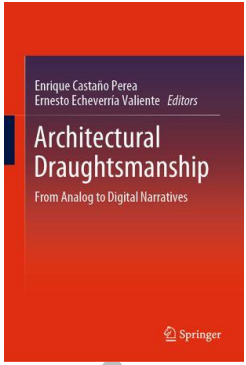


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<p><b>The Roman Amphitheatre in Tarragona, Five Centuries of Drawing and Still Unsatisfied</b></p>			
<p>Josep Maria Toldrà, Josep Maria Macias, Josep Maria Puche, Pau Sola-Morales</p>			
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## Abstract

In the monumental complex of the Amphitheatre of Tarragona we encounter the confluence of two singularities. On one hand, over the past five centuries, the amphitheatre has suffered a series of profound architectural changes. On the other hand, we have been fortunate that many of these transformations have been documented by means of drawings, engravings, plan surveys and, since the early 20th century, by photographs. Graphic reproduction of Tarragona's Amphitheatre is interesting in itself if we take into account the evolution of drawing techniques. The objectives of these graphic reproductions were the manifestation of the obsessions of different periods.

## Keywords

Drawing techniques, Amphitheater, Tarragona, Heritage

## 1. Introduction

In the monumental complex of the Roman Amphitheatre of Tarragona we encounter two singularities that come together. On one hand, the original building had been the object of numerous and profound architectonic transformations that, in fact, are the motive for the use of the expression monumental complex. These transformations include the insertion of a Visigoth church, as well as the superposition of a Romanesque church which would eventually evolve into a convent. Until the late 18th century, the convent alternated its religious function with that of a military encampment that existed during different periods of warfare due to its strategic location outside of the city and near the shore. Furthermore, during the 19th century the site hosted a prison. In the 20th century the convent/barracks/prison structures were removed, the recovery of the Romanesque church was attempted (with unfortunate results, as we shall see) and the entire general area was excavated to the original level of the amphitheatre arena. These interventions brought to light the Visigoth basilica of the late 6th century, over which the aforementioned Romanesque church was built during the mid-12th century (TED'A 1990; Ciurana et al. 2013). The second singularity is that the majority of these transformations were, fortunately, recorded by means of drawings, engravings, floorplans and, since the early 20th century, by photographs.

These abundant graphic reproductions constitute a fundamental basis for a historiographical analysis that permits the interpretation and visualization of the evolution of the complex. Nevertheless, the aforementioned production also has its own identity if we consider the study of the evolution of the representation techniques.

## 2. Wyngaerde and Pons d'Icart

The first identification and description of the structures of the amphitheatre were performed by the Tarragona native Lluís Pons d'Icart, in the second half of the 16th century, in his book *Libro de las grandezas y cosas memorables de la Metropolitana Insigne y famosa Ciudad de Tarragona* (Pons d'Icart 1572, 215). This analysis was erroneous, due to the fact that he considered it a "theatre". In the preliminary notes of the publication, however, he labels it as a "coliseum" (Duran 1984). It is probable that in the drafting phase of the *Libro de las grandezas* he met Anton Van den Wyngaerde (Remolà 2003) in Tarragona during his stay in 1563. Van den Wyngaerde was a Flemish painter commissioned by Philip II to draw numerous views of several cities, among them Tarragona. Wyngaerde devoted two sketches to the portion that was visible at that time, the south tier structure of the amphitheatre (Fig. 1). In a general view of the city drawn from the sea, (Fig. 2) we can also identify the support vaults of the cavea with the medieval church of the Miracle in the background.

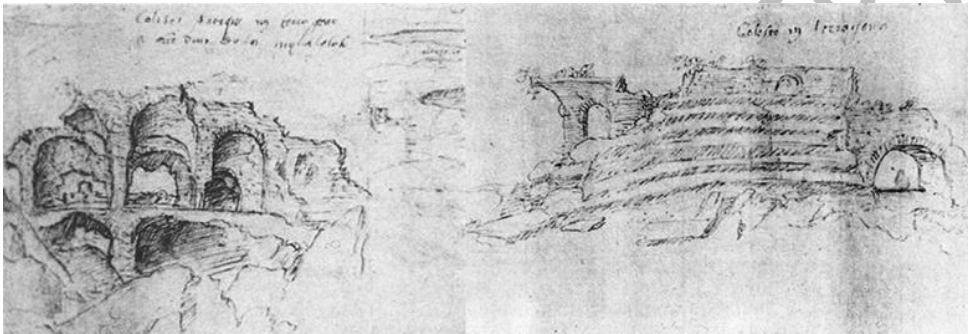


Figure 1. Anton Van den Wyngaerde, 1563, sketches of the support vaults and the tiers of the south cavea of the Amphitheatre of Tarragona, preserved in the Victoria and Albert Museum, London. Original codes: (95-H-54) 8455-13 (r)/(95-H-54) 8455-13 (v)



Figure 2. Anton Van den Wyngaerde, 1563 Overview of Tarragona from the sea, preserved in the Ashmolean Museum in Oxford. Original code: B-II-478 (r)

Wyngaerde started his services to Felipe II in 1557, accompanying him on military campaigns through the Netherlands and spending short periods in England (1558) and Rome (1560). Previously, beginning in 1543, he had worked for the prior monarch, Carlos V, following him in campaigns through France and Germany, as well as England, Netherlands, Naples and Genoa (Galera 1998).

Pons d'Icart was an attorney for the clergy of the Cathedral Chapter and also a General Appellate Judge in the city of Tarragona (his probable birth place), where he settled in 1545 once he completed his studies. The information we have about Pons d'Icart is limited, it comes mainly from what he explains in his own work.

Wyngaerde sketched the vaults on the left margin of a large drawing in which he framed a general view of the city coastline (Fig. 1). The detail of the amphitheatre is represented in a completely different scale from the rest of structures that appear, but he locates it near its actual position in the panoramic view. It is reasonable to think that the general sketch of the shoreline is an earlier drawing, which would have served Wyngaerde to have a comprehensive understanding of Tarragona. It is possible that he observed the structures of the amphitheatre while working on the panoramic view from the sea, a drawing that he did complete. At some point, before or after boarding from the Miracle beach, he reused a discarded drawing in order to take some notes. The sketch of the interior of the tiers is on the backside of the sheet (Fig. 3).

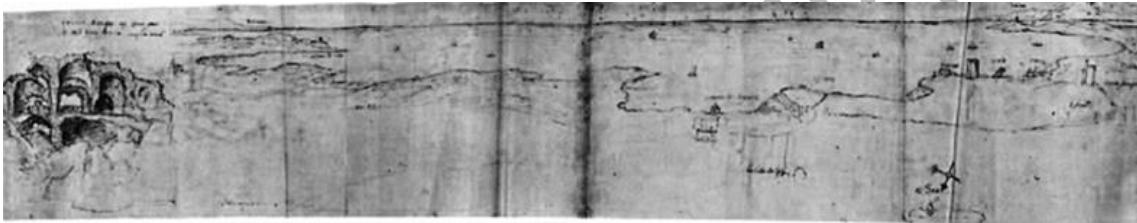


Figure 3. Anton Van den Wyngaerde, 1563, sketch of the Tarragona coastline. Preserved in the Victoria and Albert Museum, London

The two sketches show us the southern tier of the amphitheatre with a very similar appearance to which we can see to this day. It is interesting to note that Wyngaerde dedicated special attention to the Roman remains during his visit to Tarragona, a rare occurrence in his previous work, despite having visited Rome itself. Evidence of this is that in his sketch he ignored the Miracle church, which we can clearly perceive in his general view of the city from the sea. It is possible that Pons d'Icart influenced the Flemish artist in order to reflect the Tarraco described in his *Libro de las Grandezas*. It is known that Wyngaerde performed various sketches of Roman structures in his visit to Merida later in 1567.

### 3. Fischer von Erlach

A long period of time must pass, until the War of Succession in the beginning of the 18th century, in order to find the next view of the monumental complex of the amphitheatre (Fig. 1). It is an engraving included in an essay on historical architecture published by Fischer von Erlach (1721), created from a 1711 drawing by the engineer Antoine M. Weiss. It is a panoramic view of the city from the sea, slightly to the east of the remains of the southern tier of the amphitheatre. The structure of the tier and the Miracle convent ('Le Convent des Trinitaires') constitute the foreground of the image, forming the base of the south-east corner

of the urban centre, which we see in the upper right area, presided by the tower presently known as Pretori ('Châteaux de Cesar'). The view extends in a westerly direction encompassing a broad segment of the coast.

Between the 1563 Wyngaerde drawings and the drawing of 1711 that served to frame the Fischer von Erlach engraving almost 150 years had transpired, during which a number of changes in the use of monumental complex occurred. In 1576, the clergy of the Cathedral yielded the Miracle church to the monks of the Holy Trinity, the Trinitarians. Due to the siege of the city in 1644, during the War of the Segadors, the Trinitarians abandoned the convent to seek shelter within the perimeter of the city walls. It seems that the structures of the convent were seriously damaged (Capdevila 1924, 59). In 1707, the circumstances of the War of Succession changed the use of the Trinitarian convent into lodging for an English regiment. Beginning in 1710, the complex was used as a military hospital and in 1714 the Trinitarians returned.

The Fischer von Erlach engraving reflects the state of the complex at that moment it was being used as a hospital. It shows us the support structures of the southern tier, with trees along the crown of the structure. The vaults are formalized in a chaotic fashion, perhaps due to a lack of understanding and direct experience from the engraver about the reality of the complex (Fig. 4).



Figure 4. Engraving published by Fischer von Erlach in 1721, from a 1711 drawing by Antoine M. Weiss (photo reproduction from History Museum of Tarragona)

#### 4. Francesc Bonifàs and Henrique Florez

In the second half of the 18th century, Francesc Bonifàs produces two engravings of the monumental complex (Fig. 5) in order to illustrate the *España Sagrada* by Henrique Flórez (1804). Flórez's work could be encompassed in the so-called 'Christian illustration', a type of Spanish version of French illustration and encyclopaedism. His writings are scholarly and critical but always adopting a religious point of view. He shows interest in the amphitheatre due to the fact that it was the scenario of the martyrdom of San Fructuoso and his deacons. He performed a detailed description of what was known, at that point, of its structures, which was perfectly complemented by the engravings produced by Bonifàs.



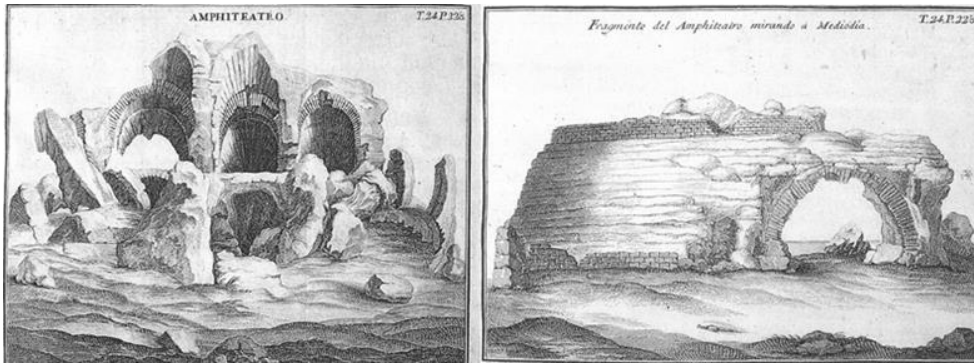


Figure 5. Francesc Bonifàs engravings, exterior and interior views of the cavea

The framings of the Bonifàs engravings are very similar to those chosen by Wyngaerde 200 years before. The crowning of the tiers is free of vegetation, perhaps demonstrating that the Fischer von Erlach engraving responded to an artistic desire to enliven the place. It is curious how Bonifàs fits the top level of the vaults in the view from the beach, giving the complex a very stylish appearance, almost with Gothic reminiscences. The stone block arches seem made of brick and can be distinguished traces of formwork almost invisible today.

When Francisco Bonifàs composed his engravings the Trinitarians had not resided in the convent for 20 years, they had moved to the interior of the urban enclosure. They retained possession of part of the structures and yielded the rest to the king. Probably, this incomplete transfer of ownership of the complex was one of the reasons for the acceleration of its state of neglect.

## 5 Alexandre de Laborde

The amphitheatre deserved the attention of Alexandre de Laborde in his work *Voyage pittoresque et historique de l'Espagne* (Laborde 1807–1818), which also includes other engravings dedicated to Roman structures in Tarragona such as the Arc de Barà, as well as the Scipion and the Pretori towers (Augusto's Palace). In the case of the engravings of the amphitheatre, the drawings by François Ligier were used as the base for these plates. There are two views, one of the interiors of the cavea and the other of the support vaults of the façade oriented towards the sea. In the second (Fig. 6), the viewpoint is very similar to that of the engraving by Fischer von Erlach, but from a tighter angle and with a much more accurate fit of the support vaults.



Figure 6. Ligier original drawing to composed the view of the amphitheatre from the sea included in the *Voyage pittoresque de Laborde*

The style of Laborde's views is both rigorous and dramatic. The setting has a romantic aspect with spectacular skies of bulky backlit clouds, elegant pedestrians contemplating the ruins, vessels navigating along the shore and a wealth of textures in the vegetation. They take full advantage of the expressive possibilities of the engraving technique, but the structures are represented faithfully, not indulging the imagination of the artist. Furthermore, you cannot discard that the view had a military purpose since it could have provided valuable information for the Napoleonic invasion at the beginning of the 19th century. It locates two forts, the position of the ships that could mark the appropriate areas for anchoring, and the topography of the coast that could permit the identification of appropriate areas for disembarking.

## 6. The First Photographs

For most of the 19th century the amphitheatre surroundings were affected by the construction of the port and the railway adjacent to the sea. The convent of the Trinitarians became a prison (Fig. 7) where the forced labour workers were being held and destined for the port expansion. All the changes suffered by the historical complex of the amphitheatre and its immediate perimeter since the late 19th century had been documented photographically. The first images show the final phases of use of the convent of the Trinitarians as a prison, with structures at a much higher level than those of today, therefore making it very difficult to identify the site as the location of a Roman amphitheatre. Posterior photographs permit a visualization of the state of neglect following the usefulness of the prison. This situation will last until the archaeological works directed by Samuel Ventura in the second half of the twentieth century.



Figure 7. The complex in the beginning of the 20th century. Vallvé archive, Archivo Municipal de Tarragona

## 7. Antoni Nogués and Salvador Ripoll

In the year 1910, the Tarragona City Council obtains the ownership of the complex and decides to eliminate the structures that had been attached to the original Romanesque church in order to make it more visible, with the unfortunate consequence that once free of the core bracing that supported the main nave for centuries, it collapsed on the night of May 9th, 1915. An intense discussion about what to do with the church was initiated in regards to whether to restore or to continue with the demolition. This type of dialectic was no stranger to political trends of the period. The ‘anticlerical’ options succeeded and on February 3rd, 1923 a series of 20 dynamite cartridges were exploded demolishing a large portion of the structures of the Romanesque transept.

In 1934, the Archaeological Newsletter of the Reial Societat Arqueològica Tarraconense published the plans of the complex developed by Antonio Nogués Ferré, who composed a plate in which he created a hypothetical reconstruction of the contour of the enclosure of the amphitheatre and its section, basing it on the remains known to date attributed to the Roman building (Nogués Ferré 1934) (Fig. 8). He overlaid the plan of the Romanesque church (without the volumes of the convent, which were already destroyed) and the layout of various walls that formed the northwest corner of the prison enclosure.



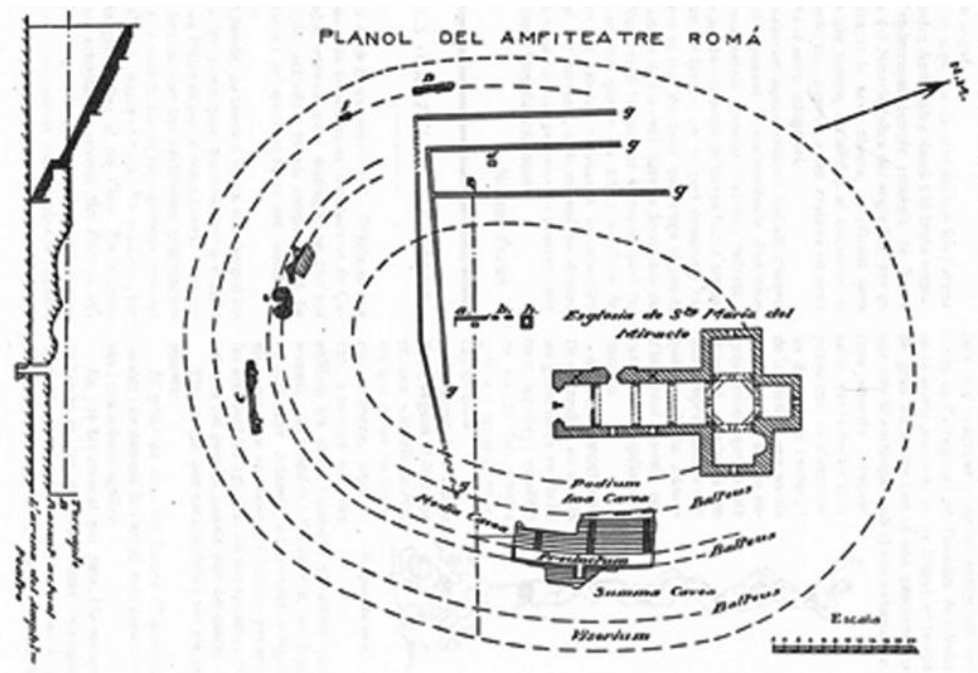


Figure 8. Plan by Antonio Nogués, 1934

Between 1948 and 1957 was performed an extensive excavation which permitted to disinter the arena of the amphitheatre and its trenches. Furthermore, it was possible to locate the remains of the Visigoth basilica beneath the Romanesque church, which, to that point, had only been referenced in writing without any material evidence. It is documented that the plans of the excavation were commissioned to the architect Salvador Ripoll (Sánchez Real et al. 1991), who during the 30s had already performed a plan survey similar to the one done by Antonio Nogués. Since the director of the excavations, Samuel Ventura, did not publish a description of this work, we were not aware if the 1950 plan surveys of Salvador Ripoll had actually been performed until we had a pleasant surprise while examining the documentation of architect Alejandro Ferrant stored in the Library of Valencia. Among the corresponding material of the reconstruction work that he developed in the Amphitheatre of Tarragona between 1967 and 1973, we found a magnificent topographic survey signed by Salvador Ripoll (Fig. 9), which was the first metrically rigorous plan survey of the monumental complex that has reached present day.

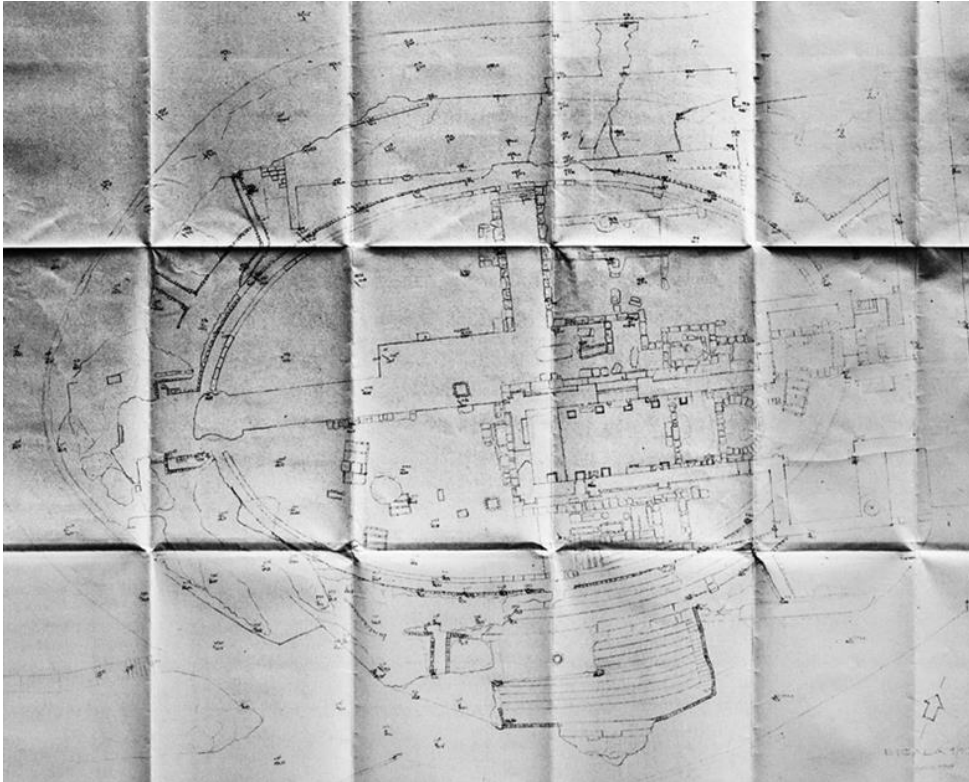


Figure 9. Topographic survey of the monumental complex signed by the architect Salvador Ripoll. Reproduction of a copy located in the Archivo Ferrant de la Biblioteca Valenciana

## 8. The TED'A Topographic Survey of 1990 and the Systems of Massive Data Collection

Until recently, the referential plans of the mapping of Tarragona Amphitheatre were those prepared by the Taller Escola d'Arqueologia de Tarragona (TED'A) during the excavation periods that preceded the publication of *L'Amfiteatre Romà de Tarragona, la basilica visigòtica i l'esglèsia romànica* (TED'A 1990).

In the year 2011, two final degree projects of the Escola Politècnica Superior de l'Edificació de Barcelona (UPC) conducted a photogrammetric survey of part of the original amphitheatre tiers, being the first time that these massive data collection methodologies were used for the documentation of the complex (Asens and García 2010). This work was awarded with the Luis Martín Morejón national award.

In order to develop an architectonic project in the amphitheatre, it was necessary to have a digital planimetric base in vectorial format (CAD). The TED'A survey was performed on paper and, consequentially, it was scanned and vectorised, but due to its comprehensiveness it was necessary to synthesize the geometry of the enclosure. Apparently, the arena matched the shape of an ellipse, but the most referential literature (Golvin 1988; Wilson-Jones 1993) indicated that key geometrical scheme of great roman amphitheatres was based on the use of ovals. This opened a new line of research, from which a doctoral thesis emerged (Toldrà 2013),

and made it necessary to ascertain that the TED'A survey was sufficiently exact. We performed diverse digital photogrammetric studies of parts of the amphitheatre, a new conventional topographic survey (but now with completely digital means) and a laser scan of all structures (Fig. 10), therefore, converting the complex into a test laboratory of the latest optical systems for the massive collection of data.

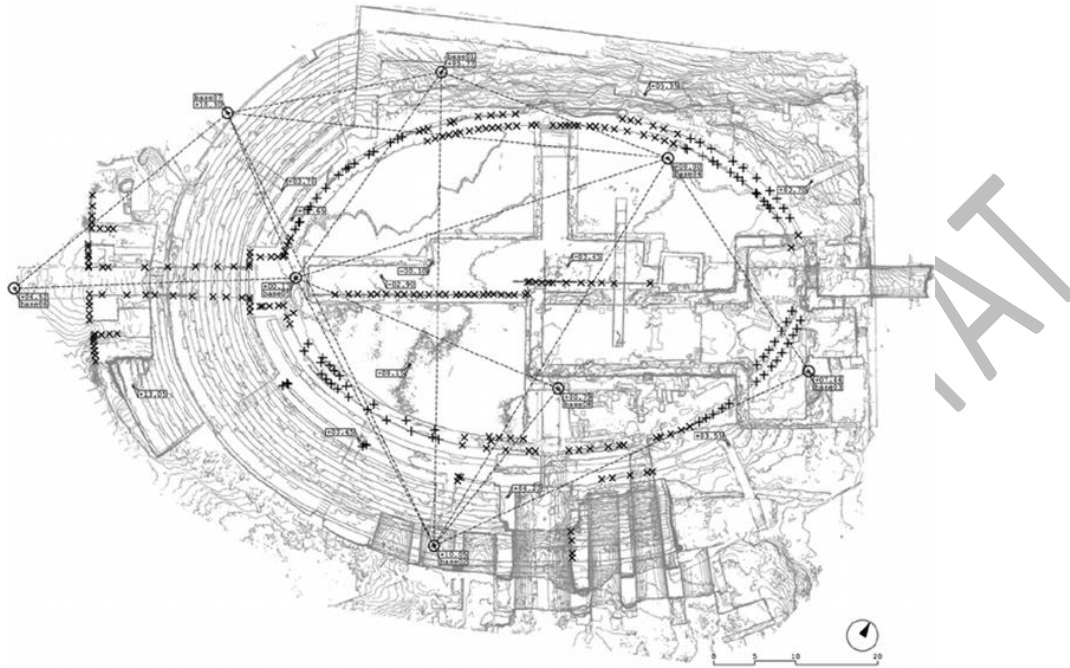


Figure 10. 2013 Laser scanning overlaid on the topographic control survey

Laser scanning has proved to be an especially powerful tool for the representation and analysis of the architecture of the monumental complex. The resulting model obtained has permitted the study of the sections of the tiers of the amphitheatre (Buill et al. 2015) and in the future can be useful for the scientific analysis of the monument (Macias et al. 2013) as well as for its management.

## 9. Conclusions

Fortunately, the artists are not accustomed to exclusively cater to the petitions of their sponsors. Wyngaerde did not limit himself in just fulfilling the commission of Felipe II during his visit to Tarragona. In addition to drawing the panoramic views commissioned by the King, the Flemish landscape artist devoted time to some precise sketches of the remains of the Roman amphitheatre in Tarragona. Perhaps Wyngaerde had been influenced by Pons d'Icart, a native of Tarragona that wanted to manifest the antique grandeur of his city.

The amphitheatre was the central motif of the Fischer von Erlach engraving. His objective was to illustrate an essay on historical architecture, although the representation that we find of the vaults that support the tier nearest the sea, the only structure clearly distinguishable at that

time of the Roman building, is extremely confusing and inconsistent with its constructive reality. On the other hand, it is possible that the engraving may be the best testimony that we have of the convent that was built at the beginning of the 16th century around the 12th century Romanesque church.

Henrique Florez's interest in the amphitheatre had a religious motivation. It was the scenario of Bishop Fructuoso's martyrdom, whose chronicle was one of the first written records that we have of Christianity in the Iberian Peninsula. But the engravings by Francesc Bonifás provide us with information of the state of a roman building in the second half of the 18th century, that we can contrast with the sketches by Wyngaerde and the engraving published by Fischer von Erlach.

For the prints by Laborde we propose a twofold objective. The first is stated and obvious: to illustrate an encyclopaedic work. The second, hypothetically: to provide military information that would be useful for the Napoleonic invasion at the beginning of the 19th century.

The intention of the planimetric survey conducted by Salvador Ripoll was to document the excavations directed by Samuel Ventura, and possibly was the reference for the pedagogical model of the excavation work exhibited presently at the Museu Nacional Arqueològic de Tarragona, but it is possible that it also served Alejandro Ferrant to project reconstructions of the tiers trying to mimic the original structures of the amphitheatre.

As mentioned above, the abundant reproductions devoted to the Amphitheatre of Tarragona exemplify the evolution of representation techniques over the past five centuries. And if we go beyond the technical capabilities, we can identify the objectives that led to the necessary to register graphically the reality of the architectural complex at a particular moment; these objectives are the manifestation of the obsessions and sensitivities of the different periods, even though, in many occasions, circumstances forced the artists not to strictly adhere to the commission, or coincidences led to an unexpected utilization of their work.

## Note

This document is part of the Activities of the ArchHcrA (Research Group on Architectural Heritage and Archaeology.

– ICAC/ETSA-URV), and are included in the project “Parámetros analítico-evolutivos de las técnicas constructivas del noreste de la Tarraconense en época tardoantigua: homogeneización, criterios de representación y calibración” (PARTAR) HAR2015-64392-C4-2P.

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