



JOURNAL OF ANCIENT HISTORY AND ARCHAEOLOGY



Institute of Archeology and Art History of Romanian Academy Cluj-Napoca Technical University Of Cluj-Napoca

Journal of Ancient History and Archaeology

DOI: http://dx.doi.org/10.14795/j.v10i3

ISSN 2360 266x

ISSN-L 2360 266x

















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Design & layout: Petru Ureche

Studies

DIGITAL AND VIRTUAL HISTORY

METHODOLOGY FOR THE STUDY **OF ROMAN EPIGRAPHY** WITH DIGITAL SUPPORT (HISPANIA 3.0)

Abstract: This paper presents a methodology for analyzing the religious preferences of the believers in Roman Hispania who worshipped a deity as part of their particular devotion or as part of their state responsibilities. The aim of the project is to create an epigraphic corpus, to be kept in archaeological museums, which will allow us to collect this epigraphic evidence in a virtual way. The methodology includes the following steps: creating the database, consulting different epigraphic repositories, visiting the museums to select the epigraphs, and implementing the virtualization techniques. The creation of this digital repertoire (Hispania 3.0) offers not only researchers but also the general public the possibility of approaching their historical past with information in real-time. The criterion for the selection of these epigraphs was none other than the dedications made by Hispano-Roman believers, showing the divinity they worshipped, whether they were the dedicators, or the recipients of the inscriptions collected. These characteristics allow us to determine the geographical origin of the inscriptions and the administrative boundaries of the Hispania to which they belong.

Keywords: Ancient history, digital epigraphy, museum, outreach tool, Roman inscriptions.

INTRODUCTION

ontemporary museology has become a discipline that seeks to create enriching and meaningful experiences for the public. Museums no longer limit themselves to the mere display of objects but strive to connect people with relevant issues and stimulate understanding and reflection. These changes reflect an evolution in the way museums approach their role in society and their commitment to education and cultural enrichment¹. In this context, new technologies applied to dissemination have allowed us to launch this project, considering the recent health crisis that has affected the cultural sector, one of the most affected. To this end, the creation of virtual museums is now an unstoppable dynamic that we cannot ignore. This situation offers us infinite possibilities for the dissemination of heritage and the diffusion of knowledge in society.

In this context, and for this specific project, the idea is to select certain inscriptions as a starting point and, using virtualization techniques, to

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DOI: 10.14795/j.v10i3.912 ISSN 2360 - 266X ISSN-L 2360 - 266X

¹ DIEGUEZ 2019.

integrate them into their original contexts, creating virtual reconstructions of which the selected inscriptions form part. In this way, real environments and scenes as realistic as possible of everyday life will be created to facilitate the understanding of the nature, functionality, and importance of each of these inscriptions in the various activities carried out in the past. For all these reasons, the use of ICT in cultural heritage and archaeology has changed the way we interact with our past and our cultural roots². It facilitates the preservation, research, and dissemination of these valuable assets, allowing greater access to and understanding of our history and cultural heritage. The objectives of this project are therefore:

- To promote knowledge, interest and/or participation in science through the study of Roman epigraphy.
- To bring society closer to such a relevant topic with such a social impact through new technologies.
- To promote the use of these new technologies for the knowledge of innovative supports.
- To use 3D image processing and modelling to contribute to scientific research.

In this sense, in a clear commitment to the digital transition, it is necessary to create a set of digital visual resources accessible through social networks and the consultation of free websites used to visualize and share 3D content online through interactive platforms³. This will allow the public to explore and learn about cultural and archaeological heritage in an engaging and educational way⁴. One such platform is Sketchfab: https://skfb.ly/ourOU

METHODOLOGY

The methodology used in this study was aimed at achieving the objectives set and followed the usual steps in any research process: gathering and organizing information, analyzing, and interpreting the data in order to present it in 3D. The first part of the study, therefore, consisted of an exhaustive compilation and subsequent review of the scientific literature on the proposed topic, which included general works on the cultic practices of the followers of Roman Hispania⁵, as well as others specifically dedicated to the study of their public and private beliefs through epigraphic and archaeological evidence⁶.

Once the consultation had been carried out, the phase of compiling inscriptions containing information about women and men and their religious cults began⁷. For this purpose, the necessary epigraphic information was taken from the main *corpora* published to date, starting with *CIL* II and the recent partial revisions of the *Conventus Cordubensis* (*CIL* II2/7), the *Conventus Astigitanus* (*CIL* II2/5) and the *Tarraconensis pars meridionalis* (*CIL* II2/14), as well as the various volumes of *CILA* and other specialized publications

such as the journal *Hispania Epigraphica*. The inscriptions thus obtained, which make up our catalogue, are classified according to the Roman provinces of *Baetica*, *Lusitania* and *Tarraconensis*⁸. Within each province, the criteria of *conventus* and town of origin are used, in alphabetical order. In this way, three large groups of inscriptions are grouped by province, organized internally first by their *conventus* and then by their centre of reference.

As far as the organization of the information in this catalogue is concerned, we have chosen to create a personalized computer database that contains the basic fields for the analysis of each of the epigraphic elements considered. However, the main and most important problem we have faced, as in the case of all databases, is to obtain the most accurate and organized record possible in relation to its documentary source. This depends both on the collection of information by the historian and on the design of the database itself, which must be a computerized adaptation of the manual recording system. As a result, the database is a very personal thing, a consequence of each professional's way of working.

The elaboration of the database has been developed in three successive moments, corresponding to the so-called internal, external, and conceptual levels, which are necessary for the construction of any registration system. The first in order, the conceptual level, concerns the identification and definition of the data to be stored. It consisted of purely historical analyses. In this first phase, it was decided to organize the research information into two hierarchies. The first is made up of the inscriptions and the second of the bibliographical references associated with each of them. The second level, in terms of sequence, was the internal level, in which the way of organizing the information was considered, the tables that will store the data, the fields that these tables will have, the relationships between them, etc.

This must be in line with the conclusions reached at the conceptual level, so that the fields of the tables represent the data we are interested in collecting and the relationships between the tables faithfully reflect the relationships between the elements of the study that we have previously defined. The database model chosen is based on a relational structure, which relies on the establishment of reference points so that relationships can be established between tables to avoid the repetition of information within the database. The third and final layer, the external layer, defines the way in which the user will ultimately view the data. This part of the work provides the necessary tools for easy access to the data, making it easier to understand. These are the forms.

Thus, at the end of the process, we obtain a series of tables whose contents and relationships have been defined by the conceptual level and forms that allow the user to manage the information stored in these tables. The main form displays the information extracted from each of the collected headings (fig. 1). From the same form, it is possible to access the existing bibliographical references on the

² DEY 2018.

³ ANDREU/SERRANO 2019.

⁴ MONTÓN 2013.

⁵ BRUUN/EDMONDSON 2015.

⁶ PÉREZ 2014; PARKER 2015.

⁷ HEMELRIJK 2016; HEMELRIJK 2020.

⁸ FISHWICK 2012.

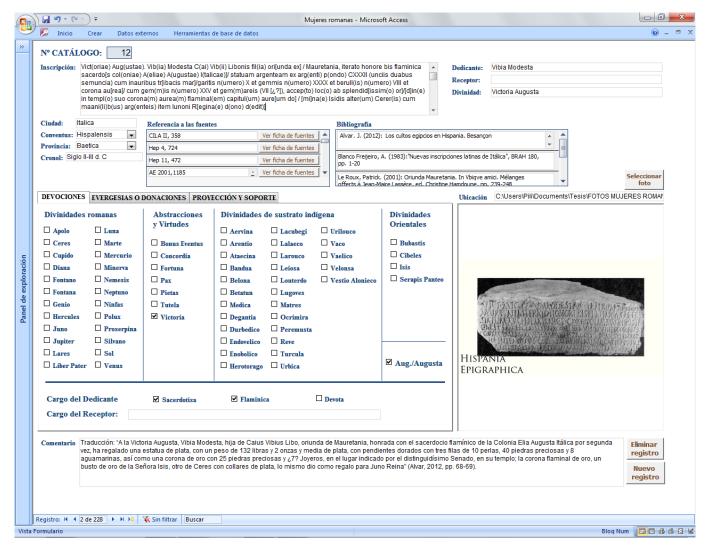


Fig. 1. View of the form of the inscriptions linked to the Roman Hispania Devotions tab.

inscription. The fields or sets of information collected for each inscription are detailed below:

Inscription. This information space contains the main piece of information for each inscription, from which most of the information broken down for each element is obtained: the transcription of the epigraph. This transcription of the text of the inscription comes from the epigraphic corpora consulted.

Dedicator. This is the name of the person mentioned in the epigraphic text who makes the offering.

Recipient. Indicates the person for whom a favour is requested from the divinity mentioned.

Deity. Indicates the deity to whom the sacrifice or dedication is made and appears with the same denomination as in the epigraph.

City. Indicates the city, given by its Latin name, where the inscription was originally placed.

Conventus. This is the *conventus* of the provinces of Hispania in which the city of origin of the sacrifice indicated in the previous field was located.

Province. This is the province of *Hispania* in which the city of origin of the dedication shown in the previous box was located. Given the chronologies we have worked with, we have chosen to divide *Hispania* into three provinces: Baetica, Lusitania and Tarraconensis.

Chronology. This indicates the time, expressed in centuries B.C. and A.D., when the inscription was made.

Bibliography. This contains a series of entries, each of which refers to the bibliographical references that mention one of the various aspects of the epigraphic document, either the inscription itself or some of the data relating to it, such as the persons mentioned in the text.

Reference to sources. This includes the information on the inscription available in the various corpora. Although, like the previous ones, they are bibliographical references, it has been decided to organize them separately because of the exclusive link between these publications and the compilation of the inscriptions. Next to each of the references, there is a button "View Sources File", which gives access to the file created for each of them. This card contains information on each source, showing the source reference, the province, the ancient and modern place name of the town where the inscription appeared, the bibliography mentioned in the source and the transcription of the epigraphic text produced by this corpus.

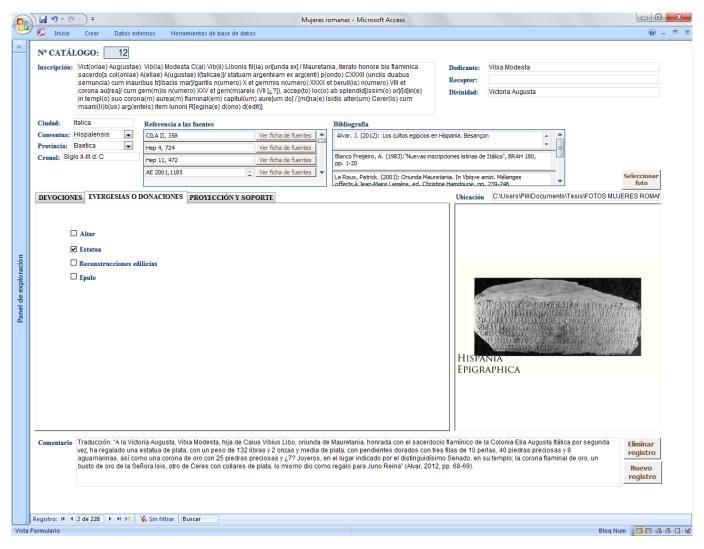


Fig. 2. View of the form via the Evergesías or Donations tab.

Image. A box containing the image of each epigraphic element has been included in the general screen of the application.

Comment. A field has been added to display data and opinions about the epigraph, some of which come from the bibliography consulted and others from personal reflection.

Devotions file. In this section (fig. 1), we have included various fields of information about the inscription related to the deities worshipped, according to the epigraphic text, the person who dedicated the element and the person to whom it is addressed. This information is given below:

Deities data. The upper part of the card has been used to organize the deities mentioned in the various inscriptions, using the general name of the deity, without taking into account the epithets or nicknames that sometimes accompany it. Four groups of deities have been established: Roman gods, Roman abstractions and virtues, deities from the indigenous substratum of the Iberian Peninsula, and deities of Eastern origin adopted by the Roman religion. Next to these groups, an option has been added to indicate whether the deity appears with the epithet "Augusta".

Religious Office of the Dedicant. The religious office of the dedicatee (if he has one and it appears in the

inscription). There are three possibilities: that the person offering is a priestess, a *flaminica* or a devotee.

Position of the recipient. The position of the person receiving the tribute as referred to in the epigraphic text (if it has one and it appears in the inscription).

Evergesias or Donations file. This section (fig. 2) contains the mentions of possible elements given to the deity, which may be an altar, a statue, reconstructions of buildings or an *epulus*.

On the other hand, the **Projection and Support** tab (fig. 3) contains data relating to the context in which the inscription was found, the type of support to which it is attached, and the nature or type of inscription.

Context (urban/rural projection). This indicates the original location of the inscription in terms of the environment in which it must have been situated. This information relates to the original spatial situation of the inscription, whether it was a public place within the Roman urban plan, a private space of a domestic nature, or a layout in a rural environment, far from densely populated places.

Type of support. This field records the support on which the inscription is placed, such as an altar, a pedestal, a statuette, a plaque, or incorporated into an architectural

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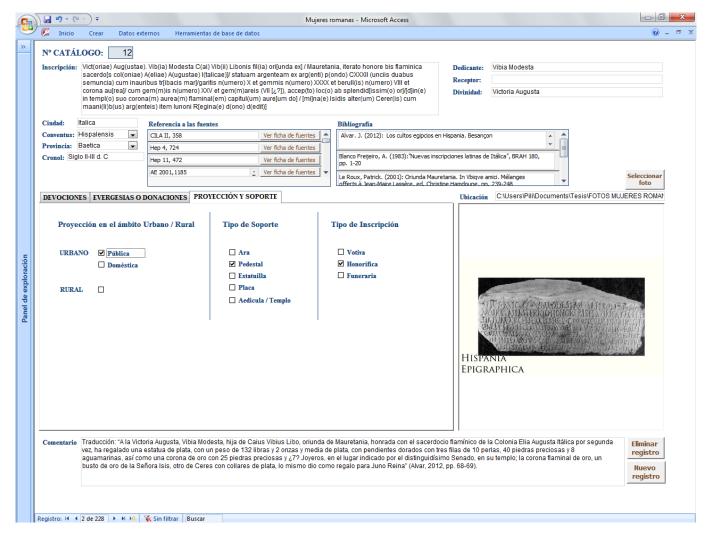


Fig. 3. View of the form of headings associated with the Projection and Support tab.

element belonging to a cult building, such as a temple or an *aedicule*.

Type of inscription. Indicates whether the inscription is honorary, funerary, or votive.

This registration system has the advantage of allowing quick access to the different elements that form the basis of the work and to all the information as a whole. Another advantage of this digital registration system is the ability to easily establish relationships between all the data contained in the computer application and to carry out filters and queries that return groupings of inscriptions based on the data stored, such as epigraphic sets by chronology or by provenance⁹. This ability makes it possible to obtain classifications of elements that share certain characteristics.

In this way, it is possible to obtain answers at different levels: simple, such as knowing how many votive aras dedicated to Jupiter come from the *Conventus Emeritensis*, or complex, combining two or more variables, such as origin, chronology, etc. In addition, current database management systems make it possible to link textual information to graphic files, be they drawings or photographs. For this reason, whenever possible, we have

included the image of each inscription in the database, as seen in figures 1 to 3. These images have been taken from the *Hispania Epigraphica Online Database* of epigraphs and allow each piece to be quickly identified.

In this sense, technology should not make us lose sight of the fact that our aim is not only to tell stories but also to tell history, and as such, all the resources created are produced with the maximum guarantees of historical veracity. Digital models are another element of epigraphic documentation, as we have indicated for the 3D digital preservation of the headings studied (fig. 4). Likewise, 3D digital preservation is an essential tool for the conservation, documentation, and dissemination of inscriptions, ensuring the long-term protection of these important cultural events and allowing wider access to their study and appreciation¹⁰. It also helps experts to carry out more in-depth research and to understand better the history and meaning of these inscriptions in their cultural context.

ACKNOWLEDGMENT

This research was made possible by the Spanish Ministry of Science, Innovation and Universities, grant number PGC2018-097481-B-I00, and by the "Prueba de

⁹ BURDICK et alii 2012.

¹⁰ SAORIN et alii 2017.

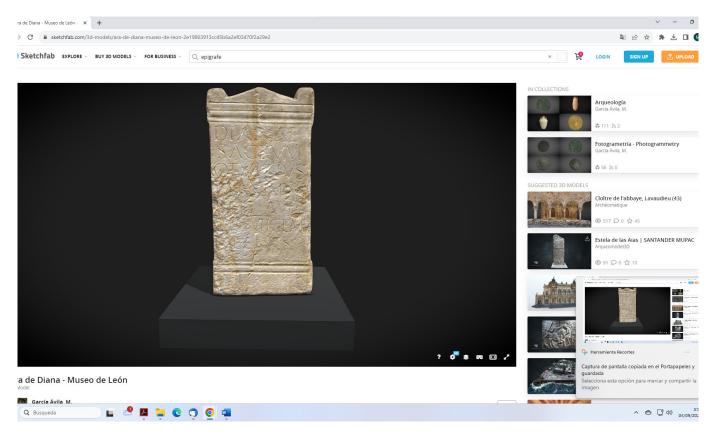


Fig. 4. 3D representation of the Ara to Diana Sacrum in the Museum of León (Spain).

Concepto" project funded by the European Union, grant number PDC2022-133123-I00: "Implementation of Virtual Archaeology in the Museum of Cadiz as a public and inclusive educational and outreach tool".

CONCLUSIONS

Although the creation and feeding of the database is an essential task for the systematization of the information collected, it is only a working tool to achieve the goal of our research, which is the historical interpretation that goes beyond simple material catalogues. Therefore, the next step, based on the data stored in the described database, is the in-depth analysis of the inscriptions, with which we are already beginning the second phase of our work. We have epigraphs (mostly honorary pedestals and votive altars) dedicated to deities, in some cases by a dedicator in favour of a third person, arranged according to provinces, monasteries and cities of origin, as well as their chronology, which ranges roughly from the first century to the third century¹¹.

For each of the selected inscriptions, the aspects derived from the interpretation of the text and the nature of its support, as well as its geographical and chronological context, were taken into account. The analysis of the data was based on a system of consultations based on the chronological and spatial distribution of the various deities worshipped¹². This research has led to the creation of various tables that allow flexible access to the data sets

and the comparison of the information they contain from different points of view. Furthermore, in order to facilitate the study of the cultural diffusion of these inscriptions, maps of the distribution of these testimonies written in the Hispania area have been produced (fig. 5), which present the same information in tabular form, using a cartographic format instead of a series of alphanumeric characters¹³.

Finally, the third phase of our research consisted of a general study of the documentation and materials obtained from the previous analyses, including tables and maps, especially with regard to the spatial and chronological distribution of the epigraphic material studied¹⁴. In order to facilitate the study process and to obtain results and conclusions, these analyses have been carried out considering as an initial unit of study the administrative division by Roman provinces¹⁵. For each province, the data have been revised according to conventus and centres of population, and the results have been compared. Subsequently, the conclusions drawn between the different provinces, monasteries and localities have been linked together to provide a global vision of the cults in space and time. We have complemented these results by using 3D digital conservation methods to document and preserve these inscriptions¹⁶. All this has provided us with several advantages, including conservation and protection, accessibility, and dissemination, as well as the study and analysis of 3D models, which allow researchers and academics

¹¹ CHANIOTIS 2009: CENTLIVRES CHALLET 2013.

¹² MACLACHLAN 2013.

¹³ MOLINA-TORRES 2018; MOLINA-TORRES 2020.

¹⁴ KEEGAN 2014.

¹⁵ ESPINOSA/VELÁZQUEZ 2021.

¹⁶ BONACCHI 2017.

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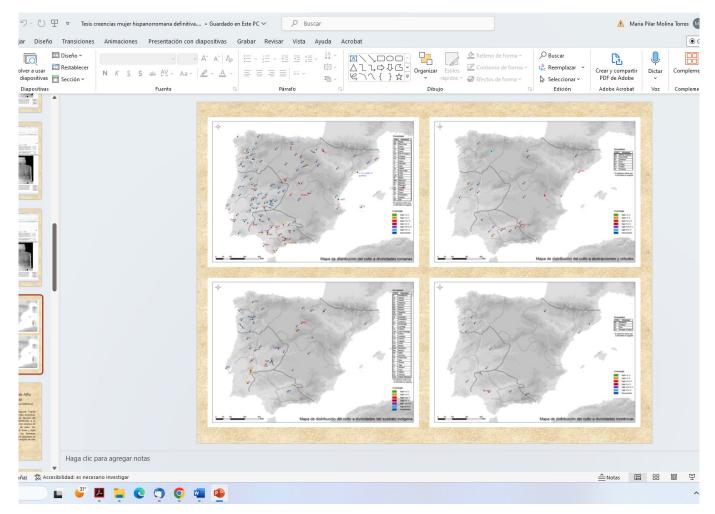


Fig. 5. Maps of the distribution of the cult of deities.

to study inscriptions from different angles and perspectives without the need to manipulate the original object, which can reveal hidden or hard-to-see details in the physical object.

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