



The Analysis of Architectural Heritage Through Graphic Documents: The Archaeological Site of Itálica (Seville, Spain) - From the 16th to the 21st Century

Elena González-Gracia¹ , Patricia W. Ferreira-Lopes² ,
and Francisco Pinto-Puerto¹ 

¹ Departamento de Expresión Gráfica Arquitectónica, Escuela Técnica Superior de Arquitectura, Universidad de Sevilla, Seville, Spain
egonzalez30@us.es

² Centro de Documentación y Estudios, Instituto Andaluz de Patrimonio Histórico (IAPH) and Universidad Internacional de La Rioja (UNIR), Logroño, Spain

Abstract. In recent decades digitalisation has revolutionised the debate on graphic records applied to the knowledge, conservation and dissemination of architectural heritage, in many cases centred around the intense quest for accuracy and rigour in the capture of metrics and dimensions for their representation. However, sometimes insufficient attention has been paid to the repercussions on our perception of heritage: where once we built images of visions or versions of what we observed, now we create interactive models with structured information from which we can extract new knowledge. Our research focuses on this perception by analysing how the concept of “representation intention” has evolved since heritage knowledge became a discipline to the application of digital models today. We base our analysis on a paradigmatic case during this period: the archaeological site of Itálica. This paper describes the work carried out in the initial phases of the research project: the reconstruction of the graphic heritage inherited from this case study by compiling and analysing the drawings made by the architects, archaeologists and other professionals who have contributed to the knowledge and conservation of the site since the 16th century. In particular, we highlight the drawings made from the 19th century up to the present day.

Keywords: Graphic language · Architectural drawing · Architectural heritage

1 Introduction

This research forms part of the study “The evolution of the role of graphic language in the knowledge, conservation and management of architectural heritage: Drawings of the archaeological site of Itálica”. Its aim is to verify the relationship between the graphic expressions employed in each period, the tools used and the concept of contemporaneous heritage, and how this impacted not only the actions undertaken for the knowledge

and conservation of that heritage, but also the construction of an administrative and legal framework for its protection. The purpose of these retrospective analyses is to reach an understanding of the increasing role that is played today by the new means of production—specifically, digital information models—and its effect on our perception of heritage.

For our case study we have chosen the ruins of the Roman city of Itálica, which has been present since the 16th century in the imagery and collective memory of Seville; from the first drawings made by Anton van der Wyngaerde, the engravings and vistas of the amphitheatre and the countless drawings created by the archaeologists and architects who have carried out interventions in the ruins, to the digital models of today and the numerous virtual realities that inundate social media.

The aim of the work presented in this publication, corresponding to the first two phases of the project, was to reconstruct the graphic heritage of the archaeological site of Itálica by collecting and analysing the “models” that have been generated about the site (Fig. 1). In this case, “model” is used in its broadest sense as an abstraction or conceptualisation of a complex reality that deliberately omits certain aspects of that reality to focus on what we are interested in revealing or understanding as observers and analysts (González-Pérez 2018, pp. 17–34). The models—a term we consider to be synonymous with the “graphic records” used by Bonta (1975) and “representations” adopted by González-Varas (2006)—are extremely varied, ranging from those that belong to the field of cartography and architectural and archaeological representation, to illustrations and other informational drawings.

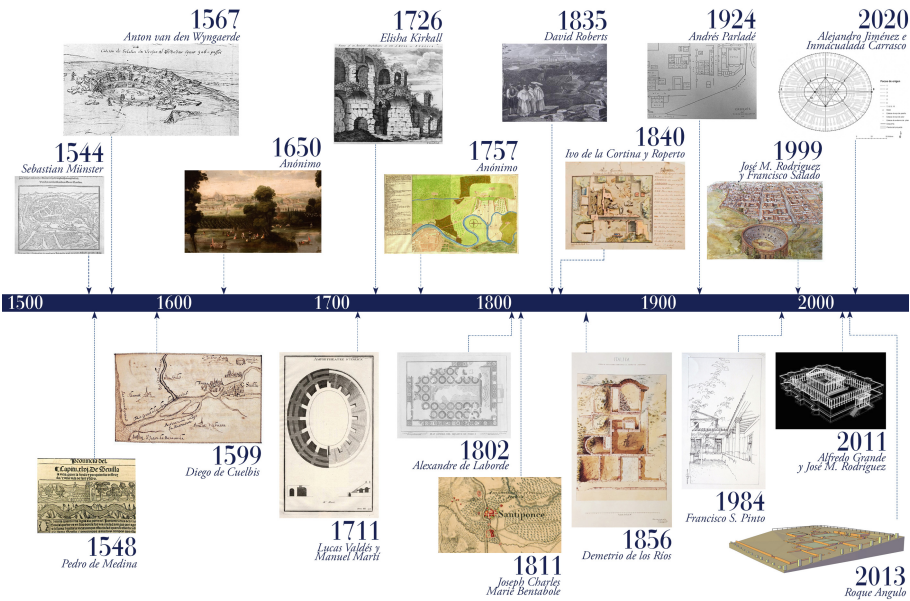


Fig. 1. Sample of the chronological reconstruction of the graphic heritage of Itálica, 16th–21st centuries. Image by the authors, 2021.

Numerous texts discuss these graphic records of Itálica (Fernández 1998; Caballos et al. 1999; Canto 2001; Bellido 2009; Jiménez 2012, and others), most of which were created in the 18th and 19th centuries by the first archaeologists and architects to illustrate their studies. Our research focuses on the relationship between those records and more recent ones, attempting to shed light on how their role has evolved in the complex framework of action that encompasses comprehensive heritage management today.

2 Reconstruction of the Graphic Heritage of Itálica

To carry out this research we proposed a methodological process with several levels of analysis of the knowledge and interpretation of the models—which themselves acquire the status of documents—organised as follows:

1. Identification and compilation of the models in the specialised bibliography and various historical archives, including the Archive of the Archaeological Site of Itálica, the Andalusian Institute of Statistics and Cartography, the National Library of Spain, the Seville Cathedral Archive and the General Military Archive in Madrid.
2. Selection of the most significant models based on previously defined criteria.
3. Organisation and classification of the information in databases, structured on the basis of certain criteria and scales, themselves topics of internal debate within the project.
4. Interpretation and analysis of the data using graph models. The results were interpreted according to the key reference parameters: main authors, promoting institutions, most prolific periods of graphic production, type of resulting image, etc.

2.1 Selection of Documents to Obtain a Representative Sample

Since the review was centred on architectural heritage, our first criterion was to select graphic documents dedicated to the immovable property at the site, considered in this case to be architectural works (or their visible remains today). We therefore excluded documents related to movable property, such as statuary, epigraphy, ceramics, *instrumenta domesticum*, etc.

The consideration of mosaics and tiles is somewhat controversial—the Itálica master plans refers to them as movable elements in the site collections, whereas in accordance with the Spanish Heritage Act (Law 16/1985 of 25 June) and other regional legislation they could be considered to be immovable heritage—but we include them in this study if they shed light on the buildings in which they were found.

In certain particularly interesting cases, the scope of our research also extends to cover graphic documents of mosaics whose iconography includes references to architectural works. An example would be Alexandre Laborde's prints of the well-known but unfortunately lost mosaic of the Muses or Circus, which depicts a circus building and could therefore be considered to be a graphic record of an architectural work.

2.2 Data Included for Analysis

Of the data collected from each document, we paid special attention to their specific parameters as graphic documents: their geometric description (system of representation, scale and orientation), and their physical description (scope, dimensions, colour, medium, etc.).

Another important aspect of the study was describing the “method of production” of each record (manuscript, woodcut, lithograph, etc.), and in the case of the digital models, their type and whether or not it was associated with an information system (BIM, GIS models). In the case of the digital models, where it was not possible to access the original documents, we worked with the records obtained from them that had either been exported to another document or published by their authors, limited to a certain scale, system of representation and medium.

After the physical description of the record, we had to identify the purpose of its execution: whether to record a present reality, whether it contained indications of the execution of a future intervention, or whether it was a hypothetical restitution of a past reality. For example, the latter is a type of record that appears in studies of partially visible buildings, as in the case of what are usually called the “ruins of Itálica”, especially since the 19th century.

Where we were able to find catalogue data of the documents in archives, these data informed our selection. In cases where no catalogue data were found, we searched the bibliography for the necessary reference data to check whether the model met the selection criteria. It is important to note that the aim of this process was not to catalogue the model but to analyse and interpret it.

To complete data not previously catalogued and correct any data with ambiguities, we used the more generic ISAD(G) (General International Standard Archival Description) as well as the AACR (Anglo-American Cataloguing Rules), which contains specific chapters on graphic materials (Fig. 2). We also referred to texts on the application of these criteria for cartography. This aspect has mainly been studied since the 1980s, when cartographers such as Harley (2005) began to consider maps to be records with a



Fig. 2. Images of the process of identification, selection and inclusion in the database of graphic documents found in the Archaeological Site of Itálica Archive. Image by the authors, 2021.

graphic language, governed by non-verbal signs to which principles of semiology could be applied (Bienes 2019).

3 Results

To date, we have identified and selected 386 graphic documents for a time frame spanning the 16th century to the present day. This sample includes documents dedicated exclusively to buildings or their ruins (62%), a group of these showing either the *Nova Urbs* or the *Vetus Urbs* of the Hadrianic city (18%), and maps of Seville, Andalusia and

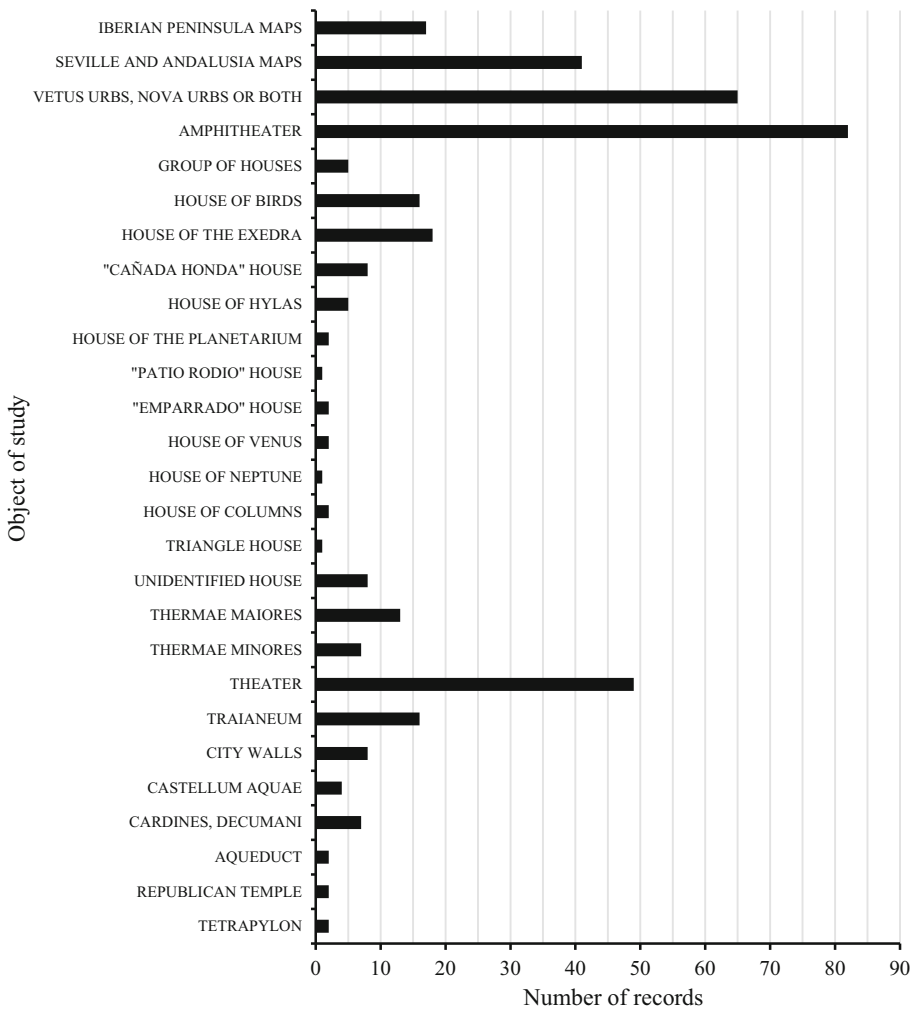


Fig. 3. Quantitative graph of the documents identified and selected, classified according to the object of study to which the model is dedicated. Image by the authors, 2021.

the Iberian Peninsula with reference to “Itálica”, “Ancient Seville” or an iconic representation of the amphitheatre (15%). The selection (Fig. 3) reveals a predominance of the amphitheatre, the architectural work that became the most recognisable image of the ancient city from the earliest graphic expressions.

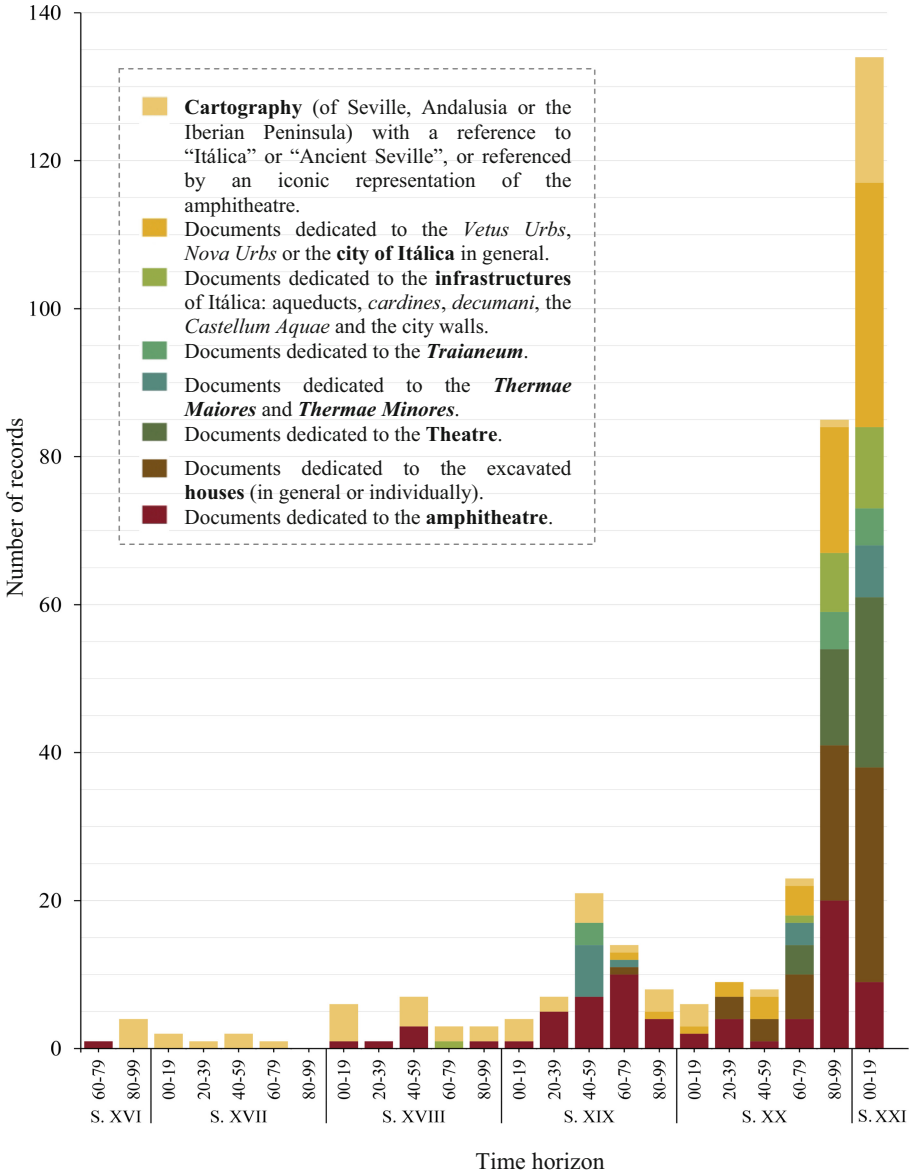


Fig. 4. Quantitative graph of the graphic documents identified and selected, classified according to the date and the object of study that appears in the model. Image by the authors, 2021.

The results of this action, still ongoing, are providing an up-to-date and interpreted picture of the graphic production of Itálica, revealing the periods in history when the ancient city has aroused interest as well as each of the buildings at the time of their discovery and in subsequent years (Fig. 4). Each graphic document reveals the desire of its promoters (individual authors or institutions) to preserve the memory—and, therefore, knowledge—of the known heritage at each moment in history.

These results will make it possible to establish correlations and identify the representation intention of each period. For example, Demetrio de los Ríos (1862) drew the Itálica amphitheatre (Fig. 5) on several occasions with two intentions: the rigorous mapping of the existing structure (in black ink) to document the geometry of the preserved remains; and the hypothetical restitution to complete the building (in red ink). This emphasises the need to understand the building as a whole, using the academicist formal patterns that would become an architectural language of subsequent centuries: as used, for example, by García and Bellido a hundred years later, in 1960, and in 35% of the graphic documents consulted for this sample.

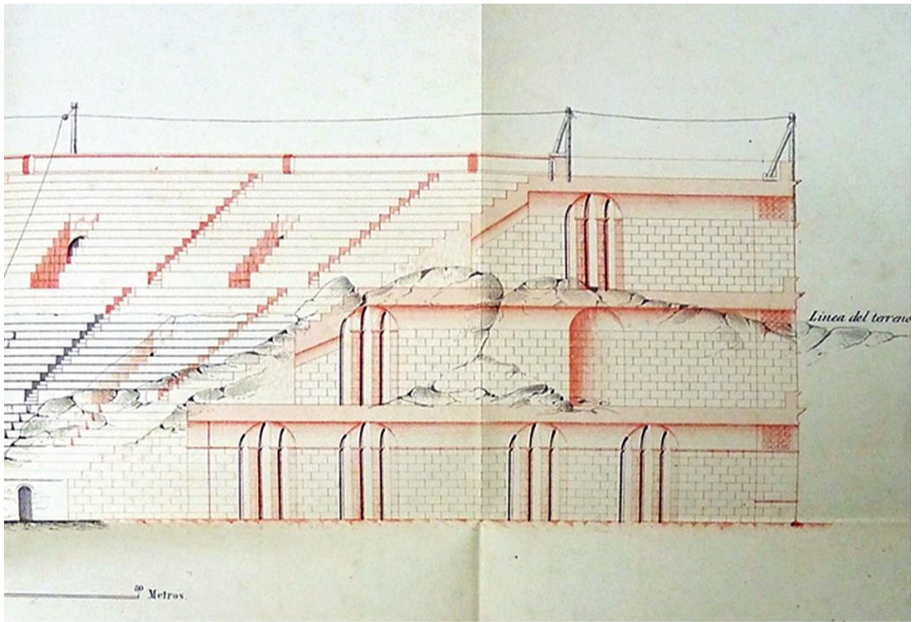


Fig. 5. “Amphitheatre of Itálica. Longitudinal section along east/west axis - South Zone (The part in black ink indicates the existing structure and the red ink the restitution)” (detail), made by Demetrio de los Ríos (1862) and published by the Real Academia de la Historia in *Memoria arqueológico-descriptiva del Anfiteatro de Itálica, acompañada del plano y restauración del mismo edificio*.

4 Conclusion

The results of this action are allowing us to relate knowledge with graphic and architectural knowledge and will enable us to determine the intentions at the time, as well as the relationships that emerge between the techniques applied and the different ways of thinking and acting. In addition, the results also show us a chronology of the periods in which the different immovable properties of the Itálica's archaeological site aroused the interest of the scientific community, the society of the time and the institutions that promoted their study. These data may be useful for evaluating, from our present perspective, the effects and consequences of the use of new digital information models today.

Our research is also enabling us to highlight the merits of graphic content not yet archived or only minimally considered, to identify the scope of the documents now partially lodged in the Archive of Itálica, and to propose a specific archival system that will facilitate the use of this graphic material as essential documents of the history of the site. We address this through models such as databases, graphs models and digital systems that permit multiple relations across different networks.

These results are constructing an up-to-date map of the multiple complex relations that we project onto our heritage, although we are aware, as Prof. Farinelli suggested, that this cartography will always be a reflection of our own interests, just as each drawing reflected its own age (Lladó 2013, pp. 189–202).

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References

- Bellido, T.: Panorama historiográfico del anfiteatro de Itálica. In: *Romula*, vol. 8, pp. 33–64 (2009)
- Bienes, G.: Los mapas antiguos como fuente de información: aportes para su descripción documental. In: *Información, Cultura y Sociedad*, vol. 40, pp. 173–197 (2019)
- Bonta, J.P.: Graficación y diseño. In: *Arquitecturas bis: información gráfica de actualidad*, vol. 5, pp. 2–5 (1975)
- Caballos, A., Rodríguez, J.M., Marín, J.: *Itálica Arqueológica*. Universidad de Sevilla, Sevilla (1999)
- Canto, A.M.: Ivo De La Cortina Y Su Obra Antigüedades De Itálica (1840): Una Revista Arqueológica Malograda. In: *Cuadernos de Prehistoria y Arqueología*, vol. 27, pp. 153–161 (2001)
- De los Ríos, D.: Memoria arqueológico-descriptiva del Anfiteatro de Itálica, acompañada del plano y restauración del mismo edificio. Real Academia de la Historia (1862)
- Fernández, F.: Las excavaciones de Itálica y don Demetrio de los Ríos, a través de sus escritos. Obra Social y Cultural CajaSur, Córdoba (1998)
- González-Pérez, C.: Modelado de información para Arqueología y Antropología: principios de ingeniería de software para patrimonio cultural. CreateSpace (2018)

- González-Varas, I.: La representación del monumento en el siglo XIX: Tiempo, lugar y memoria ante las transformaciones de la representación gráfica de la imagen monumental. In: Papeles del Partal, vol. 3, pp. 49–70 (2006)
- Harley, J.B.: La nueva naturaleza de los mapas: ensayos sobre historia de la cartografía. Fondo de Cultura Económica, Mexico (2005)
- Jiménez, A.: Arquitectura, dibujo y arqueología, ITÁLICA 1912–2012. In: Centenario de la Declaración como Monumento Nacional, pp. 213–225. Fundación Itálica de Estudios Clásicos (2012)
- LLadó, B.: Franco Farinelli. Del mapa al laberinto. Icaria, Barcelona (2013)