



UNIVERSITÀ DI PISA



Online Seminar

*From clay figurines to craft figures:
tracing producers' technical and social background through multidisciplinary approaches*

part of the PROCESS Project

Pharaonic Rescission: Objects as Crucibles of ancient Egyptian Societies

9 June 2021



Massimo **VIDALE**
University of Padua
*An innovative technique
for reconstructing
the chaîne opératoire
of a late neolithic figurine*

Dennis **BRAEKMANS**, Athena **VAN DER PERRE**,
Vanessa **BOSCHLOSS**, Hendrik **HAMEEUW**
*Leiden University, Royal Museums of Art
and History, Ghent University, KU Leuven*
*Skin-deep: chemical characterisation of unfired
clay and innovative imaging techniques for
the study of Egyptian execration figurines*

Elisabetta **STARNINI**
University of Pisa
*In the beginning: anthropomorphic
clay figurines in prehistoric Europe*

Michelle **WHITFORD**
Macquarie University
*Understanding Egyptian shabti manufacture
via morphology and elemental analyses*

Caterina **DE VITO**, Laura **MEDEGHINI**,
Silvano **MIGNARDI**
Sapienza University of Rome
*Mineralogy and petrography as key drivers
to understand the technological
background of ancient people*

Gianluca **MINIACI**, Vanessa **FORTE**
University of Pisa
*Unravelling the makers: people
and techniques behind
the figurines of Lahun*

The seminar will be held on Microsoft Teams at this link: <https://tinyurl.com/y7yzcuk4>

For more information: process.miniaci@gmail.com

Seminar program

From clay figurines to craft figures: tracing producers' technical and social background through multidisciplinary approaches

The seminar, promoted by the project PROCESS – “Pharaonic Rescission: Objects as Crucibles of ancient Egyptian Societies (PI: Prof. Gianluca Miniaci, University of Pisa), is a public event dedicated to clay figurines as a valuable means to study their producers. It will bring together scholars with experience in the study of figurines from diverse chronological and cultural contexts, with particular attention to the application of multidisciplinary approaches in order to promote the debate on this topic and identify effective research strategies suitable for the reconstruction of the social and technical background of the craft figures.

Program of the event:

9:00-9:20

Greetings and Introduction

9:20-09:40

M. Vidale

An innovative technique for reconstructing the chaîne opératoire of a late neolithic figurine

09:40-10:00

E. Starnini

In the beginning: anthropomorphic clay figurines in prehistoric Europe

10:00-10:15

Discussion

10:15-10:30

Coffee break

10:30-10:50

C. DeVito, L. Medeghini, S. Mignardi

Mineralogy and petrography as key drivers to understand the technological background of ancient people

10:50-11:10

D. Braekmans, A. Van der Perre, V. Boschloos, H. Hameeuw

Skin-deep: chemical characterisation of unfired clay and innovative imaging techniques for the study of Egyptian execration figurines

11:10-11:25

Discussion

11:25-11:45

M. Whitford

Understanding Egyptian shabti manufacture via morphology and elemental analyses

11:45-12:05

G. Miniaci, V. Forte,

Unravelling the makers: people and techniques behind the figurines of Lahun

12:05-13:00

Discussion and concluding remarks

Abstracts

Massimo Vidale

University of Padua

An innovative technique for reconstructing the chaîne opératoire of a late neolithic figurine

A terracotta female figurine dated to the 6th millennium BC, of unknown provenience but most likely from the Lakes region of Turkey, was investigated with CT scanning, recording 966 Transversal sections. More than 900 horizontal sections were digitized and stratigraphically interpreted, thus reconstructing in 3D the form of the lumps and slabs sequentially applied and deformed to build up the image. By visualizing the series of additive steps activated by the potter, we can retrace the chain of choices and template underlying the technical process. It is thus revealed a "dual" technical template, in which the figurine is built in two symmetric bilateral halves, confirming the influence, at a cognitive level, of organic analogies and a simplified map of the female body.

Elisabetta Starnini

University of Pisa

In the beginning: anthropomorphic clay figurines in prehistoric Europe

Anthropomorphic figurines are one of the most discussed expressions of the symbolic imaginary of *Homo sapiens*. If we exclude the African Makapansgat pebble, a 3-million-year-old pebble with a pattern of lines on the surface that look like a face, that was picked up by *Australopithecus africanus*, and the 400ky old African Acheulian "proto-figurine" from Tan-Tan, humans began to represent themselves only during the Upper Paleolithic, carving stone and bone, and only occasionally using clay. Certainly, clay anthropomorphic figurines are one of the most significant components of the "Neolithic package" of the European first farmers. In the last decades, many interesting interpretative hypothesis and ideas have been offered regarding their essential meaning and function. However, observing in detail the way human body representations were shaped, constructed, used and discarded, we may try to infer the ultimate significance of prehistoric statuettes.

Caterina DeVito, Laura Medeghini, Silvano Mignardi

Sapienza University of Rome

Mineralogy and petrography as key drivers to understand the technological background of ancient people

Mineralogical, petrographic and micro-structural characterization of archaeological ceramic artifacts can shed light to understand the technological background of ancient people. While most studies focus on ceramic vessels, investigations on *clay figurines* are very rare in the literature. Here a deep investigation of *clay figurines* from the archaeological site of Tell Mardikh, ancient Ebla (Syria), dating back between 2400 and 2000 BC is reported. Optical Microscopy (MO), X-ray powder diffraction (XRPD) and Scanning Electron Microscopy (SEM) analysis have been used. Petrographic observations indicated the occurrence of three different fabrics. Quantitative phase analysis by the Rietveld method revealed that four main mineralogical assemblages are present, suggesting a firing temperature in the 800-1050 °C thermal range. Only three samples were fired at temperature lower than 800 °C as suggested by the presence of very abundant primary calcite and clay minerals. Concerning the redox state of the atmosphere, the *figurines* were fired in oxidizing conditions. Both BSE images and X-ray maps provided information on micro-textural relationship between primary and neoformed mineral-phases. These results showed an evolutionary trend of manufacturing technique during the second half of the 3rd millennium BC (Early Bronze Age IV).

Dennis Braekmans, Athena Van der Perre, Vanessa Boschloos, Hendrik Hameeuw

Leiden University, Royal Museums of Art and History, Ghent University, KU Leuven

Skin-deep: chemical characterisation of unfired clay and innovative imaging techniques for the study of Egyptian execration figurines

Approximately 100 execration figurines from the late Middle Kingdom originate from Saqqara (Lower Egypt). While discovered in a closed archaeological context, they show typological variation, and the paleographic study of the inscriptions on their surfaces suggest different scribal hands. To examine the chemical homogeneity of the group and define the composition of the raw materials, the unfired clay figurines were examined with pXRF spectrometry. The variability in Nile and marl clay deposits makes it highly complex to define and classify clay and ancient ceramic provenance groups. Nevertheless, chemical characterization of the figurines allows to study the potential direct use of clays in the vicinity of Saqqara. On the other hand, multi-light and multi-spectral imaging of the inscribed surfaces allowed to study shaping techniques and the preservation and degradation of the surface layers, as well as to (re)visualize its faded inscriptions.

Michelle Whitford

Macquarie University

Understanding Egyptian shabti manufacture via morphology and elemental analyses

Ancient Egyptian shabtis are ubiquitous funerary objects that have been extensively recovered from tombs dating between the Middle Kingdom (2055-1650 BC) and the Ptolemaic Period (332-30 BC). Due to the sheer volume of objects recovered, shabtis are often described as having been mass-produced artefacts. In this project, we analysed the morphology and composition of 21 Egyptian shabtis to explore the methods of production for these mould-made objects. Using a multidisciplinary approach combining elemental analyses and 3D modelling, we concluded that there were different degrees of standardisation for the morphology and

composition of these shabtis. Our results suggest that artisans likely employed a combination of both mass-production and batch-production methods when producing shabtis.

Gianluca Miniaci, Vanessa Forte

University of Pisa

Unravelling the makers: people and techniques behind the figurines of Lahun

This contribution addresses figurines as a means to investigate and reconstruct their makers through the analysis of technological traces, presenting the first results coming from the study of the Middle Kingdom mud figurines of Lahun. A debate on the significance of this production is still open and scholars proposed diverse hypotheses, interpreting these artefacts as symbolic and religious objects or even toys. Technological traces analysis suggests a variability of the production chains at the base of the creative process, such as sequences including two or four steps, corresponding to the shaping of the body, the modelling of the principal and detailed anatomical parts (e.g. arms or eyes) and surface finishing. These features seem to vary in association with the accuracy of the final artefacts. The identification of such a high variability was integrated with the analysis of fingerprints aimed at identifying age and sex of the figurines' producers as well as their level of manufacturing skill. From our results it emerges that most of the mud figurines from Lahun were made by late adolescents/adults while only few fingerprints are associated to children/early adolescents or only adults.