 May 2021), in favour of RTP Studio Croci&Associati; Contract n. 143 (2 December 2022), in favour of DucaleRestauro s.r.l.

sliding of the raw material, the shredded rags towards the lower level, where the Dutch fraying tanks and the calenders were placed to form the large rolls of paper, while, even further down, the turbines and one of the three continuous machines contributed to feeding and concluding the process. At the end, in correspondence with the *Antiquarium*, the hanging path of the Canevari canal, supported by seemingly medieval beams, characterizes this part of the front, exposing itself beyond its vertical limit, before the forced passage of the water is once again hidden from the interior of the terminal turret.

The extraordinary cleaning of the weedy greenery made possible by operators anchored by rope, contemporary climbers of vertical walls (*fig*. 11), reveals therefore an exceptional image of the north façade, which contributes to renewing the charm of a site whose location is intimately linked to the road system ancient city of Tivoli, as well as its surrounding landscape.

Likewise, the extraordinary cleaning of the Canevari wall, which took place in 2019 with partial restoration, and then repeated in 2022 and 2023, certainly contributes to the reinterpretation of the contemporary architectural artifact. It is thus possible to give new reading the double arching that follows the ancient one, unobstructed by weeds, even on the pillar where the maidenhair tree always grows back, due to an active loss of the canal behind it which romantically continues to wet the wall.

In this way the new image that the site offers to the landscape is complete and renewed and it contributes to creating new scenarios.

Conclusions: the Tiburtina landscape

The analysis of the ancient landscape, where roads, natural environment, and architecture coexisted in a symbiotic relationship, is made more difficult today due to the changes that occurred subsequently[22]. In fact, from the Middle Ages to the Renaissance, we witness the abandonment of ancient structures, which were progressively stripped away, together with the spread of an agricultural and pastoral economy, in which olive groves stand out – cultivation that still characterizes the ar-

22. Renzoni 2021, pp. 31-38.

chaeological site of Villa Adriana –, and vines, among which a type that cardinal Ippolito d'Este imported from France, called *pizzutello*, still widespread today along the ancient Via degli Orti, around the southern border of the Sanctuary. All were crossed by the passage of transhumance routes. No less influential was the creation of the large garden with fountains of Villa d'Este which, in memory of the widespread presence of the ancient *otium* villas, contributed to a renewed enjoyment of the natural landscape together with restarting the proto-industrial exploitation of existing natural resources: the extraction of travertine, called *lapis Tiburtinus*, and the reutilization of the great availability of water began again. Once again appreciated during the Grand Tour, in the following century this territory saw an opportunity for redemption, tourism, and work, in the creation of the first connections with the city of Rome[23].

Finally, in the second half of the last century, the enormous contemporary changes to the territory recorded an extensive and intense building sprawl, the multiplication of road connections, and uncontrolled industrial development, as indeed happened in many areas of Italy. Above all, the most recent changes, which have occurred since the seventies, have erased many historical-cultural values transmitted by the places.

However, human action has not always brought destruction, sometimes it has contributed to the creation of a landscape, in compliance with the definition provided by the Cultural Heritage Code[24], which only at first glance seems natural. The nineteenth-century diversion of the Aniene River into the Gregorian tunnels created an artificial waterfall, which modified the landscape known until then, but at the same time created a new one that harmoniously fits into the existing context. Industrial exploitation, together with the subsequent construction of factories aligned along the river ridge, contributed to the governance of the territory and to direct its development. Instead, when architecture and

23. The first large-scale infrastructural transformations date back to the end of the 19th century: the Rome-Tivoli tramway (1879) run along the new route of the Via Tiburtina and, after crossing the ancient and no longer used Ponte Lucano reached the town, giving rise to the creation of a new roadway more convenient for the new needs of car traffic. The line, in service until 1931, had its terminus in Rome near Porta Tiburtina and contributed to the birth of the one-day trip out of town, as well as to the construction of the San Lorenzo buildings themselves.
24. Legislative Decree n. 42/2004, art. 131: Landscape means the territory expressive of identity, whose character derives from the action of natural and human factors and their interrelationships.

Nature proceed on separate tracks and the idyllic relationship that binds them breaks down, man's attempt to control the territory is not always successful: the area of Ponte Lucano, where the ancient Via Tiburtina climbed over the river in its flat stretch, across the late republican *Mausoleum* of the *Plautii*, is now isolated from the context in which it was born, due to the uncontrolled urban growth and the retaining wall of the floodplains, which is not always able to cope with frequent flooding.

For several decades, the Tiburtina area has been the subject of protection by the Ministry of Culture: in fact, numerous decrees have been issued with the aim of protecting and enhancing it[25]. The Sanctuary, a lesser-known brother of the more well-known UNESCO sites[26], is therefore part of the large-protected landscape context around the town of Tivoli: to the south-west the area of Villa Adriana and the surrounding Roman countryside, to the north-east the Quintiliolo hill and Villa Gregoriana, to the north-west the Monte Gennaro area and the surrounding hills.

The operations described here intend to explain how a normal ordinary maintenance operation can contribute to generating a new interpretation of the architectural work in the landscape context. The Tiburtina landscape is characterized by many ruins, both ancient and contemporary, in which the growth of uncontrolled greenery often takes over, returning an image of romantic memory, together with corners of disconsolate abandonment: it is in fact desirable that all the structures of the old paper mills located in the city of Tivoli could gradually be returned to a new use.

25. Eichberg 2021, pp. 45-53.
26. Villa Adriana has been included in the World Heritage List in 1999, Villa d'Este in 2001.

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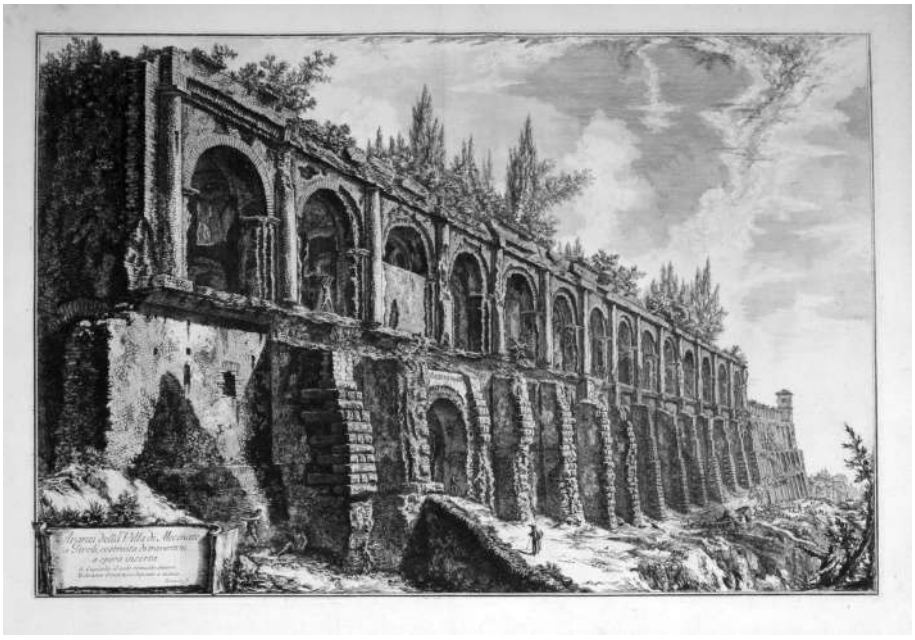

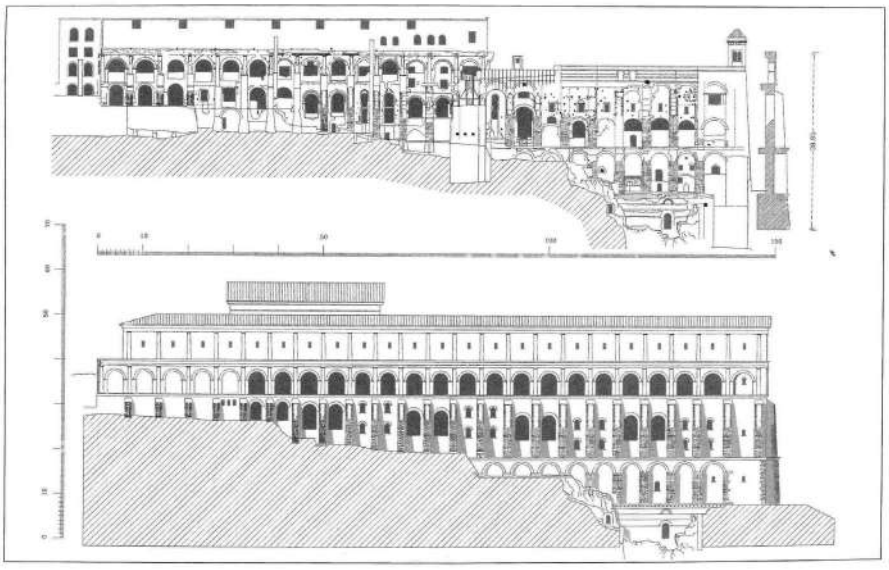

Fig. 1 – Giovanni Battista Piranesi, Avanzi della Villa di Mecenate a Tivoli construita di travertini a opera incerta*, 1763 (G.B. Piranesi,* Views of Rome*, 1763).*
Fig. 2 – Cairoli Fulvio Giuliani, Elevation of the substructures on the northern side, above: the state of preservation in 1990, below: a reconstruction image, prospectus, 2004 (Giuliani 2004).

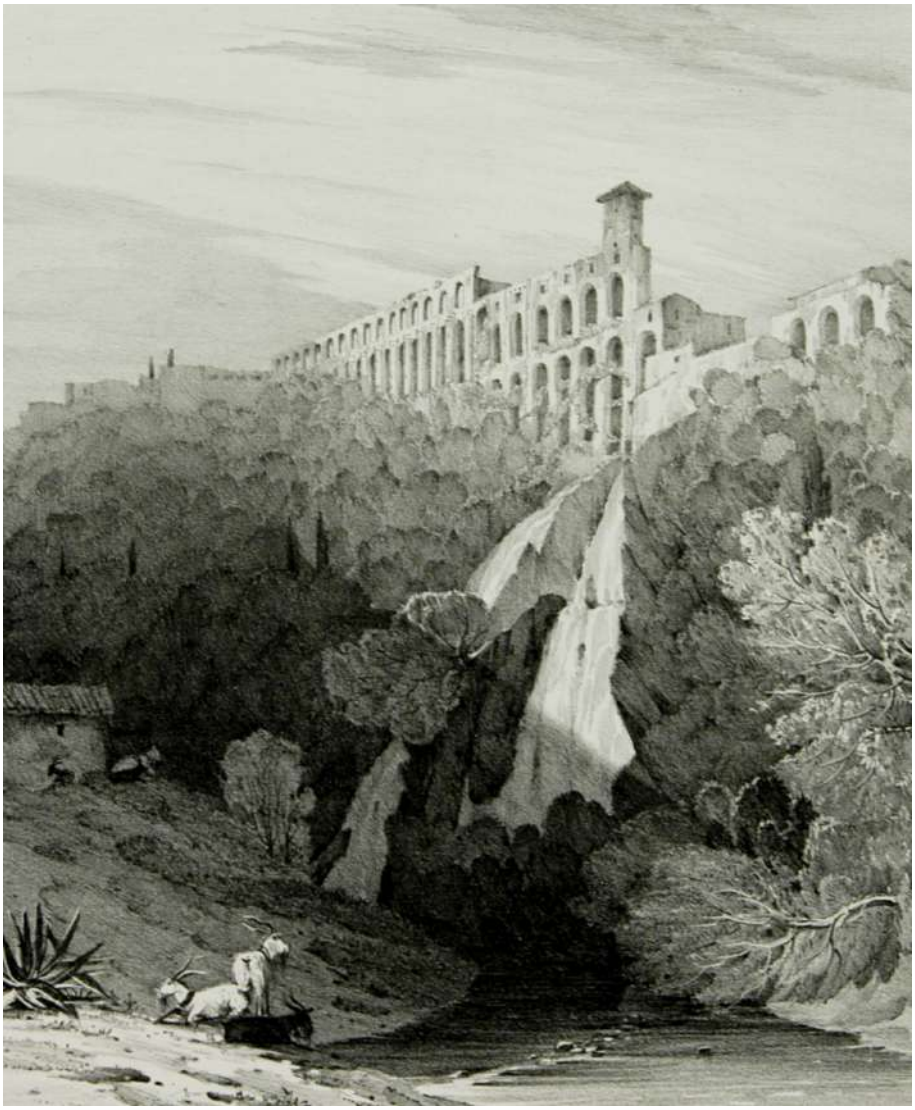

Fig. 3 – Linton William, Maecenas Villa at Tivoli*, print, 1832 (Lemmermann collection).*

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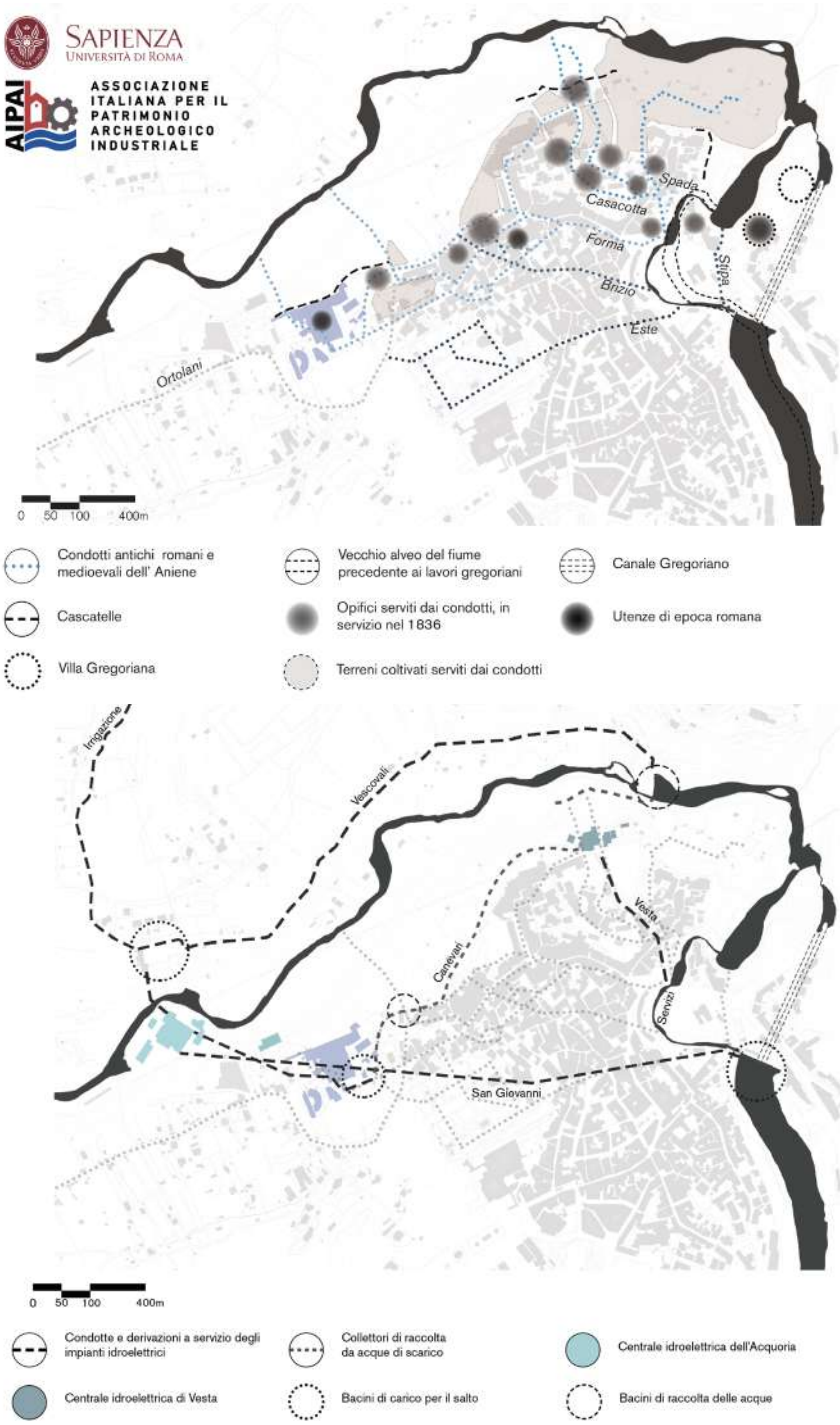
Fig. 4 – Andrea De Pace, Riccardo Rocchi, Map representing the state of the Tivoli water system in 1836, based on CTR (Regional Technical Map), digital processing, 2020 (MiC, DICEA, Sapienza University of Rome, AIPAI).
Fig. 5 – Andrea De Pace, Riccardo Rocchi, Representative map of electrical development through the complete shunt system in 1927, based on CTR (Regional Technical Map), digital processing, 2020 (MiC, DICEA, Sapienza - University of Rome, AIPAI).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Villa Gregoriana
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Centrale idroelettrica di Vesta
Bacini di carico per il salto
Bacini di raccolta delle acque

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Fig. 7 – Tivoli, The masonry structures incorporating the Canevari Canal (photo, 2023).

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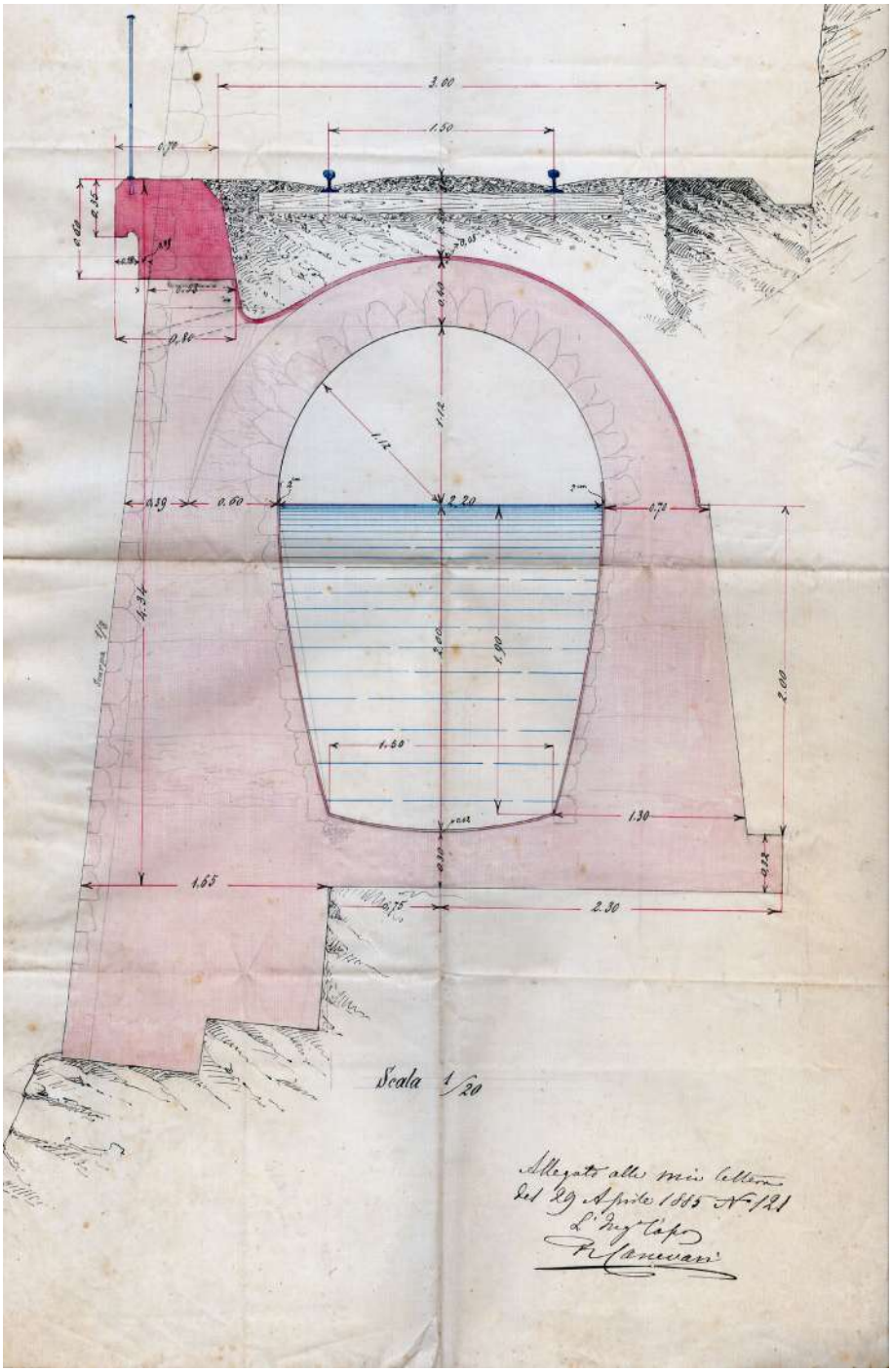
Fig. 8 – Raffaele Canevari, Sectional drawing of the Canal, drawing, 1885 (Perini-Salvati archive).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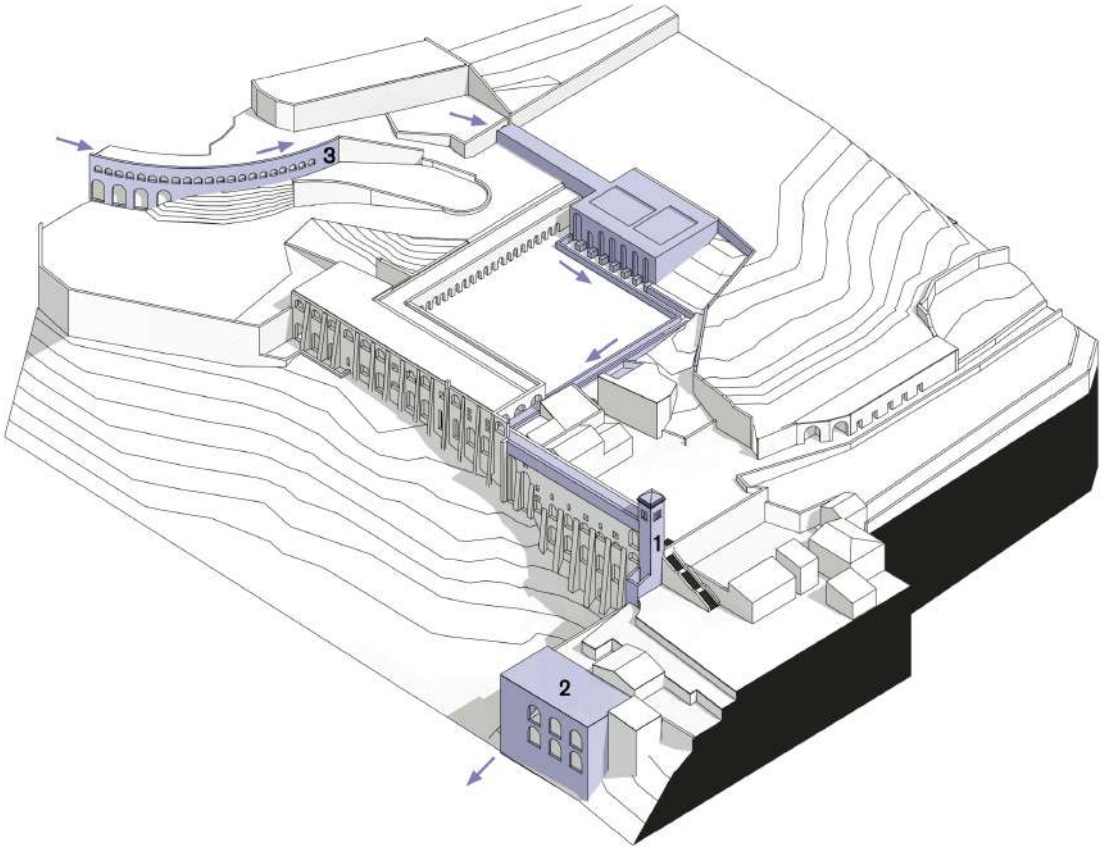

Fig. 9 – Andrea De Pace, Riccardo Rocchi, Evolution of industrial facilities from the Modern Age to the present day, an extra from the three-dimensional diagram indicating the course of the Canevari Canal within the site, digital processing, 2020 (MiC, DICEA, Sapienza - University of Rome, AIPAI).

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Fig. 10 – Tivoli, The north façade from Sala Mecenate (photo, 2023).

Fig. 11 – Tivoli, Climbers at work on the north façade (photo, 2023).

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March, 23 - 3:00 p.m.
Dr. **Daniele Bigi**, Ph.D.
Historical analysis of a Roman urban center. Hispellum as a case-study

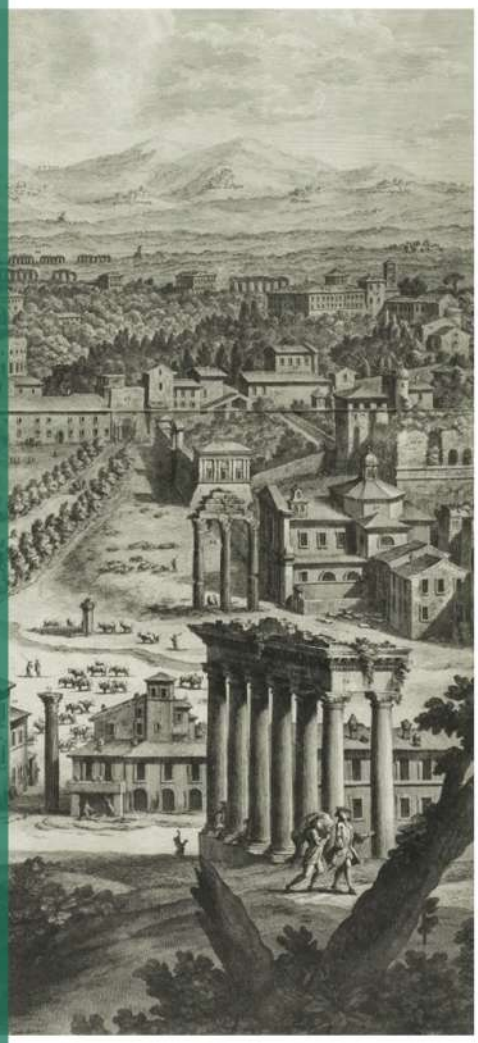
April, 04 - 3:00 p.m.
Dr. **Nael Chami**, Ph.D.
Oriental Dreams: Reimagining Paradise in the Urban Context

April, 18 - 3:00 p.m.
Dr. **Angela Convertini**, Ph.D.
Paolo III's urban strategy and the completion of the trident of piazza del Popolo

May, 04 - 3:00 p.m.
Dr. **Angela Lombardi**, Ph.D.
The missions of San Antonio, Texas: architecture as a holisti representation of the environment

May, 16- 3:00 p.m.
Dr. **Barbara Tetti**, Ph.D.
Identity Perception in Monuments, Ruins and Remains: Roman Heritage in Travel Accounts, XVIII-XIX c.

June, 1 - 3:00 p.m.
Dr. **Iacopo Benincampi**, Ph.D.
The Italian urban landscape tradition in the design of Sapienza University Campus



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