

The perspective in Ancient Greece: composition principles

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Summary

In Ancient Greece, architectonic ensembles were organised according to certain composition principles which later on were used all too infrequently. They are the principles used in building a perspective image.

There are two fundamental composition principles used in the Ancient Greek ensembles: the perspective with an open view in its axis and the perspective with two vanishing points of architectural objects.

Both composition principles had human scale and integration in nature as their main features. These features cause the Greek architectural ensembles to stand apart from the architectural ensembles of the other ancient cultures (Ancient Rome and Ancient Egypt).

It is necessary to study and acknowledge the Ancient Greek principles for the organisation of architectural ensembles, as a possibility of recovering the human and natural scale of construction ensembles, as a means for man's return to nature.

KEYWORDS: Perspective, Ancient Greece, Space, Composition

1. INTRODUCTION

In Ancient Greece, architectonic ensembles were organised according to certain composition principles which later on were used all too infrequently. In Ancient Greece there used to be two types of cities: cities that had grown naturally (the most typical example being Athens, grown around a hill, the Acropolis, which was the heart of the city, with the second centre of the city developing at its feet) and cities that were drawn according to an established plan, the colony cities with a grid plan, with straight streets and right angles, as if imposing order on nature (the Hippodamian cities). Both systems had human scale and integration in nature as their main features. (Doxiadis 2006, 193-194)

The former of the two systems, born naturally as a result of integrating architectural ensembles into the landscape and of adapting architectural objects to the land surface, has generated specific composition principles that are original, practical and at the same time universally valid. They are more apparent in the first



M. Urma

of the two systems, but they are also present – as principles for adaptation to nature and the human scale – in the second system. These composition principles can no longer be found in the times after the ancient period, with partial exceptions in the Middle Ages. This is due to the fact that Ancient Rome took over only certain principles of the Hippodamian system: symmetry, composition on an axis, parallel directions and right angles, these principles being more appropriate for Imperial Rome's expansion policy. In its turn, Ancient Rome, through Renaissance and Baroque, influenced the modern period. Thus, the principles that survived were those of Ancient Rome rather than those of Ancient Greece.

It is necessary to study and acknowledge the Ancient Greek principles for the organisation of architectural ensembles, as a possibility of recovering the human and natural scale of construction ensembles, as a means for man's return to nature.

2. COMPOSITION PRINCIPLES

There are two fundamental composition principles used in the Ancient Greek ensembles. They are the principles used in building a perspective image, "perspective" meaning here "point of view", not "two-dimensional representation". These are the perspective with an open view in its axis and the perspective with two vanishing points of architectural objects.

2.1. The perspective with an open view in its axis

This type of composition, the perspective with an open view in its axis, is present in most Greek architectural ensembles from the classical period. The plans of Greek archaeological sites analysed by Doxiadis show this, despite the fact that the author highlighted other features of the architectural ensembles.

The perspective with an open view in its axis is most evident on the Acropolis of Athens. It is determined by the direction of movement, imposed by the axis of the Propylea. (Ching 1983, 236) On the Acropolis, the perspective with an open view in its axis, or the "open field of vision" in Doxiadis's terms, comes as a respite after an exertion, after climbing the hill. At the exit from the Propylea (the main viewing point of the ensemble), to the right the viewer sees the Parthenon, to the left the Erechtheion and on the axis, on the main line of sight, an open view, having at the far end the altar (a low platform for animal sacrifices). The fire used for sacrifices thus became the focal point of perspective, the high point of the entire ceremony. In the foreground, the statue of Athena Promachos used to be located adjacent to the main line of sight, rather than on the axis.

On the Athens Acropolis, the perspective with an open view in its axis is present in all the development stages of the Acropolis. The aim was to have an open view



The perspective in Ancient Greece: composition principles

towards the altar located in the vicinity of the temple, as well as towards important landscape elements: the sky, the hills in the background.

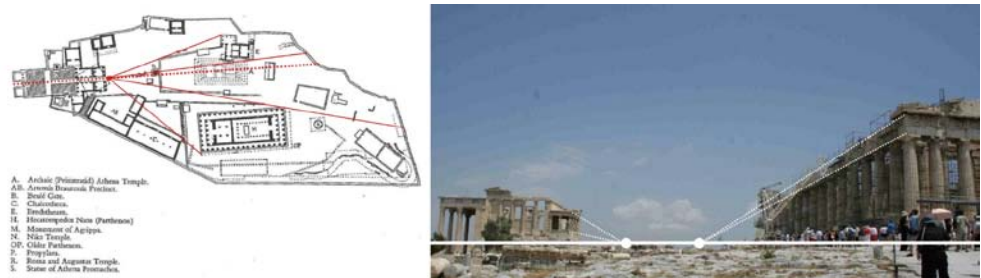


Figure 1 The Acropolis of Athens. The perspective with an open view in its axis

Similarly, at Delphi, the open view is present towards the altar in front of Apollo's temple, in the perspective image formed from a main point of view: the inflexion of the Sacred Way in front of the Athenian Treasury.

In Aegina, in the Sacred Precinct of Aphaia we also find the perspective with an open view in its axis. From the main sight point, located in the centre of the Propylea, we can see on the left the temple, on the right a monument, the altar, another monument and, on the main line of sight, an open view.

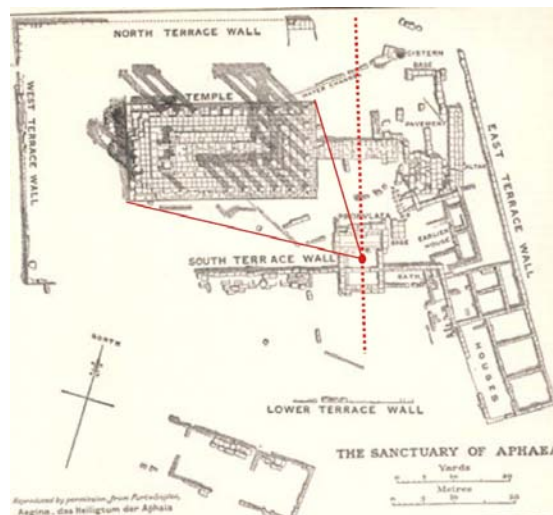


Figure 2 The Sacred Precinct of Aphaia at Aegina (the Vth c. B.C)

At Miletus, the Delphinion used to have in the beginning a central entrance to the precinct, but after 374 B. C. two lateral entrances were added. These two viewing points give open views between the altar and the two exedras. In the subsequent



M. Urma

periods (from the first century B.C. to the first century A. D.) these open views were closed by “the central tholos”(Doxiadis 1972, 56)

In the Agora in Miletus (from the 5th century B.C. to the 2nd century A. D.), in the agora II (from the 2nd century B.C.), the open view appears from the main sight point between the stoa and the Delphinion, and it was closed later, in the second century B. C.

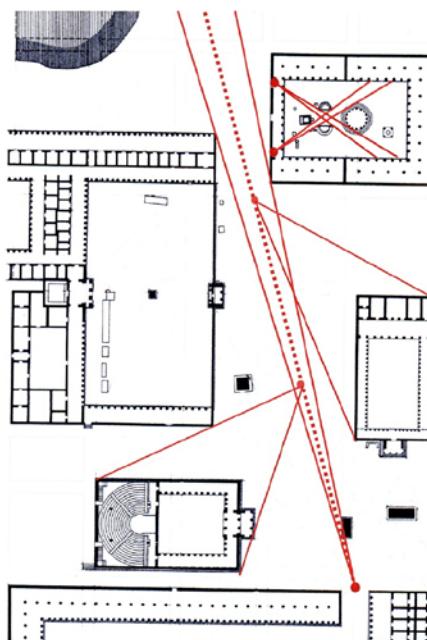


Figure 3 Miletus: The Agora (the 2nd century B.C.), The Delphinion (the 3rd and 2ndc. B.C.)

In the Altis in Olympia an open view is present towards the Hill of Gaia (the Vth – IVth c.B.C). In this image, the temple of Zeus is balanced symmetrically by the hill of Kronos. Similarly, on the Athens Acropolis, the Parthenon on the right-hand side of the image, larger than the Erechtheion, is balanced on the left by the silhouette of Mount Lycabettus, next to the Erechtheion. It can be noticed that landscape elements are included in these open views, taking part in the composition of the architectural ensemble

In the Altis at Olympia this open view between the Heraion and the temple of Zeus, toward the Hill of Gaia was closed with an exedra in the Roman period (Doxiadis 1972, 76). This proves the application in the Roman period of composition principles that differed from the Ancient Greek composition principles.



The perspective in Ancient Greece: composition principles

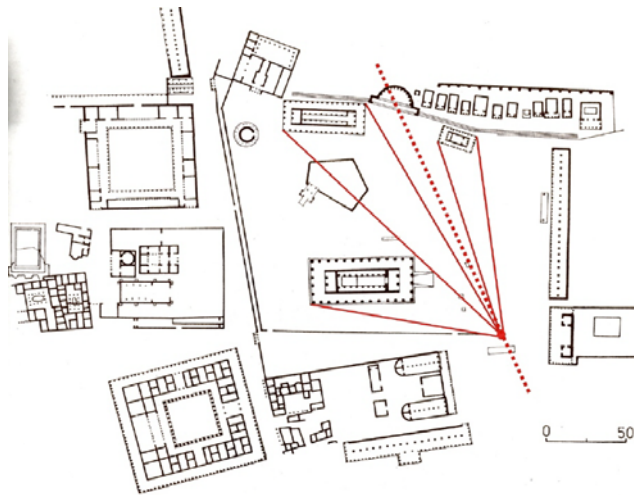


Figure 4 The Altis at Olympia (the Hellenistic period)

In the Sacred precinct of Poseidon at Sounion, from the main sight point (the exit from the Propylea) two open views can be seen: one on the left of the temple, another on the right. Doxiadis asserts that, on the left, this open view leads most probably to the altar, as on the Acropolis at Athens and on the Altis at Olympia. On the right the open view is a direct view of the setting sun over the sea. (Doxiadis 1972, 93)

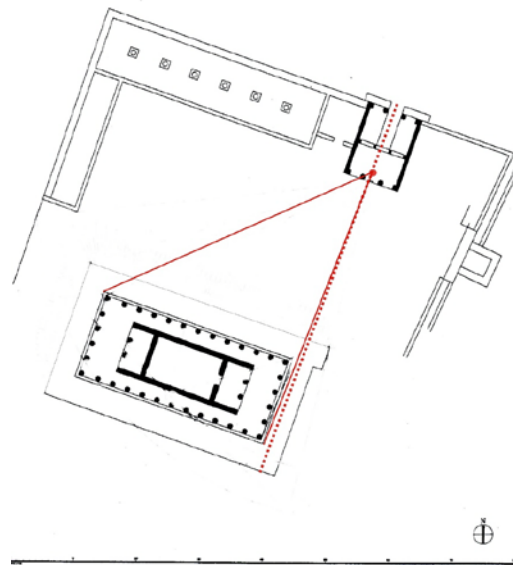


Figure 5 The sacred Precinct of Poseidon at Sounion (the Vth c. B.C)



M. Urma

In Pergamon in the sacred Precinct of Athena, from the main sight point (the entrance) there are two open fields of vision: on the left of the temple, where the altar of Athena is located, and on the right of the temple, where the circular central monument sits in the foreground.

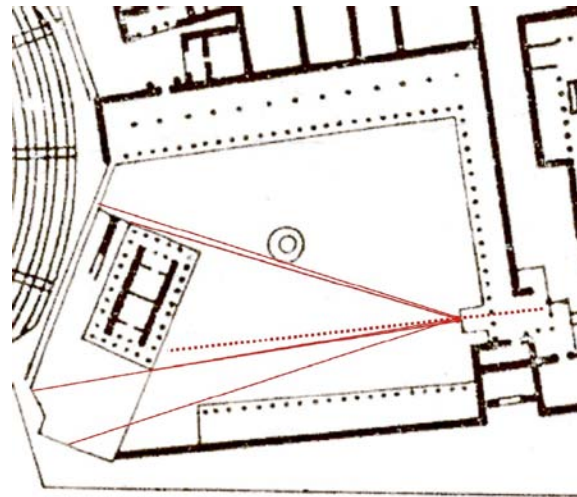


Figure 6 The Sacred Precinct of Athena at Pergamon (the IVth-IInd c. B.C.)

At the Heraion at Samos, in the Classical period (end of the 6th century B.C.) there used to be an open view towards the south-east, between the altar and the temple, similar to the Sacred Precinct of Aphaia at Aegina (5th century B.C.).

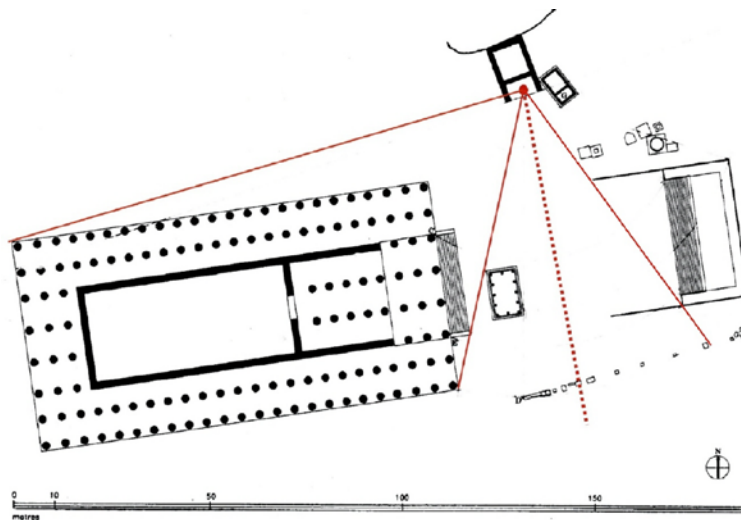


Figure 8 The temple of Hera at Samos (Classical period)



The perspective in Ancient Greece: composition principles

In this ensemble, in the first century A.D. a central pathway from North to South appeared between the altar and the temple, as well as a short path from East to West, forming a right angle. *“The organisation of the site is no longer based on lines of sight, angles of vision, or relation between distances, but is entirely determined by right-angled axes”* (Doxiadis 1972, 116). Here also it is obvious the break with the past, caused by the Roman conquest. The right angle and the axes were used preponderantly by the Romans. It can be assumed that, to some extent, the Egyptian principles were imported by Ancient Rome into Europe. However, in Egypt this organisation was more natural, unfolding over large horizontal areas. This system, with axes and right angles, such as in the Hippodamian system, was preferred by the Romans as being more appropriate for organising their newly-conquered territories.

The examples above show that the perspective with an open view in its axis or "open field of vision" was preferred in the following situations:

a. The view opened on the altar, which was a low platform in the vicinity of the temple, where sacrifices took place. *“The most important feature of classical Greek religion was the sacrifice, which was performed outside temples or shrines dedicated to particular deities”* (Connolly 1998, 56)

The altar was the final element of an itinerary which connected significant spaces (the Acropolis at Athens, the architectural ensemble of Delphi, the Altis at Olympia, the Sacred Precinct of Poseidon at Sounion, the Sacred Precinct of Athena at Pergamon). On the Athens Acropolis, the altar next to the Parthenon was the end of a road on which ample processions used to take place. This was the Sacred Way, connecting Eleusis, a settlement on the sea front, to the Athens Acropolis, on a distance of 25 km. (Connolly 1998, 59). The Panathenaea was another important procession that took place every summer; it was the festival dedicated to the birthday of the Athena goddess, the protector of the city (Connolly 1998, 80-87). The Panathenaia, which used to take place on this route, was in fact a procession consisting of a ceremony of celebrating nature, in effect man's connection to the sea.

b. This principle is also used when aiming to have the architectural objects seen in their entirety, projected against an empty space, rather than against other buildings. This generates free areas to the left and right of the architectural object being highlighted. This is the case of most architectural ensembles: the Parthenon and the Erechtheum on the Athens' Acropolis, the temple of Poseidon at Sounion, the temple of Athena at Pergamon, the temple of Aphaia at Aegina, the temple of Zeus and the Heraion in the Altis at Olympia, the temple of Athena at Priene viewed from the Agora.

c. These open views are also used in order to leave the views open towards the landscape, the intention being to integrate important landscape elements in the



M. Urma

composition of architectural ensembles. Therefore, the important features of the landscape are enhanced. Thus, in this "open field of vision" on the Athens Acropolis, on the left we have Mount Lycabettus, and on the main line of sight – given by the axis of the Propylea – in the background we have another hill.



Figure 8 The Acropolis of Athens. The view towards the hills

A similar situation can be found at the Sacred Precinct of Aphaia at Aegina (5th century B.C.).

In the Agora at Miletus (5th, 4th and 2nd century B.C.), the perspective with an open view in its axis appears when we look towards the hill in the background. In the second century A.D. this opening was closed with a stoa.

In the Altis at Olympia there is an open view towards the hill of Kronos (between the temple of Zeus and the Heraion). On the central axis we have the Hill of Kronos, which balances symmetrically the temple of Zeus, so that the importance of this axis is stressed – it is the direction the procession takes place on, from the entrance into the precinct towards the altar, similar to the Athens Acropolis. Between these two ensembles, the Acropolis of Athens and the Altis at Olympia, there are many similarities of composition. Moreover, in many Greek ensembles the building's silhouette and height are in harmony with the silhouette of the mountains in the background. In the Altis at Olympia this view open towards the landscape was closed in the Roman period.



The perspective in Ancient Greece: composition principles

At Sounion, the open view on the right of the temple is oriented towards the West, and both open views, on the right and the left of the temple, are oriented towards the sea.

In the Sacred Precinct of Athena at Sounion there are certain relations between buildings, as well as between buildings and important elements of the natural environment in the background. In this precinct, looking from left to right, from the main view point, we see in the open field of vision the temple of Poseidon on the neighbouring hill, projected to the left of the temple of Athena.

2.2. The perspective with two vanishing points

The perspective with two vanishing points of architectural objects is another composition principle specific to Ancient Greece too seldom used in later times.

Neither Doxiadis, nor other writers have stressed an important feature of the Ancient Greek architectural ensembles: the perspective with two vanishing points of architectural objects as a typical image of monuments seen from the main points of view or access ways.

By using this principle, symmetrical architectural objects are showcased through a perspective with two vanishing points, which is an asymmetrical view, more dynamic than the frontal perspective and with a great force of expression. The frontal perspective as a means for highlighting the symmetry of architectural objects was less used; it became more frequent in the Roman period, was used less in the Hellenistic era and almost not at all in the classical period, which preferred the perspective with two vanishing points of architectural objects.

On the Athens Acropolis, the Parthenon, although with a symmetrical structure, appears from the main point of sight (the exit from the Propylea) in perspective with two vanishing points, as defining view.



M. Urma



Figure 9 The Parthenon: The image at the exit from the Propylea

The image of the Parthenon in a perspective with two vanishing points is visible just before the exit from the Propylea, from the inside, framed by a colonnade, as a promise, as a gradual unveiling.



Figure 10 The Parthenon: The first image seen from inside the Propylea

Besides, views of the Parthenon in frontal perspective are rarer, and they are not taken from important viewing points. On the Acropolis, the East and the West facades are visible from a frontal perspective, from secondary viewing points.



The perspective in Ancient Greece: composition principles



Figure 11 The Parthenon: The Western façade, The Eastern façade

The Parthenon can also be seen in a frontal perspective from the Apostolou Pavlou Street (the West façade) and from the Dionisyu Areopagitou street (the South façade), but only as an image subordinated to the Acropolis ensemble.



Figure 12 The Parthenon seen from the Apostolou Pavlou Street and from the Dionisyu Areopagitou Street

The most numerous and most characteristic views of the Parthenon can be seen in the form of the perspective with two vanishing points.

In most architectural ensembles of Ancient Greece, the main monuments in the ensemble can be seen in a perspective with two vanishing points from the main viewing points: the temple of Apollo at Delphi seen from the entrance,



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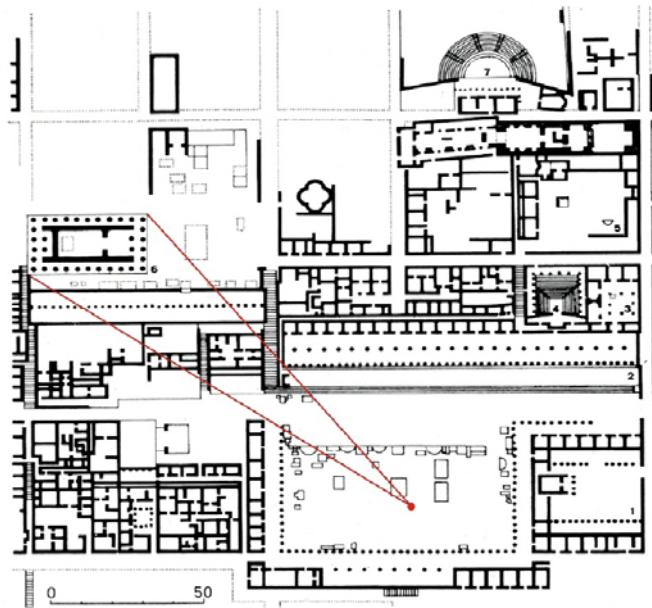
Figure 13 The architectural ensemble of Delphi: the temple of Apollo (about 530 B.C)

the temple of Aphaia at Aegina (5th c. B.C.) seen from the main view point (the exit from the Propylaea), the temple of Zeus (built between 470 and 456 B.C.), the Heraion and the Metoon in the Altis at Olympia, the temple of Poseidon at Sounion (5th c. B.C.), the temple of Athena at Pergamon (4th c. B.C.). This temple was built two centuries before the precinct was laid out. As a result, the position and the shape of the temple determined the shape, size and orientation of the portico in the Hellenistic period. The situation in which a building determines the orientation and the shape of the environment is very rare in the history of architecture; however, it has generated the most spectacular urban spaces. Predominantly in modern times, a square or an architectural ensemble are drawn according to other criteria than that of showcasing the architectural object.

The Heraion at Samos from the classical period (end of the 6th c. B.C.) is also seen in perspective with two vanishing points, being located to the lateral of the main line of sight.

At Priene, the temple of Athena can be seen from the Agora also in a perspective with two vanishing points, on the upper terrace, in ascending perspective. It is a view similar to that of Parthenon seen from the Dionisyiou Areopagitou Street and to that of Apollo's temple in Delphi, seen from the entrance to the ensemble. As is the case with other sites, at Priene the reverse perspectives are also controlled: from the precinct of Athena's temple one can see the image of the altar in the centre of the Agora, on the lower terrace (in descending perspective). This image disappeared in 150 B.C., when a new stoa was built.



The perspective in Ancient Greece: composition principlesFigure 14 The Agora and the Sacred Precinct of Athena at Priene (the IVth c. B.C.)

In Magnesia (2nd century B.C.), although the layout of the ensemble is symmetrical and with parallel sides, the temple of Artemis is seen in a perspective with two vanishing points from the Agora, due to the angle of the precinct axis with the Agora axis. In the Agora, the temple of Zeus is seen from a frontal perspective, as well as from a perspective with two vanishing points, due to the existence of the two entrances at the corners of the Agora.

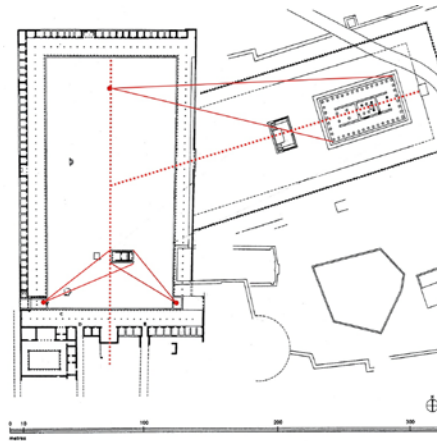


Figure 15 The Agora and the Sacred Precinct of Artemis at Magnesia



M. Urma

The ensemble in Magnesia is an example in which we can see, to an equal extent, the frontal perspective next to the perspective with two vanishing points: the temple of Zeus can be seen in frontal perspective from the central entrance into the precinct, and in a perspective with two vanishing points from the entrances at the corners of the Agora. Similarly, the temple of Artemis can be seen in corner perspective from the Agora, as well as from a frontal perspective from the entrance into the precinct.

However, in the Roman period the frontal perspective is favoured. For example, at the Corinthian temple (1st century A. C.) we can see the symmetrical layout with an axial entrance and two symmetrical entrances. But it is not possible to look from them into the interior of the precinct and from inside the precinct out, because an unusual form of columns interrupts the view to and from the side openings. (Doxiadis 1972, 161)

By studying these ensembles we can conclude that in the classical period the perspective with two vanishing points of architectural monuments was applied in all situations, using several procedures:

- a. If the entrance of the ensemble is on the axis, the monuments are placed on the lateral of the main line of sight. Thus, the perspective with two vanishing points is obtained, as well as an open view in the axis (the Athens Acropolis, the architectural ensemble at Delphi, the Sacred Precinct of Aphaia at Aegina, the Altis of Olympia, the Sacred Precinct of Poseidon at Sounion, the Agora at Pergamon, the Heraion of Samos in the Classical period, the temple of Hera at Argos, the Asclepion at Kos).
- b. When the temple is located centrally in an ensemble with parallel sides, the precinct can be entered through the corners of the Agora, so that the architectural object is perceived in a perspective with two vanishing points: the Agora at Magnesia, the Delphinion at Miletus (the central altar) and the Sacred Precinct of Artemis on the East side of the Acropolis at Eleusis (before the entrance into the Propylaea).
- c. Less often, if the ensemble has rectangular sides, the image in perspective with two vanishing points is obtained by leaning the architectural objects in relation to the ensemble: (the temple of Athena at Pergamon, the temples of the Agora at Pergamon, the temples on the middle terrace at Kos, the Temple of Artemis at Magnesia in relation to the Agora).
- d. Another method for achieving the perspective with two vanishing points of monuments is sliding the monuments' precincts to the lateral, on directions parallel with the sides of the agora. As a rule, the method was used for ensembles located on sloping grounds, by sliding the monuments from successive terraces (the Agora and the Sacred Precinct of Athena at Priene).



The perspective in Ancient Greece: composition principles

e. The perspective with two vanishing points is also achieved by tracing the main access ways among the monuments obliquely (the Agora at Miletus, the Sacred Precinct of Artemis at Eleusis, the Asklepios's Sanctuary at Epidauros). The method is most obvious in the Athens Agora. Here, the Panathenaic Way crosses the Agora obliquely, this being the main direction for travelling towards the Acropolis, the thoroughfare of processions. In the Agora at Athens, the Theseion can be seen in a perspective with two vanishing points from the Agora. In a similar manner the North-East building and the other buildings located on the Western side and on the Southern side (built in the archaic and the Classical periods) can be seen. During the Hellenistic period, the new stoae (the stoa rebuilt in the South and Attalos' Stoa), placed perpendicularly, show the image of the Agora like an inner two-point perspective. Later, during the Roman period, the two new buildings (the Temple of Ares and the Odeon), placed in parallel with the two stoae, enjoyed the view from a perspective with two vanishing points due to the oblique route of the Panathenaic Way, present here before these two buildings.

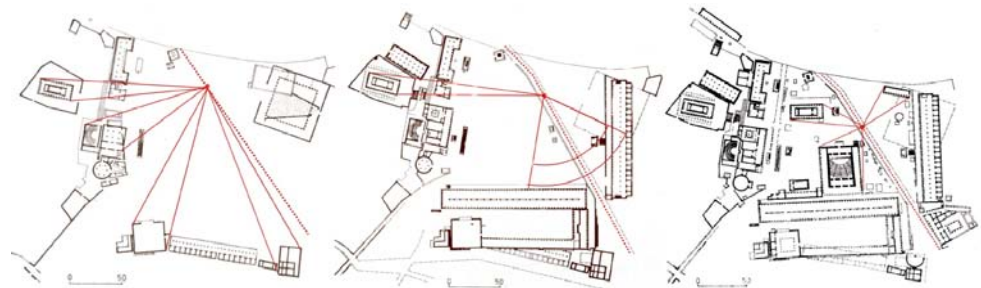


Figure 16 The Agora of Athens (the Archaic and the Classical period, the Hellenistic Period, the Roman Period)

Generally, when the land is sloped, the perspective with two vanishing points is achieved by placing the monuments to the sides of the main access ways. When the ensemble is developed on a flat ground, it has a quadrilateral shape and parallel sides, and the temple is placed parallel to the sides of the precinct. In this case, access is from the corners of the precinct or agora.

3. EXPLANATIONS, INTERPRETATIONS

These two principles (the perspective with two vanishing points and the perspective with an open view in its axis) have generated the main features of architectural ensembles: human scale and integration in nature.

The perspective with two vanishing points resulted from placing the architectural objects according to the mechanism of human sight. In the sites located on sloping



M. Urma

ground, architectural objects were placed depending on how they could be seen from the main viewing points and access ways (the Acropolis in Athens, the ensemble in Delphi, the ensemble in Pergamon, etc.). The monuments were placed at convenient distances, so that their silhouette, as well as their details would be visible. The buildings were placed on arcs whose centres were the viewing point of the viewer. The human sight distance and angle were taken into consideration. The buildings were placed according to how the eye sweeps the horizon, from, left to right. The buildings can be seen in their entirety, never overlapping. Placing the buildings on sweeping angles, in the shape of a fan, resulted in the absence, between the buildings, of parallel directions and right angles. These can be found only in the buildings layouts, not in the ensemble layouts. Each architectural object was placed in such a manner as to offer an optimal image from the main viewing point, preferably in a perspective with two vanishing points. In the classical period, the Greeks did not place any architectural objects on the main line of sight. On the Acropolis in Athens, even the Athena Promachos statue, a *ronde bosse* sculpture, was placed adjacent to the main axis of view.

It is unlikely that the Ancient Greeks had perspective treatises; however they had a long viewing experience, an exercise of visual perception developed in time. These principles were learned and transmitted practically. *"Theirs layouts were not designed on a drawing board each was developed on a site in a existing landscape, which was not subject to the laws of axial coordinates"* (Doxiadis 1972, 4). The subordination of these principles to nature and to man is obvious.

The use of the perspective with two vanishing points gives the ensembles their human scale. This human scale was given by the size of the spaces and of the buildings resulting from the study of perspective images from the main viewing points. The buildings were placed as they would be seen from the main viewing points, as architectural objects in themselves, but also in relation to the ensembles. *"It is not always easy to remember that these complexes were built by the Ancient Greeks not as isolated objects, as we see them today, but as parts of a dynamic urban environment"* (Doxiadis 1972, 4).

Thus, the human scale of architectural ensembles is obtained, the perspective image being an image which can be viewed from a certain viewing point, and therefore an image in relation to the human being.

The natural features of the site (the scale of nature) were preserved by integrating the ensembles into the landscape, by adapting the buildings to the shape of the land, and especially by using the principle of the perspective with an open view in its axis. It can be noticed that the open views are oriented towards sunrise or sunset, towards hilltops or the sea, highlighting important features of the landscape. These features are integrated in the overall composition, together with the buildings. The silhouette of the buildings is designed depending on the silhouette



The perspective in Ancient Greece: composition principles

of the landscape. "...an attempt was made, when ever possible, to bring the outline of the buildings into harmony with the lines of the landscape". (Doxiadis 1972, 8) The open views are also oriented towards the altar, thus highlighting the significance of the space.

There are also explanations in terms of relief. If the relief is flat, precincts, enclosures with porticoes outline the agora or the temple precinct.

If the relief is mixed (partially flat and partially with terraces), the openings and the free arrangements are oriented towards the landscape, towards valleys or mountains, without enclosures, in order to integrate in the composition outstanding features of the landscape. In such ensembles, enclosures are used in the flat areas, which do not offer interesting views of the landscape. On a sloping ground, the buildings are placed freely, there are no enclosures and almost all composition principles are used (the Acropolis of Athens, the ensemble in Delphi).

By comparison, Ancient Egypt and Ancient Rome used the frontal perspective both for architectural objects and for ensembles, which were symmetrical. The frontal perspective, the symmetrical composition on an axis, placing the monuments on an axis, the outlined closed spaces, the right angles are features of the Roman ensembles which inspired the Renaissance and the Baroque, later influencing the modern period. Due to the fact that the Romans did not use them, the Ancient Greek composition principles were very seldom used in subsequent periods and were all but forgotten.

4. THE CONTEMPORARY PERIOD

The question is: what have we learned or what can we learn from this Ancient Greek lesson about placing architectural objects?

Firstly, in traditional settlements integration in nature is still noticeable. Thus, in traditional sites, developed naturally over time, we can find open views towards important natural elements. Such are the towns developed on river sides, with streets leading to the quays. Similarly, in seaside towns, most of the streets close to the sea open towards it. In mountain or hillside settlements, there are streets opening views towards a hill or a mountain. Consequently, the perspective with an open view in its axis needs to be used any time nature can replace a main focal point of perspective. In Ancient Rome, during the Renaissance and the Baroque, and, under their influence, in modern times, a single composition principle has been used: placing an architectural object on the main line of sight, as focal point of perspective. Sometimes, the partial focal point of perspective has been used – a feature of Medieval ensembles, seldom used in subsequent periods. Today, the lack of a focal point of perspective is more of a mistake in urban planning and less of a



M. Urma

possibility to showcase a landscape element. It is only in the Medieval period that we come across surprising, dynamic perspectives, in which the main line of sight is unencumbered, coexisting with the partial focal point of perspective. Also, traditional seaside settlements show the perspective with an open view in its axis: short streets leading the eye towards the sea (the Piazza San Marco in Venice, the former Ancient Greek colonies, generally the old parts of port cities).



Figure 17 Street in the city of Constanța (ancient Greek colony)

This composition principle used in Ancient Greece can be found in modern-day Athens, however stifled by the chaotic development of modern urbanism. In many images of Athens in the 19th century, when the horizontal and vertical expansion of the buildings was not as marked as in the modern period, one can notice the dominance of the Acropolis and of the neighbouring mountains. One can also notice the broad opening the city had towards the sea, the land between the Acropolis and the sea being occupied by few buildings, of relatively low height, and most often by no buildings at all.



The perspective in Ancient Greece: composition principles

Figure 18 Athens city map, 1842

In the modern period, the Acropolis, the sea and the hills were partially buried in the ensemble of modern constructions. But even in this ocean of buildings there are streets leading the eye towards the sea or towards the hills. In the views from the hills towards the port one can see many streets heading for the sea. And in the districts built close to the shore one can find many streets opening towards the sea.



Figure 20 Athens. Amfiktyonos Street. The view towards Piraeus port



M. Urma

Similarly, at the foot of Mount Lycabettus one can see many streets heading towards the hill. Seen from inside the street, these are perspectives with an open view in their axes.



Figure 21 Views towards Lycabettus Hill

In modern Athens, due to the desire to maintain the dominance of the Acropolis, the city imposed a restriction on the height of the new buildings. The image of the Acropolis and of the main hills remained dominant. However, having most buildings built up to the 30 metre limit (ground floor plus 8 floors) resulted in a monotonous image of the city, which developed uniformly on the vertical and limitlessly on the horizontal. Of course, today certain accents would be needed in order to dynamise the city image; this can be achieved only by building several vertical structures needed by the city, following very well researched urbanism regulations. By limiting the vertical development of the city, a paradox was born: the city has developed monotonously on the vertical up to the 30 metre limit, while the Acropolis and the rest of the hills have been drowned by the horizontal expansion of the city, as if in an ocean.

Assuming the introduction of urbanism rules that would allow the construction of taller buildings, the city silhouette would have to be studied from the main viewing points, bearing in mind the initial composition principles. One way of preserving Athens' traditional silhouette would have been impose both vertical and horizontal limits for the development of the city. In this case, Athens would have been a different city. Nowadays one would have to take into consideration the ancient features of the city (the connection to nature, to the sea or to the mountains, the human scale), as well as the features of the 19th century city, the way they were preserved in the photographs of the era (low density at the foot of the Acropolis, openings towards the sea, the empty field between the Acropolis and the sea). Ultimately, this connection between the city and the sea has existed since antiquity, when it was highlighted and celebrated (remember the rituals connecting Eleusis and the Acropolis, a celebration of man's connection to the sea).

The principle of the perspective with an open view in its axis can be identified in the contemporary era in all the situations featuring a dominant natural element,



The perspective in Ancient Greece: composition principles

obvious in the composition at some point. It could be a way of returning to nature (the nature from which we have estranged from more and more). “A *perceptive analysis of our most successful ventures in planning would reveal that we have effected the greatest improvements not by striving to subjugate nature wholly (...), but rather by consciously seeking a harmonious integration. This can be achieved by modulating ground and structural form with those of nature, by bringing hills, ravines, sunlight, water, plants and air into our areas of planning concentration...*” (Simonds 1998, 6)

The principle of the perspective with an open view in its axis may have also been used every time nature could replace a focal point of perspective, as it is the case with in traditional settlements. This principle is much used in Mediterranean settlements, where the sea becomes the defining natural element, also where nature keeps its dominant role: hills, mountaintops, river valleys etc.

The principle of the perspective with two vanishing points on monuments, together with the other composition principles, is harder to identify in the contemporary period. It is used in the Medieval period, when symmetrical architectural objects (cathedrals, city halls) appear unexpectedly in piazzas in the shape of a perspective with two vanishing points, the monument being placed most of the times off-centre, and the entrances being at the corners of the piazzas.

Sometimes the perspective with two vanishing points appears in the modern period by leaning the monuments in relation to the rectangular sides of the ensemble.



Figure 22 Athens. Plateia Kolokotroni



M. Urma

This manner of placing architectural objects is still applied in the post-modern period in architecture by avoiding symmetry, parallel directions and the right angle; however, it is applied more at the level of the architectural object and less for the entire ensemble.

It is not, however, a principle that can be followed mechanically. It should result from the research of perspective images seen from the main viewing points, the principle of the perspective with two vanishing points being in harmony with the laws of nature. In nature, symmetrical living organisms live their lives in asymmetrical environments. Similarly, in Ancient Greece, symmetrical buildings were placed in asymmetrical ensembles or were viewed as asymmetrical images, in a perspective with two vanishing points. The essence here is a natural relation, a balance between asymmetry and symmetry

5. CONCLUSIONS

The perspective in Ancient Greece constitutes an original modality of composition in space, presented as a natural adaptation to nature, in conformity with the stages of visual perception. The Ancient Greek perspective was the main means for correcting and controlling spatial compositions.

This method, neglected for centuries and all but forgotten during the Modern period through the projection in two dimensions, must be revived. Today, computer technology offers easy control of perspective images and this could bring the architect back to the living experience of space, similar to that of the Ancient Greeks.

This is why it is necessary to restart a study of the Greek principles of composition. It may reveal long lost principles and methods, which are, in the same time, essential and very practical.

On the other hand the organic development of the ancient Greek settlements deserves to be studied; it reveals an extraordinary adaptation to nature, which is neglected nowadays. The adaptation to the relief is not the only explanation of these original features. The ancient Greeks paid a great deal of attention to the spiritual factor; the modern spaces have lost a lot of this meaning in regards to space.



The perspective in Ancient Greece: composition principles

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M. Urma

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