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Cursed in clay: object lives of Egyptian curse figurines in Leiden

Braekmans, D.J.G.; Soliman, D.; Boschloos, V.; Hameeuw, H.; Van der Perre, A.; O'Farrell, H.; Keurs, P. ter

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MUSEUMS, COLLECTIONS AND SOCIETY

YEARBOOK 2023

Holly O'Farrell and Pieter ter Keurs (eds)



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**Research Group
Museums, Collections and Society (MCS),
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Ir. Amito Haarhuis MSc/MEd, Rijksmuseum Boerhaave, Leiden

Drs. Benno Tempel, Kröller-Müller Museum, Otterlo

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Cursed in clay: Object lives of Egyptian curse figurines in Leiden

Dennis Braekmans¹, Daniel Soliman², Vanessa Boschloos³, Hendrik Hameeuw⁴
& Athena Van der Perre⁵

1. A “forgotten” anniversary

With the many exhibitions and other celebrations surrounding the 200th anniversary of the decipherment of the hieroglyphic script by Champollion and the 100th anniversary of the discovery of Tutankhamun’s tomb, another Egyptological anniversary in the year 2022 received less attention, that of the discovery, in 1922, of a relative large number of rare figurines at the site of Saqqara, just south of Cairo. But not in Leiden, where some of these figurines were closely examined in 2022 and 2023 with the objective to better understand their production techniques and history.

The Egyptian and Nubian collection of the National Museum of Antiquities (Rijksmuseum van Oudheden, RMO) comprises a small group of 12 ancient Egyptian execration figurines dating to the Middle Kingdom (ca. 1850-1700 BCE) (Fig. 4.1). They are made of unfired clay and represent captured enemies, their arms tied behind their backs. Their surface is covered in curses written in hieratic script, a cursive

1 Laboratory for Material Culture Studies, Department of Archaeological Sciences, Faculty of Archaeology, Leiden University.

2 National Museum of Antiquities, Leiden.

3 Department of Archaeology, Ghent University.

4 KU Leuven Libraries, VIEW Core Facility, KU Leuven.

5 Department of Archaeology, KU Leuven & Association Égyptologique Reine Élisabeth.



Fig. 4.1: Figurine F 1941/8.2 visualised from six viewpoints, with two visual styles: colour (left) and shaded (right), based on one Multispectral Microdome dataset (© VIEW – KU Leuven).

form of hieroglyphs, and the inscriptions mention the names of individual Egyptians and of foreign places and/or rulers. The figurines were ritually buried in order to symbolically neutralise these foreign and domestic enemies and general threats. By providing scholars with the names of regions and of the inhabitants of Egypt's neighbours – in present-day Libya, Sudan and the Levant –, these artefacts are often regarded as crucial primary sources for our knowledge of the political geography of the region during the late Middle Kingdom.⁶

The Leiden figurines were originally part of a larger assemblage, discovered at Saqqara in 1922 and of which approximately 130 were acquired by the Belgian Egyptologist Jean Capart for the Royal Museums of Art and History (RMAH) in Brussels. 83 years ago, the figurines were divided between Tel Aviv (Eretz Israel Museum), Brussels (RMAH) and Leiden (RMO), where 12 figurines arrived in 1941. The rest of the find was transferred to the Egyptian Museum in Cairo. Despite the historical importance of the objects, and even though the Leiden group is rather small, these figurines have never been studied in detail. The MCS grant “Uniting the Separated: A multifocal contextualization of the Saqqara execration figurines” provided an important stimulus for the (re)valuation of these extraordinary artefacts.

6 A. Van der Perre, D. Braekmans, V. Boschloos, F. Ossieur, H. Hameeuw, and L. Delvaux, “The Egyptian Execration Figurines of the Royal Museums of Art and History, Brussels: Conservation, Pigments and Digitisation,” *Bulletin Des Musées Royaux d'Art et d'Histoire* 87-88 (2016-2017): 5-29.

An integrated approach consisting of both innovative imaging and chemical characterization techniques had already been conducted on the exemplars kept in the RMAH in Brussels in 2015-2017. The objective was to study the socio-cultural and artisanal activities connected to the figurines.⁷ The chemical homogeneity of the group was examined and the composition of the raw materials defined.⁸ In addition, multi-light reflectance and multi-spectral imaging of the inscribed surfaces allowed to document and study shaping techniques and the preservation and degradation of the surface layers. It was also an effective tool to (re)visualize the faded inscriptions.⁹

Applying the same method to the Leiden corpus allows us to compare the Leiden and Brussels groups and to assess the possible impact of divergent object lives on their current state of preservation.

2. Uniting the separated

The figurines were originally discovered at a Middle Kingdom cenotaph near the Teti Pyramid at Saqqara, during excavations led by the British Egyptologists Cecil Mallaby Firth and Battiscombe G. Gunn in 1922.¹⁰ The find was not mentioned in the published excavation report, nor were the excavators' notes preserved. The chapel itself was marked in the south-eastern corner of the sketch plan of the site.¹¹

In 1938, a large group of these figurines was acquired by the Belgian Egyptologist Jean Capart for the Royal Museums of Art and History (RMAH) in Brussels. Capart was told that the collection was for sale on the Parisian art market, and he arranged to bring the group to Brussels in order to conduct a preliminary study. This task was given to the French Egyptologist Georges Posener,¹² who immediately understood the scientific importance of this group of unfired figurines. Initially, only half of the group was bought from the Khawam brothers,¹³ while Capart still kept an option on the second half. By 1939, and after a complex financial agreement with the Belgian ministry of Public Instruction, it was decided to buy the entire group for Brussels. A representative collection was selected to be kept in the Brussels

7 L. Delvaux, H. Hameeuw, A. Van der Perre, V. Boschloos, F. Ossieur, B. Vandermeulen, M. Proesmans, and D. Braekmans, "Final report Brain.be Pioneer Project BR/121/PI/EES: Conservation, IR, UV and 3D-Imaging: The Egyptian Execration Statuettes Project (EES)," Brussels, 2017.

8 D. Braekmans, V. Boschloos, H. Hameeuw, and A. Van der Perre, "Tracing the Provenance of Unfired Ancient Egyptian Clay Figurines Through Non-Destructive X-Ray Spectrometry Analysis," *Microchemical Journal* 145 (2019): 1207-1217, DOI:10.1016/j.microc.2018.12.029.

9 A. Van der Perre, H. Hameeuw, V. Boschloos, "De Vloek van Senwosret. Execratiefigurines Anders Belicht," *Ta-Mery* 11 (2018): 34-45.

10 A. Abdalla, "The Cenotaph of the Sekwaskhet Family," *Journal of Egyptian Archaeology* 78 (1992): 93-111.

11 C.M. Firth and B. Gunn, *Teti Pyramid Cemeteries. Vol. II. Excavations at Saqqara* (Cairo, 1926), pl.51.

12 For Posener, see Bierbrier, *Who Was Who in Egyptology*, 2012, 442.

13 For Khawam, see Bierbrier, *Who Was Who in Egyptology*, 2012, 294; F. Hagen and K. Ryholt, "The Antiquities Trade in Egypt 1880-1930: The H.O. Lange Papers," *Scientia Danica. Series H, Humanistica* 4, Vol. 8 (2016): 79-82, and <https://www.khawam-brothers.com/en/historique/>.

museum and the remaining figurines were divided into five batches (dubbed Lot A – E) with the intention to sell these to other public collections abroad. As the RMAH paid 100.000 Belgian francs for the collection, they were hoping to sell the selected batches for the price of 10.000 Belgian francs per Lot. Or, if this was not possible for the interested institutions, they were willing to accept an exchange for objects of an equal value. The Leiden National Museum of Antiquities acquired Lot C, containing twelve figurines, for BFR 10.000 in 1941.¹⁴ Lot D eventually went to the Eretz Israel Museum in Tel Aviv, where eight figurines were exchanged for a batch of finds from different sites in Palestine.¹⁵ In the end Lot A, B and E never left Brussels and were registered in the museum inventory.

The great majority of these figurines are relatively small, measuring between 10 and 15 cm, whereas one type – of which one in Leiden (F 1941/8.1) – is very large, approximately 30-35 cm long.

The Leiden figurines were shown in several Egypt-themed exhibitions in the past decades, both in Leiden and abroad,¹⁶ while the large figurine has been on view in the museum's permanent exhibition since 2016. Egyptology's focus has been on the magical purpose of these figurines, at the cost of a detailed study of their materiality. The figurines' historical value was never questioned, but they are nevertheless still at risk from certain threats. Whereas an assessment of their state of preservation indicates that the figurines in Leiden are in a stable condition, the fragility of unfired clay and the continuous fading of the inscriptions underscore the importance of a complete documentation of the figurines. This crucial task has now been completed through the support of the MCS grant.

3. Imaging

To document both the relief and the writings in red pigment, the 12 execration figurines have been imaged at the RMO with the portable Multispectral Microdome system by KU Leuven (Fig. 4.2). This was complemented with standard digital photographs and with recordings of selected features of interest by means of a mobile Dino-Lite Edge digital microscope.

The former technology (Multi-Light Reflectance) consists of a dome-shaped device that illuminates and records the figurines from 228 angles with infrared, red, green,

14 Former N° 2, 17, 23, 30, 37, 46, 56, 76, 83, 91, 97 and 104. Now registered as Leiden F 1941/8.1 – F 1941/8.12. *Musées Royaux d'Art et d'Histoire, Série des acquisitions*, n°2743. See also: A. Van der Perre, D. Braekmans, V. Boschloos, H. Hammeuw and D. Soliman (forthcoming), "Uniting the Separated: A Multifocal Contextualization of the Saqqara Execration Figurines from the Brussels and Leiden Collections," *Proceedings of the 13th International Congress of Egyptologists, Leiden, 2023*.

15 A. Van der Perre, D. Braekmans, V. Boschloos, F. Ossieur, H. Hammeuw, and L. Delvaux, "The Egyptian Execration Figurines of the Royal Museums of Art and History, Brussels: Conservation, Pigments and Digitisation," *Bulletin Des Musées Royaux d'Art et d'Histoire* 87-88 (2016-2017), 6, n. 15.

16 *Pharao siegt immer* (Hamm – Hamburg – Mannheim 2004; *Egyptische Magie* (Leiden 2010); *Het Egypte van Hollywood* (Leiden 2012); *Egyptian Magic* (Quebec 2015); *Goden van Egypte* (Leiden 2018).



Fig. 4.2: Positioning figurine F 1941/8.2 under the Multispectral Microdome at the National Museum of Antiquities, Leiden.

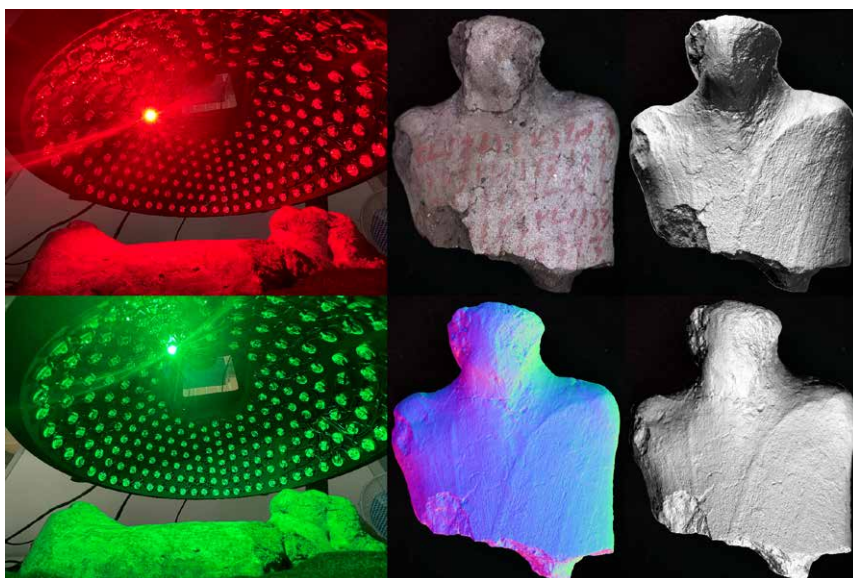


Fig. 4.3: Left: Figurine F 1941/8.1 positioned facing the MS Microdome during an acquisition procedure. Right: four static representations of the front of F 1941/8.9 (visual styles, from left to right and from top to bottom: colour, shaded exaggerated, normals, shaded), based on recordings with the Multispectral Microdome (© VIEW – KU Leuven).

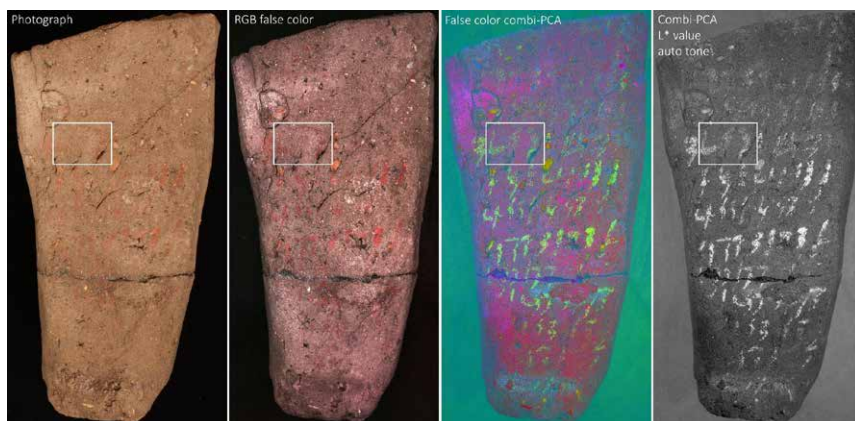


Fig. 4.4: Various renderings of the back of figurine F 1941/8.4, based on MS Microdome recording, enhancing illegible passages (© VIEW – KU Leuven).

blue and ultraviolet lights (Fig. 4.3). When this dataset is processed both the 3D and reflective characteristics of all surface features are reconstructed and can be used to analyse the figurines in detail.¹⁷ When inspecting the interactive results via the online pixel+ viewer,¹⁸ the surface characteristics can easily be detected and studied, from the smallest detail (such as production-related smears and fingerprints) to the object's current condition and its overall shape (such as the shallow relief of the arms tied behind their backs) (Fig. 4.1 and 4.3).

Large sections of the red ochre inscriptions on the figurines have become difficult to read over time. In addition, legibility is hampered by the materiality of the red-brown colour of the clay that can make it difficult to distinguish the red pigment from the surface of the figurine. Multispectral imaging is particularly useful for increasing the legibility of the hieratic curse texts. On figurines with fading or faded passages, these digital enhancing techniques provide satisfying results. The back of figurine F 1941/8.4 (Fig. 4.4) is a good case in point. Parts of the text are illegible with the naked eye, but with the application of enhancement techniques an ancient Egyptian expression for kinship (*msi.n*, which introduces the mother of the aforementioned person) is revealed.

17 All recordings with the MS Microdome of the Leiden figurines have been published online, H. Hameeuw, "MLR Datasets of Ancient Egyptian late Middle Kingdom Execration Figurines from the National Museum of Antiquities, Leiden," KU Leuven RDR, DOI:10.48804/YWIJZ.

18 The pixel+ viewer is an open-source tool to visually analyse the surface of artefacts. It can be consulted at <https://www.heritage-visualisation.org/viewer/>.

4. Material study

The non-destructive methodology consolidated during the study of the Brussels group¹⁹ was applied in Leiden. The main objective was to allow a comparison of the datasets to determine the effect of different conservation treatments and preservation conditions on the composition of the clay and on the pigments between the Brussels group and the Leiden group. The Brussels figurines were initially submitted to a series of methods, including micro raman spectroscopy, raman spectroscopy mapping, MA XRF mapping, FORS, and pXRF. The latter, being easily transportable, proved the most effective and was therefore selected as the main technique for the chemical characterisation of the Leiden figurines. The equipment used was a Bruker Tracer III-SD equipped with a custom empirical calibration for the material under study (Fig. 4.5).

The variability in Nile and marl clay deposits is complex, making it very difficult to define and classify clay and ancient ceramic provenance groups. Nevertheless, the collected pXRF data confirmed the attributed archeo-historical provenience and a consistent local production in Saqqara.²⁰ Additionally, the data correlates well with the specific Saqqara clay deposits and with modern Saqqara ceramics, thus contributing to the determination of a Saqqara geochemical signature and to the study of clay resourcing and usage in the vicinity of Saqqara.

When comparing the pXRF data from the Leiden and Brussels collections, the conservation and preservation conditions of the figurines had no demonstrable influence on the results; these are perfectly aligned and fall within the forecasted patterns. The Leiden figurines, based on their chemical signature, can be perfectly classified in the same scheme as defined in the Brussels corpus.

A noticeable difference in zinc (Zn) composition between the larger figurines (type A, likely produced with more care and skill compared to the smaller ones) can be observed in both collections. While zinc does occur in low amounts in Nile and marl clay deposits, this does not completely explain why there is an enrichment detected in the larger figurines and not in the smaller ones.

Additionally, zinc is not present in all large figurines from the Brussels collection. For now the source of this enrichment remains unclear but may well relate to post-depositional changes or through some form of post-excavation treatment before the figurines were split between the museum collections.

Finally, some pXRF results were also examined together with spectral reflectance measurements (FORS: Fibre Optics Reflectance Spectra) on the red ink inscriptions.

19 L. Delvaux, H. Hameeuw, A. Van der Perre, V. Boschloos, F. Ossieur, B. Vandermeulen, M. Proesmans, and D. Braekmans, "Final report Brain.be Pioneer Project BR/121/PI/EES: Conservation, IR, UV and 3D-Imaging: The Egyptian Execration Statuettes Project (EES)," Brussels, 2017.

20 D. Braekmans, V. Boschloos, H. Hameeuw, and A. Van der Perre, "Tracing the Provenance of Unfired Ancient Egyptian Clay Figurines Through Non-Destructive X-Ray Spectrometry Analysis," *Microchemical Journal* 145 (2019): 1207-1217, DOI:10.1016/j.microc.2018.12.029.



Fig. 4.5: pXRF measurement on figurine F 1941/8.1.



Fig. 4.6: FORS measurements on figurine F 1941/8.6 (red ink and clay medium) (© VIEW – KU Leuven).

The FORS measurements were carried out on areas where the red ink has been well preserved, and wider than the spot size of the optical fibre (Fig. 4.6). Consistently, these measurements correspond to the spectral curves (300-1000nm) of red ochre.²¹ Being an iron oxide the identification of the pigment as ochre was further endorsed by the pXRF, which measured higher concentrations of iron (Fe) on these spots than on the clay underground.

5. Conclusions

The complete multi-modal digitisation of the 12 ancient Egyptian execration figurines at the National Museum of Antiquities (Leiden) opens the pathway to digitally reunite this dispersed heritage. A similar analytical approach on the other groups of execration figurines, such as those located in Tel Aviv and Cairo, would complete the study of this unique set of materials.

21 A. Cosentino, "FORS, Fiber Optics Reflectance Spectroscopy con gli spettrometri miniaturizzati per l'identificazione dei pigmenti," *Archeomatica* 1 (2014): 16-22; H.H. Marey Mahmoud, "Colorimetric and Spectral Reflectance Access to Some Ancient Egyptian Pigments," *Journal of the International Colour Association* 24 (2019): 35-45.

The applied imaging and chemical characterization techniques provide important insights into the textual and material aspects of the 12 figurines in Leiden. Documenting not only the figurines themselves, but also their object lives, has given us valuable insights relating to the applied documentation strategy. While the figurines were separated ca. 80 years ago, the current study has proven that neither the conservation nor the preservation conditions have influenced their materiality. This is not only an important conclusion for the Leiden group, it also confirms that the developed methodology can be applied to objects regardless of their state of preservation.