

Assessment of the Relations between Ancient Theatres, Landscape and Society

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ABSTRACT

The theater is a specialized category of buildings designed for public assembly and performance and have been used for many purposes. As ancient cultural landmarks, they form a heritage encompassing not only the monuments of Greco-Roman times but also the history of the alterations made to them, the successive uses to which they were put and the cultural and artistic traditions associated with them. Greek, Hellenistic, and Roman theatres were influenced by a multitude of geographic, climatic, political, economic, social, cultural and technological factors. Every city had to have its public entertainments, so a theatre, later on an amphitheatre was an important part of the original planning and later expansion of Roman city.

In order to evaluate the relation of the theatre contribution to natural landscape, urban landscape and urban planning, this paper will discuss and analyze the relationship between the theatre and landscape, their interaction to other public buildings and spaces in the Greek, Hellenistic and Roman period, with reference to their location, orientation, their architectural formation ,acoustic qualities, and construction methods.

1. Introduction

The ancient theatres are the only monuments of the classical antiquity that still - in some cases - serving the purpose for which they were originally designed as place of performance. Many aspects of ancient Greek theaters have long been studied and debated. Our knowledge of ancient theater comes not only from the work of philologists and literary critics but from the study of architecture, acoustics and the findings of archaeologists. Much of the information about these theaters is based on speculation due to the fact that so many of them still exist today and in good condition. Meanwhile there is a lack of remnants especially in the architecture of the early Greek Theater.

Theatres went through a gradual but radical change. It was not until the early 6th century B.C., that the Greek theatre had a separate architectural space in the city for its performance. From the late 6th century B.C. to the 4th and 3rd centuries B.C., there was a gradual evolution towards more elaborate theatre structures, but the basic layout of the Greek theatre remained the same. Initially, both Greek and Roman theaters were improvised outdoor affairs constructed of timber that over time became formalized as architecture and were constructed of stone and brick masonry. A smaller but still more specialized type of theater building identified by the generic Latin term *theatrum tectum* (roofed theater) was being developed concurrently with the larger out door theaters.

2. Assessment of the Relation between Ancient Theatres and Society

Ancient theatre is not only a place in which took dramatic productions, but also a

huge multi-functional, social, religious, and political meeting space¹. It is fact that in every historical epoch, all theatres, both out door and roofed, have been used for many purposes, therefore, theatres are categorized technologically as being either multi purposes or multiple-use. Izenour (1992) define these theaters use by:-

1- Multi purpose theatre: a multipurpose theater is defined as a facility for public assembly incorporation wide latitude of design flexibility intended to accommodate a variety of public events as disparate as athletics and the performing arts. Multi purpose theater is the out door open theatre.

2- Multiple use theatre: a multi-use theater is more narrowly defined as an exclusively theatrical-type facility for public performance and assembly in which design and engineering flexibility is restricted to forensic activities (public speaking), staged dramatic performances, and the performance of music that is the performing arts. Multiple use theater is defined as Roman *theatrum odium*.

Thus all theatres, both outdoor and roofed have been used for many purposes than those for which they are alleged to have been specifically intended by the designers, builders and or owners.

2.1. Greek & Hellenistic Theatre and Society

The Greeks invented two kinds of drama, tragedy and comedy. Tragedy is the older and more famous of the two types. But both genres were important to Athenians of the fifth and fourth centuries B.C., and both were performed several times during the year as part of religious and agricultural festivals. Dramas from Athens would later tour the country and were again performed at the winter's Rural *Dionysia*². Presentation of tragedies began early in the morning. The spectators knew in advance the plot of the play. Greek actors were honored by the state, employed as ambassadors.

It is a pity that so much has been lost of the literature of the ancient world, but at least we have the consolation of knowing that the work we do possess is the best there was; *Aeschylus*, *Sophocles*, *Euripides*, and *Aristophanes* were all acclaimed by their contemporaries as the most talented of Greek playwrights, and together they won many prizes in the dramatic competitions. The tragic poets of the 5th century B.C., most notably *Phrynichus* and *Aeschylus*, not only composed the plays but acted in them, directed them, and choreographed them. Because they were said to have "taught" (*edidaksen*) the chorus, the inscriptions recording the winners of the dramatic contests were called *didaskaliai*. Like the actors, these poets were men of leisure with a passion for theatre. Although a substantial cash prize was offered to the winning playwright, and later to the winning actor, playwrights and actors in the 5th century B.C., did not earn their living in the theatre.

The great plays had been written by prominent citizens to explore ideas of consequence to the society. The theatre was considered to be a kind of "school" that everyone had to attend in the Greek society. The Athenians were taught to sing and

¹ Frederiksen, R. (2002), pp. 91-92

² Forman, R.J. (1989), p. 92

dance from a very early age. During the golden era of *Pericles* (5th century B.C.), the rich Athenians were considered to be honored if they were appointed to sponsor the play during a "dramatic game". *Pericles* also introduced the Theoric Fund to subsidize the cost of theatre tickets for the poor. The price of a ticket to the Theatre of Dionysos was two obols, as much as a laborer earned in a day.

The effort of dancing and singing through tragedies and a satyr play was likened to that of competing in the Olympic Games. Ordinarily each actor would undertake to play several different roles, and it is usually possible to divide the speaking parts in a Greek tragedy up by determining which characters were in the same scene. Often the division of roles had some thematic significance relevant to the play. We know that the audience could tell one actor from another, despite wearing a mask and costume; because a prize for the best actor was introduced in 449 B.C. Very occasionally a single role might be divided between two or more actors. Because Greek tragedy and comedy originated with the chorus, the most important part of the performance space was the orchestra³, which means 'a place for dancing' (*orchesis*). A tragic chorus consisted of 12 or 15 dancers (*choreutes*), who may have been young men just about to enter military service after some years of training.

The fifth-century B.C. skene was not a permanent building, but a temporary construction of wood, placed across the rear of the orchestral circle for the dramatic performances at each year's festival. Nevertheless its invention brought about a massive change in theatrical practice and in the way in which performers and playwrights used space to create meaning. The interior of this flat-roofed building was the "backstage" area, but in visual terms it was not so much "behind" as "within", an enclosed space which, like a real house, was the dominion of female characters. As a rule, actors could and did step out of the skene and join the chorus in the orchestra, but we have no record of the chorus ever having entered the skene. The entrances from the right and left side to the orchestra (as they were faced by the spectators) indicated the place from where the heroes were coming. The right entrance was a sign that they were coming from the palace or the town and the left from the fields, the port or another town.

Divinities could appear suddenly on the roof via a trap door. Characters which were specifically stated to be flying could be swung into the air above the stage space by means of a simple crane, called the mechane or *geranos*. The earliest known use of the mechane was in the year 431 B.C., when *Euripides* used it at the end of his *Medea*. Because the mechane had to support considerable weights (and counterweights) it was probably supported by the projection of stone which extended into the orchestra from the terrace wall, and affixed to one of the posts which supported the skene.

2.2 Roman Theatre and Society

The Romans had conquered the Greeks, and began changing everything in society, including the theater. It was now possible to build larger and more lavishly, and the construction of larger buildings led naturally to greater architectural emphasis on the buildings' interiors, as in the case of the stage theatre and greater emphasis on

³ Drougou, S. (1999), p.67-8.

interiors led to changed social habits. From the beginning, seating in the theatres of the Roman Empire was designed to separate the different ranks of society using parapets⁴. The Greeks, however, had a more democratic approach to seating where each tribe had their own section within the same gallery.

The Roman view of theatre is totally different from the Greek. In fact, actors in Rome were indeed subject to a form of taboo. Although Romans of all classes enjoyed the plays, they thought the actors were strange people. The Roman Theatre was less philosophical. Meanwhile the Romans copied theater from Greece and the best actors of Roman plays were usually Greek, but in the earliest known examples, and in Vitruvius description, it differs in several respects from all known Greek theatres of classical or Hellenistic times. Theatre was very important in the lives of the Romans. The importance of the city was reflected on the number and size of its theatres⁵. It was constructed due to the population number of the city. There is a connection between function, location, and size of the different theatres. Theatre was another way of keeping people busy and happy so they would not plot against the emperor. Emperors such as Nero used the theatre as a way of showing their own talents - good or otherwise. Nero actually used to sing and would not let anyone leave until he was finished⁶.

The Roman audiences preferred comedies to tragedies. The audience was usually more interested in their favourite actors than the play itself. The popularity of theatrical battles increase as the occurrence of real battles decrease. Roman actors are usually slaves and have no standing in a society in which, by and large, they are not even citizens. An actor who is highly skilled might be able to buy his freedom and become a producer himself. The actors of Roman comedy were all men, and about five of them shared out all the different roles in the play. Women were not allowed act, so their parts were normally played by a man or young boys wearing a white mask. The actors also wore masks, which were wildly distorted stereotypes, not very realistic, but funny. The costumes were fairly simple, long for female characters and short for male characters. Costumes showed the audience who the person was (a purple gown for a rich man, a striped toga for a boy, a short cloak for a soldier, a red toga for a poor man, a short tunic for a slave).

3. Theatre architecture and Landscape

In ancient Greece, the landscape and nature, with all their topographical and environmental changes, were influential in the design of cities. In their organization of space, the Greeks wanted harmony with the landscape. Perhaps it was Rhodes which first turned men's thoughts in this direction⁷. Ancient references to the 'theatre-like' "*theatroeithes*" plans indicate, not a radial street-plan, but rather the relationship of a central agora, or agora and harbor (the 'orchestra of the theatre), to the surrounding area (the auditorium)⁸. Their architecture was based on a plastic effect interpreted by viewing their buildings as huge sculptural monuments seen from the

⁴ Walton, J. (1980), p.85

⁵ Segal, A., (1995), p. 7-9

⁶ <http://www.iol.ie/~coolmine/typ/romans/thea.html>

⁷ Ward-Perkins, (1974), p.178.

⁸ Winter, (1984), p. 371

surroundings⁹. Thus the spiritual feelings for the landscape affected their building concepts, and the Greek temple was major example of this relationship.

Another very familiar type to the temple is the theatre. Its positioning within the city was largely determined by the terrain. In the fifth century B.C., it became popular to build theaters on the slope of a large hill. The Greek theatre, consisted, of two quite separate parts, a high auditorium, which in plan somewhat exceeded a semicircle, and a much lower stage-building, or skene: the curve of the lowest seats, round the orchestra, could be completed or nearly completed, as a circle, without cutting the front line of the skene¹⁰.

The Theatre of Dionysos at Athens was first dug out of the slope beneath the south side of the acropolis built in 342-326 B.C. for archon Lycurgus at the site where various theatre buildings had been erected since the early 6th century B.C. (**Fig 1**). Alterations in the 3rd and 2nd century B.C., and then again ca. 61 A.D. under Roman emperor Nero (raised stage, stone proscenium, 2nd skene storey). Marble barrier between skene and audience added in the 1st century A.D. The Theater like many of its descendants was built in the open air of an acropolis. A lot of important and revealing information about the theater of the fifth century B.C. has been lost forever due to changes made by the Romans. This leaves scholars of today with scant evidence of ancient Greek Theater architecture. The skene of the Fifth Century Theater is believed to have been a temporary structure, erected and taken down for each festival. It was constructed using light and perishable materials until later, when theaters were built in stone. At that point, a permanent stone skene was built¹¹. More became known about the skene after it changed to a permanent, stone fixture in the theater of the fourth century B.C.



Figure 1: Theatre of Dionysos at Athens

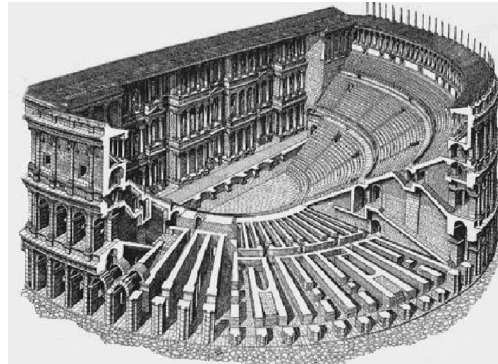


Figure 2: Section of a Roman theatre

The way theatres were constructed, their architectural planning and technical execution all demonstrate a high degree of excellence in virtually all aspects. Engineering and architectural problems encountered in erecting a theatre were surely far more complex than was the case in other public buildings. Each theatre posed its own problems which typically arose from its topography and landscape¹². In Classical Greek as well as Hellenistic theatres the cavea was always built on a natural slope that was hewn out and shaped to this end. The cavea or auditorium containing the tiers of

⁹ Haddad, (1995),pp. 186-7.

¹⁰ Robertson, D. (1974), p. 271

¹¹ Allen, James T.,(1924).

¹² Segal, A.(1995), p32

seats for the audience was designed with great skill to ensure its adaptation to the landscape. As the seating area of a theatre became enlarged, it became necessary to build supporting walls for the theatron called analemmata. Thus, the Greek theatre is part of the natural landscape, where the architects created concentric tiers of seats that followed the circular shape of the orchestra and hugged the rising ground of a hillside, following the natural contours of the land.

Theaters of the fourth century B.C., were predominately built out of stone and marble. During the reign of Alexander the Great and throughout the fourth century B.C., a new type of theater referred to as the Hellenistic Theater was built. In this period the Theatre was still built on slopes like Greek theatres. Like the theaters built in the prior century, Hellenistic theaters contained the orchestra, parados, and the skene¹³. However, architecturally speaking, that is the extent of the similarities between the theaters of the fourth and fifth centuries B.C. Another new aspect of the Hellenistic Theaters was the columns used next to the skene. These columns were typically enclosed by the paraskenia. There were painted boards located behind the columns called pinakes. The development of the skene building: later the "proskenion" was incorporated with the skene building and was used for painted scenery Also, the auditorium was slightly larger than a semi-circle, and the skene was now divided into room's¹⁴. Meanwhile in some theatres, the shape of the orchestra was changed to be semi-circular. The skene was built into two floors, and new elements appeared such as (Proscenium).

While the Greek theatre is considered as part of the natural landscape, by the introduction of two floors Hellenistic "proskenion" the relationship between theatre and landscape, will start to change and the concept of the open to the natural views of landscape will start to decrease.

Roman theaters were built, bringing about even more changes to the physical appearance of the theater in relation to the landscape. During later imperial times the Romans built many enormous stone theaters all over Europe, North Africa, and the Near East. The Greco-Roman era fused together the ideas of Romans and Greeks into the theater. These theaters had a larger theatron, so that more people were able to attend performances. The lower level of seats was built at the same level as the orchestra, and the background of the orchestra became intricately decorated. The columns present throughout Hellenistic Theaters were done away with and replaced by a plain stage large area.

The Roman theatre differs in several distinctive ways from the Greek. The plan of the theatre included a high stage auditorium (**Fig.2**). Most prominent, however, were the changes to the orchestra. In Roman theatres the orchestra was part of the auditorium. The skene was moved forward, thus cutting into the circular orchestra and created a semi-circular orchestra. But since this was normally occupied by senators it could no longer perform a useful acoustic role as a reflector. This in turn required a lower stage level (generally 1.5m) to maintain visual conditions for those seated on the orchestra. The skene with its proskenion was usually not longer than the diameter of the

¹³ Retzleff, A. G.,(2001).

¹⁴ Nicoll, Allardyce. (1966); Robert W. (1990).

orchestra, but the pulpitum was normally about twice as long and the scaenae often longer still. The front wall of the skene proper was simple in design, but the wall behind the Roman stage, the *scaenae frons*, was usually decorated with an elaborate scheme of columns and niches in two or more tiers.

Thus, in the Roman theatre the action had moved away from the lower orchestra and onto the stage proper. As a result of this the theatrical development the orchestra lost its importance and diminished in size with the Roman stage moving forward and closer to the auditorium, thus, decreasing the theatre relation with the landscape. This final type of theater came to fruition towards the end of the second century B.C., when the Roman influence became more prominent. By the linking of the stage-building to the cavea, the stage itself was deepened and raised, cutting off a part of the orchestra; the façade of the stage-building (*scaena frons*) was heightened and given elaborately columnar orders constituting a formal backdrop; and the whole stage was covered with a timber roof, which sloped forwards and upwards from the summit of the scaena frons and was supported at either end by the parascaenia, as can be seen in the typical cases at Orange, at Aspendos, and at Sabartha theatres .

Thus, Unlike the Greeks, the Romans typically built their theatres on flat sites, combining the acting areas and the seating areas into a single structure. The Roman structure, as introvert conception, is imposed on nature and landscape; because the building of the Roman Theatre was one unit building, which gives the feeling of the enclosure, rather than the Greek.

3.1 Acoustic qualities and Landscape

One reason for the success of the ancient Greek theatres was that disturbing environmental noise was generally quiet when they were in use. Early Greek theatres had a stage height of only 1-1.2m but this was increased to 3-3.6m as in the cases of Priene and Epidauros. The acoustic implication of this change is an increased angle of incidence, relative to the seating plane for the direct sound. However, it is reported that the unoccupied seats and the heads of the audience also scattered sound to adjacent areas¹⁵ . Reverberation in a Greek theatre model was shown to be a significant part of the acoustical response¹⁶ . Imp shankland also records that in a Roman theatre the word articulation dropped from 80% to 40% when a moderate breeze began to blow¹⁷ .

From Acoustic simulation and analysis of the open air ancient Theaters¹⁸ of three selected theaters of ancient Greek antiquity, which have great historic significance, and based on acoustic prediction - simulation and auralization using computer software, many open past questions relating to the good acoustics of such spaces, can be answered. The study of these theaters is performed for identical listener positions, not only using the architectural details of the theaters in their present state, but also for the theater's properties in their earlier states of construction and use. The findings

¹⁵ Shankland, R. S. (1973).

¹⁶ Noson, D. (Unpublished). Acoustical Quality and Stage Acoustics of the Ancient Greek Theater

¹⁷ Shankland, R. S. (1973). Shin-ichi Sato1; Hiroyuki Sakai1; and Nicola Prodi2 .PACS Reference: 43.58.Gn, acoustical measurements in ancient Greek and Roman Theatres

¹⁸ Σταμάτης, Α. Βασιλαντωνόπουλος, Ιωάννης, Ν. Μουρτζόπουλος, (2004) *AcP2*. Vassilantonopoulos, S.L. and Mourjopoulos, J.N., (2003) p. 123-5.

reinstate the known good acoustic performance of these theaters, which allowed for perfect speech communication, something that at present is only possible with the use of electro acoustic support. While recent Measurements and Analysis of the Acoustics of the Open air Ancient Theater of Epidauros¹⁹ were obtained using modern techniques, allowing evaluation of numerous acoustic parameters for the theater, such as the Clarity of the sound. The analysis of the results, illustrates many novel aspects of the theater's acoustic properties, such as the pattern and mechanism for the early reflections, the spectral response of the theater, aspects of time-frequency response interaction and aspects of the spatial impression. The results restate the well-known exceptional acoustic quality of the theater for speech, with speech intelligibility remaining nearly perfect at all listener positions.

By enclosing the theatre space, the reverberant sound becomes the disturbing noise and only much smaller audiences can be accommodated. In enclosed space our attention turns to the details of the reflection sequence. In ancient theatre the absence of reverberation means that it is solely a signal to noise situation. This means that it is solely a signal to noise situation, even if the signal consists of a direct sound enhanced by strong early reflections. The stage building provides to the audience area with strong reflections to reinforce the direct sound, and such reflections improve source loudness and speech intelligibility, while the columns on scene wall has a good scattering effect. Finally, in Roman theaters in particular, a wall behind the performers added to the direct sound, with reflected energy arriving at listeners' ears within a short enough time intervals (less than 30msec) after the direct sound to reinforce both the clarity and loudness of the direct sound. These sound-reflecting walls may be thought of as an early first step toward creative room acoustics. Meanwhile the colonnade (portico) at the end of the cavea , is not only architectonic; it has an acoustic function, as it improves the strength of sound in remote seats.

Thus, we can conclude that by enclosing the theatre space with the stage building and the colonnade (portico), the theatre acoustic qualities were increased, while the theatre relation with the landscape decreased.

4. Location of the theatre and Landscape

Choosing a location for the theatre has followed several considerations, most of which was the implication of the theatre on the planning of the city, where it was connected with general basic elements in the city. Meanwhile, spatial planning and the material at hand, and the solutions found point to a form of architectural creativity which often was as original and imaginative as it was practical. To evaluate the theatre contribution to the design of the landscape and urban landscape, it is necessary to understand the factors that determined the location, orientation and size of the theatre within the ancient city's boundaries, or within sanctuaries inside and outside the cities, and, in particular the joint relationship between the theatre and landscape and their interaction with other public buildings according to the city planning.

In classical Greek architecture and city planning nature dominates; in Hellenistic architecture the human being dominates. The gods are no longer so closely tied to

¹⁹ Σταμάτης Βασιλαντωνόπουλος, Τηλέμαχος Ζακυνθινός, Παναγιώτης Χατζηαντωνίου, Νικόλαος – Αλέξανδρος Τάτλας(2004) *AcP2-XXX*.

their natural origins; they have become great urban gods. The sitting of temples was calculated to impress a complex and sophisticated urban civilization (Priene, Pergamum, Ephesus, Rhodes, Jerusalem, and Gerasa). The character of the terrain was divine and symbolized the major ritual and religious factors that affected the choice of sites. The harmony was one between man, nature, and the divine rather than one of an “organic design”; the monumental organization of whole complexes of terraced buildings, the individual elements of which were deliberately played down so as to accentuate the organic unity of the whole.

The harmonious relationship between the architecture and the landscape stemmed from the embodiment of the gods’ or goddesses’ presence in the temple, which was set in a sacred place. The character of the terrain was divine and symbolized the major ritual and religious factors that affected the choice of sites. Actually, the major locations of Greek and Hellenistic theatres tended to be around temples complexes out in areas with great majestic natural views²⁰. This relationship between theatre and temple emphasized the spatial and sequential concept of the dramatic play in the Greek and Hellenistic period. Thus the theatre formation and design was very important to the people of Ancient Greece, because it was the epidemic of the unity between earth and sky.

The strong relation between the Theatre and the Temple decreased in the Roman period. With the knowledge of vaulting techniques, later facilitated by the use of concrete, in the Roman period theatres could be constructed as independent structures²¹ on flat sites and in different shapes of the topography and landscape formation of the city. In general Roman theatres were constructed according to the landscape formation of the selected site. The location and orientation of theatres found that they were represented by three designs of structures, these are: 1-on slope hill site. 2-on pure flat site and 3-on semi slope hill site. But choosing a location for the theatre in the Roman period has followed several considerations, most of which is in its relation to the urban planning of the city in combination with the urban landscape. A few theatres were located at the edge of the cities, away from areas of dense construction. Arelate Roman theatre, which originated in the Augustan period, was rebuilt and expanded several times. This was located just within the city walls in the northeast corner of the colonial city. On the other hand the theatre is aligned with the original city grid and its *scaenae frons* is aligned with a prominent north-South *cardo*. The theatre at Bosra in Syria was erected upon the city's lowlands. It served the population of the city and the soldiers permanently encamped at the city. Despite the fact that the Bosra theatre had been erected outside the city, it was integrated into the city's street network by a colonnaded street, with a decorative arch marking where this street branched off from Bosra's *decumanus maximus*.

The north theatre at Jerash in Jordan offers the best example of the theatre's successful integration into the city's network of street²². Its orientation and the way in which the plaza behind the stage building is integrated with the northern *decumanus* and the municipal plaza to the north confirm that much thought and careful planning were invested in the site (**Fig 3**). The large theatre of Philadelphia at Amman with the small theatre (Odeon) and agora formed an impressive urban complex at the center of the

²⁰ Berve, H., Gottfried, G. (1963).

²¹ Russell, D. (1980), p.55.

²² Clark, et al. 1986; Haddad, 1995; Segal, 1995, 1997

city. The theatre closed off the city from the south, balancing the acropolis and its complex of ritual worship buildings across the valley. Amman forum is adjacent to the theatre. In the small theatre (Odeon) at Amman, the influence in the city planning is obvious on the location of the theatre. It was constructed on Eastern side of the forum and oriented to the west. The theatre location affected the design and its construction as is seen in the back side of the theatre which acts as supporting wall of the cavea.

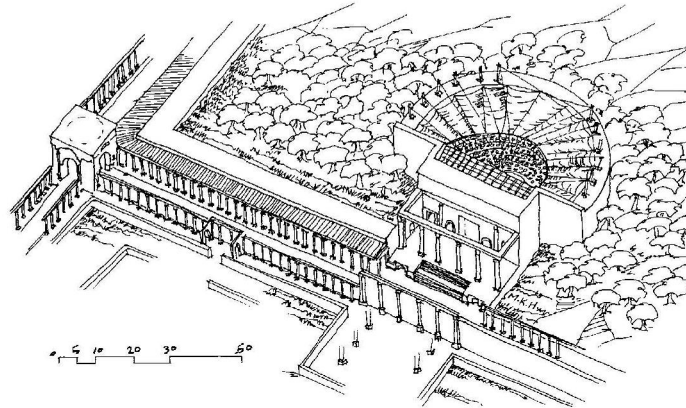


Figure 3 Gerasa the north theater, an isometric reconstruction of the theater

The role of the planning of the city had its implications on the location of the Roman theatre which can be realized from the example of the Northern theatre of Gadara in Um-Qais in Jordan. The theater is set on the city's acropolis, at the foot of which runs the main colonnaded street (*decumanus maximus*). The theatre was chosen at a prime location which necessitated the adoption of difficult applications and solutions. The theatre structure was on an utterly rocky slope²³. Although, the bend of this slope was appropriate, it seems that there were difficulties in dealing with it, because it did not allow for establishing rocky cellars assisting in supporting the upper parts of the theatre.

On the other hand, while the strong relation between the theatre and the temple decreased in this period, the Hellenistic tradition and foundation of the Decapolis had influenced the forming of these later Roman cities. The southern theater at Jerash, located in the area of the Zeus sanctuary abiding by the Hellenistic traditions of the West, is clearly an urban ritual theater. This further suggests that the building of the theatre may have been in keeping with a tradition which had its roots in the Hellenistic sanctuaries, where theatrical activities were held also in theatres located in sanctuaries in spite of the fact that it was located within the city's walls²⁴. The theater forms part of the Zeus sanctuary which was the city's ancient sanctuary and dated back to the Hellenistic period, and it is plausible that the theater become part of it in the same way as theaters were incorporated in the Hellenistic sanctuaries. The theatre at Sabra seems to have been part of the isolated Nabataean sanctuary in Leda. The theatre at Wadi Sabra is part of a Nabataean sanctuary south of Petra. A small shrine was located at the top of the large theatre of Philadelphia (Amman). The theatre of

²³ Al-Dahsh,(1993); Segal,(1995)

²⁴ Haddad,(1995); Segal, (1995, 1997)

Umm Qais was dedicated to the Goddess of Tyche. The large theatre at Petra has raised some questions. While some scholars see it first of all as a structure in which people would assemble for necrolatry rituals, others point out that its location was definitely decided mainly by the areas topography and that it actually is an urban theatre.

Taking the case of Roman theatres in Eastern part of the Roman empire, especially in Great Syria, we can see that these theaters had been divided by Arthur Segal (1995) in relation to their location into two primary categories:-

-Urban theaters, which were erected within cities and were intended to serve, the city's own population (Umm-Qais north and west theater, Gerasa North Theater, Philadelphia large and small theatre at Amman in Jordan and Bursa in Syria.

- Ritual theaters, which were built in sanctuaries outside the cities and served the diversified population that frequented the sanctuaries. The main characteristic of those theatres that, they never had a stage building at all, such as the Nabataean ritual theaters at Sabra and the theater at Hammat Gadara, functioned as ritual theaters, which may perhaps explain the absence of the stage building. While small theatres, like Philippopolis, Gadara west theater, Pella, Gerasa north theater, Philadelphia small theater, are urban theaters, they were incorporated into the urban landscape and had no connection whatever to sanctuaries²⁵. The theatre at Philippopolis is located near the city's forum. The west theater at Gadara was built on the acropolis. Though the location of the theater at Pella within the city's urban plan is not very clear, it seems to have been near the Pella Acropolis. The north theater at Gerasa and the theater at Antipatris were both well integrated into the urban landscape.

Thus, the location of theatres in the city is directly related with the main elements, forming the urban fabric, such as the *cardo* and *decumani*, the forum and temples. Lastly, though the Romans, like the Greeks, preferred to use hillsides for their theatres, they were often obliged, especially in large cities, to build them on flat ground, and this practice led to important developments in the structure of the *cavea* and its relation to the landscape.

5. Orientation of Theatres

Public amphitheater or stadium where people would have to sit out in the sun was tented with some kind of awnings. There is evidence for awnings in many theaters, in almost all of the amphitheaters, and even in the stadium. The so called *velarium* was an awning stretched over the whole of the *cavea* to protect the spectators from the sun. These awnings were in general either woolen or linen; cotton was used for this purpose a little before the time of Julius Caesar. The awnings were not intended as protection from the rain. We know that from the poets who tell us that when the days of wind came up, the awnings could not be put out. They were sunscreen awnings.

The Roman Architect Vitruvius²⁶, discussed in his Fifth Book, the Greek and Roman Theatres, mentioned that two factors were taken into consideration while choosing the site of the Roman Theatre, the Healthy place good orientation for the Theatre which should be exposed to the south. Are most of the theatres were oriented towards the

²⁵ Clark, et al. (1986); Haddad, (1995); Segal, (1995, 1997)

²⁶ Vitruvius, V, Chapter VI, article 2, Chapter VII, article 2.

north, so as to protect the spectators on the theatre from the sun! From a statistical analysis of the orientation of 68 theatres, from which 50 theatres (74%) are Roman and 18 theatres (26%) are Hellenistic we found that:

1. 32 theatres (47%) were mainly oriented to the North; 29 of them are Roman.
2. 16 theatres (23%) were mainly oriented to the East; 8 of them are Roman.
3. 12 theatres (18%) were mainly oriented to the South; 8 of them are Roman.
4. 8 theatres (12%) were mainly oriented to the West. 8 of them are Roman.

Out of these 68 studied theatres, 29 were in the region of the Great Syria (Jordan, Palestine and Syria). Their orientations are as follows:

1. 20 (68%) of the theatres were mainly oriented to the North
2. 4 (14%) of the theatres were mainly oriented to the South
3. 3 (11%) of the theatres were mainly oriented to the East
4. 2 (7%) of the theatres were mainly oriented to the West

Thus we can assume that:-

1. The Romans were more careful in choosing the orientation for their theatres than the Greeks.
2. Roman theatres in general were mainly oriented to the North to protect the spectators on the theatre from the sun.
3. Hellenistic theatres were mainly oriented to East and South, due the location of Hellenistic cities was often on the eastern and southern slopes of hills and mountains
4. Most of the theatres in Great Syria were theatres with north orientation

6. Concluding Remarks

The ancient theatre in its architectural design reflected the actual social structure of the society. Erecting a theatre was surely far more complex than was the case in other public buildings. Each theatre posed its own problems which typically arose from its location and topography. It can be concluded that the architects wanted to exploit the possibilities offered by a landscape, which could be enhanced by the Theatre building. Greek theatres normally exhibit a more expansive orchestra than the later Roman theatre, because in early Greek theatre communication between the low stage and this area was important to the action. The Greek theatre emerges as part of the natural landscape. In Classical Greek as well as Hellenistic theatres the cavea was always built on a natural slope that was hewn out and shaped to this end. The cavea or auditorium containing the tiers of seats for the audience was designed with great skill to ensure its adaptation to the landscape.

By the introduction of two floors Hellenistic "proskenion" the relation ship between theatre and landscape, will start to change and the concept of the open to the natural views of landscape will start to decrease. All over the Roman Empire theatres were erected to entertain the masses. By enclosing the theatre space with the stage building and the colonnade (portico), the theatre acoustic qualities were increased, while the theatre relation with the landscape decreased. The Roman theatre as an introvert conception in relation with the landscape had a lot of differences in its architectural features. One of the crucial differences between Greek and Roman theatres is the way in which the cavea is built. It was supported by its own framework of piers and vaults and thus could be constructed in the hearts of cities. Roman theatres in general were mainly oriented to the North to protect the spectators on the theatre from the sun.

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