

**THE CREATIVE ASPECTS OF ROMAN THEATRE
ARCHITECTURE IN THE TRIPOLITANIA REGION
"A COMPARATIVE STUDY OF LEPTIS MAGNA AND SABRATAH THEATRES"**

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ABSTRACT

The Roman theatre had multiple functions; it was used as a recreational, educational, religious and civilizational building. It formed the Roman mind and conscience and was used as a form of political propaganda for the emperors and the elites throughout the empire. Roman theatres were built in all areas of the Empire. Rome's power and wealth gave them the ability to influence local architecture, such as all theatres throughout North Africa, with uniquely Roman attributes. This paper discusses the most important Roman innovations in theatre architecture in the Tripolitania region through a comparative study between the Leptis Magna and Sabratah Theatres.

المخلص

تمتع المسرح الروماني بوظائف متعددة؛ فقد كان بمثابة الأبنية الترفيهية والتعليمية والدينية والحضارية، حيث شكل العقل والضمير الروماني، كما استخدم كنوع من الدعاية السياسية للأباطرة والطبقة العليا في المجتمع في جميع أنحاء الإمبراطورية. هذا، وقد تم بناء المسارح الرومانية في جميع مناطق الإمبراطورية. الأمر الذي جعل من الرومان قوى مهيمنة في التأثير على العمارة المحلية، لذلك فإن جميع المسارح في جميع أنحاء شمال إفريقيا لها سمات رومانية فريدة. تناقش هذه الورقة أهم الابتكارات الرومانية في فن العمارة المسرحية في منطقة المدن الثلاث من خلال دراسة مقارنة بين مسرحي لبدة الكبرى وصبراته.

KEYWORDS

Roman Theatre; North Africa; Leptis Magna; Sabratah; *cavea*; *pulpitum*.

الكلمات الدالة

المسرح الروماني - شمال أفريقيا - لبدة الكبرى - صبراته - مقاعد المشاهدين - خشبة المسرح

INTRODUCTION:

The Romans inherited the idea of the theatre from the Greeks and developed it in terms of sound technology and clarity of vision. The *scaenae frons* has become more enduring, rich and decorative than before. The Romans were also able to solve the overcrowding problem for entering and leaving theatrical performances - given the high turnout of the theatre in the Roman city - through the multiplicity of entrances and exits from inside the *cavea* itself.

As for the most important creations of the Romans regarding theatre architecture, it was the ability to choose the most suitable location for the construction

of the theatre. This was consistent with the planning of the city by building the theatre on arches, which gave the Romans control over the choice of the theatre's location. They did not have to carve the theater into the bosom of a hill or mountain, whatever its location from the city, as the Greeks did. Thus, the theatre became an essential feature of the Roman city ((Bieber 1961, 41-49) (Harrison 1979, 15-26) (Small 1983, 55-68) (Sturgeon 2004, 411-429) (Phillips 2006, 74-83).

Since the Age of Augustus (27 BC - 14AD), the number of theatres in the Roman states increased, which indicates the extent of economic and intellectual prosperity of these states at the same time. Several Roman theatres in the Roman states of North Africa have been found, demonstrating Rome's prosperity and advanced culture. It is noticeable that the size of the theatres in North African cities was directly proportional to the population of these cities, as was recorded by Vitruvius (Vitruvius 1931, I- II).

The theatre had multiple functions in the Roman city. It served as the media for the people - as the concept of that time - and therefore, it cannot be excluded as a means of political propaganda, as the theatre had, at the same time, an educational and enlightenment role for society. It is impossible to deny the entertainment side of the theatre, so the Amphitheatre also served this role in the Roman city.

The most important of these remaining theatres in North Africa are preserved in good condition; Leptis Magna and Sabratha Theatres in Libya. This study will discuss the general features of both theatres and their creative elements, especially the Sabratha Theatre, one of the most important Roman theatres constructed in North Africa.

DISCUSSION:

– **Roman Theatre Design:** Vitruvius said when the forum is established, the optimal position is to be chosen for the theatre. It must avoid bad winds by carefully choosing a location for the theatre (Vitruvius 1931, V- III-I). Vitruvius considers this an essential feature in theatre building as the winds and direction of the sun should be considered at the planning stage.

The structural design of the Roman theatre was not different from its Greek counterpart in terms of its architectural components, which consisted of the auditorium or audience seats, known as the *cavea* (This name appeared in ancient Roman literary sources to denote the seating places of the spectators in the theatre); (Plautus 1964, 66) (Cicero 1951, 24). This seating was divided horizontally and vertically (fig.1). The vertical division was divided into wedge-shapes, called *cunei*, separated by staircases, termed *scalaria*. In most theatres in the western part of the Empire, the lower part of the *cavea* was divided into 4, 5, or 6 *cunei*, usually with double that number in the upper levels. Theatres of the Eastern Empire was commonly divided into five, seven, or nine *cunei*. The Auditorium was divided horizontally into *ima*, *media*, and *summa cavea* (Vitruvius 1931, V-VI-II) (Sear, Roman Theatres: an Architectural Study 2006, 2) (fig.1).

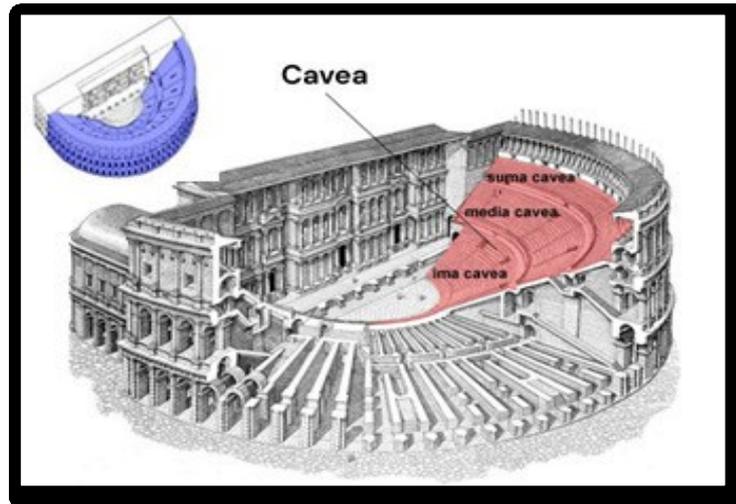


Fig.1 Plan of Roman Theatre *cavea* according to Vitruvius
(Vitruvius 1931, V-VI- II) (Hines 2020)

The second partition of the theatre is the *orchestra*. Most Roman literary sources used this term to denote the space between the audience seats and the stage in the Roman theatre. It is the same term used in this architectural feature of the Greek theatre. This indicates that the Roman theatre inherited many architectural vocabularies from its Greek predecessor. (Vitruvius 1931, V-VI-II) (Quintilian 1963, 3-3-71) (Suetonius 1979, Nero 12.3) (Juvenal 1974, 178) (Sear, Roman Theatres: an Architectural Study 2006, 7), (fig.2) The *orchestra* of a Greek theatre was usually circular, while that of a Roman theatre was generally more or less semi-circular. There were one or more altars situated in the *orchestra*, for example, at Leptis Magna, Itatica, and Arles (Sear, Roman Theatres: an Architectural Study 2006, 7)

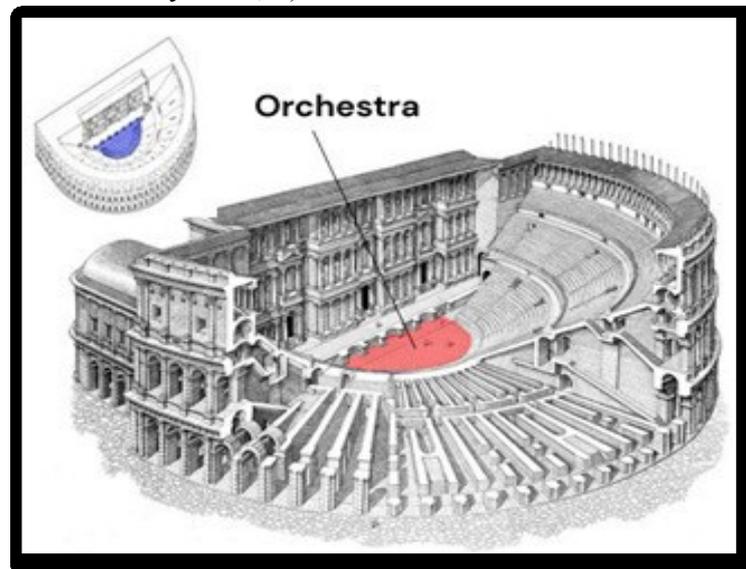


Fig.2 Plan of Roman theatre *orchestra* according to Vitruvius
(Vitruvius 1931, V-VII_II) (Hines 2020)

The third partition of the theatre is the *pulpitum* (This name is mentioned in Roman literary sources to denote the stage. Its ceiling is often made of wood. In some cases, a room is included under the podium. It is usually connected to the orchestra by

stairs on both sides (Vitruvius 1931, V-VII_{II}), (Horace 1966, 279), or the stage (fig.3). The *scaenae frons*(This name appeared in Vitruvius to denote the wall in the background of the stage, which is often as high as the number of floors of audience seats or *cavea*. It may have two or three stories, and Vitruvius indicated that this wall should have three gates or doors that lead to the backstage rooms, where clothes and masks are changed. He also indicated that the middle door was called the royal door due to the senior actors using this to exit the stage. As for the door to the right of the viewer, it was for the exit of the second layer of actors to their backstage rooms. The last door on the left of the viewer was for the lower levels of actors or extras (Vitruvius 1931, V-VI) (Beare 1968, 285-294) (fig.4). The back wall of the stage rose to a considerable height, at least as high, sometimes higher than the top of the *cavea*, and was usually decorated by two or three storeys of columns (Sear, Roman Theatres: an Architectural Study 2006, 8). There were three doorways in the *scaenae frons* wall, but the term *scaena* is used by Vitruvius for the scene building as a whole (Vitruvius 1931, V-VI).

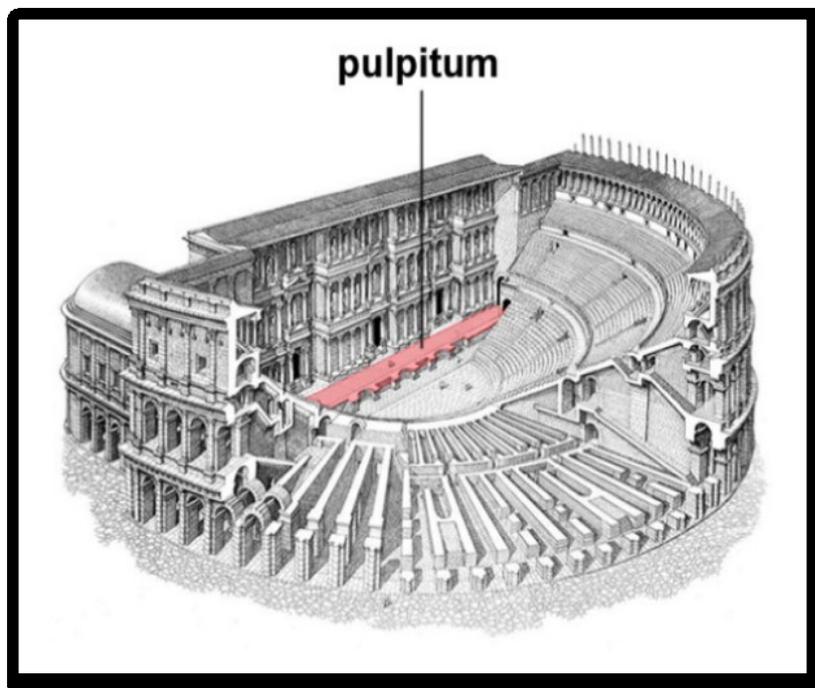


Fig.3 Plan of *pulpitum* according to Vitruvius
(Vitruvius 1931, V-VII-II) (Hines 2020)

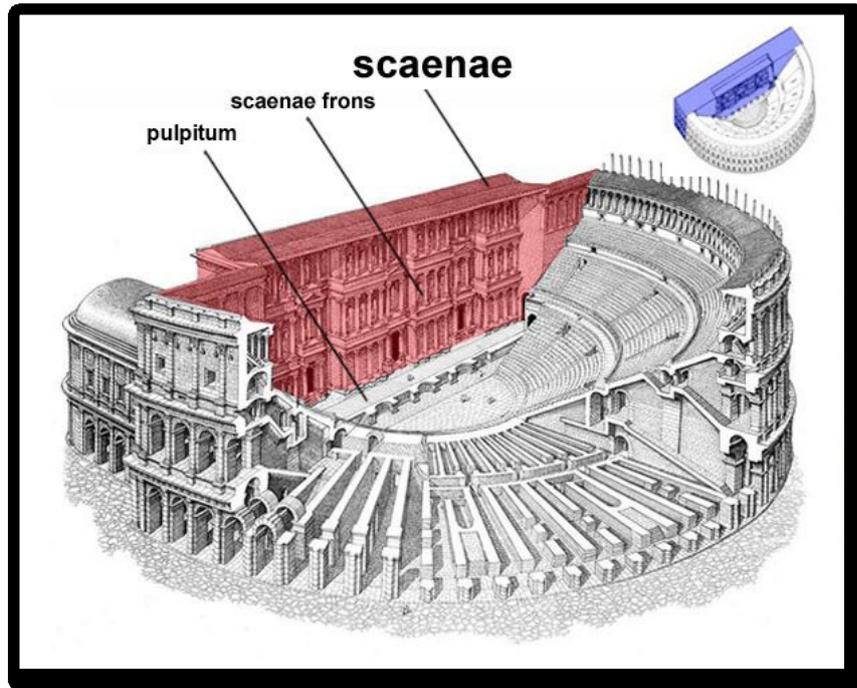


Fig.4 Plan of scaenae frons according to Vitruvius
(Vitruvius 1931, V-VI-VI.) (Hines 2020)

However, Roman theatres have specific differences from the Greek, such as generally being built upon their own foundations instead of earthen works or a hillside and being completely enclosed on all sides. Roman theatres were complex buildings, the seating was arranged in a semi-circle around the *orchestra* as in the Greek theatre, but the stage and scene-building were joined to the auditorium and rose to the same height (Sear, *Roman Theatres: an Architectural Study* 2006, 1). These buildings were semi-circular and possessed certain inherent architectural structures, with minor differences depending on the region in which they were constructed. For the Greek theatre, Vitruvius takes the circle of the *orchestra* as his starting point, and within it places three squares whose angles touch its perimeter. The rim of the circle touches the *skene* wall, and the base of the bottom square marks the front of the stage (Bieber 1961, 126-128) (Sear, *Vitruvius and Roman Theater Design* 1990, 249-250).

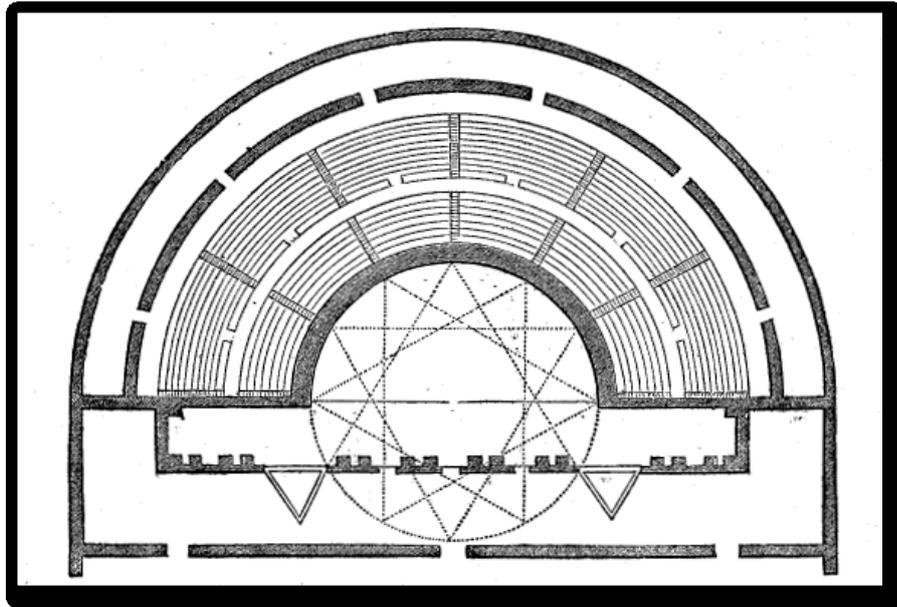


Fig.4 Plan and section of a Roman theatre according to Vitruvius
(Vitruvius 1931, V-III-1) (Sear, Vitruvius and Roman Theatre Design 1990, 249-250)

The Romans were skilled at building substructures under the auditorium, which meant that the seating was served by a complex of passageways and staircases. The stage and scene building were perhaps the most spectacular parts of the building. The stage was deep and extremely wide, and the wall behind the stage was elaborately decorated with niches, statuary, and tiers of columns (Sear, Roman Theaters: an Architectural Study 2006, 1) (fig.4).

* **Leptis Magna:**

The name "Lpqy" was associated with its Phoenician founders who came to it from their original motherland of Sidon after the founding of the city of Carthage in 814 BC, and it is more likely that the city was not founded before the seventh century BC. It served as an Emporia for the Phoenicians to provide them during their maritime trade. It has used the name Leptis Magna since the end of the First Century AD and the beginning of the Second Century AD to distinguish it from Leptis Parva, which was also founded by the Phoenicians at the Gulf of Gabes in Tunisia (Romanelli 1925, 8, 17) (Mattingly, Tripolitania 1994, 116) (E. Di Vita 1996, 120-123) (Matthews 1957, 33-47).

Leptis Magna Theatre (fig. 5) is one of the most important theatres in North Africa, due to its distinguished location in the city, and according to its dating, it was situated in the middle of the city at that time; and located to the west of the centre of the old city. The *cavea* faces the Mediterranean Sea in a wonderful sight (fig.6).

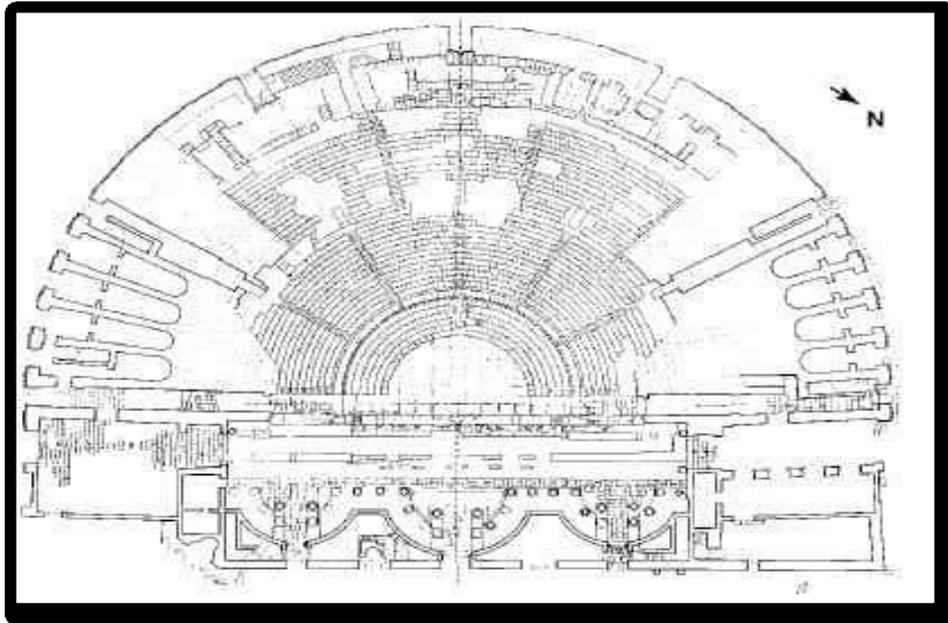


Fig.5 Plan and section of Leptis Magna theatre

(Sear, Roman Theatres: an Architectural Study 2006, 1)



Fig.6 View of the Leptis Magna theatre from above

(Judith 2013)

A bilingual inscription over each *aditus maximus* arch, facing the *orchestra* (1–2 A.D) within *tabula ansata* (Meyer 2004, 28), commemorating the theatre's builder, Annobal Rufus (fig.7) (Sear 2006, 282). The inscription is as follows: -

*"Imp(eratore) Caesare divi filio) Aug(usto) pont(ifice) max(imo) tr(ibunicia)
pot(estate) XXIV co(n)s(ule) XIII patre patr(iae)
Annobal Rufus ornator patriae amator concordiae
flamen sufes praef(ectus) sacr(orum) Himilchonis Tapapi filius) d(e) s(ua) p(ecunia)
fac(iendum) coer(avit)
idemq(ue) dedicavi"*

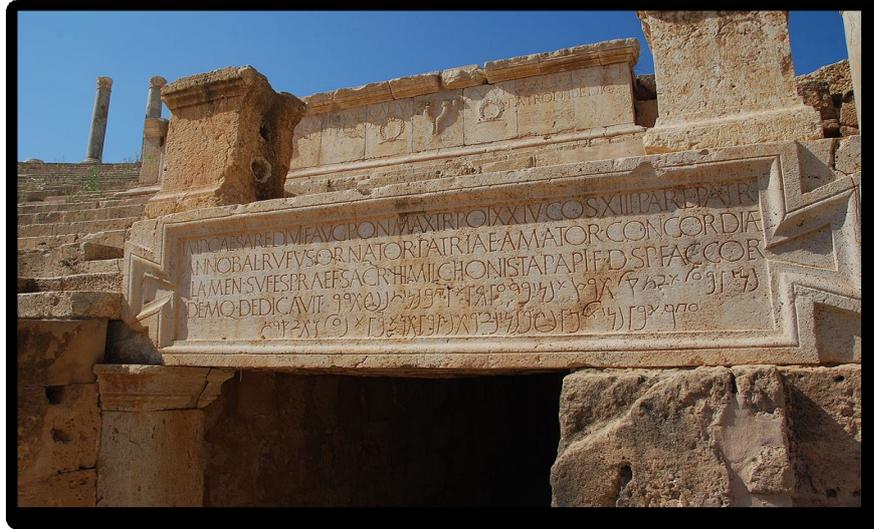


Fig.7 Bilingual text of the Leptis Magna theatre
(A field study by the researcher.)

This inscription indicates that *Rufus Hannibal* one of the wealthy men of the city dedicated the theatre to Emperor Augustus at the beginning of the first century. The theatres often bore the names of those who had made the most significant contribution or helped to enable projects to be completed. Those who had theatres named for them would subsequently use these as a propaganda tool to further entrench their status and power in Roman society. So at that time, there was a significant development in Roman theatre architecture in terms of sound technology and the genius of choosing the right location to enhance the acoustics inside the theatre, as Vitruvius identified (Vitruvius 1931, V-VI_II_III).

Leptis Magna and Ostia are the best documented surviving inscriptions. It may come as no surprise that the theatre was one of two preferred locations for the erection of statues of the Julio-Claudian family, perhaps reflecting its importance as a structure (Rose 1997, 27-29).

Leptis Magna is the second largest theatre in North Africa, with the diameter of its *cavea* being about 87.60 m, accommodating 5500 to 6800 viewers. The *cavea* consisted of three floors; facing north-east; *ima cavea*:14 rows (0.31×0.67m) in 6 cunei; lower *praecinctio* W 0.78m; *media*:16 rows (0.31×0.65m) in 12 cunei; upper *praecinctio*, W 1.30m with podium (H 3.95m); *summa*:5 rows in cunei; *porticus* (W 2.9 m to back wall, including columns), columns H 2.25m (fig.8) (Sear, Roman Theatres: an Architectural Study 2006, 281).



Fig.8 *cavea* of Leptis Magna Theatre

(Judith 2013)

As with all Roman theatres, the *orchestra* has a semicircular shape. It was covered with painted stucco; renewed c.12 times before being paved with marble (later 2nd cent. AD). Situated in the middle of the steps is a statue of Antoninus Pius (Sear, *Roman Theatres: an Architectural Study* 2006, 281). The orchestra has a diameter of about 24.80 m. There are six low rows of seats where wooden chairs were placed for the elite. It is separated from the *cavea* by a passageway and *balteus* wall (H 1.3 m, D at wall 22.4 m), which has three doors leading to the *cavea*. All of them are in a direct line, opposite to the three doors in the *scaenae frons* (fig.9).

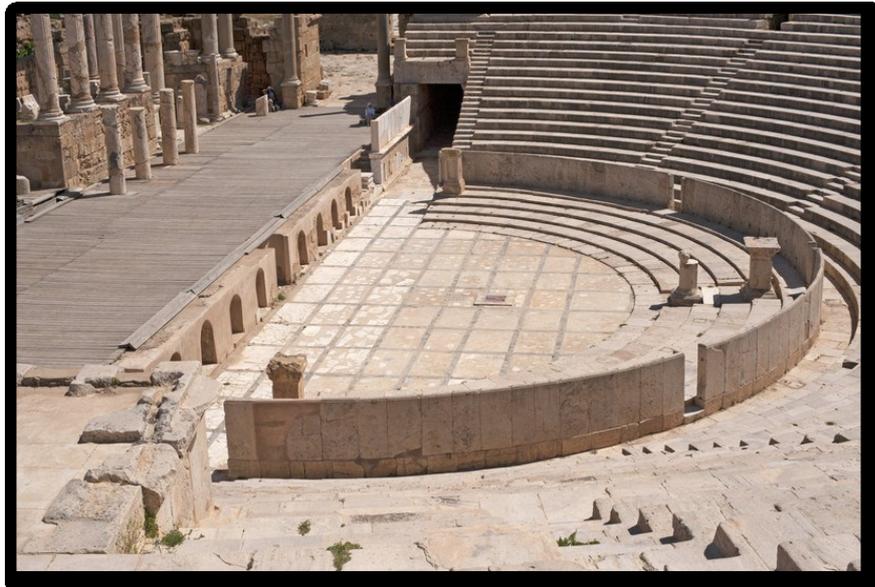


Fig.9 *Orchestra* of Leptis Magna Theatre

(A field study by the researcher.)

The *orchestra* also contains an octagonal altar; (H 0.74, W 0.62), near the middle door of the *orchestra* leading to the *cavea*. The wall of the stage facing the *orchestra* or *proscenium*, (W 1.25, H 1.50 m), has nine niches, where statues may have been placed. Small statues dated to the second century have been found in this area. The middle niche is the most spacious and is situated in the centre of the *orchestra*, completely surrounded on either side by niches that are less wide than the central niche yet all equal to each other. (Sear, Roman Theatres: an Architectural Study 2006, 281). It is possible that these niches, in the beginning, may have been adorned with statues of Muses, goddesses of poetic inspiration, and adored deities of song, dance, and memory, on whose mercy the creativity, wisdom, and insight of all artists and thinkers depended. This played a prominent role in creating an intellectual and cultural awareness of society.

The *cavea* was connected to the *pulpitum* (Sear, Roman Theaters: an Architectural Study 2006, 282), which measures 45.70 tall, while it is 7.35 m deep. The archaeological evidence indicates that the height of the *scaenae frons* was three floors to match its counterpart in the Sabratha Theatre, and there are three doors set up in the form of arches in the Corinthian style. Curved niches enclose all three doorways; columnatio, originally of limestone, later replaced with a screen of cipollino, pavonazzetto, and granite columns three stories high, like Sabratha; regia door (W 2.75 m); hospitalia doors (W2.00m); columnatio: H of lowest store c.9.4m (estimated total H c.21.67m), (Sear, Roman Theatres: an Architectural Study 2006, 281).

The engineering creativity of the Leptis Magna theatre is not only manifested in its location and position, nor in its combination of straight, curved, and broken lines, but it is also manifested in the principle of symmetry in all components of the theatre. The middle staircases of the *cavea*, the *scalae*, divided the theatre into two completely identical parts (Fig.10). The *vomitorium*, the main entrance and exit, the middle stairs, the main door of *balteus* wall, the largest and middle niche in *proscenium*, and finally the royal door, *regia porta*, in the *scaenae frons* all are located on a straight line.

The digital consistency is also one of the most important creations of the Romans in the Leptis Magna Theatre. It is the repetition of the number three, which may refer to the three gods of the theatre (Ceres - Apollo - Bacchus), which is reflected in the number of doors in both the *scaenae frons* and *balteus* wall and the number of floors in both the *cavea* and the *scaenae frons*.



Fig.10 The middle *Scala* of Leptis Magna Theatre
(Judith 2013)

***Sabratha:**

The Sabratha Theatre (Raven 1999), (Mattingly, Tripolitania 1994, 50)(Mattingly 1994, 50) (Mattingly and Hitchner, "Roman Africa: an Archaeological Review 1995, 165-213) is unique with many architectural features. Where the genius of the location and the position, its architectural planning, and in terms of the principle of balance between the architectural and decorative elements that abound in it, (The Italian expedition discovered this theatre in 1927 and work continued on it until 1932. The building and what was lost was restored with the task being accomplished in 1937, (Caputo, Il teatro di Sabratha e l'architettura teatrale Africana 1959, 62-64) as well as the conformity of engineering standards which Vitruvius had recommended (Fig.11) (Vitruvius 1931, V-VI_II).

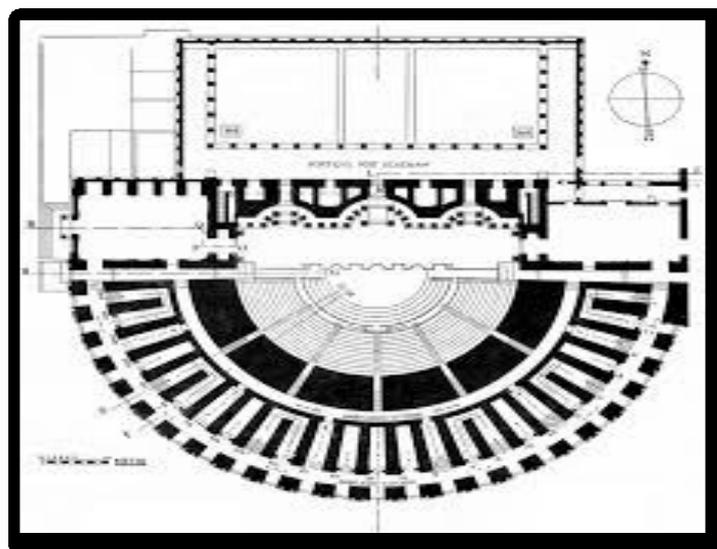


Fig.11 Plan and section of Sabratha Theatre
(Sear, Roman Theatres: an Architectural Study 2006, 283)

The theatre is also characterized as the largest of its kind in Africa, as it is one of the huge theatres in the Roman Empire (Figs.12, 13). It reaches a height of about 22 m and can be compared to the major theatres in the Roman Empire in terms of architectural features and artistic attributes. It can be compared in terms of magnitude with Orange Theatre in Gaul (France), Aspendos Theatre in Asia Minor, and Roman Theatre at Bosra in South Syria (Patricio and Stevens 2003, 1601-1612).



Fig.12 Location and Position of Sabratha Theatre
(Judith 2013)



Fig.13 The Sabratha Theatre from inside
(A field study by the researcher)

The *cavea* was a building of sandstone, which was available in the city (Altekamp 2004, 60-62) (Munzi 2004, 97-98), then the stones were covered with a layer

of stucco (Haynes 1965, 130). The *cavea* (Fig.14) consisted of three floors, taking the shape of a semi-circle, and their diameter was about 92.60 m. The first or the lowest floor, the *cavea ima*, consists of eleven rows of seats, 33 cm wide and 77 cm high, separated by seven vertical stairs dividing the rows of seats for the first floor into six cone-shaped sectors, *cunei* (Vitruvius 1931, V_VI_II) (Vitruvius 1931, V_VI_III) (The width and height of the seats on the three floors were measured by the researcher and it was found that they are of the same standards that were mentioned in the text and did not differ from one floor to another at all, which indicates the extreme accuracy of the work).

If we consider that the area of each of the two sectors above the two aisles of the theatre is equal to one conic sector. Thus, the number of conic sections on the first floor can be considered seven as well as the number of stairs on the same floor. As the spectators' seats are connected architecturally to the stage, a feature that distinguished the architecture of the Roman theatre, and only a part of the second or middle floor remains. The *media cavea*, on the western side of the theatre, is divided into seven conical sectors, as suggested by Di Vita (A. Di Vita 1999, 173) and Sear (Sear, Roman Theaters: an Architectural Study 2006, 283).



Fig.14 *cavea* of Sabratha Theatre

(A field study by the researcher)

There are only four rows of seats left on the third or upper floor of the *summa cavea*, also on the west side. Di Vita (A. Di Vita 1999, 173) suggests that the sectors of the third floor were divided into eight sectors, while Sear (Sear, Roman Theaters: an Architectural Study 2006, 173), mentioned that it was divided into six conical sectors without mentioning the number of stairs in each of the second and third floors, however, it seems that the opinion of both - in my opinion - is not true, as neither of them has evidence to support their ideas, nor is there a comparison with other Roman theatres.

The upper layer of the third floor indicates to remains of a *portico* (Fig. 13), so it is likely that Sabratha Theatre had a *portico* above the *cavea*, as Vitruvius indicated that for most Roman theatres (Vitruvius 1931, V.VI.IV). The third floor may have included a chapel, a small temple, and a portico, as the Leptis Magna Theatre. Some of the theatres include a temple at the top of the *cavea*, and perhaps the most famous of them is the Temple of Venus in the Pompeii Theatre, while some of the theatres include a *Stoa* or Portico. It is possible that the most famous of which is the Temple of the Bosra Theatre in Southern Syria. (Sear, Roman Theaters: an Architectural Study 2006, 2).

The *cavea* is oriented completely to the north, which protects the viewers from the hot desert winds, while at the same time this orientation enjoys a breathtaking view of the Mediterranean coast, as the theatre is not far from the seashore, no more than one hundred and fifty meters (Fig.12). The viewers on the second and third floors can see the theatrical show directly against the backdrop of the sea. As for the viewers on the first floor, they are not blocked from seeing the sea as a background to the theatrical performance. They can do it through the three doors of the *scaenae frons* (Fig.13). The *cavea* is 6.92 m in diameter, which indicates that these seats are wide for a number of viewers. There were no less than five thousand viewers in one show (A. Di Vita 1999, 173) or six and half thousand viewers approximately (Sear, Roman Theatres: an Architectural Study 2006, 284) (Fig.14).

The *cavea* was based on two ambulatory rings, one external and the other internal. The external ones are similar in terms of shape to many amphitheatres (Fig.12), except that they take the form of corridors supported by arches with huge edifices, which separate these arches from the outside three pillars. The middle of them is larger and higher, and on either side of them are two smaller pillars. The middle pillar contains Corinthian capitals for the two major pillars and Doric capitals for the two side pillars, above the middle pillar is a cornice that rises above the first floor, while the two side pillars bear the arches. This pattern is repeated on the second and third floors.

The *orchestra* takes the form of a semi-circle like the *cavea* (Vitruvius 1931, V-VI-II), the diameter of it is about 22.4 m. The *orchestra* does not have an altar like the *orchestra* of the Greek theatre or several altars like some orchestras in the Roman theatre (Sear, Roman Theaters: an Architectural Study 2006, 7), but the *orchestra* included four marble rows which held wooden benches, most likely for the elites to sit on them (Fig.15). This is what Vitruvius pointed out; where he indicated that the height of the stage should not be more than 152.4cm so that the notables and the elites can see the theatrical performance clearly from their location inside the *orchestra* (Vitruvius 1931, V.VI.II).



Fig.15 Orchestra of Sabratha Theatre

(A field study by the researcher)

It is worth mentioning that the width of one row for these stands was about 96 cm, while the height was about 12 cm; this indicates the necessity of wooden benches above these marble rows, not less than 40 cm in height (Sear, *Roman Theatres: an Architectural Study* 2006, 6) (Caputo, *Il teatro augusteo di Leptis Magna* 1987, pls. 49-51), to be able to see clearly in light of what Vitruvius specified for the height of the stage. The floor of the *orchestra* was also tiled with marble slats similar to the marble wall of the *orchestra*. De Vita suggests that this marble is from Proconisos (A. Di Vita 1999, 173).

The *orchestra* was surrounded by a marble wall or *balteus* (Dumasy 1975, 1014-1015). It is mentioned in an inscription from the theatre of Leptis Magna under the name Podium about 1.5 m high separating the *orchestra* from the *cavea*. Each of its ends had a base decorated with two dolphins, each of them is the same height as the *balteus*, with their heads turned inward, and fixed on the three upper steps of the *orchestra*. The two dolphins are similar to their counterparts in the amphitheatre at Carthage (Sear, *Roman Theatres: an Architectural Study* 2006, 6). The *balteus* was pierced by three openings, or rather three doors, each door opening to three of the seven stairs on the lower floor of the *cavea*. It is noteworthy that these doors are similar to the three doors in the *scaenae frons* and are parallel to them.

There is a well at the end of the *orchestra* towards the stage (Fig.16). It lies specifically in the middle, opposite the main door which is situated in the *scaenae frons* wall, and the middle wall in the *balteus* of the *orchestra*. The location of this well was on an imaginary line that divides the theatre into two halves, in both length and width. This indicates the principle of symmetry of the architectural elements of the theatre building. It was used to drain rainwater and as a form of sound technology, where it was connected to several tunnels, which would amplify the sound to help all the audience to hear very clearly.



Fig.16 A well in the end of Sabratha orchestra

(A field study by the researcher)

The *pulpitum*, the stage, rises from the *orchestra* floor 1.37 m (4.66 ft.), and thus meets the criteria of Vitruvius in the ideal height of the stage from the *orchestra* floor (Fig.17); it should not be more than five feet (Vitruvius 1931, V.VI.II). The length of the stage is 42.70 m, while its width was 4.09 m, and depth to the *scaenae frons*, the background wall of the theatrical, was 10.43 m; meaning the ratio reflects the ideal stage in terms of clarity of vision (Sear, Roman Theatres: an Architectural Study 2006, 35-36).

The *pulpitum* is also closely connected to the *orchestra* arena with the *cavea*, audience seats (Figs.13, 17). Seats were added to the section above the two entrances which led from the stage to the *orchestra*. The *pulpitum* is also connected to the *orchestra* by stairs on both sides of the stage that are not visible to the audience, as it is separated by a barrier facing the *orchestra*, so that is the actors could climb four steps onto the stage from either side of the stage. It is possible to ascend and descend to and from the stage from the *orchestra* arena.

The Sabratha Theatre also has a lobby that leads to a room located below the stage; it can be accessed from either side of the stage, and this lower room appears to have been used for the rest of the cast. Here were found the remains of a mosaic that adorned the floor as well as the walls.



Fig.17 The *pulpitum* of Sabratha Theatre

(A field study by the researcher)

The *pulpitum* is distinguished by a marble edge in front of the *orchestra*, consisting of seven consecutive niches, *exedrae*, containing within them various scenes in reliefs, comprising 21 scenes in total. Each niche, or apse, includes three scenes separated between the seven niches by a rectangular wall with a pedestal in the form of an Ionic column at each end. It seems that the Roman theatres of North Africa were characterized by these *exedrae*. Such *exedrae* are present in all theatres, discovered in North Africa, such as Leptis Magna, Dugga, Djémila, and Timgad Theatres (Pfeiffer 1931, 145-156).

The most important characteristic of the Sabratha Theatre is *scaenae frons*, or stage wall, which faces the audience and at the same time is a permanent background to the stage as a theatrical façade (Fig.18). The *scaenae frons* is divided into seven bowers or vertical niches on three floors for a variety of symmetrical marble columns; the floor consists of 32 columns, or rather models; where the floor consists of a podium base, a Column, and an Entablature. That is the façade includes 96 columns characterized by their compound capitals, which consist of acanthus leaves, theatrical masks and lions' heads.



Fig.18 The *scaenae frons* of Sabratha Theatre
(A field study by the researcher)

The height of the first floor of the *scaenae frons* is about 8.8 m; the height of the base is about 1.91 m, and the height of the column is 5.54 m, while the porch on the first floor rose to about 1.35 m. The second floor rises to about 7.06 m; the height of the base was about 0.96 m, the height of the column is 4.90 m, and the height of the porch is 1.20 m. The third floor is about 5.74 m; the height of the base is about 0.86 m, the height of the column is 3.65 m, and the height of the entablature is 1.23 m, and thus the height of the *scaenae frons* is 21.60 m. (Sear, Roman Theatres: an Architectural Study 2006, 35-36).

The observer of the *scaenae frons* would notice the consistency between each section on the same floor and the gradation in height between the three floors. This gave the scene beauty and majesty, and the architecture excelled in the theatrical scene with the variety between the columns' shafts.

The columns of the first floor were made of colored marble known as smooth *pavonazzetto*, while the columns' shafts of the second floor were made of white marble. It has straight and spiral channels, or flutes, as for the third floor, some of its columns' shafts are made of black granite, while others are made of colored marble with spiral flutes, and sometimes straight flutes at other times. Thus, the architect drew a wonderful painting through the multiple colors of marble, which achieves comfort of the vision, as it softened the straight lines of the scene through the multi-colored marble on the first floor, spiral flutes on the second floor, and multi-colored granite and marble on the third floor.

The niches of the *scaenae frons* are distinguished by the fact that the columns are framed by it from the front and sides, while there is a wall at the back to create a cavity between the columns and the wall creating an architectural feature that resembled

balconies. This creates a frequency for the sound and then strengthens it, allowing the audience to hear sound clearly from any point in the cavea.

The *scaenae frons* wall has three doors for actors to exit to backstage rooms; the middle door is the main door, which is called the *regia* door the royal door, characterized by depth and more spaciousness, reaching a width of 1.95 m. It is flanked by two side doors, each called the *hospitalia* (Vitruvius 1931, V.VI.VI) as the width of each of them 1.37 m (Caputo, Il teatro di Sabratha e l'architettura teatrale Africana 1959, 94-96). These doors are consistent with the three doors in the marble *orchestra* wall, the *balteus*, in a straight line, which indicates the principle of consistency, just as the royal door is consistent with the middle door in the *balteus* with the middle stairs for the audience seats on the first floor (Fig.13). All these architectural elements are located on one straight line that divides the theatre into two identical parts.

CONCLUSION: The results clarified through the comparative study of the architectural elements of the two theatres through the following table (Table N. 1) as follows:

Table n.1: A comparative study of Leptis Magna and Sabratha Theaters

(Designed by the researcher based on the references)

N.	Architectural Elements	Leptis Magna Theatre	Sabratha Theatre	Observations
1	<i>cavea</i> Orientation	North East of the City	North of the City	Both of them facing the sea
2	Diameter of <i>cavea</i>	87.60 m	92.60 m	Sabratah is the biggest
3	Number of <i>cavea</i> floors	3	3	The same
4	Number of the viewers	6000	6500	-
5	Diameter of <i>orchestra</i>	24.80 m	22.40 m	-
6	Number of the marble seats of <i>orchestra</i>	6	4	-
7	High of <i>balteus</i>	1.3 m	1.5 m	-
8	Altar	yes	no	-
9	Tall of <i>pulpitum</i>	45.70 m	42.70 m	-
10	Wide of <i>pulpitum</i>	7.35 m	10.43 m	-
11	Number of <i>pulpitum</i> Niches	9	7	-
12	High of <i>pulpitum</i>	1.37 m	1.37 m	The same
13	Reliefs of the Niches	no	yes	-
14	Statues of the Theatre	yes	no	-

15	High of the <i>scaenae frons</i>	3 floors	3 floors	The same
16	The founding text	yes	no	-
17	The dating	The Augustan era	The Severan era	-

Since the Leptis Magna Theatre is dated to the beginning of the First Century AD, I suggest that the Sabratha Theatre should be dated to the beginning of the Third Century AD. The measurements of the architectural components of the Sabratha Theatre are larger than those of the Leptis Magna Theatre, due to the increase in the population after nearly two centuries. Bearing in mind that the city of Leptis Magna was the most important of the Tripolitania region, and then was the most populous, only the space of the Leptis Magna *orchestra* and its seats are bigger than the orchestra of Sabratha Theatre, perhaps because the elite people were concentrated in Leptis Magna rather than in Sabratha, requiring increased space in the *orchestra*.

The comparative study also shows that the Leptis Magna *orchestra* includes an altar, while the Sabratha orchestra does not, this may reflect the influences of the Hellenistic theatre on the Roman Theatre. Before the beginning of the theatrical performances, offerings must be sacrificed to the protective deities of the theatre, and with further development, the theatre became part of the social fabric of the society for enjoying a daily life function more than a religious one.

The comparison also reveals that both theatres were designed on a similar basis to the laws of Vitruvius for the model theatre: the height of the stage, the direction of the audience seats, *cavea*, and the use of sound enhancers, whether it was in the balcony recesses in the wall of the theatrical scene, or the well that precedes the middle niche of the stage, located in the middle of the baseline of the semi-circular *orchestra* (Phillips 2006, 13). This indicates the continuity of Vitruvius' approach to civil architecture throughout Roman times.

The two theatres architectural design was consistent with the style of Roman theatres in North Africa: the connection between *cavea* and *pulpitum*, the permanence of the *scaenae frons*, and the width of the *pulpitum*. It seems that it expanded with the passage of time, as evidenced by the fact that the width of the Sabratha *pulpitum* is wider than the one in Leptis Magna by more three meters (specifically 3.08 m). The two theatres were also distinguished by the edge of the stage in front of the *orchestra* being decorated with niches that contained statues inside, as in the Leptis Magna theatre or reliefs, as in the Sabratha Theatre.

This study has emphasized the consistent use of numbers and ratios in the construction of the two theatres, the repetition of the number three in their architectural planning, and in the architecture of the majority of the Roman theatres in general (the number of theatre doors in the *scaenae frons* and the *balteus*, as well as the number of floors of the *cavea* and the number of floors of the *scaenae frons*). This consistency may indicate the protective tripartite deities of the Roman theatre (Ceres, Apollo, Bacchus). The study suggests that the number of niches in the Leptis Magna theatre refers to *Musae*, the nine deities of arts.

I also observed a distinct phenomenon in the Sabratha Theatre, which is the repetition of the number seven in many details of the theatre, whether in the architectural elements or the reliefs (Zaied 2021, 80-103). The number of the theatre doors is seven, and the number of stairs " *scalaria*" between the rows of the first floor of the *cavea* is seven. In addition, the conical sections of " *cunei*" in the second-floor number seven, and the number seven may also be repeated in any of the architectural features on the third floor, of which only a few parts were discovered. The number of niches at the edge of *pulpitum* is also seven, and the number of bowers or vertical niches in the *scaenae frons* is seven; it was divided into seven bouquets between the three floors for a variety of coordinated marble columns, and indeed the number of stones in all the arches above the doors inside the theatre numbered seven too.

This repetition of the number seven in the architectural elements, and the reliefs, of Sabratha Theatre is so interesting, if it is indeed intentional and not coincidental. The same phenomenon was present more than once in the Severan buildings in Leptis Magna, such as the Nymphaeum (Morgan 1960, 152) (Haynes 1965, 78) (Flitcher 1975, 250) (Ball 2002, 426), which also consists of seven niches, and the number of stones in each apse is seven stones. This demands attention, especially since the contracts of other buildings from different Roman eras do not include this number in any of their architectural elements. The Hadrian Thermae is not only one of the most famous public buildings in Leptis Magna, but also in the Roman world. It encompasses several decades, and the presence of the seven stones was not observed, such as those found in the Severan buildings, such as the Severan basilica building in the same city found that the number of niches in each of its southeastern and northwestern ends was seven. (Haynes 1965, 81) (Ball 2002, 428).

Therefore, I suggest that the number seven was sacred in the Severan era due to the connection of this number with two important things. The religion of Mithra "Mithraism", and astrology (Berry 1961, 16-22) (Hoskin 1999, 34-37) and each of them is closely related to the other, and then they had a great reputation at that time. Mithraism spread in the Severan era throughout the Roman Empire at an unprecedented rate (Dowden 1992, 76 - 79), especially among the ranks of the Roman army (Dowden 1992, 76-79), and the sanctity of the number seven it is well known in Mithraism. Believers in Mithraism go through seven stages, each protected by one of the seven planetary deities. Then the number seven expresses the seven planets that the soul crosses during its ascension (Beck 1988, 1-3) (Dowden 1992, 76-77).

If the Leptis Magna Theatre is dated at the beginning of the first century AD, through the founding text, specifically in the year 101/102 AD, then this study dates the Sabratha Theatre to the year 203 AD, the date of Septimius's historical visit to Tripolitania region. This date is contrary to that of previous studies (Haynes 1965, 129) (Small 1983, 63) (Bacchielli 1999, 173) (A. Di Vita 1999, 158) (Raabe 2007., 9), which dated the theatre building in the last quarter of the second century AD. Our dating is based on the main niche in the theatre, which depicts Septimius Severus and his procession on the one hand (Zaied 2021, 88-92, figs. 13-17), and the significance of the number seven, which is reflected in all the architectural and artistic elements of the theatre on the other hand.

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