CHAPTER 9

DESIGNING HISTORICAL LANDSCAPES. AN ARCHITECTURAL LOOK AT THE ARCHAEOLOGICAL SITES

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Abstract

An archaeological site is a fragment of a past reality in the modern world. A contemporary visitor without a relevant background can hardly understand its function or perceive how it initially looked like, especially in places where the environment has changed dramatically, either because it has converted into a modern metropolis or because of changes in the natural landscape. The architectural design of historical landscapes, when it results from the collaboration of Archeology with other scientific fields, depending on the case, can lead to a deeper understanding through the spatial experience of visiting and touring. This article investigates the relationship between Architecture and Archaeology in three axes. First, at a theoretical level, examining the relationship of human construction with the place, then through an example of inquiry and analysis, using media and terms related to space, and finally a successfully constructed example of landscape architecture.

The Building and the Place

It all started from Earth,

> *"the mother of all beings, the oldest of all...*
> *mother of the gods and wife of the starry sky" (Stevenson Smith, 1958: 227)*

as the ancient Greeks attributed to her and other ancient cultures.

The architect Dimitris Pikionis describes civilization as the creation that was built when man was called to respond to nature: the difficulties, the needs, the opportunities. *Every civilization was dictated by nature* (Pikionis, 2014: 55-57). The human constructions, the accommodation, the path, and the utilitarian object are transitional objects between

man and nature. They define how man inhabits and experiences the place and their relationship with the earth, the sky, the elements of nature, and the world by defining movements, protecting, or even serving an activity (Norberg-Schulz, 1979: 10).

In the first years of human history, man, being alone and entirely dependent on nature, sought solutions and ways to ensure their well-being. *The world of animals and plants is not used simply because it exists but suggests to man a way of thinking* (Levi-Strauss, 1977: 61). Stone Age human gives more importance to things outside of them, seeing themselves simply as part of a whole, one of many beings to whom the earth, as a mother, provided and provides life. According to the anthropologist Claude Levi-Strauss (1977: 37), *wild thinking is constantly looking for messages in the world around because it perceives the world using "imagenes mundi", that is mental constructions that facilitate the understanding of the world to the extent that they resemble it.*

Thus, man gives meaning to the world around him based on nature. This is related to many levels of perceiving and understanding space, both morphologically and existentially: not as a set of information perceived intellectually, like location, but experientially, therefore with a physical and symbolic substance (Norberg- Schulz 1979: 6; also Tilley, 1994). Pikionis (1989: 7) refers to the locality as that *which nestles in the techniques and forms of folk architecture, which, being far from everything superfluous and pretentious, preserves the ancient virtues, without copying anything, in an authentic and sincere relationship with nature.*

Buildings are always built somewhere. (Leatherbarrow, 2015: 30)

Perceiving the pre-existing is the starting point for any design process. The man-made space reflects the conditions of the place and the time frame in which it was created. Pikionis (2014, 55-58) talks about the peasant, the non-citizen, the person who lives close to nature, *who empirically knows what is useful and what is necessary, builds their house by themselves, without anything superfluous, with materials of nature, in the shape that fits its geometry, without any plans, just with their body inside nature and the perception of the landscape around them. They have an instinctive perception of harmony. The shape is irregular, yet both the house and the sum of several houses reflect a harmony, which could not have arisen if they had been composed far from the place.* The emotional perception of the landscape and this harmony inspires what the architect calls *natural architecture, reminiscent of the architecture that nature applies in its inorganic creations* and only exists in ancient and medieval architecture.

Today, at a scientific level, the characteristics of a place are the subject of different scientific disciplines, such as geomorphology - which deals with the shape of the formations of the earth's surface, as well as their origin and characteristics, orography - which specializes in mountainous volumes, and topography - as derived from the greek words τόπος+γραφή / topos (place/locus) +graphy (scripture, writing), and deepens at the perception and recognition of the morphological features of places, as well as their recording on maps. The place, however, in addition to location and geometry, has a physical substance with materiality, color, texture, orientation, degree of brightness, and temperature. These characteristics, constantly changing, each with a different life cycle and on a perpetual path to deterioration, constitute a dynamic system in constant motion (Leatherbarrow, 2015: 31).

All these physical and symbolic elements collectively make up the overall feeling that man has for a place, sometimes involving metaphysical symbolism, which in ancient Rome was described as *Genius Loci* or Spirit of the place. Something similar happens in the case of identifying deities with forces of nature, as happened in ancient Egypt. In a more modern conceptualization of Genius Loci, architect Norberg-Schulz argues that *the essential act of architecture is to perceive the call of place* (1979: 23). Architecture serves the purpose of inhabiting. It is realized not when it simply creates buildings and cities but when it perceives the place and produces space in continuity and relationship with what previously existed and/or with what will exist. In 18th-century English garden design, a similar concept refers to the distinct atmosphere of a place rather than a spirit or an entity: a self-reliance of nature over artifice.

From Words to Images

Drawing is the primary, two-dimensional architectural expression (*"The language of design is the language of architecture"*, Schön, 1983: 80-81), both for recording information and for processing ideas, and the first step for architectural composition, as the creator selects and visualizes the elements that interest him. For philosopher Donald Schön, verbal description, and design are parallel ways of design composition and constitute what he calls the *"language of design"* (Schön, 1983: 80-81); however, in drawings, the information

acquires spatial dimension, qualitative characteristics and specific relationships among them. The creator necessarily needs to define them all while drawing. In other words, it is an eminently creative act on an intellectual level beyond the physical nature of the creation. Schön describes the process as a conversation between the creator and the situation. The creator gives shape based on his original idea, the situation responds, and the creator responds by editing the drawing. This conversation is reflective in a good design process (Schön, 1983: 79); therefore, drawing is a valuable research tool.

THE ANCIENT LANDSCAPE OF A CONTEMPORARY CITY [2013]

In the following example, drawing is used as a research tool to lead to conclusions: a series of plans and collages transforms the historical and theoretical background into spatial information to be the springboard for a supervisory approach to the history and identity of the city and its natural landscape, through the experience of its archaeological sites. This material is a potential base and background for a modern design project and connection of the spaces in a single, more comprehensive proposal.

This paper investigates how three Greek archaeological sites were integrated into their landscape environment at the time of their construction and examines whether and to what extent this is perceptible today in the urban environment of a modern city. Therefore, the title refers to the attempt to trace, in a contemporary city, the elements of the natural landscape that once affected its architecture. The case of Athens is chosen, and precisely three archeological sites, the Acropolis, the ancient Agora, and the temple of Olympian Zeus. Two critical theoretical works, «The Earth, the Temple, and the Gods: Greek Sacred Architecture» by the American historian Vincent Scully and «Architectural Space in Ancient Greece» by the Greek urbanist Konstantinos Doxiadis, served to build the theoretical background. They both argue that the architecture of the ancient Greek complexes was not just about their building design but was connected to a significant degree to their relationship with the surrounding landscape. The works mentioned above refer to prehistory and antiquity; thus, the maps and plans corresponding to each work are on different scales, as they try to highlight different types of relationships at the time of the construction of the monuments. The photo-collages and accompanying sketches are used to conclude the evolution of the relationships perceived in the plans, in the modern urban environment.

Figure 1: The archeological sites of Acropolis, Agora, and Olympian Zeus temple in Athens
(Collage by Eva Andronikidou)

A_ Vincent Scully «The Earth, the Temple, and the Gods: Greek Sacred Architecture» The work was published in 1962 and examined the relationship of construction in Greek territories with its surrounding landscape since the Stone Age when the main religious worship referred to Earth as a mother and source of food and survival. Therefore, the caves were considered sacred places within the body of the Great Mother and housed the first places of worship. The animal murals inside the caves exude gratitude for the animals since hunting is the only hope for survival. Several herbivorous animals - except the horse - have horns, considered a sacred worship symbol. The march through the cave's labyrinthine passages was part of a more extensive ritual, which used the sculptures of female figures discovered there, depicting Mother Earth, full of curves, with well-formed breasts and the mount of Venus. The topography and the formations on the body of the earth were seen as symbols on the body of the Great Mother. Thus, the places of worship were not located in the landscape incidentally; the landscape was not treated as a tabula rasa. Instead, they depended directly on it (Scully, 1962: 4).

Figure 2: Minoan statues of women with their hands raised towards the sky, Archeological Museum of Herakleion, Crete (Photo by Eva Andronikidou, 2021)

Figure 3: Horns sculpture in the archeological site of Knossos, Crete. At the back in the middle and behind the tree, mount Youchtas. (Photo by Eva Andronikidou, 2021)

The primal symbols of the Mother-Goddess and their physical expression

According to Vincent Scully, in buildings dating to the Bronze Age, almost 2000 B.C., particular features that have their roots in the Stone Age are recognized.

1_ an enclosed valley (which gives the observer the feeling of being enclosed by the Earth, the mother-goddess, like a child in a mother's arms or womb),

2_ a cone-shaped hill (considered the mother form of the earth),

3_ a mountain with two peaks (topography that refers to horns- the symbol of energetic power, to raised hands or wings, to the mount of Venus or two breasts, without this involving any sexual symbolism in the Freudian sense). Because of the specific topography, these landscapes were considered closer to the center of life and power (Scully, 1962: 11-16).

Figures 4, 5, 6: Skylines of landscapes considered sacred according to Scully (sketches of Eva Andronikidou based on Vincent Scully's photos)

Figures 7, 8, 9: Landscape formations considered sacred according to Scully (Scully, 1962)

The ancient Greek temple

In antiquity, beliefs of previous eras continue to exist or survive by selecting sights that have already occurred. The ancient temple inhabits its place exclusively with its external presence: it is intended to house the god and not man, the immortal, who cannot fit inside an interior - their power spreads over the entire landscape. Sacred symbols as natural elements or combinations are found in the landscape and associated with specific gods. The relationship of the buildings with them can be complementary, empowering, and even contradictory. The sanctity of the place does not come from the temple.
On the contrary, it was the reason the place was chosen since the divine presence already existed there as a physical force. The temple is the sculptural embodiment of the divine presence recognized by man in nature. The temple and the landscape are the essential components of ancient Greek worship architecture (Scully, 1962).
An attempt to investigate the relationship of the selected archaeological sites with the surrounding landscape of Attica follows in maps, plans, and collages. The plans and maps refer to the -possible- relations in the past, whereas the collages present the current situation in the modern city of Athens.

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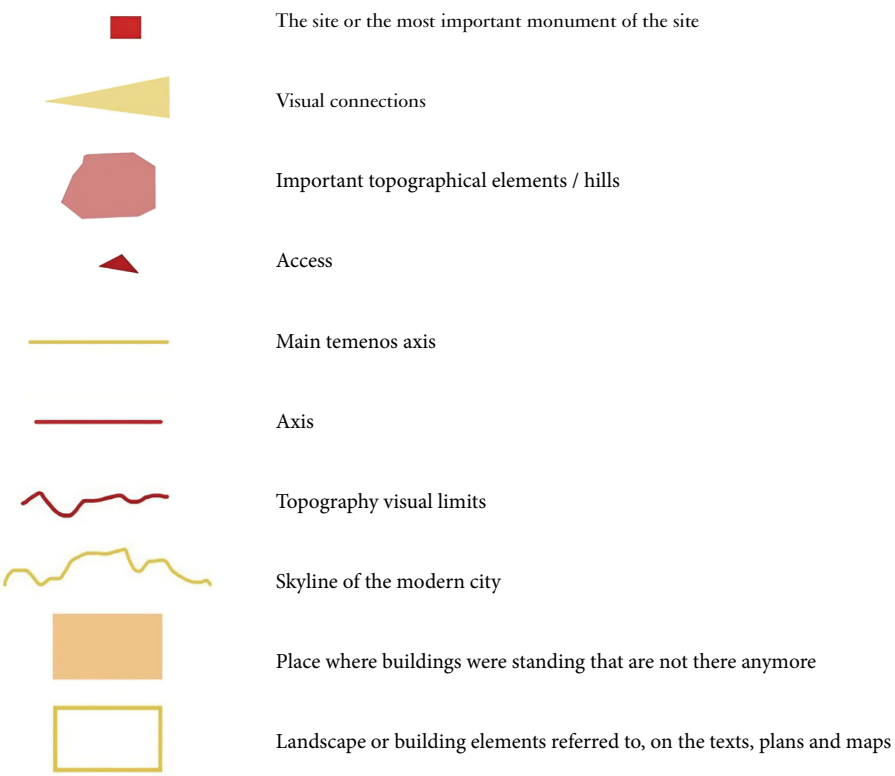
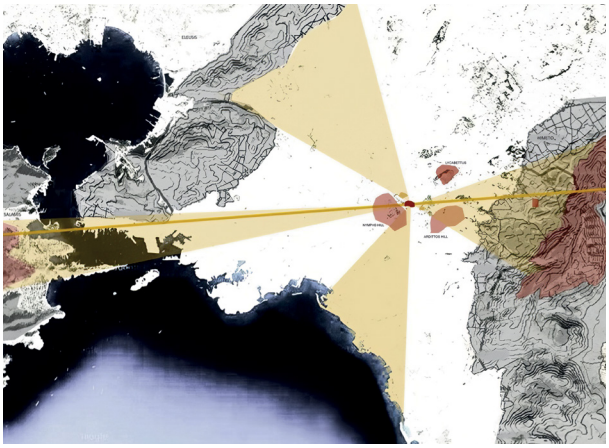
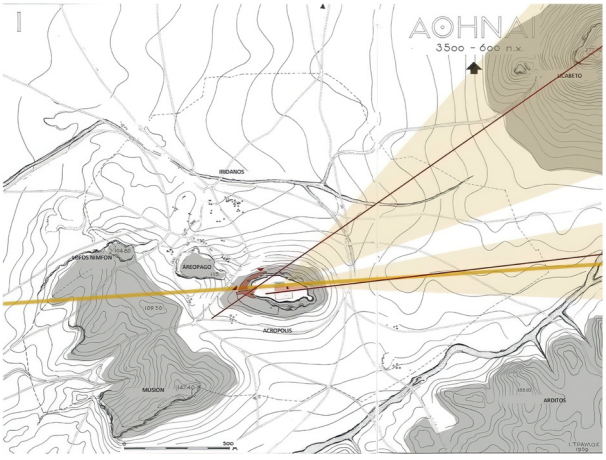
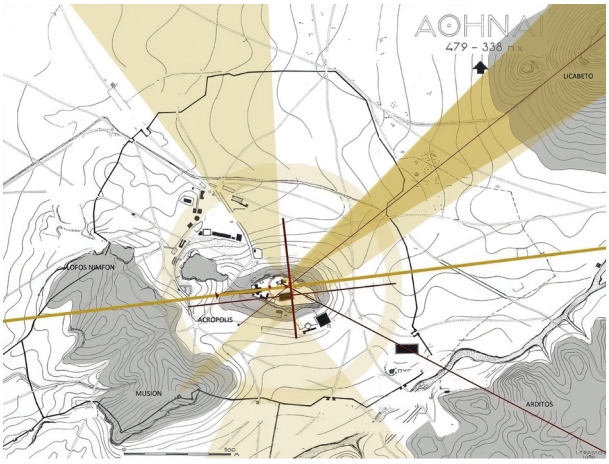


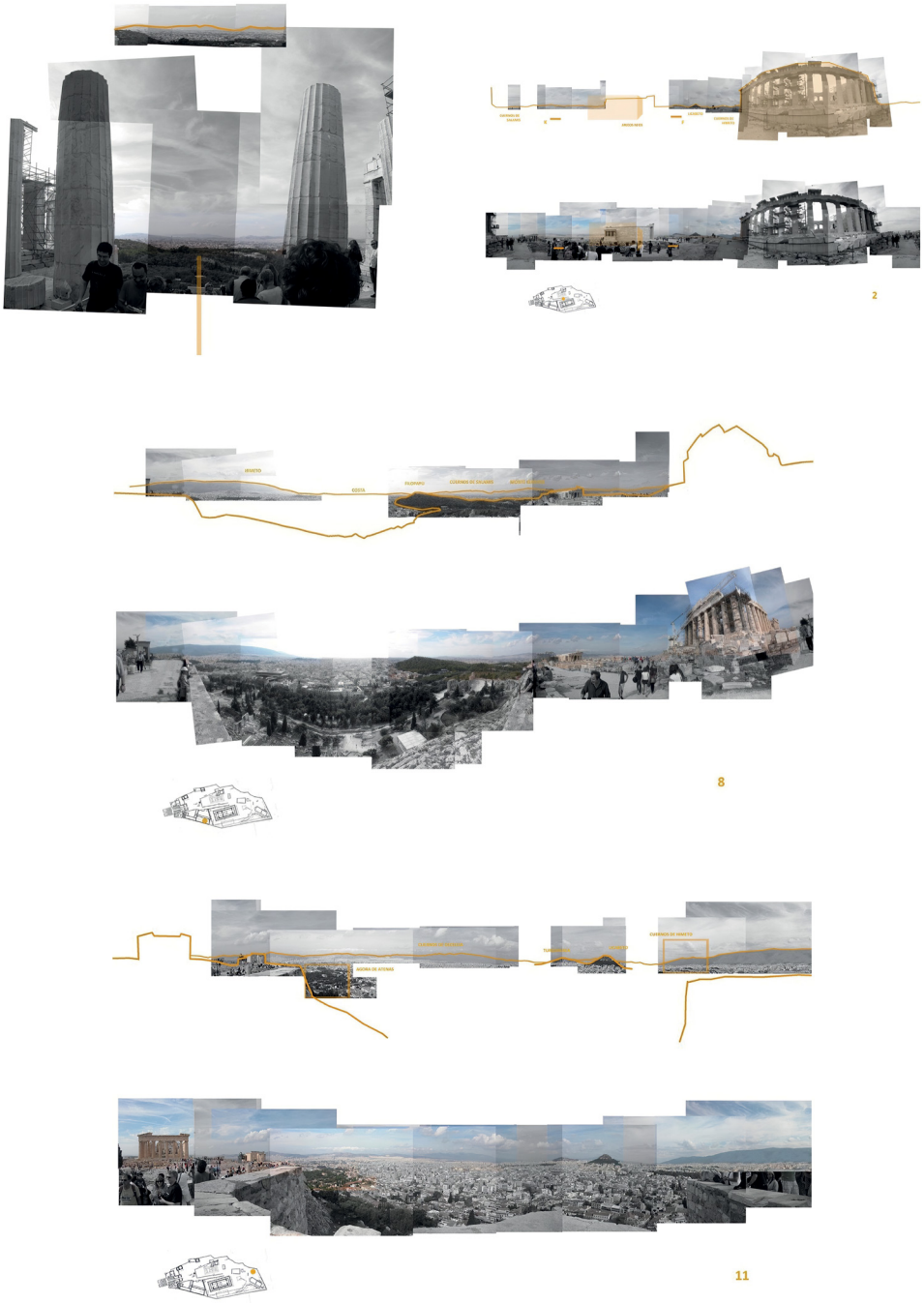
ACROPOLIS







Figures 10, 11, 12: Spatial relations between the buildings of the Acropolis complex and the surrounding natural landscape at the time it was built (Sketches by Eva Andronikidou, maps – bases of Athens of figure 11 and 12 Travlos, 1960)



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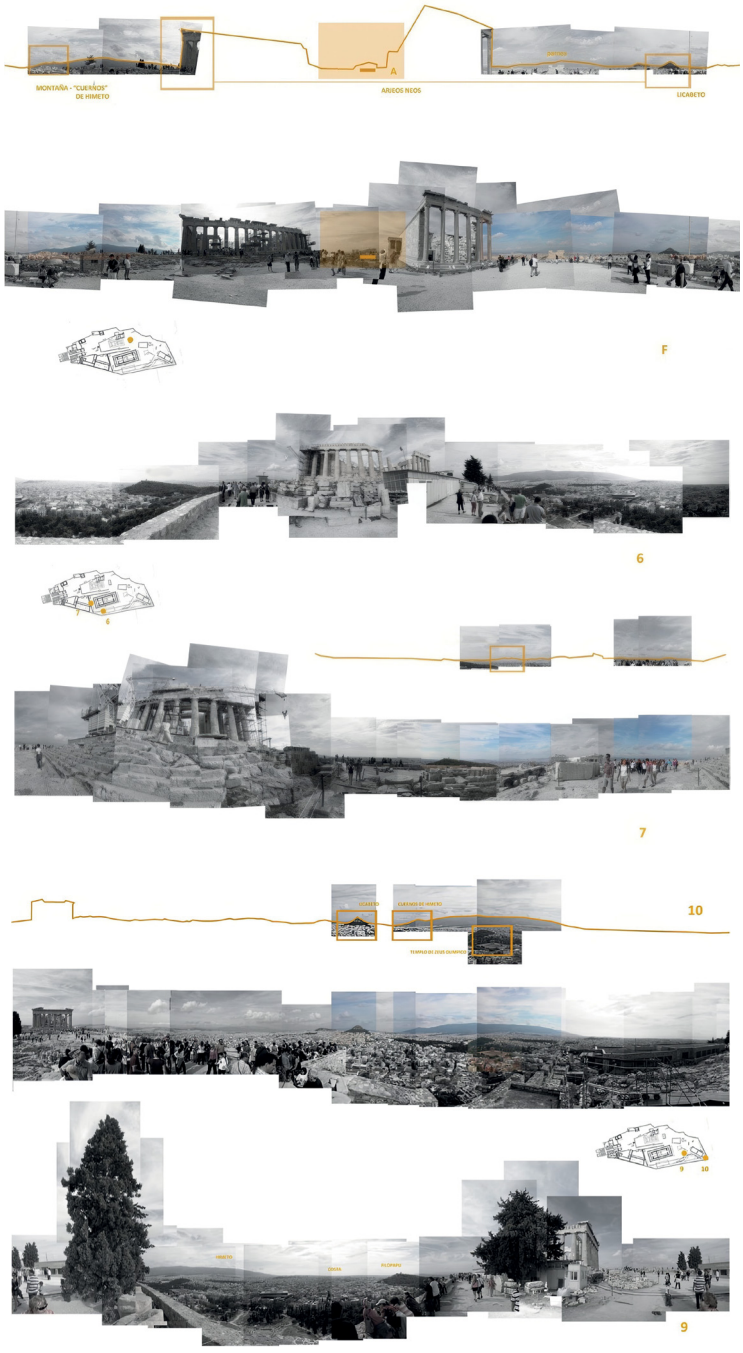

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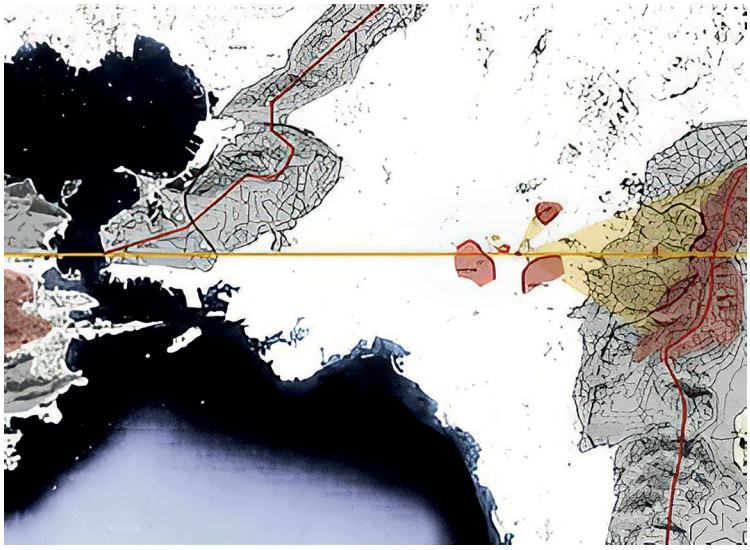
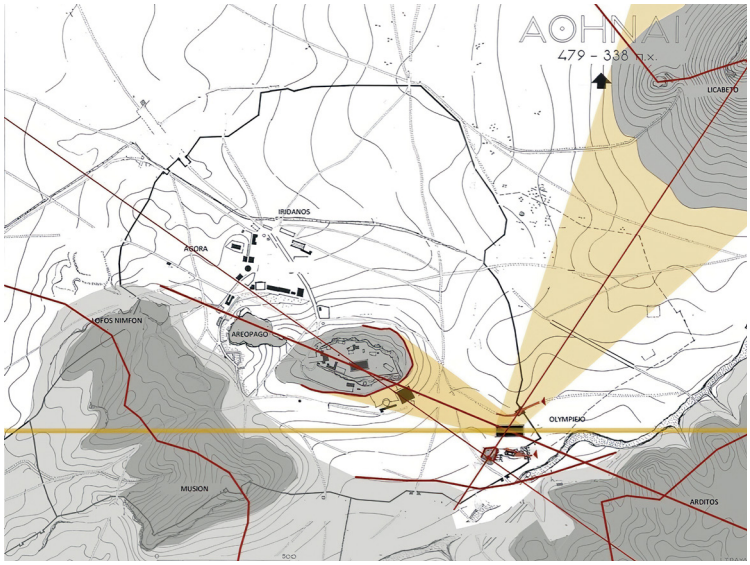
TEMPLE OF OLYMPIAN ZEUS





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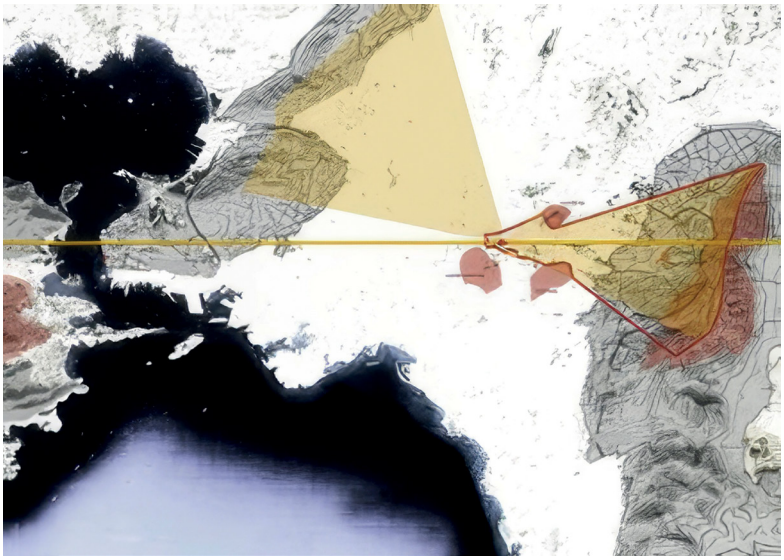
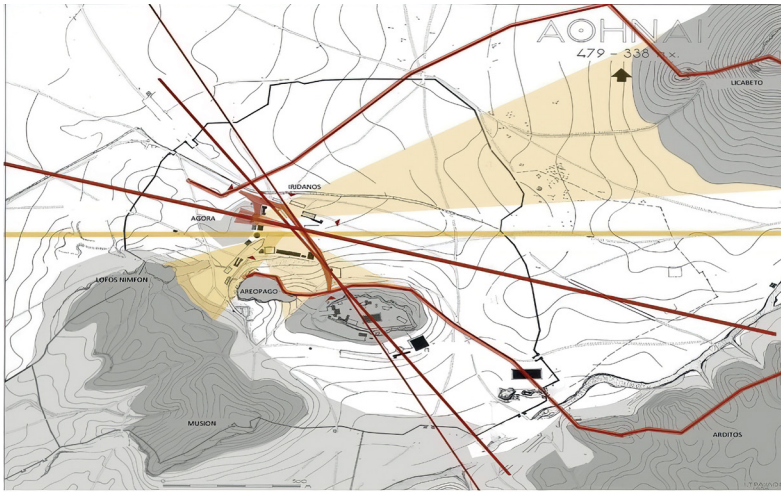
Figures 22, 23: Spatial relations between the buildings of the Olympian Zeus temple complex and the surrounding natural landscape, as they can be perceived nowadays (Collages and sketches by Eva Andronikidou)

TEMPLE OF OLYMPIAN ZEUS





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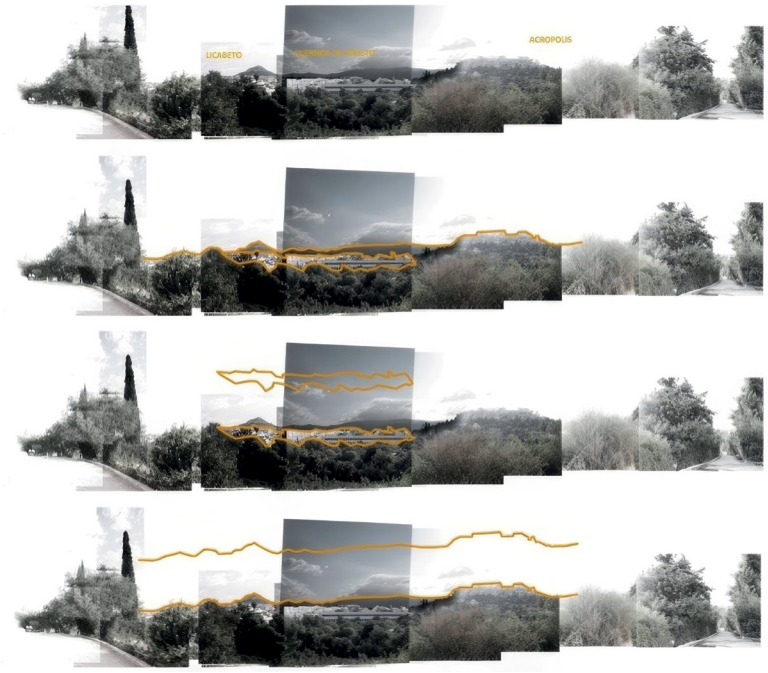

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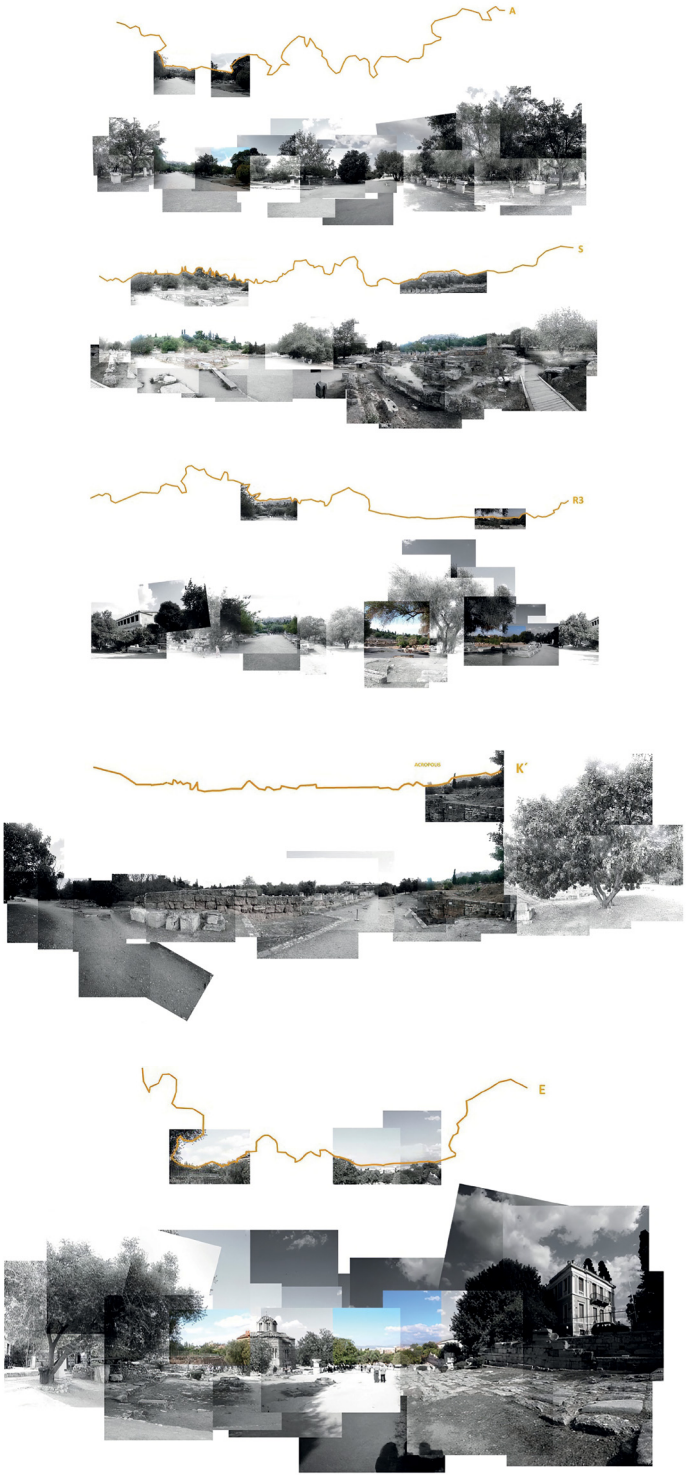

Figures 28, 29, 30, 31, 32: Spatial relations between the buildings of the Agora complex and the surrounding natural landscape, as they can be perceived nowadays. (Collages and sketches by Eva Andronikidou)

B_ Constantinos Doxiadis «Architectural Space in Ancient Greece»

The dissertation of the Greek urban planner was published in 1937 in Germany and includes his research and theories about the organization of the ancient Greek public complexes that also contained worship buildings, the so-called *temenos*. He argues that ancient Greek architecture obeys the Pythagorean and Platonic rules of universal harmony and proportion and is the creation of a man who acted driven by necessity and perceived the geometry of the landscape with great sensitivity. The architects of the time did not draw on paper. Instead, they composed in situ within the existing, tangible natural landscape, utterly incompatible with the straight and perpendicular lines of the Hippodamian grid.

Practically, an observer standing in the landscape and looking around will not automatically identify the locations of elements based on a global abstract coordinate system, as it is impossible for them to perceive this in space. Instead, they will form a coordinated system by and for themselves, of which they are the center and where all points are defined in relation to them. In this way, they perceive additional relationships and proportions based on those already formulated, such as double distances, opposite directions, or equal angles. It is a "system of relative coordinates", with the determining factor being the viewing of space concerning the environment-existing landscape and geometric relationships related to the conceptions of the time in philosophy, mathematics, physics, and cosmology. For example, in Greek antiquity, great importance was attached to numbers, especially to some specific ones such as 12 and 10; almost all philosophers mention the second in particular.

Doxiadis studies the organization of the complexes based on a point he calls the *"advantageous point of viewing"* and often places it at the propylon (the entrance) so a visitor can perceive the space upon entering. The spatial relations between the buildings are sought to be as simple as possible, while the lines in the observer's visual field are as few as possible. The so-called system avoids visual gaps that disrupt unity and continuity, and each boundary of one building visually coincides with that of the next, resulting in the viewing of each building in its entirety or not at all, and in contours of all buildings being treated as a whole, as parts of a single, unique contour. The space is harmoniously divided, and the design is *anthropocentric*. The parts of the buildings appear to the human eye in simple proportions, the angles are measured from the point of view, the length of the streets depends on how far the observer's gaze reaches, the average height

of human eyes determines the line of perspective, and foot is the metric system. It is a space made by man for man (1937). The visitor is free to follow his own path: *The gaze of the visitor, artfully guided (1937).*

The conscious or unconscious attachment of modern man to the orthogonal coordinate system, which has to do with planning on a scale away from the landscape, makes it challenging to recognize the design thinking of the urban structures of antiquity, which were inextricably linked to their "here and now". In continuation, an attempt is made to explore the geometrical relationships mentioned by Doxiadis in plans. At the same time, in the photo collages, the same axes are marked to compare the initial conditions and their evolution.

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In plan:


Advantageous point of viewing

Building corners marking angles


Building corners – same distance from specific points

Axis

Angles' sides seen from APV (plan)

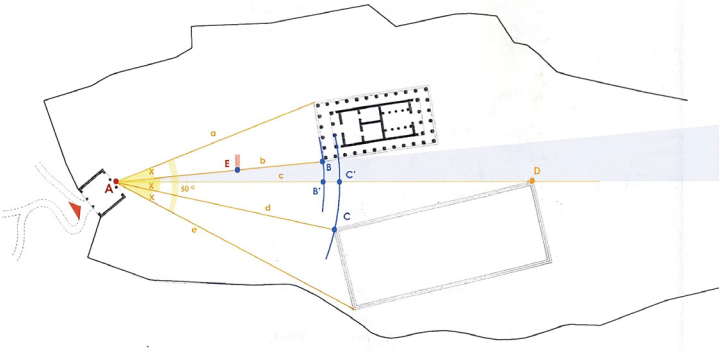
Angle

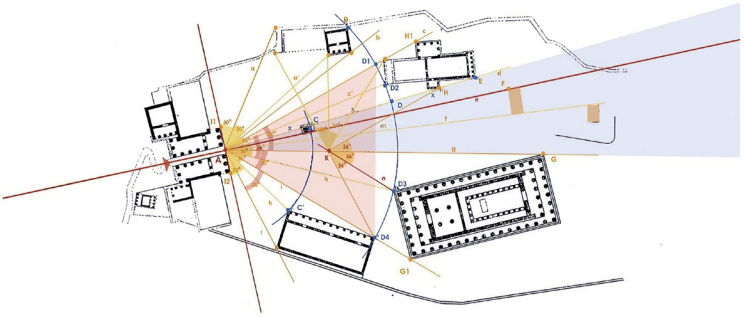

Arc to mark same distance

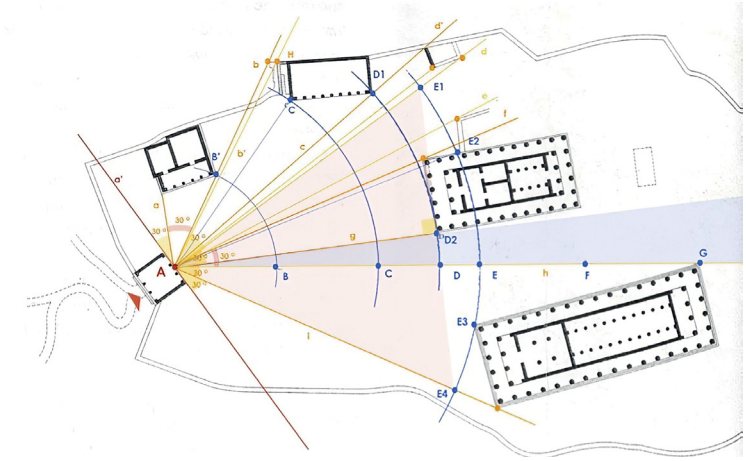

Important/central visual axis of the temenos


Angles of the plan, as perceived in today's urban environment

ACROPOLIS







Figures 10, 11, 12: Spatial relations between the buildings of the Acropolis complex and the surrounding natural landscape at the time it was built (Acropolis was among the original cases studied by C. Doxiadis, therefore the above plans are his, colorized to match the common index)

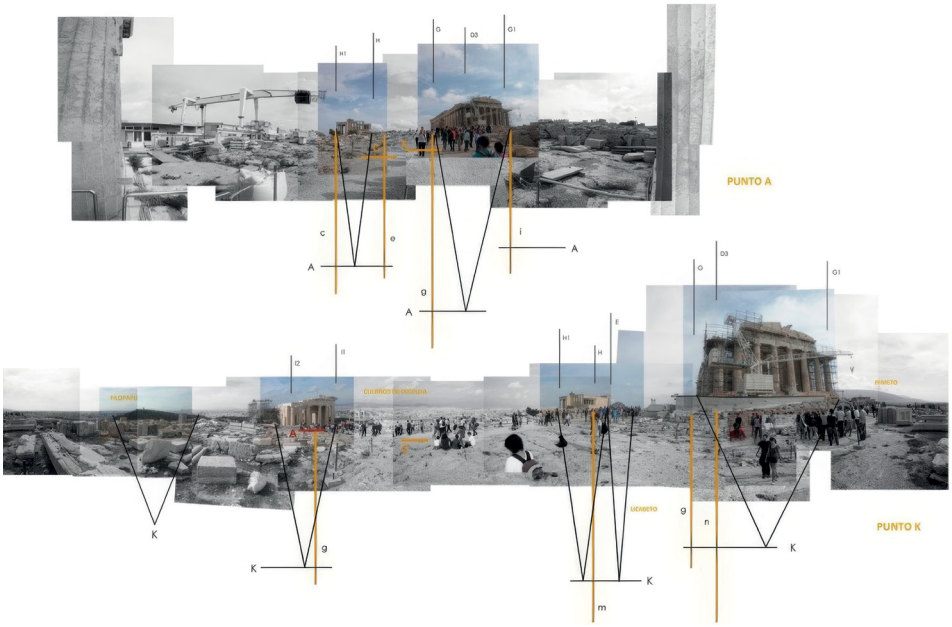
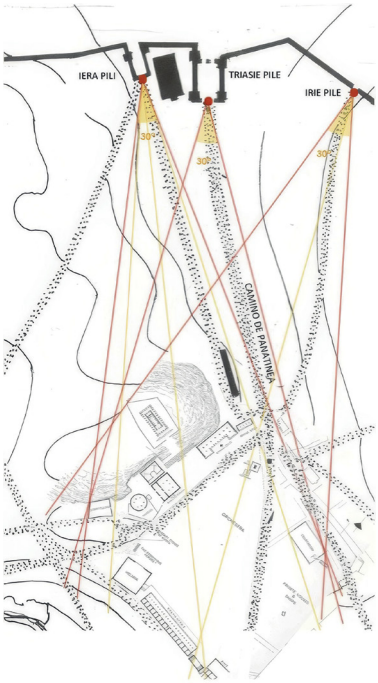
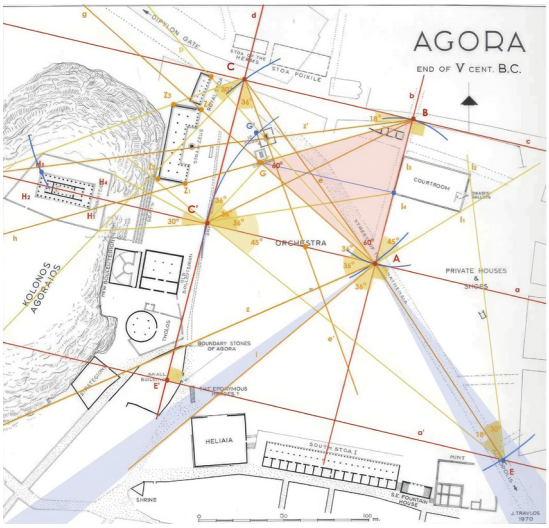
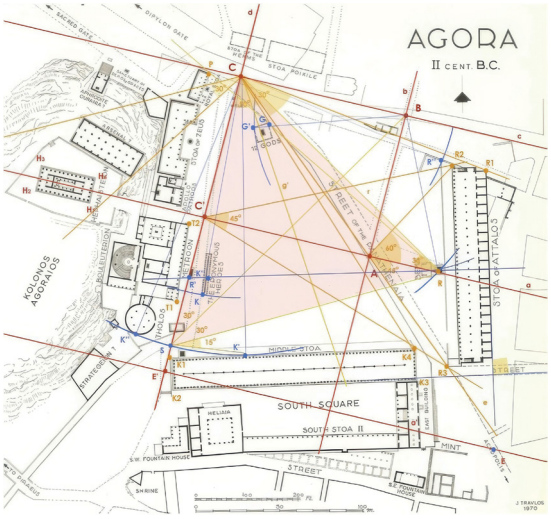


Figure 34, 35: Spatial relations among the buildings of the Acropolis complex, as they can be perceived nowadays. (Collages and sketches by Eva Andronikidou)







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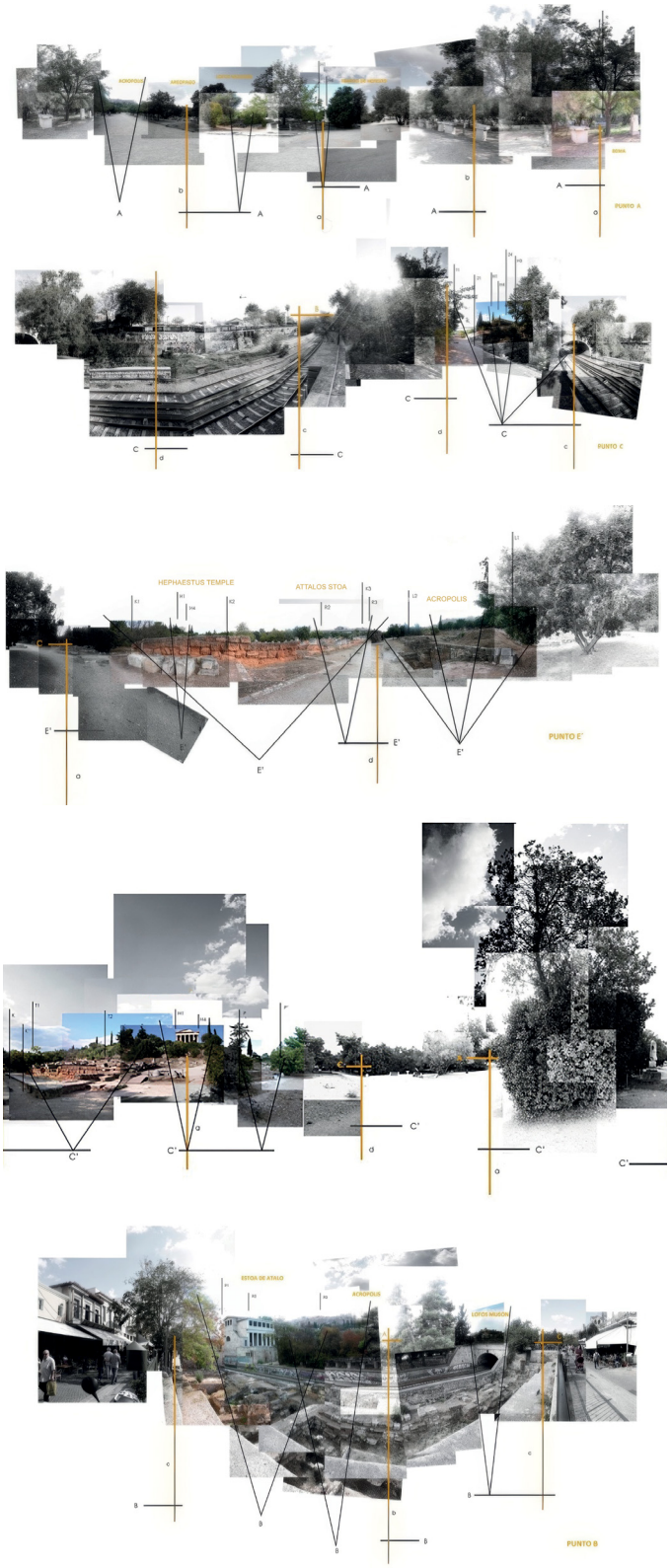

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TEMPLE OF OLYMPIAN ZEUS

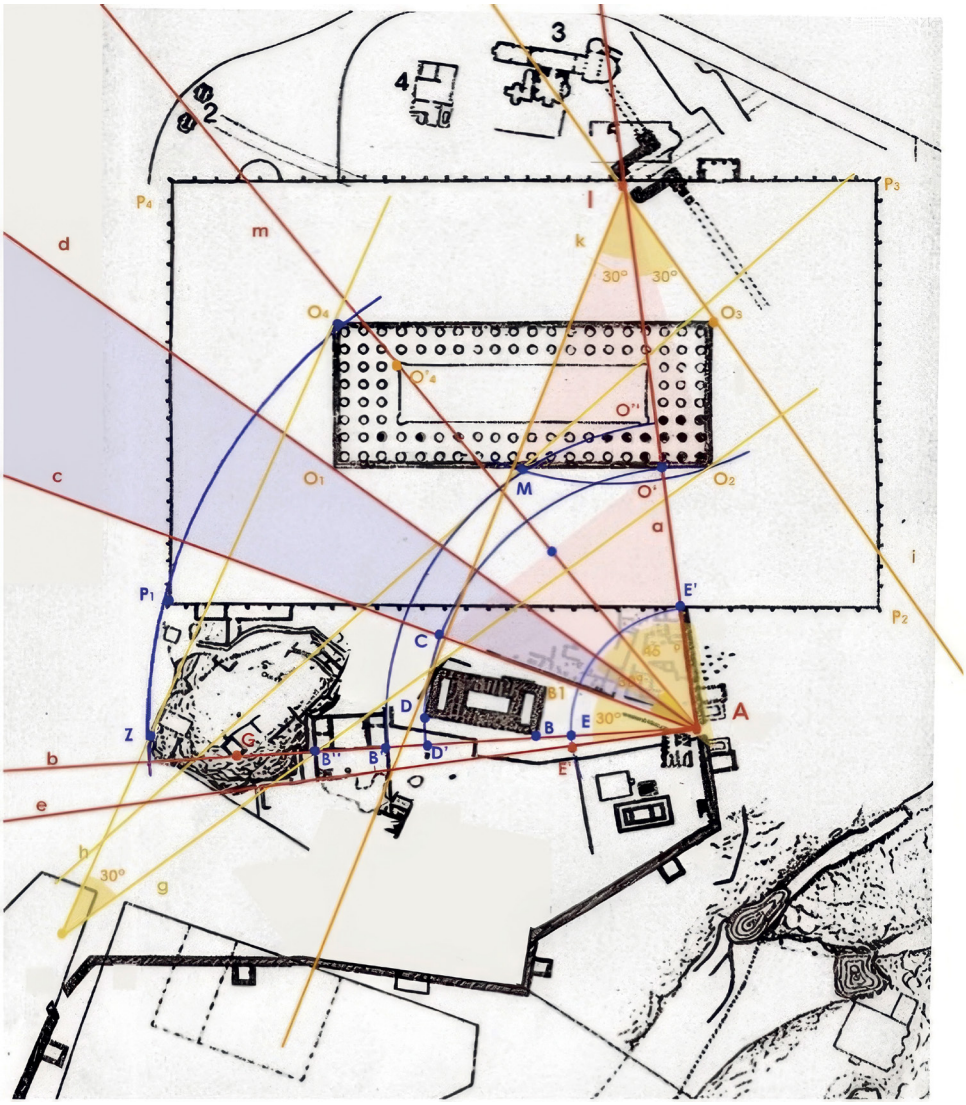

Figure 42: Spatial relations among the buildings of the Olympian Zeus temple complex at the time they were built (Sketches by Eva Andronikidou, plans - base of the complex by the website Archaeology of the city of Athens http://archaeologia.eie.gr.)

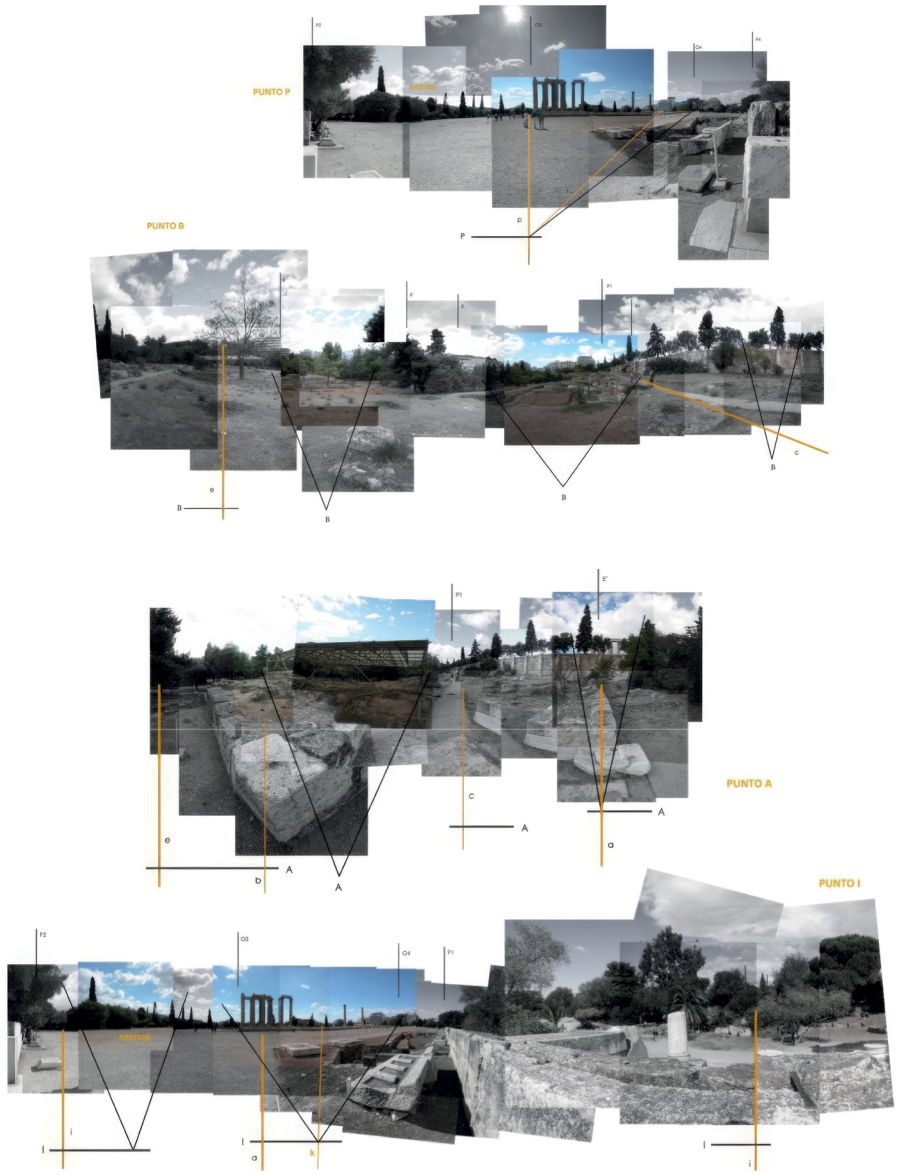

Figure 43, 44, 45, 46: Spatial relations among the buildings of the Olympian Zeus temple complex, as they can be perceived nowadays. (Collages and sketches by Eva Andronikidou)

The Attic landscape, the urban landscape. Then, now.

Historically, the social needs of humanity that pushed it to co-existence and cohabitation led to the formation of settlements (Aravantinos, 2007). In the history of the urban phenomenon, these changes were slow and, at some rate, assimilable until the Industrial Revolution (1760-1840), when the sizes of the cities changed at an explosive rate. This results in new problems arising that are directly related to the structure of the space. The era of industrialization is pivotal in defining the modern urban phenomenon and the science of urbanism (Sarigiannis, 2000). In urban environments, spatial and temporal discontinuities are frequent since the city is a living organism. This dynamic system is constantly being reshaped by social, economic, and cultural processes (Despotopoulos, 1997). These forces interact with each other, and the result is expressed dynamically in space as a situation, a habitation model that evolves and changes over time at rates proportional to the magnitude of the intensity of this interaction.

Since the end of the 19th century, there has been an ever-growing interest in the history and protection of monuments. The excavation creates new landscapes characterized and organized by historical fragments in asynchronous environments. In urbanism, the perception of the city as a result of successive layers, which over time are superposed one to another and are partially visible in its current image, is described by the term *Urban Palimpsest* (Genet, 1997). Therefore, every city is potentially an urban palimpsest. The urban palimpsest plays a significant role in shaping the local and historical identity of the city and the collective memory, and it is, therefore, an essential parameter in urban planning.

Figure 47: Urban "void" in Athens, Ermou street; due to the discovery of antiquities during the excavations for construction, an archaeological excavation had to be carried out, and proved the findings of great importance, therefore the terrain remained unbuilt. (Photo by Eva Andronikidou, 2018)

By comparing the plans and the photos, conclusions are drawn about the design and integration of the complexes in their environment and the evolution of these relationships over time. In summary - since the present paper focuses on the methodology and not the conclusions, the geometrical relationships between the ancient buildings testify to the existence of an internal planning logic, which, however, is constantly in a dialogue with the surrounding landscape, with which the archaeological sites were inextricably linked. However, the Athenian urban environment, combined with the current state of the antiquities, which are mainly preserved in foundations, dramatically affects the perception of this relationship in the eyes of the modern visitor. The dense and high-rise urban construction almost erases the relief of the topography and limits the vision. Below, the presentation of an architectural intervention in the surrounding landscape of archaeological sites and not within them is used as an example of how architecture and design can propose solutions to such problems in collaboration with Archaeology.

Shaping a Landscape by (its) History

The architectural intervention in the landscape around the Acropolis is undeniably an architectural work that connects the city and modern life with the natural relief, landscape, and history with simple gestures and a deep understanding of the place. The project began in 1954 and consisted of a system of routes in a landscape of particular topography: the hill of the Nymphs, the Muses, the Acropolis, and the Areopagus.
The Greek architect and painter of the so-called Generation of the '30s, Dimitris Pikionis, formulates his unique vision of perceiving and understanding the place with his «Emotional Topography» concept. In his so-called text of 1935, he explains how the human body, through the simple act of walking, experientially discovers the geometry of the earth, the sculpture of the landscape, and how this physical (trans)motion leads to the alternation of emotions, along with the variations of the landscape. Pikionis himself, since a young age, has deeply loved the Attic landscape and explored it on long solitary walks in his paintings and writings. He writes: «*Man gets tired on the uphills, rejoices in the beautiful views, calms down on the horizontal planes, meditates in the glade,*

fears on the edge of the cliff, feels awe in the caves, which are also the first prehistoric sanctuaries. This is how he follows the graphic representation of Space and Time, tunes in with the seasons and the changes that make up the mystery of life, and finds his place in the material World: he realizes that he is part of the Harmony of the Whole, together with the Earth, with every stone, obeys the same secret geometry of numbers as music, language, sculpture and architecture, all human creations born of the rhythm of nature. (2014)




Figures 48, 49, 50, 51: Dimitris Pikionis' pavement in the Acropolis area (Photo by Eva Andronikidou)

Pikionis was inspired by the particular morphology of the landscape and the theories of Konstantinos Doxiadis, mentioned in the previous chapter. The level differences created by the topography of the hills give excellent possibilities for visual connections. Thus, Pikionis establishes a system of routes, using the vision as the primary synthetic tool and guide of the body in space (Tsiambaos, 2017). The architect works here like the ancient and the folk craftsman, in situ, in the field, and not in some distant office - the shaping of the routes is done experientially and empirically, as well as by tracing old or even ancient paths. He spends long hours on the construction site daily with his collaborators. For the pavements, he used materials scattered in the surrounding area, fragments of ancient marble and pottery, and building materials from the mass demolitions of buildings in the 19th century. Some of the architectural fragments are recognizable and decorated with sculpted figures, as are the ceramics.

The drawings, sketches, and croquis produced during this work do not create/propose a new reality. On the contrary, they follow reality and study its order and harmony – they seek to understand, manage, rearrange, not create something new. For Pikionis, the material is the landscape and the physical testimony of its history: the remains. He

does not construct the landscape but shapes it with its materials, sculpts it, searches for the perfect new location of the findings, and studies the dynamics and relationships between them. The work presents the fragments of a bygone era. It forms with them the continuity of the history of the place through a constant reference to its past, the city, and the *Greekness* that the architect sought in nature, materials, plants, and techniques deeply rooted in tradition. The rest of the points, the dimensions, the views, and the covered spaces are not chosen but discovered by walking in the landscape. The sensory and emotional experience of the earthly sculpture dictates them.

As in ancient times.

In this way, Pikionis gave a new and, at the same time, the pre-existing image of the city a starting point for the redefinition of its collective identity and future through a more conscious and exploited relationship with its past. The modern walker has a comprehensive, deep experience of the landscape and the ancient world before entering the archaeological site.

"Natural is all ancient architecture whose creations seem to be a continuation of nature." (2014)

Pikionis summed up in this distinguished work the whole essence of his teaching about architecture that is born by the emotional experience of the topography, by the history of the place, by the cooperation of nature and man, by what our ancestors *were pushed by nature to create intuitively, with their body, with which they perceived and experienced the place,*

an architecture of the Whole, archetypal, eternal. (Pikionis, 1935)




Figures 52, 53, 54, 55: Dimitris Pikionis' pavement in Acropolis area (Photo by Eva Andronikidou)

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