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on Ancient Bronzes

edited by Dávid Bartus, Zsolt Mráv and Melinda Szabó

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Budapest 2024



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Budapest, 20–24 September 2022

Edited by
Dávid BARTUS – Zsolt MRÁV – Melinda SZABÓ

Budapest, 2024

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Some Italic Heracles from the National Archaeological Museum of Madrid

Preliminary remarks

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Abstract: The paper presents an archaeometallurgical analysis made on a group of Italic bronze figures from the National Archaeological Museum of Madrid (MAN-Madrid) whose common theme is that they all represent Heracles in different attitudes.

Keywords: XRF analysis, votive figure, bronze forgery, Hellenistic period, pre-Roman Italy

The present paper considers a group of Italic bronze figures from the National Archaeological Museum of Madrid (MAN-Madrid) whose common theme is that they all represent Heracles in different attitudes. This research is part of a wider project that aims to study the collection of typologically Italic and Greek bronze objects from the Archaic, Classical and Hellenistic periods. This is a complex assemblage and we know almost nothing about the origins of the pieces. However, indirect information on the places where they were acquired allows us to identify reliable locations of production, such as the regions of Paestum, Numana or Locri Epizefiri. Moreover, these are ratified by the distribution areas of each of the types.

The little information available is contained in a brief catalogue of bronze objects published by R. Thouvenot in 1927,¹ which includes both previous publications and a large number of unpublished pieces. Subsequently, only a few metal objects have been partially and selectively studied.

The oldest set of pieces is the assortment from the Spanish royal collections, which was previously held in the National Library or the National History Museum.² Most of the others, on the other hand, are from private collections formed between the 19th and early 20th centuries by wealthy entrepreneurs and diplomats (the Marqués de Salamanca, Helguera, Castellanos, Asensi, etc.).³ Finally, a more modest but extremely important group consists of objects from scholars and academics who acquired them or received them as gifts (e.g. de La Rada as part of the Arapiles expedition to the Aegean).⁴ Lastly, there have been additions made up to the beginning of the 21st century, either on the international antiquities market or due to the acquisition of the Várez Fisa collection.⁵

1 THOUVENOT 1927.

2 HÜBNER 1862; MAÑUECO 1993.

3 MARTÍN NIETO 1993; PALMA-VENETUCCI 2007.

4 See GRAELLS I FABREGAT – ROSAMILIA, *in press*.

5 CABRERA 2003.

The collection⁶ currently numbers slightly over 600 objects,⁷ comprising:

- elements of personal ornamentation (mostly of Central Italic and Adriatic types, dated between the 8th and 5th centuries BC);⁸
- weapons, such as Italo-Calkidian, Etruscan and Attic helmets, Samnite bronze cuirasses, and Villanovan bronze spears and swords;⁹
- Etruscan- and Campanian-produced banquet vessels (horizontal-handled *kyathoi*, *lebetes*, various types of jugs and *olpai*, strainers, *simpula*, etc.);¹⁰
- an outstanding collection of Etruscan and Greek mirrors, a study of which we have almost ready for monographic publication;¹¹
- a set of ca. 150 bronze figurines including both elements for vessel decoration and different types of *ex voto* that correspond to representations of Kouros, Kore or Herakles (in this case, all of Italic origin).

The enormous heterogeneity of the collection clearly includes votive offerings from different sacred spaces in pre-Roman Italy. The case of the representations of Herakles is probably the most complex if we consider the different models encompassed. Their lack of origin, which reduces the appeal for a contextual understanding of the pieces, if analysed from a different perspective (i.e., archaeometrically), can be useful for a later comparison with properly contextualized ones. In this way, series of materials from museum collections become active instruments for the construction of the historical discourse of the societies that created the objects studied. In order to achieve this, it is necessary to complete the documentation regarding the typology with the biography of each object and the archaeometry, as well as the cultural context in which its parallels are inserted, the analysis of the chronology and the archaeological contexts of its parallels.

Together with I. Montero, we conducted chemical analyses by X-ray Fluorescence (XRF) as well as lead isotope ones. These examinations serve two main purposes: first, to clarify the characterization of the alloy composition and second, to determine the origin of the raw copper material (or lead or silver).

We carried out our work with the Olympus Vanta M spectrometer from the archaeometry laboratory of the Instituto de Ciencias del Patrimonio (INCIPIT) – Consejo Superior de Investigaciones Científicas (CSIC).¹² This instrument is equipped with a Rhodium (Rh) anode X-ray tube (50 kV and 0.2 mA) and a large area silicon drift detector (SDD). We used a protocol based on the Olympus Alloy Plus software and optimized it for the analysis of archaeological alloys, working with the beam collimated to a 3 mm diameter and measurement times of 40 seconds. The spectra were quantified using the software developed by Olympus, which employs a fundamental parameter algorithm to automatically correct for inter-elemental effects, providing results normalized to 100 wt%.

The sample extraction protocol was carried out under the supervision of the curators of the MAN. A total of 100 XRF analyses were performed and 50 samples were sent to the laboratory of the University of the Basque Country (Advanced Research Facilities (SGIker) – Geochronology and Isotopic Geochemistry Research Service) for lead isotope analysis. Unfortunately, we have not yet received the results of these isotopic analyses, so we can only comment here on some of the results of the copper alloy composition ones.

6 CABRERA 1993.

7 MARTELLI 2007; GRAELLS I FABREGAT 2011.

8 BLÁZQUEZ 1959; MARTELLI 2007.

9 BLÁZQUEZ 1957; MARTELLI 2007; GRAELLS I FABREGAT 2011; GRAELLS I FABREGAT 2021.

10 BLÁZQUEZ 1960a; MARTELLI 2007; GRAELLS I FABREGAT 2007; GRAELLS I FABREGAT 2023; GRAELLS I FABREGAT, in press.

11 BLÁZQUEZ 1960b; GRAELLS I FABREGAT – ROSAMILIA, in press.

12 ROVIRA LLORENS – MONTERO RUIZ 2018.

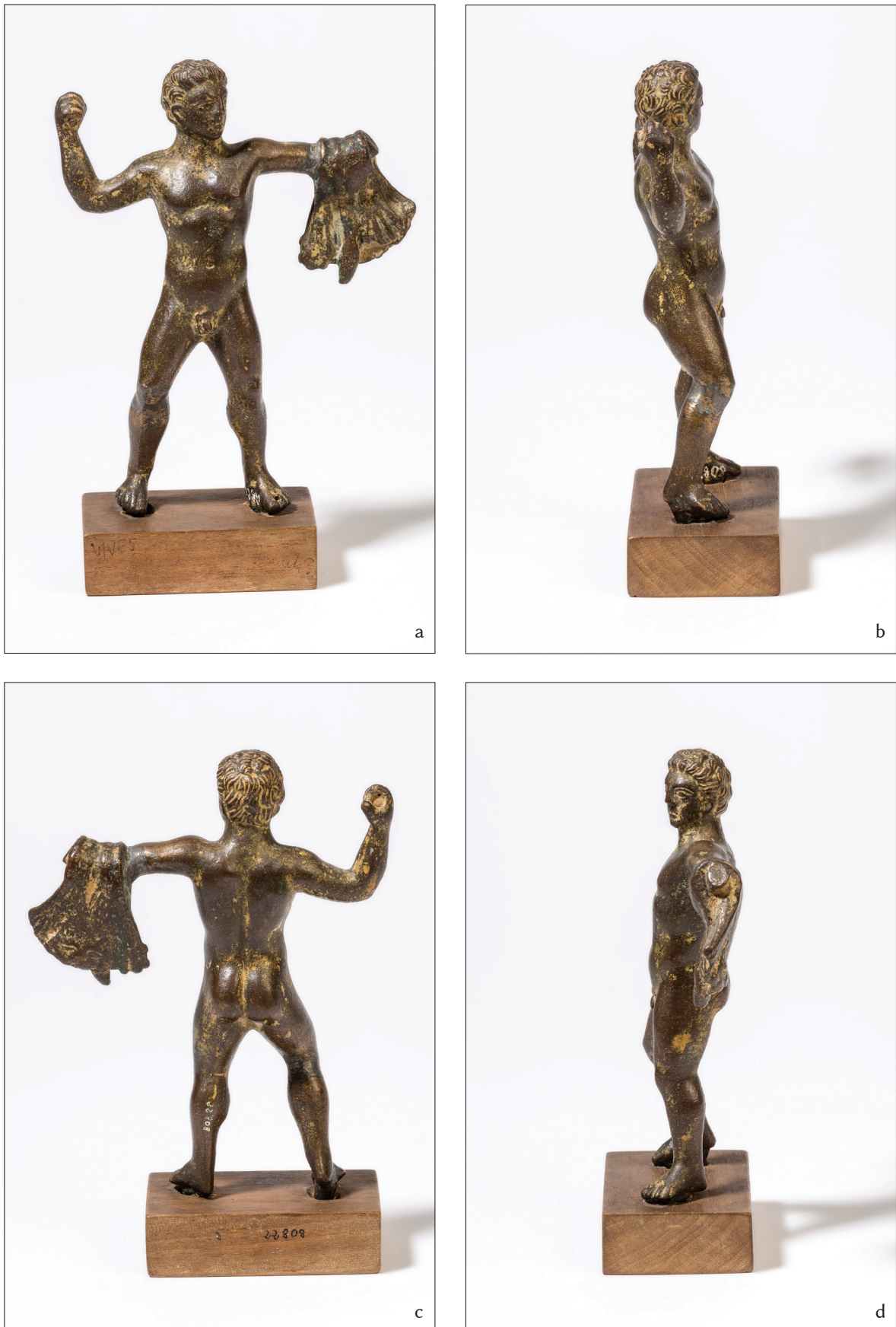


Fig. 1. Bronze Figure MAN-22808. © José Luis Municio García, MAN-Madrid 22808-ID002-5.

We have selected a group that stands out from the rest of the collection both for the size (between 13 and 25 cm) and weight as well as, in particular, the workmanship of the pieces. We have also sought to ensure that they correspond to various morphologies that are easily identifiable as belonging to different workshops and chronologies of recent types.¹³ The purpose is to evaluate the figures that are to be analysed archaeometrically by means of an intentional selection in order to obtain a view that can be extrapolated to the collection as a whole.

Tab. 1. Summary table of results of archaeometric measurements.

Analysis No.	Inv. no.	Fe	Ni	Cu	Zn	As	Ag	Sn	Sb	Au	Pb	Bi	Other El.	Br/Hg
PA28893	2922	ND	ND	82.52	ND	ND	0.2	5.65	ND	ND	11.64	ND	ND	ND
PA28894	2665	0.55	ND	84.87	ND	ND	ND	5.78	ND	ND	8.8	ND	ND	ND
PA28898	3808	ND	ND	78.35	ND	ND	ND	4.8	ND	ND	16.85	ND	ND	ND
PA28899	2002-114-23	0.27	ND	87.76	ND	ND	ND	7.95	ND	ND	3.56	0.46	ND	ND
PA28900	3801	ND	0.06	78.66	ND	ND	ND	5.47	ND	ND	15.8	ND	ND	ND
PA28901	2921	ND	0.08	70.78	ND	ND	ND	7.63	ND	ND	21.51	ND	ND	ND
PA28902	3156	ND	ND	73.79	ND	ND	ND	7.32	ND	ND	18.89	ND	ND	ND
PA28903	2920	ND	0.07	72.75	ND	ND	ND	7.87	ND	ND	19.31	ND	ND	ND
PA28904	22808	ND	ND	82.67	ND	ND	ND	6.48	ND	ND	10.85	ND	ND	ND
PA28905	3800	0.12	ND	74.87	ND	ND	ND	8.53	ND	ND	16.47	ND	ND	ND

Among them, the one with the best workmanship is the Sabellic-type figure Inv. Nr. 2920,¹⁴ a standing representation of Heracles on a plinth, unfortunately with missing arms. Its style is similar to that of the so-called Heracles of Birdoswald, typologically datable to the second half of the 4th century BC, which according to G. Colonna was of Campanian production.¹⁵ The detail and plasticity of the hero's anatomy, on the one hand, and of the *leonté*, on the other, show the excellent and meticulous workmanship of an experienced craftsman capable of producing an object of outstanding dimensions and beauty, based on hours of work. The proportions and the minute details indicate a refined piece constructed in two stages, one involving the preparation of the wax model for casting, and the other, equally demanding, the cold work of polishing and the addition of incisions that complete and enrich it. If we observe the composition, (PA28903) we can note the presence of nickel, which interferes in a ternary bronze with a high presence of lead. As has been repeatedly proposed, the trace element data of the bronzes provide useful information for recognizing the parameters of different production series, so we will view the presence of nickel as relevant to the characterization of the origin to which this figure is attributed.

We also observe a series of cases with smaller dimensions that are very close in composition (PA28900) and with a similar weight of nickel as a trace element. Among these, I will only indicate the single case of Inv. No. 3801,¹⁶ which shares stylistic criteria with the previous figure, and it can be suggested that they could have come from the same context (as it suggests that both were part of the same collection). It is a figure of Hérakles standing (the plinth has not been preserved), his legs parallel without any flexion but with some intention of mobility for the upper limbs, the right

13 For archaic types see COLONNA 1970.

14 HÜBNER 1862, 216, Nr. 419.

15 COLONNA 1997.

16 THOUVENOT 1927, 43, No. 187.

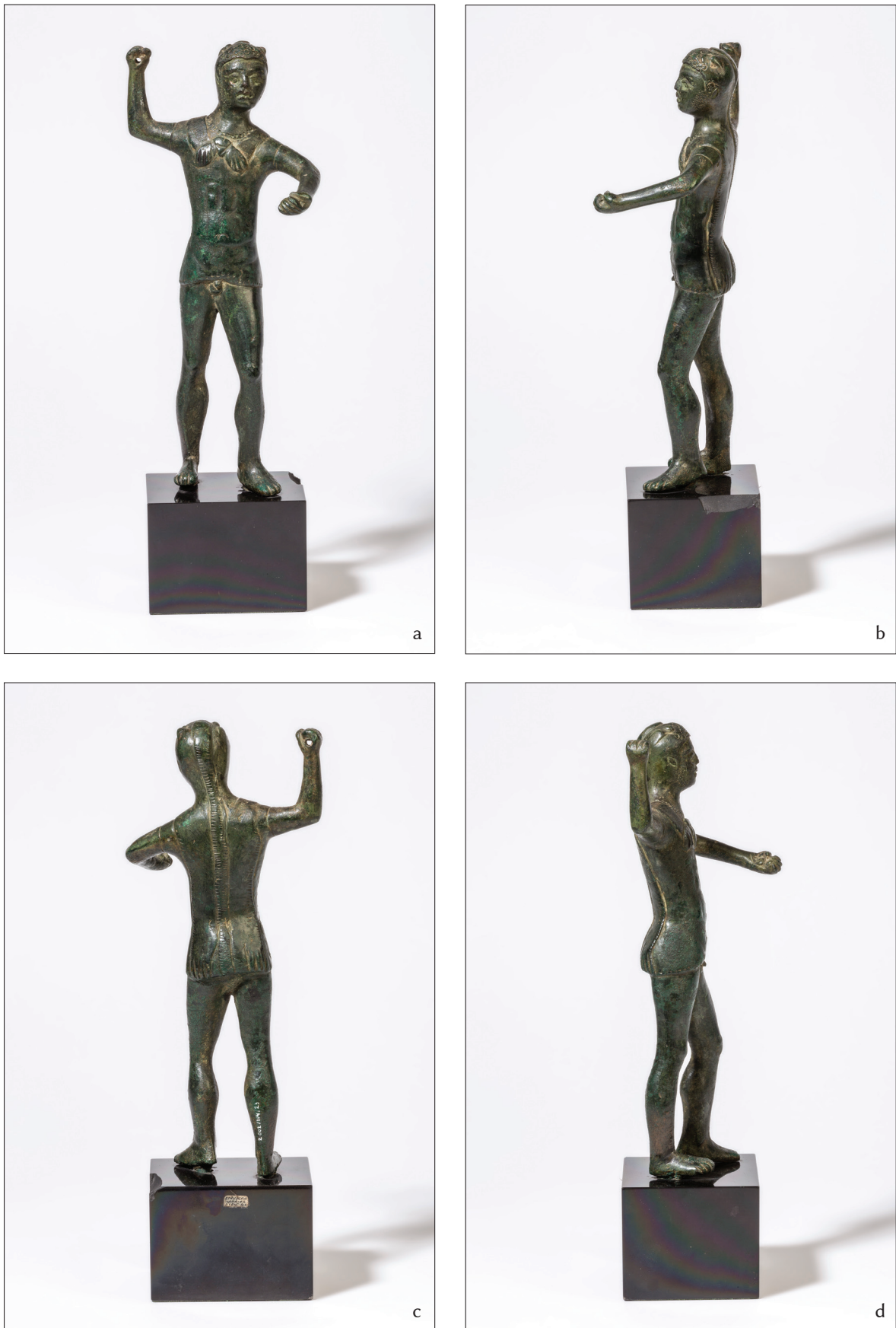


Fig. 2. Bronze Figure MAN-2002-114-23. © José Luis Muncio García, MAN-Madrid 2002-114-23-ID009-12.

arm slightly folded backwards, frozen in the moment before striking a blow with the mace (not preserved) and the left arm extended forwards and covered by the end of the *leonté* (hanging over the arm, tied at the neck with a knot of the paws and covering the hero's head).

For other figures (Inv. No. 3156; H.: 130 mm),¹⁷ which are typologically very close to each other and do not include the aforementioned trace element in their composition (see PA28902), it is difficult to attribute them to the same production series or to construction in the same workshop. In fact, the origins of these pieces provide confirmation of this inconsistency, as two of them are from the Salamanca collection and a third one from that of the Infante Don Gabriel. The first two were acquired in the mid-19th century and the other a century earlier, in Naples and Rome respectively.

If we consider other model design but still continue to examine large figures (such as Inv. No. 22808;¹⁸ H.: 170 mm) (Fig. 1.a-d), we can see that the composition is completely different (PA28904), with a higher weight of copper and a decrease in lead. This figure, contrary to the previous ones, is not presented in a frontal position but from the side, with its legs open and its arms extended, the right one backwards preparing the blow with the mace (not preserved) and the left forwards and covered with a small *leonté*, which now no longer covers the hero but protects him as a shield. It is a contrasting, more complex representation that requires a different fluidity of the metal than the previous models, as it is more compact and vertical. However, the variation in the composition cannot be explained solely by the technical necessity of fusion but, most probably, by a different craft tradition, workshop or school, which we can justify with a differing geographical position if we accept that they are synchronous works or, more likely, by a combination of spatial and chronological distance between the two series.

The large figure (Inv. No. 2002-114-23; H.: 250 mm) (Fig. 2.a-d), which has a different composition compared to the aforementioned figures, seems to be more complicated. It has a very high proportion of copper, the highest of those analysed, and the lowest proportion of lead, four times less than the first group of figures discussed and half of the one discussed in the previous paragraph. It also has a notable presence of traces of iron and is the only figure that includes bismuth in its composition. In this case, the morphology of the figure is similar to the compact and vertical shapes of the first ones mentioned, but differs due to the careless finishing both of the wax model and of the post-fusion work, which is equally incomplete. Coincidentally, this figure has no strict typological parallels. Curiously, this object was acquired in the modern international antiquities market, as it was bought by Mr. Várez Fisa at Sotheby's New York. It is highly probable that it represents further evidence of the fraudulent antiquities market. In any case, once the isotopic analyses have been completed, we will be able to convey a much stronger opinion.

In view of what I have presented, the study of the Archaic and Classical Bronzes of the National Archaeological Museum in Madrid requires typological, archaeometric and historiographical research, and only in this way will the large number of pieces collected contribute to the knowledge of the complex repertoire of Italic Herakles *ex votos*. However, I would like to underline an important detail, which is that the main problem with this type of examination is the lack of analyses carried out on well-contextualized objects, so that, paradoxically, contextualized ones can continue to be studied from a typological perspective, limiting their informative potential.

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17 THOUVENOT 1927, 79, No. 405.

18 THOUVENOT 1927, 40, No. 171.

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