



JOURNAL

OF THE GENERAL UNION
OF ARAB ARCHAEOLOGISTS

JGUA2 is a semi-annual peer-reviewed academic journal



Volume 8/1

Cairo
2023

ISSN: 2537-026X





Journal of the General Union of Arab Archaeologists

(JGUAA2)

Published by

The Arab Council of the General Union of Arab Archaeologists

Emanating from

The Association of Arab universities

S. Lamci & M. El-Kahlaway (eds.)

Volume 8/1

**Cairo
2023**

Copyrights © 2023 by
The Arab Council of the General Union of Arab Archaeologists

New Headquarters in Sheikh Zayed City next to Specialty Sheikh Zayed Hospital 10 St. Hassan
Hamdy behind al-Mabqusat City - first floor- flat N^o. 6.

<https://jgaaa2.journals.ekb.eg/> <https://www.g-arabarch.com/>
<https://digitalcommons.aaru.edu.jo/jgaaa/>
[E-mail: arabarch@yahoo.com](mailto:arabarch@yahoo.com)

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, Recording, or otherwise, without the prior written permission of the publisher.

Academy of Scientific Research & Technology:

Print ISSN: 2537-026X

Online ISSN: 2537-0278

DOI Prefix: 10.21608

EDITORIAL BOARD

I. EXECUTIVE EDITORIAL BOARD DIRECTOR EDITOR-IN-CHIEF

Prof. Dr./ Mohamed M. El kahlawey

Professor of Islamic Archaeology, faculty of Archaeology/ Cairo University & President of the Arab Council of the General Union of Arab Archaeologists, Egypt

mohamedkahlawey@hotmail.com

II. EDITOR-IN-CHIEF

Prof. Dr./ Saleh Lamei Moustafa

Director of the Arab Islamic Heritage Center

saleh.lamei@ciah.biz

Prof. Dr./ Solaiman `Al-Theeb

Professor of ancient Arabic Inscriptions / King Saud University.

solali999@gmail.com

III. EDITORIAL BOARD

Prof. Dr./ Ahmed `Amin Selim

Professor of Egyptology at Faculty of Arts / University of Alexandria

dr.ahmedselim224@gmail.com

Prof. Dr. / Sherin Sadek `EL-Gendi

Professor and Chairwoman of the Tourist Guidance Department, faculty of Arts / Ain Shams University

sherin_sadek@yahoo.com

Prof. Dr./ Arianna D`ottone

Professor of Arabic Language and Literature Italian Institute for Oriental Studies / University of Roma – La Sapienza.

arianna.dottone@uniroma1.it

Prof. Dr./ Laurent Coulon

Director of the French Institute for Oriental Archeology in Cairo (IFAO).

laurent.coulon@ephe.psl.eu

Prof. Dr./ Hassan Aouraghe

Professor at Department of Geology / University Mohammed Premier Oujda - UMP.

aouraghe.oujda@gmail.com

Prof. Dr./ Mona Fouad `Ali

Professor of Preservation of Architectural Heritage, Conservation Department, faculty of Archaeology/ Cairo University

monalyeg@yahoo.com

Prof. Dr./ Mona `Abd `El- Ghany Haggag

Professor at Faculty Faculty of Arts, University of Alexandria

hendalius@gmail.com

Dr./ Ahmed Hussein Abdelrahman Adam

Associate Professor of Archaeology / University of Khartoum

ahmedaba77@yahoo.com

IV. ASSISTANT EDITORS

Prof.Dr./ Rushdya Rabee Ali

Associate professor of Conservation Department, faculty of Archaeology/ Cairo University.
rushdyarabii@yahoo.com

Dr./ Iman. M. Arafa

Lecture of Islamic Archaeology, faculty of Archaeology/ Cairo University.
iman.arafa14@gmail.com

Dr./ Ola `Elaboudy

Lecture of Department of Archeology, faculty of Archaeology/ Cairo University.
ola.elaboudy@gmail.com

V. ADVISORY BOARD

Prof. Dr./ Bernard O'Kane

Professor of Islamic Art and Architecture/ American University in Cairo.
bokane@aucegypt.edu

Prof. Dr./ Mohamed cAbd `El-Rouf `El-Gohary

Professor at Faculty of Archeology / University of Sohag.
m_1968_algohary@yahoo.com

Prof. Dr./ Mounira Chapoutot-Remadi

Professor of Archeology and Islamic civilization / University of Tunis, Tunis.
mouni.chapoutot@gmail.com

Prof. dr/Suphi Saatçi

Professor at faculty of Fine Arts/ Sinan University, Turkey.
suphisaatci@gmail.com

Prof. Dr./ Zeidan cAbdelkafi

University Professor Emeritus of Archaeology / Yarmouk University, Jordan.
zeidan.kafari@gmail.com

Prof. Dr./ Stefan Heidemann

University of Hamburg, Germany
stefan.heidemann@uni-hamburg.de

Prof. Dr./ Paola Devoli

Professor of Egyptology, Department of Humanities / University of Salento (Lecce), Italy
paola.davoli@unisalento.it

Prof. Dr./ Mona El-Shahat

Professor at Greek and Roman Archeology, faculty of Arts/ Alexandria University, Egypt.
dr.monaelshahat@hotmail.com

VI. LINGUISTIC REVISION

Dr. Emad El-Din Aysha

English Language Review

em14aysha@gmail.com

M/Mohamed Al-Kurashy

Arabic Language Review

korashy66@gmail.com

VII. EDITORIAL SECRETARIAT

Nehal A. al-Sheriay

Master Researcher, Department of Islamic Archeology / Cairo University

alasryt@yahoo.com

Samira E. Al. Manwaty

Master Researcher, Department of Islamic Archeology / Cairo University

Samiraessam38@gmail.com

CONTENTS

I. ANCIENT ARCHAEOLOGY & EGYPTOLOGY

1. **Ahmed Younes Mohammed & Sabry
Youssef Abd El-Rahman** 1-15
Stela of Padiamun from ^cAyn-Terghi [INV. N^o. 1320].
2. **Evgeny Vdovchenkov** 16-25
Royal *Tamga*-Signs of Bosphorus II-III Centuries
as a Result of the Barbarization
3. **Mona Abou El Maati El Nadi** 26-43
Some Remarks on the Execution Place *ḥbt*
in Ancient Egypt
4. **Nelli Boraiei** 44-63
The Titles of Ahmose
[The Owner of Theban Tomb N^o. 224]
5. **Rabee Eissa Mohamed** 64-91
The Worshipping Formulae of Royal Adoration
Scenes in Ancient Egyptian Temples from the
Old Kingdom till the End of the Late Period
6. **Zainab Abd El-Twab Riyad** 92-120
Rainmaking through the Rock Art in East and
South Africa: A Comparison with current
traditional tribes

II. COPTIC & ISLAMIC STUDIES

7. **Ahmed T. A. Khalil** 121-128
Two Coptic Inscriptions in the Abou
El-Goud Storage Magazine
8. **Waleed Ahmed Salah al-Din** 150-189
The Geometric Kufic Inscriptions on the
Late Mamluk Architecture and Artifacts:
A New Perspective Through Some
Artifacts
9. **Othman Salama Attia** 129-149
New Lights on a Rare Abbasid Dirham
in the Name of the Caliph Hārūn al-Rašīd
Minted in al-Muḥammadiya, 173 AH

III. RESTORATION

10. **Elashmawy Ahmed** 190-206
Diagnosis of the current state of the granite
columns remnants and suggesting the
treatment methods in the area of Merit Amun,
Akhmim, Egypt.
11. **Neven Fahim, Shaaban Abdelaal &
Emil Henin** 207-222
Physiochemical Characterization of Coptic
Jesus Christ Icon, Church of Saint
Mercurius, Egypt.

STELA OF PADIAMUN FROM 'AYN-TERGHI [INV. N°. 1320]

Ahmed Younes Mohammed

Lecturer of Ancient Archaeology, Faculty of Arts, Helwan University,
ahmed_mohammed@arts.helwan.edu.eg

Sabry Youssef Abd El-Rahman

Ministry of Tourism and Antiquities., youssifsabry1@gmail.com

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Mohammed, Ahmed Younes and Abd El-Rahman, Sabry Youssef () "STELA OF PADIAMUN FROM 'AYN-TERGHI [INV. N°. 1320]," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 1. Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/1>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in *Journal of the General Union of Arab Archaeologists* by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

STELA OF PADIAMUN FROM ʿAYN-TERGHI

[INV. N^o. 1320]

BY

Ahmed Younes Mohammed & Sabry Youssef Abd El-Rahman

Lecturer of Ancient Archaeology, Faculty of Arts, Helwan University, Egypt.

Ministry of Tourism and Antiquities.

ABSTRACT

[AR]

لوحة بادي آمون من جبانة عين ترغي، تحمل رقم 1320

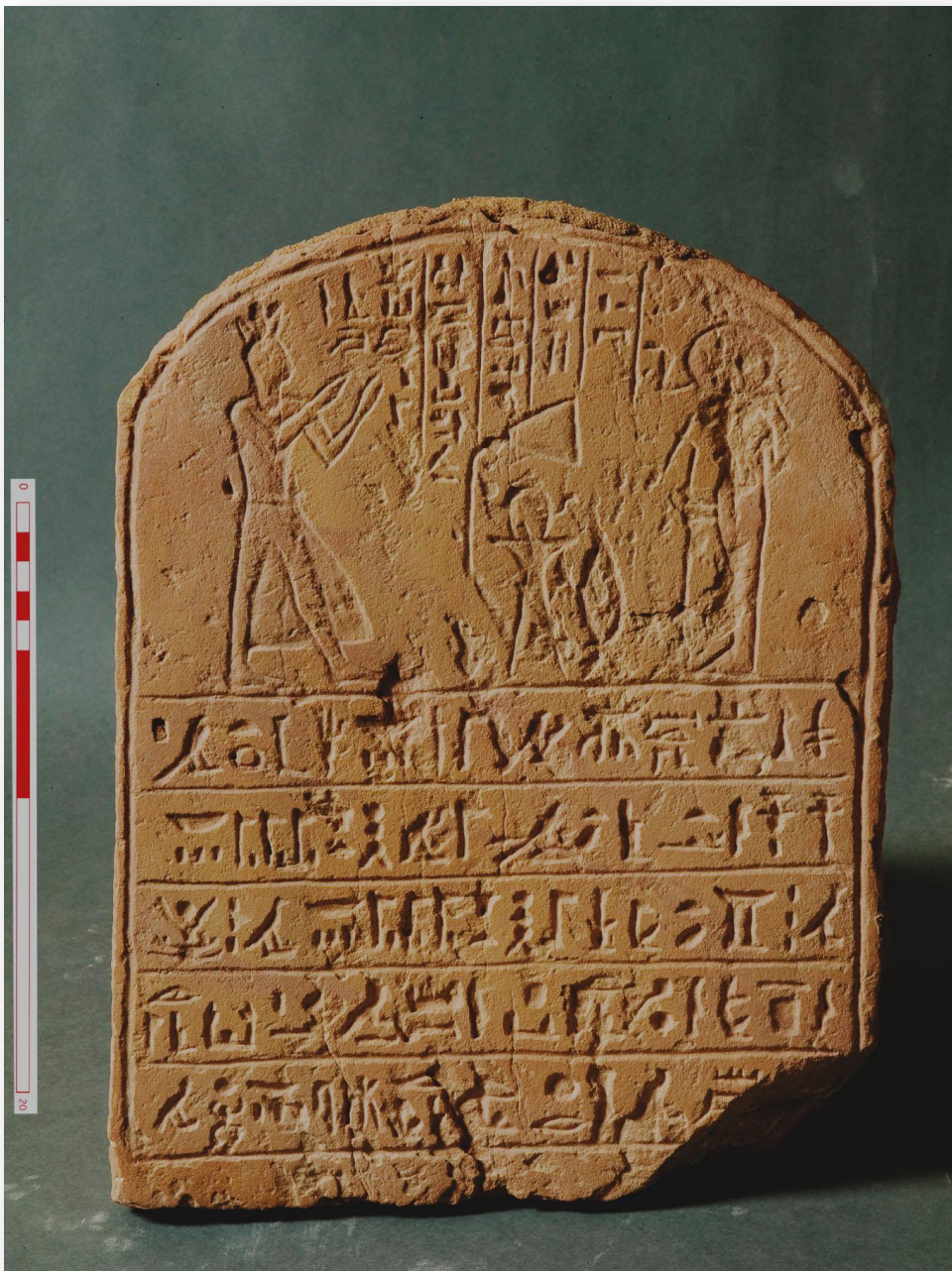
يهدف هذا المقال إلى دراسة لوحة "بادي آمون" التي عثر عليها في منطقة عين ترغي. وهي محفوظة حاليًا في المخزن المتحفي لأحمد عبد الحميد يوسف بواحة الداخلة تحت رقم تسجيلي 1320. وقد تبين من هذه الدراسة أن الأسلوب الفني وسمات التهجئة وأشكال العلامات تؤرخ اللوحة بالأسرة السادسة والعشرين.

[EN] This article aims to publish and study the stela of Padiamun, discovered at ʿAyn-Terghi and currently stored in the Ahmed Abdul Hamid Youssef Museum in the Dakhla Oasis under the inventory number 1320. The artistic style, the orthographic and palaeographic analysis dated the stela to the Twenty-sixth Dynasty.

KEYWORDS: Stela, *P3-di-Imn*, ʿAyn-Terghi, Dakhla Oasis, God, Genealogy, twenty-sixth dynasty.

I. INTRODUCTION

In this paper the author examines the stela of Padiamun, dated to the 26th dynasty. This stela was discovered in 2010 by Mr. Sabry Youssef Abd El-Rahman, the head of the SCA's excavation at ʿAyn-Terghi عين ترغى - Balat Dakhla Oasis. The stela was found in a debris layer in the shaft of Padiamun's tomb entrance. It is currently stored in the Ahmed Abdul Hamid Youssef Museum in the Dakhla Oasis, under inventory number 1320 [FIGURES 1-2]. The photograph [FIGURE 1] was taken at the time of its discovery during SAC's excavations at ʿAyn-Terghi.



[FIGURE 1]: Stela of Padiamun (Ahmed Abdul Hamid Youssef Museum in Dakhla Oasis. Inv. N^o. 1320).



[FIGURE 2]: Stela of Pediamun (Ahmed Abdul Hamid Youssef Museum in Dakhla Oasis. Inv. N°. 1320.
© Facsimile by Walid El-sayed.

II. DESCRIPTION

The stela has round-topped and made of local red sandstone. It measures 37cm in height, 27cm in width, and 8cm in thickness. It is divided into two registers: the upper register comprises the scene, while the lower one bears the texts. Both the scene and the text are carved in sunk relief. The stela is in good condition except for the damaged lower right corner, small chipped areas, and a few scratches.

III. FIRST REGISTER

A. Scene:

The scene shows the owner of the stela, Padiamun¹, standing facing to the right. His hands raised to praise the god Re-Horakhty who facing him. Padiamun with unclear facial features, is bald with a rare headdress; It could be a cone surrounded by two lotus in an upright position². He wears a long transparent kilt. Between Re-Horakhty and Padiamun is an altar with a *nmst* jar³, topped with a lotus flower. Beneath the altar, to the left, there is probably, a *dwj* jar with a conical stopper on a low stand⁴ or a plant tree⁵, and a *b3y* vessel in

¹ Most of the worshippers to Re-Horakhty were men, see: MUNRO 1973: 197, TAF. 4 [ABB. 15; End twenty-fifth dynasty], 264, TAF. 29 [ABB. 103; 680- 650 BC, ABB. 106; 680- 650 BC]; *HTBM* 11, PLS. 6 [N°. 66421; third intermediate period, 66425; third intermediate period], 8 [N°. 8451; third intermediate period], 10 [N°. 66424, third intermediate period], 12 [N°.42078; third intermediate period], 24 [N°. 66426; twenty-fifth dynasty].

² The lotus flower symbolizes resurrection and regeneration in the afterlife, see: BRUNNER-TRAUT 1980: 1091-1095; RADWAN 2008: 279-280; HALLMANN 2015: 150.

³ For *nmst* jar, see: TAWFIK 1979: 335-344.

⁴ They are attested from the second dynasty, Tomb of *Skr-h^c-b3w* at Saqqara. MURRAY 1905: PLS. I-II; Lintel of the royal daughter Sahnesr from tomb N°. 2146 at Saqqara. QUIBELL 1923: PLS. XXVI-XXVII; BALCZ 1934: 49-53.

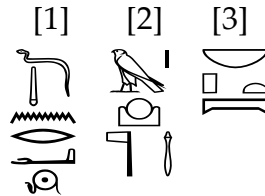
For other examples dated to the Middle Kingdom, see: *HTBM* 2, PLS. 3 [N°.177; twelfth dynasty], 31 [N°.221; twelfth dynasty], 32 [N°. 223; twelfth dynasty], 39 [N°. 287; twelfth or thirteenth dynasties], 45 [N°.286; thirteenth dynasty], 46 [N°. 124; thirteenth dynasty]; *HTBM* 3, PLS. 10 [N°.234; twelfth dynasty], 11 [N°.237; twelfth dynasty], 15 [N°.243; twelfth dynasty], 19 [N°.302; twelfth or thirteenth dynasties], 20 [N°. 313; twelfth dynasty], 22 [N°.133; twelfth dynasty], 25 [N°.246; twelfth dynasty], 40 [N°.239; twelfth dynasty], 48 [N°.295; twelfth dynasty]; *HTBM* 4, PLS. 12 [N°.170; twelfth dynasty], 19 [N°. 280; thirteenth dynasty], 30 [N°.257; twelfth dynasty], 36 [N°.255; twelfth dynasty], 37 [N°.193; twelfth dynasty], 44 [N°. 321; thirteenth dynasty, N°.306; thirteenth dynasty], 45 [N°.333; thirteenth dynasty]; LANGE and SCHÄFER 1925: TAF. III [CG. 20019-20021], IV [CG. 20038], V [CG. 20045, 20047, 20050, 20053], VI [CG. 20055, 20059], VII [CG. 20072], VIII [CG. 20079], X [CG. 20101], XI [CG. 20121], XII [CG. 20135], XIII [CG. 20141], XVI [CG. 20184], XVII [CG. 20218, 20220], XXVI [CG. 20350], XXVIII [CG. 20303], XXXI [CG. 20435], XXXIII [CG. 20476], XLIV [CG. 20554], XLIV [CG. 20559], XLVII [CG. 20588, 20593], XLVIII [CG. 20608], LI [CG. 20679], LIV [CG. 20719], LV [CG. 20731], LVI [CG. 20742], LIX [CG. 20754].

For other examples dating from the New Kingdom, see: *HTBM* 5, PLS. 34 [N°.374; eighteenth dynasty], 50 [N°.496; eighteenth dynasty]; *HTBM* 6, PLS. 32 [N°.483; eighteenth dynasty], 36 [N°. 353; eighteenth dynasty], 37 [N°.348; eighteenth dynasty]; 38 [N°.352; eighteenth dynasty], 43 [N°. 514; eighteenth or nineteenth dynasties], 44 [N°. 513; eighteenth dynasty], 46 [N°.488; eighteenth dynasty]; *HTBM* 7, PLS. 8 [N°.322; eighteenth or nineteenth dynasties], 12 [N°.860; eighteenth dynasty, 275; eighteenth dynasty], 14 [N°.644; eighteenth dynasty], 16 [N°.335; eighteenth dynasty], 19 [N°.282; eighteenth dynasty], 22 [N°.547;

heart-shape with a long narrow neck⁶. Re-Horakhty appears in a mummified form, with a falcon head wearing a tripartite wig surmounted by solar disk with uraeus. His two hands hold a *w3s*- scepter.

B. Inscriptions:

In front of the god Re- Horakhty †:



[1] *dd mdw [i]n R^c-*

[1] *Recitation by Re-*

[2] *hr-3h.ty, ntr-^c3,*

[2] *Horakhty great god,*

[3] *nb p.t*

[3] *lord of heaven.*

eighteenth dynasty], 24 [N^o.294; eighteenth dynasty], 27 [N^o. 279; eighteenth dynasty], 33 [N^o.248; eighteenth dynasty]; *HTBM* 8, PLS. 34 [N^o.170; eighteenth dynasty], 36 [N^o.301; eighteenth dynasty], 39 [N^o.155; eighteenth dynasty], 41 [N^o.295; eighteenth dynasty], 42 [N^o.1743; eighteenth dynasty]; *HTBM* 9, PLS. 23 [N^o.149; nineteenth dynasty], 28 [N^o.156; nineteenth dynasty], 29 [N^o.158; nineteenth dynasty], 45 [N^o.132; nineteenth dynasty], 46 [N^o.345; nineteenth dynasty]; *TOSI* 1972: 263 [N^o.50007; eighteenth dynasty], 264 [N^{os}. 50008; eighteenth or nineteenth dynasties, 50009; eighteenth dynasty], 266 [N^o.50012; nineteenth dynasty], 267 [N^o.50016; eighteenth or nineteenth dynasties], 272 [N^o.50030; nineteenth dynasty], 275 [N^o. 50036; nineteenth dynasty], 280 [N^o. 50047; nineteenth dynasty], 281 [N^o.50049; nineteenth dynasty], 288 [N^o.50060; nineteenth dynasty]; *HTBM* 10, PLS. 6 [N^o. 281; late eighteenth dynasty], 8 [N^o.972; late eighteenth dynasty], 41 [N^o.556; nineteenth dynasty], 54 [N^o.1188; nineteenth dynasty], 65 [N^o.291; nineteenth dynasty], 68 [N^o.448; nineteenth dynasty], 77 [N^o.598; nineteenth dynasty], 86 [N^o.278; twentieth dynasty]; *HTBM* 12, PLS. 36 [N^o.284; nineteenth dynasty], 38 [N^o.1347; nineteenth dynasty], 44 [N^o.547; nineteenth dynasty], 50 [N^o. 279; Ramesside period], 60 [N^o.349; nineteenth or twentieth dynasties], 62 [N^o.549; nineteenth or twentieth dynasties], 98 [N^o.1369; Ramesside period], 100 [N^o.772; New Kingdom].

For other examples dating from the third intermediate period, see: *HTBM* 11, PLS. 8 [N^o.35896], 10 [N^o.8447], 12 [N^o.42078], 14 [N^{os}. 8449, 25262], 18 [N^{os}. 22916, 27332], 20 [N^o.65354].

For other examples dating from the Ptolemaic era, see: *KAMAL* 1905: PLS. X [CGC. 22029], XIII [CGC. 22043]; *HTBM* 11, PLS. 64 [N^o.36504], 66 [N^o.8470], 74 [N^o.8461], 77 [N^o.8461], 86 [N^o.8463], 88 [N^{os}. 8465, 8469].

⁵ About the plant tree under the alter, see: *MUNRO* 1973: TAF.9, ABB. 34, TAF. 58, ABB. 200, TAF. 61, ABB. 210, TAF. 62, ABB. 212.

⁶ For *b3y*- vessel, see: *ERMAN & GRAPOW*, (eds.) 1971: *Wb*.vol.1, 417, 13.

IV. SECOND REGISTER

The lower register comprises the main text. It contains five horizontal lines of slightly raised hieroglyphs, oriented from right to left between incised border lines. It read as follows ↓:



[1] *htp-dj-nsw^a n Wsjr^b hn.ty-jmnt.yw^c ntr-^{c3} nb 3bdw^d Hr*

[2] *nd.ty jt.f^e 3s.t wr.(t) mw.t ntr hnw.t ntrw nbw*

[3] *Nb.t-h.t sn.(t)-ntr^f hnw.t ntrw nbw Wp-w3.wt*

[4] *Inpw jm3h (n) Wsjr^g P3-dj-Imn m3^c-[hrw] s3 n k3 Wsjr^h*

[5] *[Iy]-mn(?) m m3^c-hrw hr Wsjrⁱ ms [.n]^j nb.t-pr^k Mj-hpr -r^{c?}^l.*

[1] *An offering that the king gives to Osiris, foremost of the westerners, the great god, lord of Abydos¹³, Horus,*

[2] *the protector of his father, Isis, the great, mother of the god (i.e Horus), mistress of all of the gods,*

[3] *Nephthys, sister of the god, mistress of all of the gods, Wpwawet,*

[4] *Anubis, the honored Osiris Padiamun, justified, son of the ka of Osiris*

[5] *[Iyamun?], justified before Osiris, born of the lady of the house, Kheperemra?*

A. The arrangement for writing *htp dj nsw* formula on this stela is in the form commonly used during the twenty-sixth dynasty¹⁴. However, this arrangement was first used in the fourteenth dynasty¹⁵ and was proven until the Greco-Roman era¹⁶.

B. The orthography with the sign as a determinative is a criterion for dating inscriptions to the Saite and Post-Saite Periods¹⁷.


¹³ For the epithet *Wsjr hnty-imntyw ntr-^{c3} nb 3bdw* is rare before the second half of the twelfth dynasty, see: SPIEGEL 1973: 31; LEAHY 1977: 331.

¹⁴ BARTA 1968: 195; *HTBM* 11, Pls. 31 [N^o 8483], 38 [N^o 8458], 40 [N^{os}. 8474, 8475], 42 [N^o 8476], 46 [N^{os}. 8460, 65789], 48 [N^{os}.35626, 8504], 50 [N^{os}.8478, 8459], 52 [N^o.22918], 56 [N^o.56598], 58 [N^o.35467, 35897].

¹⁵ FAKHRY 1952: 42; BARTA 1968: 72.

¹⁶ BARTA 1968: 209.

¹⁷ LEAHY 1979: 141-153.

- C. The word  *hnty* was written in semi-cursive writing with two water jars only. The sig mentioned above was first attested on stelae of the eighteenth dynasty¹⁸ and continued to be used until the twenty-sixth dynasty¹⁹.
- D. The epithet *ntr-^{c3}*, *nb 3bdw* after the name of Osiris was first attested, also rare, during the reign of *s^cnh-ib-t3wy* Mentouhotep I.²⁰ It is noted that the title *ntr-^{c3}* without a god determinative²¹ and the ^{c3}- sign was first written in a vertical position during the reign of the king Cheops²².
- E. *nd it.f*: «The protector of his father». It is a title of the god Horus. The earliest evidence can be found in the pyramid texts²³. However, the title changed in the Middle Kingdom to *nd hr it.f*²⁴. It continued to be used until the Greco-Roman era²⁵.
- F. *sn(.t)-ntr*: «sister of the god»²⁶, was the title of the goddess Nephthys during the New Kingdom and continued to be used to the Ptolemaic era²⁷.
- G. The construction *im3h (n)*²⁸ + Osiris (i.e. deceased) was first attested in the twenty-sixth dynasty²⁹. However, in the Late Period, the genitival *n* was omitted from the construction mentioned above³⁰.
- H. The construction *n k3 (n) + Wsir* was first attested in the New Kingdom³¹, and continued to be used up to the Ptolemaic era³². However, the construction changed during the Late Period by omitting the genitival *n*³³.

¹⁸ CURTO 1961: 77, TAF. 34 [N^o.44; nineteenth dynasty, but in my opinion, it is noticeable, that during the eighteenth dynasty].

¹⁹ For other examples dating from the late period, see: LEAHY 1977: 59-60 [N^o.10]; *HTBM* 11, Pls. 24-25 [N^o. 66426; twenty-fifth dynasty], 46-47 [N^o.8460; Late Period].

²⁰ For the epithets of Osiris *hnty-imntyw*, *ntr-^{c3}*, *nb 3bdw*, see: CLERE, & VANDIER 1948: 19, § 23; SCHENKEL 1962: 30, § 4 [b]; FISCHER 1992, 72; SPIEGEL 1973: 25-32.

²¹ HASSAN 1943: 140- 141, FIG. 81; SIMPSON 1974: FIGS. 3a, b, 10; SIMPSON 1978: FIGS. 8, 10. For similar examples, see: SCHENKEL 1962: 30, § 4 [b]; STEFANOVIĆ 2010: 209, note 8.

²² SIMPSON 1978: FIGS. 8, 10.

²³ SETHE 1908: 633 b; SETHE 1910: 1685 a, 1728 b; ERMAN & GRAPOW, (eds.) 1971: *Wb.* vol.2., 375, 4; SELIM 2000: 245 [c]; LEITZ 2002: vol. 4, 580.

²⁴ LANGE, & SCHÄFER 1902: 108 [CGC.20089]; HASSAN 1928: 153 [CGC.20703]; FAULKNER 1973: 263; BARGUET 1986: 56; HANNIG 2006: 1419. For similar examples from the New Kingdom, see: ERMAN & GRAPOW, (eds.) 1971: *Wb.* vol.2, 375, 6.

²⁵ LEITZ 2002: vol.4, 580.

²⁶ LEITZ 2002: vol.6, 372.

²⁷ For similar examples during the New Kingdom, see: *KRI* 1979: vol.2, 430 [6]; NELSON 1981: PL.139 [7]; BERLANDINI 1985: 56. For similar examples from the late period, see: JELINKOVA-REYMOND 1956: 25; GOYON 1974: PL. IX A, 2. For other examples during the Graeco-Roman era, see: DAVIES 1953: PL.2 [VIII], 3 [III]; *HTBM* 11, Pl. 68-69 [N^o.8464].

²⁸ ERMAN & GRAPOW, (eds.) 1971: *Wb.* vol.1, 82, 7.

²⁹ FAKHRY 1942: 128, FIG. 98; EL-SADEEK 1984, 56.

³⁰ FAKHRY 1942: 128, FIG. 98; EL-SADEEK 1984: 56.

- I. *m m3^c-hrw/hr Wsir*: «in justified/before Osiris». The construction *m + m3^c-hrw* was first attested in hymn texts dated to the reign of King Senowsret III.³⁴ It is also attested in tombs and temples of the New Kingdom³⁵. The construction *m m3^c-hrw hr Wsir* rarely occurs after a personal name NN during the twenty-sixth dynasty at Bahariya Oasis, as in the tombs of Zed-Amun-ef-ankh³⁶ and Pedaashtar³⁷.
- J. *ms*: The word *ms* appears before the mother's name since the reign of King Antef I or Antef II onwards³⁸.
- K. *nbt-pr*: «Lady of the house». This title was first attested from the Middle Kingdom era,³⁹ and it is probably certain from the reign of Amenemhat II onwards⁴⁰. The title usually implies that the woman was married⁴¹. However, the title was held by a six years old girl on coffin dated the twenty first dynasty, it appears to have been used as an honorary title.⁴² Moreover, it may not just refer to the role of the women in charge of the house, but also the fact that she owns private property⁴³. According to Franke, this title was only for the legal wife⁴⁴. In most cases, the housewife lived in her husband's house and was responsible for managing the entire house⁴⁵.
- L. *Mj-hpr-r^c?*: This name was not mentioned by Ranke and other parallels are still omitted. The name may also be read as *Hpr-mj-r^c?*.

³¹ LACAU 1926: 130 [CGC. 34081], 141 [34091], 142 [CGC. 34092], 223 [CGC. 34182]; HERMANN 1940: 7* [41; eighteenth dynasty], 10* [53; eighteenth dynasty]; TOSI, & ROCCATI 1972: 115 [N^o.50076; nineteenth dynasty], 121 [N^o.50083; nineteenth dynasty]; STEWART 1976: 28, Pl. 18 [1; eighteenth dynasty].

³² For other examples of *n k3 n Wsir* dating from the Late Period, see: MUNRO 1973: TAF. 2, ABB. 7, TAF. 3, ABB. 11, TAF. 7, ABB. 25, TAF. 6, ABB. 22, TAF. 8, ABB. 30, 32, TAF. 9, ABB. 34, TAF. 11, ABB. 43, TAF. 19, ABB. 66, TAF. 24, ABB. 87, TAF. 24, ABB. 88, TAF. 25, ABB. 92, TAF. 26, ABB. 94, TAF. 27, ABB. 97, TAF. 29, ABB. 105, TAF. 28, ABB. 100, TAF. 30, ABB. 108, 110, TAF. 33, ABB. 122, TAF. 34, ABB. 123, 125-126; LABUDEK 2010, 123 [stela Louvre IM 2867; Psmathek I], 201 [stela Louvre IM 2789; Psmathek I], 233 [stela Louvre IM 3071; Psmathek I].

Ptolemaic era, see KAMAL 1905: 8 [CGC. 22007], 11 [CGC. 22010], 17 [CGC. 22016], 21 [CGC. 22020], 29 [CGC. 22028], 30 [CGC. 22029], 33 [CGC. 22034], 43 [CGC. 22047], 48 [CGC. 22051], 60 [CGC. 22064], 61 [CGC. 22065], 66 [CGC. 22071], 75 [CGC. 22081], 76 [CGC. 22083], 83 [CGC. 22093], 90 [CGC. 22102], 92 [CGC. 22105], 93 [CGC. 22107], 96 [CGC. 22111], 98 [CGC. 22114], 101 [CGC. 22116], 102 [CGC. 22118], 103 [CGC. 22119], 104 [CGC. 22120], 106-107 [CGC. 22122], 110 [CGC. 22126], 139 [CGC. 22151], 145 [CGC. 22158], 151 [CGC. 22171].

³³ For other examples of *n k3 Wsir* dating from the Late Period, see: CURTO 1961: TAF. 44, N^o 80; MUNRO 1973: TAF. 3, ABB. 10, TAF. 4, ABB. 14, TAF. 24, ABB. 89, TAF. 29, ABB. 103, 106; LABUDEK 2010: 156 [Stela Louvre IM 2621; Psmathek I].

³⁴ GRIFFITH 1898: Pl. I [1]; SETHE 1959: 70 [18].

³⁵ MARIETTE 1869: Pl. 30 [a].

³⁶ FAKHRY 1942: 52, FIG. 9 [a-b], 59, FIG. 18.

³⁷ FAKHRY 1942: 109, FIG. 71.

³⁸ SELIM 2001: 327, l.

³⁹ JOHNSON 2009: 86, note 18; HALLMANN 2015: 143.

⁴⁰ FREED 1996: 331.

⁴¹ WARD 1982: 99 [N^o.823].

⁴² SALEH 2006: 210.

⁴³ JOHNSON 2009: 86, note 18.

⁴⁴ FRANKE 1983: 38-39.

⁴⁵ MILLARD 1976: vol.2, 304; STEFANOVIĆ 2013: 329-330.

V. PALEOGRAPHICAL REMARKS

1. It can be presumed that the scribe miswrote the word $\overline{\text{III}}$ [**line 1**] with the sign III (Z 2) because the god invoked in the stela offering formula is only Osiris, so the scribe is supposed to use the sign V (V 30) instead of $\overline{\text{III}}$.
2. It should also be noted that the sign \otimes (O 49) is written without any detail.
3. The scribe used the sign F (F 34) in [**line 2**], although the correct one is W (W 24).
4. The god determinative in the writing of *Wsir* in [**line 4**] is unclear.
5. For the title *sn(t)-ntr* [**line 3**], the scribe must use the sign R (R 8) before the sign T (T 23) in the hieroglyphs for honorific.
6. Another error occurred in [**line 3**] where the scribe used the sign N (N 5) between the sign F (F 13), instead of the sign Q (Q 3). The word F [**line 3**] was first attested in the Pyr 92a⁴⁶ and was commonly used in the Ptolemaic era⁴⁷. The structure of the name *Wp-w3.wt* rarely appears in this form F during the twenty-sixth dynasty and later.
7. It is noted that there are few traces of the ink in the name *Hr-n-s3(?)* [**line 3**].
8. It is worth noting that the word *hrw* [**line 5**] ends with the determinative A (A 2) this writing was used from the Middle Kingdom and continued until the Greco-Roman era⁴⁸.
9. The determinative of Osiris [**line 4**] is unclear. It seems that the sign is R (R 8) if compared to Osiris (line 1), or the sign is A (A 40) if compared to Osiris [**line 5**].
10. It is worth mentioning that the word C appears without the sign D for the first time since the eighteenth dynasty⁴⁹ and continued to be used down to the Ptolemaic era⁵⁰. It is also noted that the sign C in a word C in a cursive hieroglyphic [**line 5**]⁵¹.

⁴⁶ SETHE 1908: 54.

⁴⁷ LEAHY 1977: 42, 48; LEITZ 2002: vol.2, 346.

⁴⁸ HERMANN 1940: 2*; ERMAN & GRAPOW, (eds.) 1971: *Wb.* vol.2, 15; ERMAN & GRAPOW, (eds.) 1971: *Wb.* vol.3, 324, 7-8.

⁴⁹ For similar examples dating from the eighteenth dynasty, see: LACAU 1926: vol.1, 175 [CGC. 34123]; KOEFOED–PETERSEN 1948: 23, 73 [Stela ÆIN 968], 38-39, 74 [ÆIN 972]; TOSI & ROCCATI 1972: 45 [N° 50011], 85 [N° 50050].

⁵⁰ For similar examples dating from the nineteenth dynasty, see: TOSI & ROCCATI 1972: 64 [N° 50031].

For similar example dating from the Late Period, see: *BMHT* 1987, vol.11, PLS. 4-5 [N° 35895; third intermediate period], [N° 37899; third intermediate period], 16-17 [N° 8450; third intermediate period], 18-19 [N° 27332; third intermediate period], 22-23 [N° 8453; 25th dynasty], 26-27 [N° 69521; twenty-fifth dynasty], 30-31 [N° 21637; twenty-fifth dynasty], 33 [N° 66842; twenty-fifth dynasty], 36-37 [N° 22915; Late Period], 40-41 [N° 8475; Late Period]; 42-43 [N° 8476; Late period], 44-45 [N° 8479; Late period], 48-49 [N° 35626; Late period], 50-51 [N° 8459; Late period], 52-53 [N° 22918; Late period], 56-57 [N° 56598; Late period], 58-59 [N° 35897; Late period], 60-61 [N° 8472- 8473; Late period], 62-63 [N° 21636; Late period]; LABUDEK 2010:125 [Stela Louvre IM 3043; Psmathek I], 131 [Stela Louvre IM 3072; Psmathek I], 136-137 [Stela Louvre IM 3082; Psmathek I], 139 [Stela Louvre IM 3129; Psmathek I], 145 [Stela Louvre IM 3130; Psmathek I], 154 [Stela Louvre IM 2656; Psmathek I], 166 [Stela Louvre IM 2624; Psmathek I], 169 [Stela

VI. DATE

The style and paleography of the stela date it to the twenty-sixth dynasty due to the following facts:

1. By comparing the artistic style of our stela with a similar one published by Munro, dated to twenty-sixth dynasty. Especially the depiction of *P3-di-Imn* praising the god Ra-Horakhty was commonly used during the twenty-sixth dynasty⁵².
2. The orthography of $\overline{\text{𓆎}}$ with the sign 𓆎 (N 6) as a determinative was first attested during the twenty-sixth dynasty⁵³.
3. The name *P3-di-Imn* was commonly used during the twenty-sixth dynasty⁵⁴.
4. The orthography of $\overline{\text{𓆏}}$ with the sign 𓆏 as a determinative was commonly used during the twenty-sixth dynasty⁵⁵.
5. The occurrence of the sign 𓆑 (R 18A) in the word *3bdw* was first attested during the twenty-sixth dynasty⁵⁶. It was noted that the end of the cobra is missing.

Louvre IM 3077; Psmathek I], 172 [Stela Louvre IM 3075; Psmathek I], 196 [Stela Louvre IM 3142; Psmathek I], 226 [Stela Louvre IM 1805; Psmathek I], 257 [Stela Louvre IM 4175; Amasis], 268 [Stela Louvre IM 4019; Amasis], 282 [Stela Louvre IM 4018; Darius], 284 [Stela Louvre IM 4046; Darius], 287-290 [Stela Louvre IM 4037; Darius], 294 [Stela Louvre IM 3999; Darius], 296 [Stela Louvre IM 4125; Darius], 303 [unknown; Darius], 306-307 [Stela Louvre IM 4011; Darius], 313 [Stela Louvre IM 4121; Darius], 317-318 [Stela Louvre IM 4120; Darius], 324-325 [Stela Louvre IM 4027; Darius], 328 [Stela Louvre IM 4169; Darius], 330 [Stela Louvre IM 4107; Darius], 334-335 [Stela Louvre IM 2857; Darius], 337-339 [Stela Louvre IM 138; Darius], 341-344 [Stela Louvre IM 42; Darius], 346 [Stela Louvre IM 2864; twenty-sixth dynasty], 354-355 [Stela Louvre IM 4062; twenty-sixth dynasty], 358 [Stela Louvre IM 4126; twenty-sixth dynasty and twenty-seventh dynasties], 374 [twenty-sixth dynasty and twenty-seventh dynasties].

For similar example dating from the Ptolemaic era, see: *BMHT* 1987, vol.11, PLS. 64-65 [N^o.8456], 70-71. [N^o.8462], 90-91 [N^o.8481].

⁵¹ LEAHY 1977: 42, 48.

⁵² MUNRO 1973: TAF.1, ABB. 1-2, 2, ABB. 5, 4, ABB. 15, 28, ABB. 101, 29, ABB. 103-106, 30, ABB. 107-110, 31, ABB. 111-112, 32, ABB. 115-118, 33, ABB. 119- 120, 34, ABB. 123, 126, 36, ABB. 131- 132, 134, 37, ABB. 136, 38, ABB. 140, 144; *HTBM* 1987, vol. 11, PLS. 2 [N^o 22917], 4 [N^{os}. 35895, 37899], 6 [N^{os}. 66425, 66421], 8 [N^{os}. 35896, 8451], 10 [N^{os}.8447, 66424], 12 [N^{os}. 8448, 42078], 14 [N^{os}. 25262, 8449], 16 [N^{os}. 8450, 35622], 18 [N^{os}. 27332, 22916], 24 [N^o.66426], 34 [N^o.22914], 36 [N^{os}. 22915, 22919], 62 [N^o. 21636].

⁵³ FAKHRY 1942: 90, FIG. 48, 78, FIG. 35, 157; JANSEN-WINKELN 2014: vol.4/1, 124, 573; JANSEN-WINKELN 2014: vol.4/2, 977, 983, 1008-1009, 1120, 1124.


⁵⁴ Ranke 1935: 121 [N^o. 23]; FAKHRY 1942: 98, 161-162.

⁵⁵ LEAHY 1979: 141-153

⁵⁶ FAKHRY 1942: 55, FIG.13, 59, 111, FIG.76; EL-SADEEK 1984: 45, 88, FIG.11, 137, 140, FIG.20; JANSEN-WINKELN 2014: vol.4/1, 43, 53, 66, 265, 519; JANSEN-WINKELN 2014: vol.4/2, 890, 904, 984, 987, 1003, 1019, 1064.

BIBLIOGRAPHY

- BALCZ, H.: «Die Gefäßdarstellungen des alten Reiches», *MDAIK* 5, 1934, 49-53.
- BARTA, W.: *Aufbau und Bedeutung der altägyptischen Opferformel*, *ÄgFo* 24, Glückstadt (Augustin) 1968.
- BARGUET, P.: *Les textes des sarcophages égyptiens du Moyen Empire, Ancient Literatures of the Near East* 12, Paris (Les Éditions du Cerf) 1986.
- BERLANDINI, J.: «Varia memphitica, VI-La stèle de Parâherounemyef», *BIFAO* 85, 1985, 56.
- BRUNNER-TRAUT, E.: «Lotos», in *LÄ* 3, Wiesbaden (O. Harrassowitz) 1980, col. 1091-1095.
- BIERBRIER, M.L.: *Hieroglyphic Texts from Egyptian Stelae, ect., in: The British Museum*, vol.11, London (The Trustees of the British Museum) 1987.
- CLERE, J.J. & VANDIER, J.: *Textes de la première période Intermédiaire et de la XI^{ème} dynastie, Bibliotheca Aegyptiaca* 10, Bruxelles (Fondation Égyptologique Reine Élisabeth) 1948.
- CURTO, S.: *L'Egitto Antico nelle Collezioni dell'Italia Settentrionale: Mostra*, Bologna (Museo Civico) 1961.
- DARESSY, M.G.: «Les cercueils des prêtres d'Ammon- Deuxième trouvaille de Deir el-Bahari», *ASAE* 8, 1910, 10.
- DAVIES, N. DE G.: *The Temple of Hibis in El Khargeh oasis. III. The Decoration*, *MMAEE* 17, New York (Metropolitan Museum of Art) 1953.
- EL-SADEEK, W.: *Twenty-sixth Dynasty Necropolis at Gize*, *BeitrÄg* 5, Wien (Afro-Pub) 1984.
- ERMAN, A. & GRAPOW, H. (EDS.): *Wörterbuch der ägyptischen Sprache*, 5 Bande, Leipzig, 1926-1931=[Wb].
- FAKHRY, A.: *Bahria Oasis I, The Egyptian deserts*, Cairo (Service des antiquités de L'Egypte) 1942.
- FAKHRY, A.: *The Inscriptions of the Amethyst Quarries at Wadi el-Hudi*, Cairo (Government Press) 1952.
- FAULKNER, R.O.: *The Ancient Egyptian Coffin Texts I*, Warminster (Aris & Philips) 1973.
- FISCHER, H.G.: «Merginalia II», *GM* 128, 1992, 72.
- FRANKE, D.: *Altägyptische Verwandtschaftsbezeichnungen im Mittleren Reich*, in: *Hamburger Ägyptologische Studien* 3, Hamburg (Verlag Borg) 1983.
- FREED, R.E.: *Stela Workshops of Early Dynasty 12*, in: P. Der Manuelian (ed.), *Studies in Honor of W.K. Simpson I*, Boston (Museum of Fine Arts) 1996.
- GRIFFITH, F.L.: *Hieratic Papyri from Kahun and Guro: (peincipally of the Middle Kingdom)*, London (Bernard Quaritch) 1898.
- GOYON, J.-C.: *Confirmation du pouvoir royal au nouvel an: Brooklyn Museum [papyrus] 47.218.50*, *Bd'É* 52, 1974, PL. IX A, 2.
- HALLMANN, A.: «Three Unusual Stelae from Abydos», *JEA* 101, 2015.
- HANNIG, R.: *Ägyptisches Wörterbuch. 2. Mittleres Reich and Zweite Zwischenzeit, Kulturgeschichte der Antiken Welt* 112, Mainz/Rhein (Verlag Philipp von Zabern) 2006.
- HASSAN, S.: *Hymnes religieux du Moyen Empire*, Le Caire (Imprimerie de l'Institut français d'archéologie orientale) 1928.
- HASSAN, S.: *Giza IV. 1932-1933*, Cairo (Government Press) 1943.
- HERMANN, A.: *Die Stelen der Thebanischen Felsgräber der 18. Dynastie*, *ÄF* 11, Glückstadt (Hamburg: J.J. Augustin) 1940.
- JANSEN-WINKELN, K.: *Inschriften der Spätzeit. Teil IV/I-II. Die 26. Dynastie*, Wiesbaden (Harrassowitz) 2014.

- JELINKOVA-REYMOND, E.: *Les inscriptions de la statue guérisseuse de Djed-Her-le-Sauveur*, Bd'É 23, 1956.
- JOHNSON, J.H.: *The Societal, Economic, and Legal Status of Women in Ancient Egypt*, in: *The life of Meresamun, a Temple Singer in Ancient Egypt*, edited by E. TEETER & J.H. JOHNSON, OIMP 29, Chicago 2009.
- KAMAL, A.: *Catalogue général des antiquités égyptiennes du Musée du Caire. Nr. 22001-22208: Stèles Ptolémaïques et Romainé*, Le Caire (Imprimerie de l'Institut français d'archéologie orientale) 1905.
- KAMAL, A.: *Tables d'offrandes I, Catalogue général des antiquités égyptiennes du musée du Caire, Nr. 23001-23246*, Le Caire (Institut français d'archéologie orientale) 1906.
- KOEFOD-PETERSEN, O.: *Les Stèles égyptiennes. PGNy Carlsberg I*, Copenhagen (Glyptothèque Ny Carlsberg) 1948.
- LABUDEK, J.: «Late Period Stelae from Saqqara. A Social-cultural and Religious Investigation», MA Thesis, University of Birmingham, 2010.
- LACAU, P.: *Stèles du Nouvel Empire. I, Catalogue général des antiquités égyptiennes du Musée du Caire*, Le Caire (Institut français d'archéologie orientale) 1926.
- LANGE, H.O., & SCHÄFER, H.: *Grab- und Denksteine of the Mittleren Reiches im Museum von Kairo*. vol. 1, *Text zu No. 20001-20399, Catalogue général des antiquités égyptiennes du Musée du Caire*, nos. 20001-20780, Berlin (Reichsdruckerei) 1902.
- LANGE, H.O., & SCHÄFER, H.: *Grab- und Denksteine des Mittleren Reichs im Museum von Kairo*, vol.3, *Listen zu N°. 20001-20780, Catalogue général des antiquités égyptiennes du Musée du Caire*, Berlin (Reichsdruckerei) 1925.
- LEAHY, M.A.: «Abydos in the Late Period: An Epigraphic and Prosopographic Study», PhD thesis, Cambridge University, 1977.
- LEAHY, M.A.: «The Name of Osiris Written », SAK 7, 1979, 141- 153.
- LEITZ, CH.: *Lexikon der ägyptischen Götter und Götterbezeichnungen*, vol. 2, OLA 111, Leuven (Uitgeverij Peeters en Department Oosterse Studies) 2002.
- LEITZ, CH.: *Lexikon der ägyptischen Götter und Götterbezeichnungen*, vol. 4, OLA 113, Leuven (Uitgeverij Peeters en Department Oosterse Studies) 2002.
- LEITZ, CH.: *Lexikon der ägyptischen Götter und Götterbezeichnungen*, vol. 6, in OLA 115, Leuven (Uitgeverij Peeters en Department Oosterse Studies) 2002.
- MARIETTE, A.: *Abydos: Description des fouilles exécutés sur l'emplacement de cette ville I. Ville antique-Temple de Sêti*, Paris (Librairie A. Franck, F. Vieweg, propriétaire) 1869.
- MILLARD, A.: «The Position of Women in the Family and in Society in Ancient Egypt with Special Reference to the Middle Kingdom», vol. 2, PhD thesis, University College London) 1976.
- MUNRO, P.: *Die Spätägyptischen Totenstelen*, ÄF 25, Glückstadt (J.J. Augustin) 1973.
- MURRAY, M.A.: *Saqqara Mastaba*, vol.1, London (Bernard Quaritch) 1905.
- NELSON, H.H.: *The Great Hypostyle Hall at Karnak. I. The Wall Reliefs*, UCOIP 106, Chicago (The Oriental Institute of the University of Chicago) 1981.
- QUIBELL, J.E.: *Archaic Mastabas, in Excavation at Saqqara 1912-1914*, Le Caire (Imprimerie de L'Institut français d'archéologie orientale) 1923.
- RADWAN, A.: «The Nun-basin of Renpetneferet», in: THOMPSON, S.E. & DER MANUELIAN, P. (eds.) *Egypt and Beyond: Essays Presented to L.H. Lesko upon his Retirement from the Wilbour Chair of Egyptology at Brown University*, 2008.
- RANKE, H.: *Die Ägyptischen Personennamen*, vol.1, Glückstadt (J.J. Augustin) 1935.

- SALEH, H.: «Investigating Ethnic and Gender Identities as Expressed on Wooden Funerary Stelae from the Libyan Period (c. 1069-715 B.C.E) in Egypt», PhD thesis, University of California 2006.
- SCHENKEL, W.: *Frühmittelägyptische Studien*, Bonn (Selbstverlag des Orientalischen Seminars der Universität) 1962.
- SELIM, H.: «The Stela of *Ir-wd3w*», *SAK* 28, 2000, 245 (c).
- SELIM, H.: «Three Identical Stelae from the End of the Twelfth or Thirteenth Dynasty», *SAK* 29, 2001, 327 (l).
- SETHE, K.: *Die altägyptischen Pyramidentexte: nach den Papierabdrücken und Photographien des Berliner Museums. I. Text, erste Hälfte. Spruch 1-468 (Pyr. 1-905)*, Leipzig (J.C. Hinrichs) 1908.
- SETHE, K.: *Die Altägyptischen Pyramidentexte: nach den Papierabdrücken und Photographien des Berliner Museums. II. Text, erste Hälfte. Spruch 469-714 (Pyr. 906-2217)*, Leipzig (J.C. Hinrichs) 1910.
- SETHE, K.: *Ägyptische Lesestücke zum Gebrauch im Akademischen Unterricht: Texte des Mittleren Reiche*, Leipzig (J.C. Hinrichs'sche Buchhandlung) 1959.
- SIMPSON, W.K.: *The Mastaba of Queen Mersyankh III, 7530- 7540 G, Giza Mastabas*, vol. 1, Boston (Museum of Fine Arts) 1974.
- SIMPSON, W.K.: *The Mastabas of Kawab, Khafkhufu I, II, G 7110-20, 7130-40 and 7150, Giza Mastabas*, vol.3, Boston (Museum of Fine Arts) 1978.
- SPIEGEL, J.: *Die Götter von Abydos: Studien zum Ägyptischen Synkretismus, GOF I*, Wiesbaden (Otto Harrassowitz) 1973.
- STEFANOVIĆ, D.: «Brief Communication, Four Middle Kingdom Stelae from the National Archaeological Museum, Athens», *JEA* 96, 2010, 207-215.
- STEFANOVIĆ, D.: «The Late Middle Kingdom Stela Avignon, Musée Calvet A 10», *GM* 96, 2013, 329-330.
- STEWART, H.M.: *Egyptian Stelae, Reliefs and Paintings, from the Petrie Collection. I. The New kingdom*, Warminster (Aris & Phillips Ltd.) 1976.
- TAWFIK, S.: «Aton Studies», *MDAIK* 35, 1979, 335-344.
- THIRION, M.: «Notes d'onomastique Contribution à une révision du Ranke *PN*», *RdE* 56, 2005, 177-178.
- TOSI, M., & ROCCATI, A.: *Stele e alter epigrafi di Deir el Medina n. 50001- n. 50262, Catalogo del Museo egizio di Torino*, 1, Torino (Edizioni d'Arte Fratelli Pozzo) 1972.
- WARD, W.A.: *Index of Egyptian Administrative and Religious Titles of the Middle Kingdom*, Beirut (American University of Beirut) 1982.

ROYAL TAMGA-SIGNS OF BOSPORUS II-III CENTURIES AS A RESULT OF THE BARBARIZATION

Evgeny Vdovchenkov

Department of Archaeology and History of the Ancient World Institute of History and International Relations, Southern Federal University. Russia, evvdovchenkov@sfedu.ru

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Vdovchenkov, Evgeny () "ROYAL TAMGA-SIGNS OF BOSPORUS II-III CENTURIES AS A RESULT OF THE BARBARIZATION," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 2. Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/2>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in *Journal of the General Union of Arab Archaeologists* by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

ROYAL TAMGA-SIGNS OF BOSPORUS II-III CENTURIES AS A RESULT OF THE BARBARIZATION

BY

Evgeny Vdovchenkov

Associate Professor at Department of Archaeology and History of the Ancient World Institute of
History and International Relations, Southern Federal University, Russia.

ABSTRACT

[AR]

علامات التامغا الملكية في مضيق البوسفور خلال القرنين الثاني والثالث

تُقدم هذه الدراسة تحليل استعمال «التامغا» الملكية على مضيق البوسفور. ويرتبط ظهور التامغا الملكية كتأثير لقبائل سارماتيا القاطنة حول مضيق البوسفور مع النخبة الحاكمة الأصلية في المنطقة. ويحلل المقال العلامات الملكية على اللوحات والأواني الفخارية. «التامغا» تم نحتها على ألواح رسمية عليها نقوش يونانية، ويُعتقد أن «لتامغا» على الألواح تم استبدالها باسم الملك. ويمكن صنع «التامغا» من مواد برونزية، بالإضافة إلى المطبوعات الذهبية المصنوعة في ورش الصناعة في البوسفور، وهي شبيهة بتلك في أحزمة ملوك البوسفور. وقد أصبحت هذه العلامات مميزة للغاية للدلالة على الانتماء إلى عناصر الجيش أو كدلالة على حراس أو أقارب ملك البوسفور. وقد عارضت (N. V. ZAVOLOKINA) الرأي القائل أن «التامغا» الموجودة على الألواح كانت عبارة عن علامات ملكية، واقترحت أن مثل هذه العلامات لا يمكن أن تكون أختام ملكية، وأنها عبارة عن أختام خاصة بقبيلتين مهاجرتين من عائلة سارماتيا. وتقدم هذه المقالة تفسيراً واضحاً يُخالف رأيها، لأنه بفضل استخدام «التامغا» من قبل ملوك البوسفور، تم إضفاء الشرعية على قوة ملك البوسفور في نظر السكان البرابرة القاطنين في البوسفور من خلال عبادة ملك البوسفور، والتي تم التعبير عنها في أشكال أخرى من خلال صورة «التامغا» الملكية، والتي عكست بالتأكيد استجابة أذهان المستوطنين السارمات على أراضي البوسفور. وقد أظهرت «التامغا» روابط الصلة للملك مع عشائر سارمات.

[EN] This study is devoted to the analysis of the tradition of the royal *tamgas* on the Bosphorus. The appearance of the royal *tamgas* is associated with the sarmatization of the Bosphorus and the dynastic ties of the ruling elite with the Sarmatian tribes. In this paper, I analyze the royal signs on plates and buckles. *Tamgas* were carved on official slabs with Greek inscriptions. It is believed that the tamga on the slab replaced the name of the king. Bronze elements of belt sets with *tamgas* of Bosporan kings, as well as gold prints, could be made in Bosporan workshops. These signs became a convenient sign of belonging to the army or guard of the Bosporan king or his relative. N. V. Zavoikina disputed the version that the tamgas on the slabs were royal signs. She suggested that such signs could not be royal but the signs of two clans of the Sarmatian migrants. The paper provides arguments against her opinion. Thanks to the use of tamga by Bosporan kings, the power of the Bosporan king was legitimized in the eyes of the barbarian population of Bosphorus. The cult of the Bosporan king, expressed, among other things, by the image of the royal *tamgas*, certainly found a response in the minds of the Sarmatian settlers on the territory of Bosphorus. *Tamgas* showed the kinship ties of the king with the Sarmatian clans.

KEYWORDS: Bosporan kingdom, *tamgas*, Sarmatians, ideology, Barbarization, Sarmatization, belts, plates.

I. INTRODUCTION

Sarmatian *tamgas* gained popularity in Eastern Europe from the 1st century BC to the 1st century AD. They spread among Iranian-speaking nomads, their neighbors, and migrants from Central Asia. According to many researchers, *tamgas* were signs of collective belonging [clan] in the Sarmatian world¹. They could be signs of ownership, signs of presence, or power.

Bosporus-a Greek kingdom in the Crimea and adjacent areas of the Eastern Azov region-was an example of the synthesis of ancient and barbaric cultures. In the first centuries of our era, Sarmatian *tamgas* appeared in the Bosporus. Special attention is drawn to the so-called royal *tamgas* of Bosporus associated with the rulers of this kingdom. The appearance of the royal *tamgas* was associated with the sarmatization of the Bosporus and the dynastic ties of the ruling elite with the Sarmatian tribes². We could see the so-called royal signs on the plates and buckles. Researchers pay special attention to two forms of *tamgas*: *tamgas* on steles (both with and without inscriptions) and tamgo-like signs on buckles.

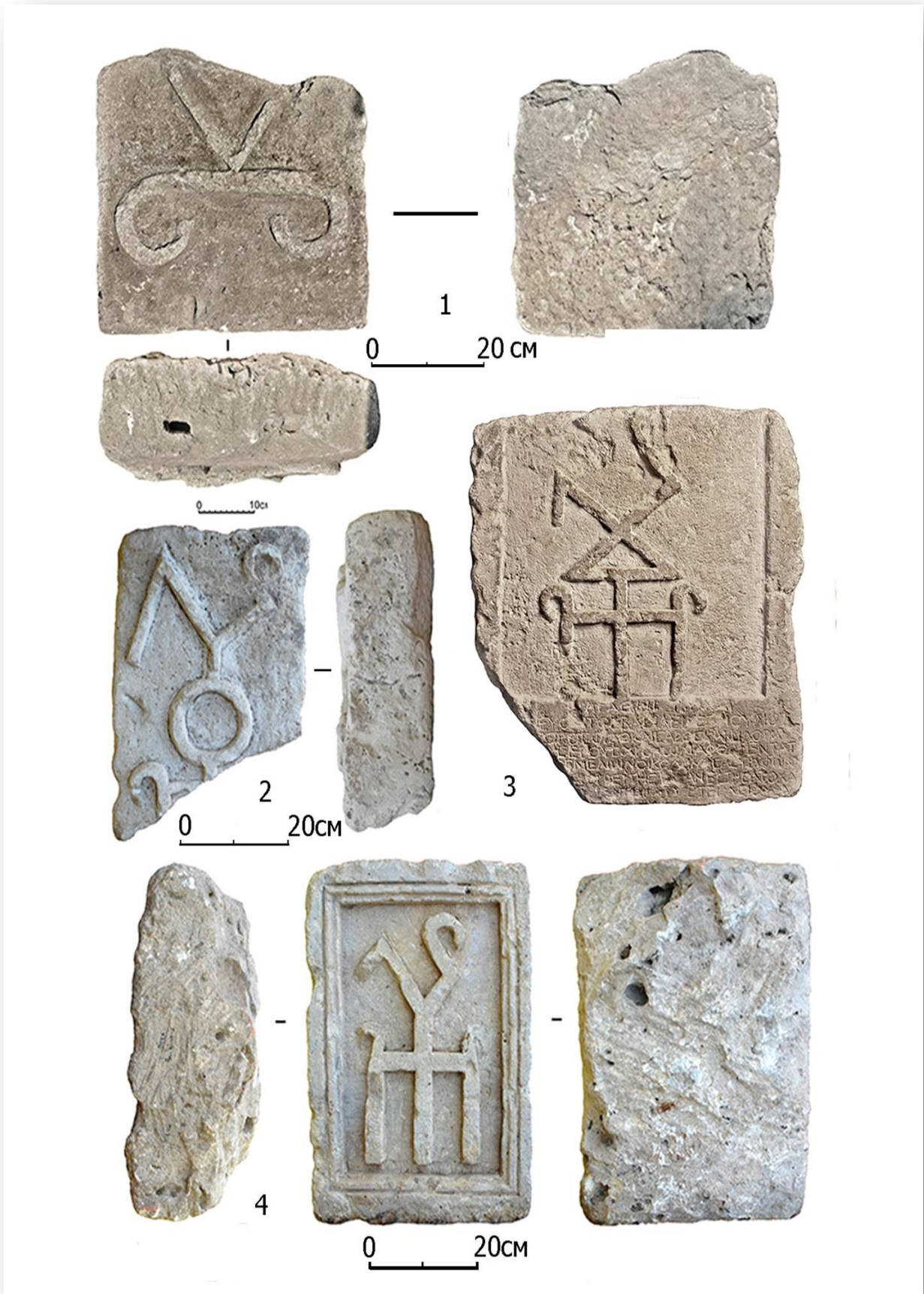
II. DESCRIPTION

Tamgas are carved on official slabs with Greek inscriptions. Six of such plates were known in Tanais; one came from Hermonassa. They are dated from 163 AD to 236 AD.

They are attributed to the Bosporan kings Remetalus, Evpator, Sauromat II, Reskuporid II and Ininfimei [FIGURES 1 & 5].

¹ YATSENKO & ROGOZHINSKII 2021.

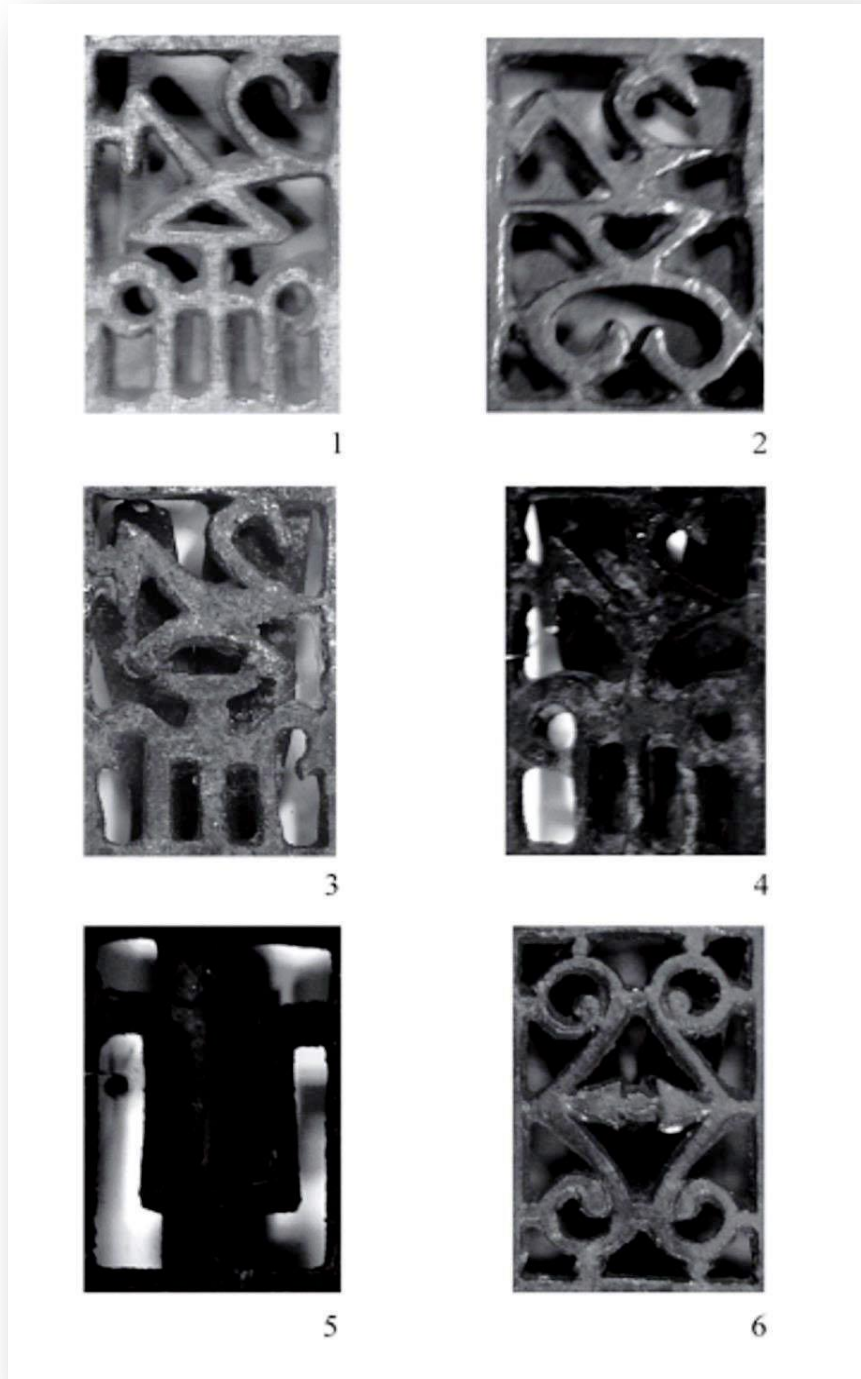
² YATSENKO 2001: 45-60; SHAROV 2013; KOZLOVSKAYA & ILYASHENKO 2018.



[FIGURE 1]: Four plates without inscriptions with royal *tamgas* from Tanais.
VDOVCHENKOV 2016: FIG. 1.

ROYAL TAMGA-SIGNS OF BOSPORUS II-III CENTURIES
AS A RESULT OF THE BARBARIZATION

It is believed that the tamga on the plate replaced the name of the king. Bronze elements of belt sets with *tamgas* of Bosporan kings and gold prints could be made in Bosporan workshops and awarded [FIGURE 2]. The manufacture of such belts might begin during the reign of Rimitalka, but the main part of the buckles dates back to the reign of Tiberius Julius Evpator. They are found mainly in Crimea, but there are also on the Asian part of the Bosporus.



[FIGURE 2]: Types of tamga on bronze buckles and belt tips.
TREISTER 2011: 306.

The question then arises – what meaning was invested in the *tamgas* on belts and belt tips? These belts did not belong to kings and their relatives but to ordinary residents. The belt is a symbol of dependence in the Iranian world. The tamga on the belt is a sign of dependence on some ruler or military leader. The finds of the tamga on the belt tell us about the subordination to the bearer of this tamga³. Tying a belt meant entering the service of the tsar to recognize their obligations. Apparently, the same idea was used to design the belts of the guards on the Bosphorus. These signs became a very convenient sign of belonging to the army or guard of the Bosporan tsar or his relative.

III. DISCUSSION

N. V. Zavoikina disputed the version that the *tamgas* on the slabs were royal signs. She suggested that such signs could not be royal but the signs of four families of two clans of the Tanaites⁴. Tanaites were Sarmatian settlers in Tanais. They were settled in Tanais, divided by ethnicity into two communities, Hellenes and Tanaites, after the middle of the II century AD.

N.V.Zavoikina reported the disproportion of plates with *tamgas* and without *tamgas*. For the Bosporan king Evpator, 4 plates are known, and only one has a tamga. Sauromat II has 40 plates, and only 3 with *tamgas*. Reskuporid II has 23 plates, and one with a tamga. Inifimei has 4 plates without *tamgas* and 3 with *tamgas*. That is, the clear predominance of plates without tamga– 68 versus 7. N. V. Zavoikina drew attention to the absence of «royal tamga» on the coins of the times of the four mentioned kings.

But Bosphorus was in a barbaric environment and was forced to use any means to normalize relations with the Sarmatians, including symbolic means. These *tamgas* were located mainly in the Asian part of the Bosphorus, i.e., where there were more barbarians for whom these *tamgas* were designed. There was no point in placing *tamgas* on coins because the barbarian population was alien to the idea of monetary circulation, and the symbols placed on coins could hardly reach them. Another thing was the plates with official inscriptions.

N.V. Zavoikina did not pay attention to the anepigraphic plates, which were probably embedded in the defensive walls [FIGURE 1]. The sign itself, embedded in the plate without inscriptions, without an accompanying inscription, suggests that its meaning was obvious to contemporaries, and it is unlikely that it is a sign of some aristocratic families. It is much more likely that the tsar possessed such a sign than an influential representative of the elite of Sarmatian origin.

A convincing argument against the position of N.V. Zavoikina was given by M. Yu. Treister [FIGURE 3]⁵. On two marble slabs framed by the figures of Victoria on the globe with a wreath and a palm branch in her hands, one or two tamga-like signs were depicted in relief. M.Yu.

³ IVANCHIK 2001: 160.

⁴ ZAVOIKINA 2013: 191-203.

⁵ TREISTER 2011: 321-327.

ROYAL TAMGA-SIGNS OF BOSPORUS II-III CENTURIES
AS A RESULT OF THE BARBARIZATION

Treister proved that the Bosphorus images of Victoria on the globe (or without) with a wreath in his hand, crowning a horseman or a foot soldier, or a tamga-like sign (signs), should be more likely to be considered in the context of state military victories, one way or another connected with the king power⁶. It is impossible to imagine the placement on these two plates with the figures of Victoria of signs not of kings but simply of some nobility.



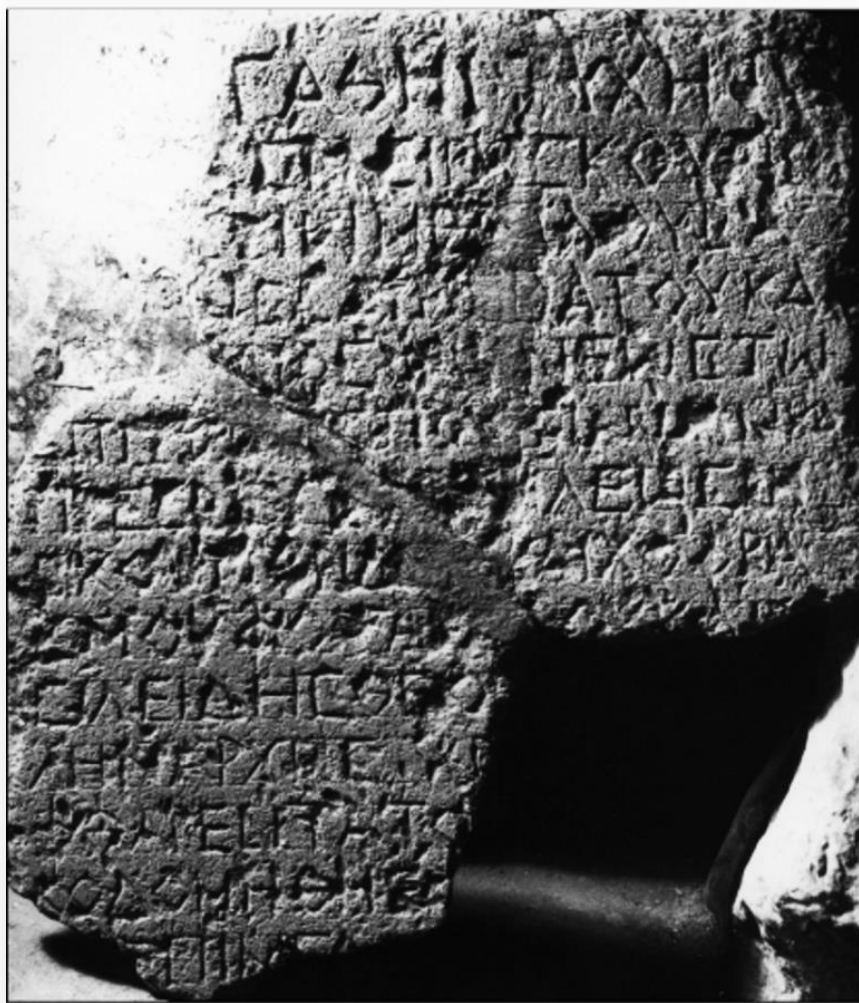
[FIGURE 3]: Slabs depicting Victoria and *tamga*-shaped signs from Germonassa: 1–Kerch, Lapidarium; 2–State. Hermitage. TREISTER 2011: 326-327

⁶ TREISTER 2011: 326-327

The geography of the area of the *tamga*-signs carved on slabs with official Greek inscriptions, on anepigraphic embedded slabs, as well as on anepigraphic slabs with relief images of Victoria figures, included not only Tanais but also Asian Bosporean centers – Phanagoria and Hermonassa. This is absolutely logical since these signs were found in cities surrounded by Sarmatians and aimed at the barbaric population of the outskirts of the Bosphorus.

In Tanais, back in 1853, two important building inscriptions from the time of Reskuporid III (210-222) were found during excavations. Almost identical in content, they were installed in different places. At the southern gate (it was located right at the port, and the Greeks entered the city through this gate), the slab was made of simple limestone [FIGURE 4]. There is no tamga on this slab, but there is a mention of the name of the king:

[ἐπι
β]ασιλεῖ
Ὶησκουπό-
[ριδι]



[FIGURE 4]: CIRB 1246. The slab at the southern gate of Tanais, «RegionsNorth Shore of the Black Seaunspecified subregion CIRB 1246»: <https://epigraphy.packhum.org/text/183986>, accessed on 31/12/2022.

At the northern gate (facing the steppe, through which the Sarmatian nomads entered), the same inscription was made on spectacular marble. At the top, it was accompanied by the tamga of the king instead of his name [FIGURE 5]. This tamga of the king that replaced his name was a sign of royal power, understandable for nomads. In other words, the city administration was sure that the Sarmatians would be duly impressed by the royal tamga and the shine of polished marble; thus, it was worth spending extra money.



[FIGURE 5]: CIRB 1248. A slab at the northern gate of Tanais with a tamga, «Regions North Shore of the Black Sea unspecified subregion CIRB 1248»: <https://epigraphy.packhum.org/text/183988>, accessed on 31/12/2022.

IV. CONCLUSION

Tamgas were consistently used by Bosporan kings. They had several advantages: the legitimization of the Bosporan king's power by his connections with the nomadic Sarmatian elite; the image was succinct and concise; it was familiar to people associated with the Sarmatian nomadic world. All these advantages were significant when communicating with the Iranian population but were not obvious to the Greek population of Bosphorus. Perhaps the plates with *tamgas* were unknown on the European Bosphorus.

The cult of the Bosporan king, expressed, among other things, by the image of the royal *tamgas*, certainly found a response in the minds of the Sarmatian settlers on the territory of Bosphorus. *Tamgas* showed the kinship ties of the king with the Sarmatian clans. The symbol of this connection was the royal *tamgas*, which became popular in that part of the Bosphorus where the Iranians had a high specific gravity and influence.

BIBLIOGRAPHY

- CIRB—*Corpus of Bosporan inscriptions, Album of illustrations*, Saint Petersburg (Bibliotheca classica Metropolitana) 2004.
- ZAVOIKINA, N.: *Bosporan fias: Between the Polis and the Monarchy*, Moscow (Russian Foundation for the Promotion of Education and Science) 2013.
- IVANCHIK, A.: Rec.: «Dudarev S.L. The Relationship of the Tribes of the North Caucasus with the Nomads of Southeastern Europe in the Pre-Scythian era (IX - First half of the VII century BC)», *Russian Archeology* 2, Armavir, 2001, 157-161.
- TREISTER, M.: «Bronze and Gold Buckles and Belt Tips with Tamgo—Like Signs- a Phenomenon of the Bosporan Culture of the II Century A.D», *Antiquities of Bosporus* 15, 2011, 303-340.
- YATSENKO, S.: *Signs-Tamgas of the Iranian-Speaking Peoples of Antiquity and the Early Middle Ages*, Moscow (Oriental Literature of the Russian Academy of Sciences) 2001.
- KOZLOVSKAYA, V & ILYASHENKO, S. M.: *Tamgas and Tamga-Like Signs from Tanais*, In: KEIL, W. E. et Al. (eds.), *Zeichentragende Artefakte im sakralen Raum*, (Series: Materiale Textkulturen, De Gruyter, 2018, 167-198.
- «Regions North Shore of the Black Sea unspecified Subregion CIRB 1248»:
<https://epigraphy.packhum.org/text/183988>. Accessed on 31/12/2022
- «Regions North Shore of the Black Sea unspecified subregion CIRB 1246»:
<https://epigraphy.packhum.org/text/183986>. Accessed on 31/12/2022
- SHAROV, O. V.: «Bosporus Etudes: towards the Question of Emergence of the Royal *Tamgas*», *Stratum plus* 5, 2013, 43-49.
- VDOVCHENKOV, E.V.: *Tamgi Tanais in the social space of the Iranian-Bosporan borderland*, In *Eastern Europe in antiquity and the Middle Ages. Writing as an element of the state infrastructure. XXVIII Memory readings of the V.T. Pashuto*, Moscow (IVI RAS) 2016, 48-54.
- YATSENKO, S. A. & A.E. ROGOZHINSKII, A. E.: «Some Notes on the *Tamga-Signs* of Sarmatians and their Neighbors», *Proceedings in Archaeology and History of Ancient and Medieval Black Sea Region*, №. 13, (Nizhnevartovsk 2021) 733-767.

SOME REMARKS ON THE EXECUTION PLACE xbt IN ANCIENT EGYPT

Mona Abou El Maati El Nadi

Associate Professor at Faculty of Archaeology, Cairo University, Egypt ., dr.monaelnadi@gmail.com

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

El Nadi, Mona Abou El Maati () "SOME REMARKS ON THE EXECUTION PLACE xbt IN ANCIENT EGYPT," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 3.

Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/3>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in *Journal of the General Union of Arab Archaeologists* by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

SOME REMARKS ON THE EXECUTION PLACE *hbt* IN ANCIENT EGYPT

BY

Mona Abou El Maati El Nadi

Associate Professor at Faculty of Archaeology, Cairo University, Egypt .

ABSTRACT

[AR]

بعض الملاحظات عن مكان الإعدام (xbt) في مصر القديمة

في هذه المقالة ، تحاول الباحثة إلقاء الضوء على أحد أماكن العقاب في مصر القديمة ، ألا وهو مكان الإعدام الذي يسمى Xbt . ومن خلال الدراسة ، نلاحظ أنه وعلى الرغم من تعدد أماكن العقاب وتنوعها في مصر القديمة ، إلا أن التفاصيل قليلة في وصف هذه الأماكن ، ولم ينتشر تصويرها سواء في المناظر أو في كتب العالم الآخر . وقد كان الإعدام يقطع الرأس موجود في التصاوير منذ العصور المبكرة ، وكان عقابا لأعداء الملك كما سجل على بعض الصلايات من العصور المبكرة وبصفة خاصة صلاية الملك نعرمر ، ولكن عقوبة الإعدام كنتيجة لجرمة ارتكها شخص ما ، لم تثبت بصورة واضحة . والإعدام يعني فناء الشخص نهائيا ، والنجاة من العقاب بالإعدام كان غاية الشخص دائما حتى ولو كان مسينا . ومكان الإعدام xbt لم يصور بشكل صريح وهو يعبر عن أداة الإعدام نفسها وليس المكان . ويبدو من خلال الدراسة أنه يعبر عن مكان يتم فيه الإعدام بواسطة الأداة xbt . وقد ظهرت في كتاب الموتى بردية أي ، الفصل 50 . حيث يصور المتوفي مارا بسلام موجها ظهره لأداة الإعدام ، التي يتم تمثيلها بقاعدة تشبه القل ، يخرج من أطرافها عمودان ، ومن فوقها سكين كبير ، ينزل للأسفل لقطع الرأس ، وهناك قطرات من الدماء تسقط منها . ومن خلال هذا البحث ، نستطيع أن نلقي الضوء على بعض المحاولات التي من الممكن أن تضمن حتى للمذنب أن ينجو من مصير الفناء بنجاح .

[EN] In this paper, I highlight one of the punishment places in ancient Egypt [*hbt*], i.e., the place of execution, which was mentioned early in the Pyramid Texts. This place is considered the oldest known punishment place in ancient Egypt. Many punishment places for the wrongdoers were mentioned in texts, but were not precisely described or clearly represented. It is well known that in the early period, decapitation existed. It was a traditional performance against the enemies of the king. It could be traced as early as king *Narmer*, as recorded on his palette exhibited in the Egyptian Museum in Cairo. However, beheading as a consequence of a crime was not attested definitively. The enemies of the king were represented on the palette with their heads cut off, and each enemy had his head between his legs. Keeping the heads of the enemies with the bodies was an exceptional habit in ancient Egyptian representations. That notice made the author wonder why the ancient Egyptians were keen to preserve the heads of the guilty, although they were considered enemies and deserved total extinction. Thus, the author thought of the execution place [*hbt*] in order to know more about this place and determine the destiny of the guilty, whether a total extinction or another chance to survive. The execution place was known from the Old Kingdom and continued through the Greco-Roman Period. It was in the shape of a shrine upon which a huge knife was descended downwards to cut off heads and two upright posts. The only representation of the place of execution appeared in Spell 50 of the Book of the Dead. The act of cutting off heads, the ancient Egyptians never expressed clearly in art, but the heads were cut off in many scenes. Even when the tool of execution was represented as in the Book of the Dead, only the tool, not the act, was shown. Moreover, the deceased was given his back to it, as if he meant only to warn the people from falling into this tortured place. In this study, the author gives some remarks on the place of execution, and how the deceased tried to avoid entering such place, as he prayed to pass safely by the execution place. The author noticed that the ancient Egyptians ignored the details of the punishment places. They only showed the beheaded bodies of the enemies or the sinners in different scenes in life and the books of the afterlife. They let us wonder, if there were a total extinction by beheading the wrongdoers or if there were some ways to escape that ugly fate. In this paper, the author searched for the ways that the ancient Egyptians used to avoid extinction and found out that (1) by some religious texts from different periods, (2) by some sacrifice, especially an animal to save the person, and (3) by the help of some deities (e.g., Thoth, Shesemu, Sekhmet, Mehit, Matyt, and Horus-Merty) he might survive and have another chance to escape that ugly fate.

KEYWORDS: Decapitation, death, execution, evildoers, knife, punishment, seth.

I. INTRODUCTION

The ancient Egyptians believed that the fate of the enemies of *Re* and *Osiris* was the destruction of their souls after death¹. The sinners were considered enemies of the god who deserved avenging just as the criminals on earth. *Apophis*², the great traditional snake enemy of the sun-god, who was eternally threatening the voyage of the sun god *Re* was said to be punished by putting him in irons³. The head of the god Seth was cut off by the sharp knife⁴.

The Netherworld was not simply a paradise, but it was also a place of punishment and torment for the enemies of the gods. Thus, some spells allowed the deceased to pass safely by the punishment places, while the wicked were slaughtered by executioners described as those of «sharp of fingers»⁵. There were several ways to punish the wrongdoers, as the juridical procedures were essential to keep justice (*Maat*) both in life and in the afterlife⁶.

The punishment of cutting off heads was one of the most severe penalties in ancient Egypt⁷. The paper dealt with the place of punishment and execution called *hbt*, where heads were cut off. It is well known that in early periods, decapitation existed. It was a traditional performance against the enemies of the king, but beheading as a consequence of a crime, was not attested definitively⁸.

The representations of the convicted with hands tied from behind were an artistic standard in ancient Egypt, the action that referred to the following step was the cutting off the head. When the head was cut off, it was said to be eaten by a mythical animal⁹, which the author suggests that it was just a kind of threat. The «slaughter» was especially used in a butchery context. It often appeared as a punishment for the deceased in funerary compositions, especially during the New Kingdom.

Terrible threats could occur on the passage through the otherworld, which the deceased dreaded and wanted to avoid, especially the decapitation in the execution place of the god *Osiris* by the hands of the slaughtering demons, as shown in a picture from the tomb of *Ramses VI*¹⁰.

¹ ZANDEE 1960: 19, 147–158.

² It was depicted as a huge serpent. It was believed to exist from primeval times, but the texts did not mention its name until the Middle Kingdom. It appeared in the realm of *Duat* to destroy the sun bark. TROY 2017: 323-326; WILKINSON 2017: 221.

³ CT 1954: vol.5, 245c; ZANDEE 1960: 22; MORENZ 2003: 201-205.

⁴ URK 1929: vol. 6,49, 7.

⁵ TAYLOR 2010: 5f.

⁶ SELIM & SUZAN 2001; MAHMOUD 2003; ALLAM 2012: 129-145; MÜLLER-WOLLERMANN 2012: 147-158.

⁷ BOOCKS 1986: 68-72.

⁸ Several studies addressed corporal/capital punishment and punitive mutilation, as well as the chronological limits of the evidence. LORTON 1977: 2–64; LEAHY 1984: 199–206; VAN DEN BOORN 1984: 373; BOOCHS 1986: 68–72; VAN DEN BOORN 1988: 118–19; WILLEMS 1990: 27–54; BOOCHS 1991: 57–64; MCDOWELL 2001: 315–320.

⁹ HORNUNG 1968: 17; HELCK 1977: 1219;. Ammyt was a mythical creature represented beside the balance in the juridical hall. It eats the heads when they were cut off. See: SEEBER 1976:186.

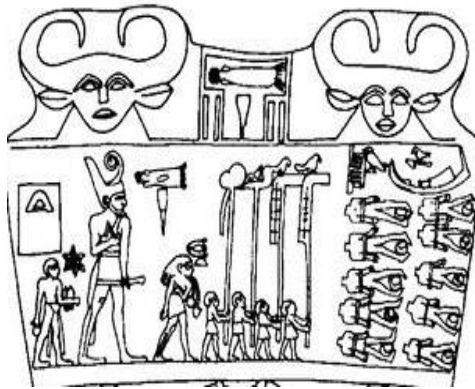
¹⁰ PIANKOFF 1954: 195.

For the ancient Egyptians, decapitation meant irreversible second death and total extinction¹¹. It was the fate of all unrighteous sinners, who failed the final judgment before Osiris. We have many terms and phrases that refer to decapitation and the places where that action took place. In this research, the author spots the light on:

- The punishment place (*hbt*) where heads were being cut off.
- Did the sinners have a chance to survive extinction or not?
- Was there a sacrifice by an animal instead of a guilty human?

II. THE DECAPITATION IN ANCIENT EGYPT

In early periods, decapitation was a traditional custom performed as one of the various known methods of punishment¹². Some representations of persons whose heads were cut off appeared on king *Narmer* Palette¹³ [FIGURE 1].



[FIGURE 1]: WILKINSON 2003: 172.

Ten persons-considered enemies- were to the right of the palette, with their heads being cut off and bounded, each with his head between his legs. The main tool used in the execution was the knife, so the place of execution was distinguished in hieroglyphics with the knife sign. In reading the scene above, one can say that the act of decapitation took place inside a place called «the execution place». The god Horus opened the gate to the king to show him this victory, while another representation of Horus above seemed to be holding a «knife» by which the prisoners were executed¹⁴. Throughout Egyptian history, the representations of people with heads being cut off were noticed. For example, from the books of the afterlife: In the Book of *Amduat*, the eighth hour [FIGURE 2], nine standards are fixed in the ground, each with a knife and a human head is hanged to a stick.

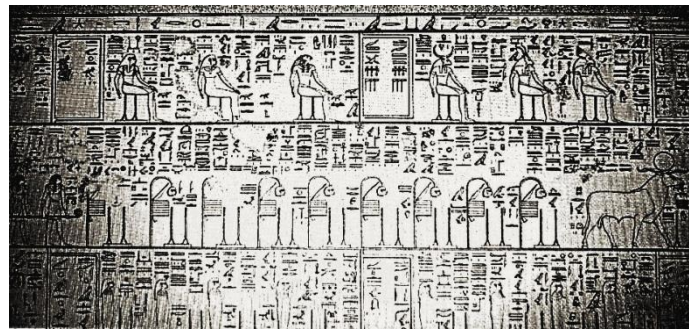
¹¹ HORNUNG 1963: 149–64.

¹² CAPART 1936: 125-126; PICARDO 2007: 221ff.

¹³ QUIBELL 1898-1899; PETRIE 1953: PL. K.; WILKINSON 2003: 172.

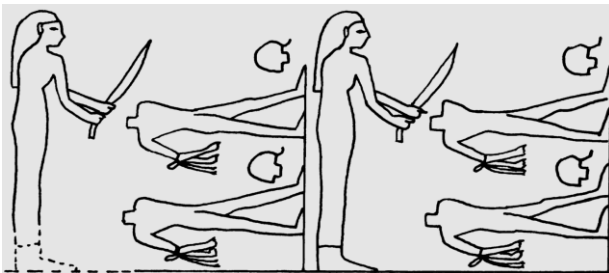
¹⁴ O'Connor gave the scene a «celestial interpretation», as he said the ship was the sun-god *Re*'s morning bark with a swallow at the prow representing sunrise. Horus hovering above the bark represented protection and the defeated enemies were those of *Re*, see: O'CONNOR 2011: 149-152. For more details on the Palette, see: Davies, W.: *Masking the Blow, The Scene of Representation in Late Prehistoric Egyptian Art*, Berkeley 1992.

The texts are read as follows, «What they are doing is getting rid of the enemies of sun-god (*Re*) everywhere in this city, then they put their heads on the edge of the knife»¹⁵.

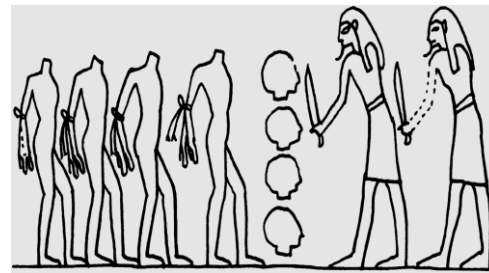


[FIGURE 2]: LEFEBURE 1886: PL.XLVIII.

In the Book of Caverns, the sixth division [FIGURE 3] shows the punishment and torture of the enemies of *Re*. One of these shows two goddesses holding knives, and two enemies with their hands tied together from behind, everyone with a decapitated head placed in front of them.



[FIGURE 3]: PIANKOFF 1954: FIG. 20.



[FIGURE 4]: PIANKOFF 1954: FIG.11.

In the Book of *Amduat*, the seventh division and the second chapter in the book of Caverns [FIGURE 4] showed the enemies tied from behind, with heads being cut off. The *Amduat's* Eleventh Hour text also commented on the ultimate import of their inclusion, capturing the essence of the theme of decapitation in mortuary religion: «You have been decapitated, that you may not come into being»¹⁶.

In the scenes of decapitation, the author could notice that:

First: The enemy had banded hands from behind, although this act was performed only with animals that were tied well before slaughtering.

Second: Although many terms referred to the place of execution, the ancient Egyptians ignored the details of such places.

Third: In all the decapitation scenes, the ancient Egyptians preserved the decapitated heads, between the legs, in front of the body or simply beside the body. The head was not taken away from the body, so the author suggests the possible resurrection and not extinction of those punished ones.

¹⁵ HORNUNG 1963: vol.1, 142-143; II, 589-597.



¹⁶ HORNUNG 1963: vol.1, 189 & vol.2, 181; HORNUNG 1994:782.

III. NOTIONS AND REPRESENTATIONS OF *hbt* 𓂏𓂏¹⁷:

Several terms referred to the punishment places¹⁸ in religious texts, including the Coffin Texts, Book of the Dead, Book of Gates, and Book of Afterlife (*Amduat*).

They were written as follows:

𓂏𓂏, 𓂏𓂏^x, 𓂏𓂏^xi, 𓂏𓂏𓂏, 𓂏𓂏¹⁹, 𓂏𓂏, 𓂏𓂏²⁰.

They took the determinative as  ,  in the Late Period and the Greco-Roman period.

hbt is known as «the Place of Execution»²¹, «the Place Where the Enemies Fall»²², «the Place Where the Rebels Fall»²³ or «Destroyed», and «the Place Where *Apophis* was killed»²⁴.

They were also translated as «the Place of Truth» and the «*dw't hbt*», i.e., «the Place of Truth of the Afterworld»²⁵.

In the Middle Kingdom, it was translated as «the Place of Execution in which the Evil persons were Slaughtered»²⁶ or «the Slaughterhouse»²⁷.

The word was derived from the verb *hb*, which means «to Execute»²⁸ and the verb *hbt*, which means «to Punish the Enemy»²⁹.

The consonant letter «*d*» sometimes replaced the «*t*» letter, and the word, in this case, was read as *hbd*, derived from the verb *hbd*, i.e., «to be hated»³⁰.

In the Temple of Edfu, there was a «slaughterhouse» called «The Eastern *hbt*», where the sun rose³¹. As the sun god *Re* rose every morning, *Re* defeats his foes in the east to establish *Maat*³². The significance of which might be mythological, and there might be such a building to the east of the main temples of the supreme god of the country³³.

¹⁷ ERMAN & GRAPOW (eds.): *Wb.* 1929: vol.3, 252(9-14) MK.

¹⁸ *šyt-wrt, išt, shwn.*

¹⁹ DAVIES 1913: TAF. 8, 43; BLOCK 1961: 105.

²⁰ WILSON 1997, 719.

²¹ FAULKNER 1962: 187.

²² WILSON 1997, 719.

²³ *CT* 1935: vol.1, 70 d spell 23.

²⁴ EDFOU 1928: vol.3. 252, 2-3.

²⁵ HANNIG 2006: 635.

²⁶ ERMAN & GRAPOW (eds.): *Wb.* 1929: vol.3, 252,9-19.

²⁷ BUDGE 1911: vol.31, 299. LESKO suggested that the word may be translated as «a cellar» or «a dungeon». See: LESKO 2002: 354; *KRI* 1968: vol.1, 69, 6.

²⁸ BUDGE 1911: 298; *Urk* 1915: vol.5,13, 87; *CT* 1956: vol.6, 73g; ERMAN & GRAPOW (eds.) *Wb.* 1929: vol.3, 252,7.

²⁹ ERMAN & GRAPOW (eds.): *Wb.* 1929: vol.3, 285,5.

³⁰ ERMAN & GRAPOW (eds.): *Wb.* 1929: vol.3, 257,10 MK; LESKO 2002: 355; BAKIR 1943: 79, PL.2; 79,(3)

³¹ LEPSIUS 1842: TAF.13[13].

³² WILSON 1997: 719.

³³ BAZIN 2004: 31-40.

In the Pyramid Texts:

The place *hbt* was the oldest of the punishment places. It was mentioned once with the determinative of a «mountain» or a «sand- hill», as follows³⁴:

ndr hnty imntyw c.k hr spt hbt

«The Foremost of the Westerners, takes your hand on the edge of the *hbt* -mountain» .

Faulkner translated *hbt* here³⁵ as «a mountain», but we notice that the word «edge» here represents the place of slaughter, on which the neck of a guilty man was placed to be cut off, and the sign here is the base of the *hbt* tool as appeared in the Book of the Dead, which looked like a mountain (*dw*). Accordingly, the author suggests the translation would be «the *hbt* place» not a mountain.

In the Coffin Texts:

The word *hbt* was mentioned several times in the Coffin Texts as follows:

n iti.k m m imyw hb(t) m-m iryw 3wwt

«You won't be among those who are in the execution place³⁶, among those who belong to the long Knives *3wwt*»³⁷ .

n ck(i) r hbt

«(I hate the eastern land), I will not enter to *hbt*» .

n rdit.k m hbt

«You are not taken to the place *hbt* »³⁸ .

š3s.k hbt (nh.i.i) hbt

«You will pass the place of execution»³⁹ .

³⁴ SETHE 1910: Pyr.1393.

³⁵ FAULKNER 1962: 187.

³⁶ CT 1935: vol.1, 197 c-e .

³⁷ FCD 1962: 2; ERMAN & GRAPOW (eds.): *Wb* 1926: vol.1, 4,10-14. *3wwt* was a long knife that was held by the demons of the afterlife. It was the punishment tool inside the execution place in the afterlife. See: WILKINSON 1992:189; EISSA 2009: 512.

³⁸ CT 1935: vol.1, 196 h-197 a-c

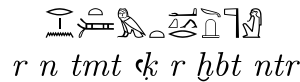
³⁹ CT 1951, IV, 353 c.



«You will escape the execution place»⁴⁰.

In the Book of the Dead (the Papyrus of *Ani*)⁴¹ [FIGURE 5]

In Spell 50, the name of the chapter is labeled as:



«Word for not entering the god's place of execution»⁴².

Ani walks away from the shambles, represented symbolically by a knife dripping blood on two supports that protrude from a sand mound⁴³. Those who were to be slaughtered placed their necks between the two upright posts, and the huge knife descended to cut off their heads⁴⁴.



[FIGURE 5]: FAULKNER 1985: 66 (BM.10470/16).

Here, *Ani* is seen standing with his back turned to the slaughter's block⁴⁵, suggesting that he passes the dangerous area unharmed⁴⁶. The deceased is put on a slaughter block and killed like a piece of cattle. *Ani* says:

«I have joined up my head and neck in heaven (and) in earth...may nothing happen to break them apart make me strong (the gods) against the slaughterer of my divine father»⁴⁷.

The drops of blood dripping from the knife might be the blood of something else, not the deceased. Therefore, the author suggests that these drops of blood might belong to a sacrificed animal in order to avoid being tortured as *Ani* walked soundly and safely.

⁴⁰ CT 1951, IV, 366 d.

⁴¹ BARGUET 1967; BUDGE 1910: 287.

⁴² ALLEN 1974:61.

⁴³ FAULKNER 1985: 66 spell [50]

⁴⁴ BUDGE 1910: 287.

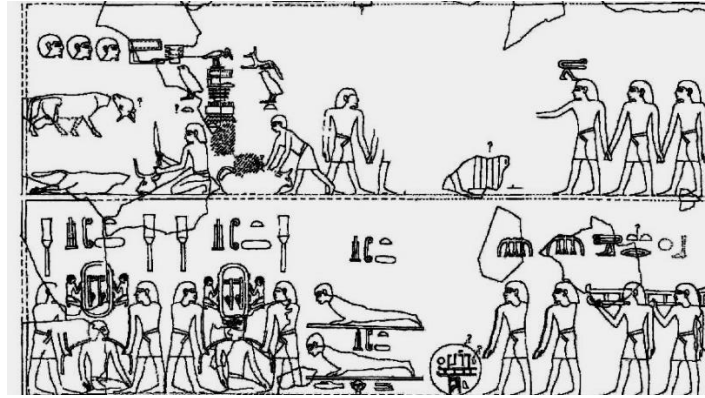
⁴⁵ BLOK 1961: 109.

⁴⁶ MUNRO 2018: 56, FIG.4,12.

⁴⁷ BUDGE 1910: 102ff.

In the Tomb of Montuherkhepeshef - Thebes (TT 20)⁴⁸:

A sacrifice scene, on the wall of the tomb, in the first register, represents the decapitation of three humans and three oxen. The scene could be read as torture or execution, whether performed in reality or not.



[FIGURE 6]: DAVIES 1913: PL.8 [scene 3].

In the center of the second register, there is a circle, representing the burial shaft or a pit. A sled is shown with two poles set upright in it by two men, and another two are carrying a sled on their shoulders, used in the funeral cortege. The legend says, «The pit *hbt* of burial». The first two men are in the act of consigning something to the pit. Above them is the legend «conveying it to the pit». Two kneeling men on the left with a cord around their necks, the ends of which are in the hands of two strong men⁴⁹. Blok designates the word «pit» here like a kind of passage supposed for the offerings sent to the underworld⁵⁰. But as the enemies are prepared to be executed and they are tied well, as it seems to be the place of execution.

From the scene above, the author suggests that cutting off the heads of the sinners could be replaced by cutting off the heads of the animals because of the presence of the human heads with the ritual of cutting off the heads of the animals.

The slaughtering of animals in ancient Egypt was performed in a place called the *nmt* place. It was originally related to cutting off the animals in temples. Then, it was extended to be used as a punishment place for sinners and was confused with the *hbt* place. The two places *hbt* and *nmt* were interfered together and might support the idea of sacrificing an animal in order to rescue the convicted people.


⁴⁸ PORTER & MOSS 1927: *PM 1*, 34-35 (Time of King Thutmosis III, Dra Abou El Naga).

⁴⁹ DAVIES 1913:15.

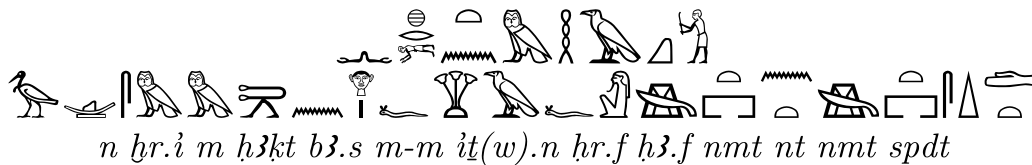
⁵⁰ BLOK 1961: 106.

IV. THE EXECUTION PLACE *hbt* AND THE SLAUGHTER BLOCK *nmt*:

Originally, the word  *nmt*⁵¹ referred to a «slaughter block» or a «chopping

block». It took the determinative of a butcher’s wooden table, with a knife upon it  upon which animals were cut for the benefit of the king in his temple⁵². It was derived from the word *nm*, i.e., «knife» used for butchering⁵³. Then, it was extended to be the room or the place where the enemies of the gods were defeated⁵⁴. The slaughter place *nmt* was known in the Middle Kingdom⁵⁵. It was one of the dangerous places that faced the most often, enemies were brought to *nmt* to meet their end: «Behold your foes are in *nmt*»⁵⁶ and «Those who do evil to you are on *nmt*»⁵⁷. The author suggests that there was a kind of sacrifice by an animal instead of humans to avoid the ugly fate of extinction. Therefore, confusion is found between the *hbt* and the *nmt*.

In a text, we read:

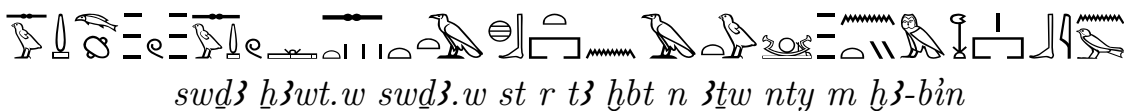


«I have not fallen as a prey whose soul is with he who is around the slaughter-place of the slaughter place of Sothis»⁵⁸.

The deceased is describing himself as a «prey», just like animals that fall as «preys» or «plunders».

V. SOME DEITIES ASSOCIATED WITH THE EXECUTION PLACE

The deceased prayed to the gods in order to save him from the dangerous place (*hbt*), as in the following text from the book of the Dead:



«May you keep their bodies safe, protect them from the place of execution of the enemies who are in the dangerous chamber»⁵⁹

Some deities with severe character were closely associated with the places of execution, such as *Sekhmet*, *Mehit*, *Matyt*, *Shesemu*, *Thothh*, and *Horus-Merty*.

⁵¹ERMAN & GRAPOW (eds.): *Wb.* 1928: vol.2, 264,1; *UrK* 1915: vol.5,16, 56.

⁵² ABUEL-YAZID 2019: 7-24; ZANDEE 1960: 166; BLOK 1961: 105.

⁵³ WILSON 1997: 521.

⁵⁴ERMAN & GRAPOW (eds.): *Wb.* 1928: vol.2, 2, 264.

⁵⁵GARDINER 1957:515.

⁵⁶ EDFOU 1884: vol.1, 498, 3.

⁵⁷ EDFOU 1929: vol.4, 16,235.

⁵⁸ LESKO 1972: 102, 106; *CT* 1961: vol.7, 1099 [B1Bo].

⁵⁹ Chapter 164, 165 from the Book of the Dead.

Sekhmet:

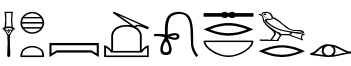
Sekhmet was famous for her power, violence, and vengeance⁶⁰. One of her important tools was the knife⁶¹. She was considered an enemy, who threatened the deceased in the afterlife, and he feared her⁶². Her slaughterers were mentioned in the Book of dead⁶³.

On the top of a stele that dates back to the Persian Empire ⁶⁴- Hannover Museum, the god *Seth* is depicted with a human body and the head of an ass⁶⁵. His hands are tied from behind. He is depicted inside the place of execution, which takes the form of a shrine, above which there are two knives, while a turtle⁶⁶and a lizard ⁶⁷- two of the symbols of Seth⁶⁸- under it.



[FIGURE 7]: BLOK 1961: TAF. II.

The goddess *Sekhmet*, is seated with the body of a woman, and the head of a lion, wearing the *Atef* crown, holding the *wag* scepter in her left hand, and the sign of life in her right hand⁶⁹. *Sekhmet* is captioned as:


shmt hry nmt psdt.s r nb wr(t) ir

«*Sekhmet*, Mistress of the execution place (block), whose fire threatens all, the great»⁷⁰.

The text on the stele refers to the place of execution with only the determinative of a shrine upon which is the knife. The author thinks that the transliteration of the place of execution could be written as *nmt* or *hbt*, as they have the same determinative.

⁶⁰ SCHMITZ 1985: 325; HOENES 1976: 32f.

⁶¹HOENES 1976:241.

⁶² ZANDEE 1960: 214.

⁶³ ZANDEE 1960: 205.

⁶⁴ GUENTCH-OGLOUEFF 1940: 128.

⁶⁵ A similar stele in Egyptian Museum in Cairo *Jd* 43014. BLOK 1961: 97-113.

⁶⁶ EDFOU 1897: vol.2, 74 (7). As the aspect of Seth. CRUZ-URIBE 2009: 208.

⁶⁷ TAYLOR 2016: FIG. 9,96; LOSSE 1998: 36, FIG.15.

⁶⁸ LEFÉBURE 1874: 53; MORET 1915: 254; FISHER 1968: 19.

⁶⁹ GUENTCH-OGLOUEFF 1940: 129.

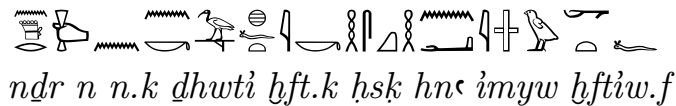
⁷⁰ DERCHAIN 1964: 20-21, PL.2.

Seth is represented with his arms tied from behind,. Some scenes showed him attached to a pole⁷¹. This punishment gesture appeared in the Ptolemaic period, in *Jumilhac* Papyrus, in which *Seth* had a similar image ⁷².

The shape in which the god *Seth* was represented is the shape of the shrine of execution above which the knife is represented. Blok described the place where *Seth* was tied, as a sandhill upon which *Seth* was executed⁷³.

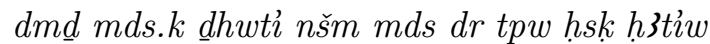
Thoth:

In the Pyramid Texts, Thoth appears against the enemies of Osiris as a butcher⁷⁴



«Thoth has laid hold of your foe for you, he having been decapitated together with those who are in his following».

Thoth's blade was sharpened, and the knife that removes heads and cuts out hearts was honed, and [it] will remove the heads and cut out the hearts of those who will cross NN when he goes to you, Osiris⁷⁵.



«Sharpen your knife, O Thoth which is keen and cutting which removes heads and cuts out hearts».

It shows the importance of using words, such as sharpening the knife before decapitation, which was performed before slaughtering an animal.

Shesmu

Shesmu was identified as a «butcher»⁷⁶. He was often represented with the head of a lion or completely anthropomorphic⁷⁷. Certain passages in the Coffin Texts attested to the blood thirstiness of *Shesmu*⁷⁸. He was the one who cooked the flesh of the guilty⁷⁹. He held the stone knife⁸⁰.

He was given the title «Slaughter of the Souls»⁸¹. He was connected with wine with red color as blood, and he was identified as the «lord of blood». Since the wine was a good thing, his association with blood was considered one of righteousness, making him an

⁷¹ See examples in CAUVILLE 2000: vol.3, 264; WILSON 1997: 650; DERCHAIN 1946: 20.

⁷² VANDIER 1962: 149, PL.10.

⁷³ BLOK 1961: 113.

⁷⁴ BLOK 1961: 108; Pyr.635c, 962, 2110c.

⁷⁵ The translation here is that of J. Pyr. 477; SETHE 1910: 961–63; ALLEN 2005: 129; FAULKNER 1969: 165. Thoth also decapitates enemies of the deceased in *Pyr.* 367.

⁷⁶ HELCK 1985: 590-591.

⁷⁷ CICCARELLO 1977: 43ff; DRIOTON 1939: 77-78 n.c

⁷⁸ CT 1935: vol.1, 123b & 1956: vol.4, 179h; ZANDEE 1960: 16-21b.

⁷⁹ Pyr.403 a.

⁸⁰ NAVILLE 1886: 153A:32.

⁸¹ CICCARELLO 1977: 47.

executioner of the unrighteous, being the slaughterer of souls. When the main form of execution was by beheading, it was said that *Shesmu* ripped off the heads of those who were wicked, and threw them into a wine press to be crushed into red wine, which was given to the righteous dead. Beheading was commonly carried out by the victim resting their heads on a wooden block, so *Shesmu* was referred to as the overthrower of the wicked at the block⁸². This violent aspect led to the depiction, in art, as a lion-headed man, which perhaps was a bridge between him and *Sekhmet*, the goddess of vengeance⁸³.

He was responsible for the slaughter place in the famous spell of chapter 17th of the Book of the Dead⁸⁴:



dd sphw m isftiw r nmt.f dnt b3w ptr rf sw šsmw pw sj 3ti pw n wsir

«Who lassoes evildoers for his Slaughter block who cut souls, who is he? He is *Shesmu*, the butcher of Osiris»⁸⁵.

The god *Re* was called upon to rescue the dead from *Shesmu*, who dragged the guilty enemies of Osiris to his slaughter⁸⁶. In the temple of *Hathor* in Dendera- the east staircase east side *Shesmu* was depicted with a human head carrying pieces of meat after the first priest. He is labeled as:



dd mdw in šsmw nb shw-hr hry-tp nmt hsk m3-hd m3i-hsy hr hftyw

«Recitation by *Shesmu*, lord of the slaughterhouse of Horus, lord of the slaughter place, who slaughters the white antelope, the lion before the enemies»⁸⁷.

***Mehit* (*mḥit*)⁸⁸:**

She was a lion goddess⁸⁹, whose name means «she from the north»⁹⁰. In Edfu, her guardian character appeared, as she was identified with goddesses: *Menhit*, *Neseret*, and *Sakhmet*. She was identified as «she brules the enemies»⁹¹.

⁸² SCHOTT 1938: 88-93, Pl. VI.

⁸³ «Shezmu»: <https://ancientegypt.fandom.com/wiki/Shezmu>. Accessed on 01/01/2022

⁸⁴ NAVILLE 1886: PL. XXV.

⁸⁵ NAVILLE 1886: 17; Urk 1915: vol.5, 55- 56, 16-17, 57,1-2(=TB 17).

⁸⁶ CICCARELLO 1977: 46; PETERSON 1964: 84.

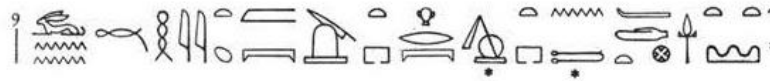
⁸⁷ MARIETTE 1873-1874 : PL.VII, VII,184(1), PL. DCLXXI, VII,184 (2-3); XVI.

⁸⁸ A goddess could be assimilated with Isis and Hathor. LEITZ 2002: vol.3, 371.

⁸⁹ KAKOSY 1982: 5-6; JUNKER 1917:57.

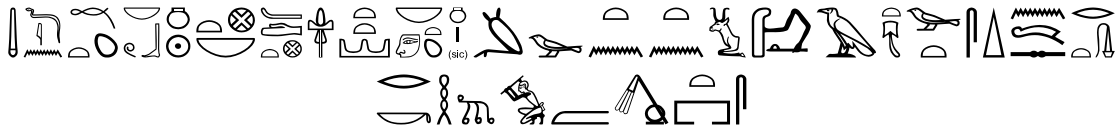
⁹⁰ KEES 1956:10

⁹¹ EDFOU 1884: vol.1, 2, 313; JUNKER 1917: 57; DE WIT 1951: 301ff.



wnn mh̄yt m h̄ry nmt h̄ry h̄bt nt bh̄dt ʾʾbtt

«Mehit, the one who presides over the block and the place of execution in eastern Edfu»⁹².



dd mdw ʾn mh̄yt nbt wbnt nbt bh̄dt ʾʾbtt nbt h̄nt...dndn

h̄ʾt wrt spd nsrt r.k h̄ryw m h̄bt.s

«Words spoken by Mehit lady of Webnet, lady of eastern Edfu, the forward lady the great warrior goddess, she is furious and the flame is hot for you and the enemies are in her execution place»⁹³.

Matyt⁹⁴:

One of the lioness goddesses, worshiped in the 2nd provinces of Upper Egypt. She was represented holding two knives as a protectress goddess with the goddess *Sekhmet* in Dendara, who defeated *Seth* as the text says:



dd mdw ʾn M̄tyt h̄ry-ʾb t̄nʾ špst wsrt h̄nt Pr-špst rdʾ stš hr h̄bt n pr.f ʾm.s n k̄.f r ʾbdw dt

«Words spoken by Matyt in the middle of *Thinis*, the favorable, the strong in the temple of (*Hathor*), who placed *Seth* in the execution place and he never go out and never enter Abydos forever»⁹⁵.

⁹² EDFOU 1987: vol.2, 16, 85.

⁹³ EDFOU 1884: vol.1, 314, 17-18.

⁹⁴ DE WIT 1951: 292-367; Leitz 2003: 213.

⁹⁵ CAUVILLE 1997 : X/1, 219,2, X/2, PL.103;132.

Horus-mertry

He was a form of Horus. His name means «Horus of the two eyes»⁹⁶. He was depicted as a falcon or a falcon-headed god, crowned with two horizontal horns, and carrying the sun-disc, surrounded by the *Uraeus*. He was considered the mighty Horus who defeated *Apophis*.



dd mdw in hr mrty nb šdnw hr ib wts-hr tm kn hftyw.f rdi hftyw r hbt

«Words spoken by *Horus Mertry* of *Shednw* in *Edfu*, He puts the enemy in *hbt*»⁹⁸.

⁹⁶ WEBER 1977 : 996; LEITZ 2002: vol.5, 260-261; ERMAN & GRAPOW (eds.) : *Wb* 1928:vol.2, 107; GUERMEUR 2005: 200-201.

⁹⁷ Leitz 2002 :vol.2, 82.

⁹⁸ EDFOU 1932: 157, 6, PL.CLXVI.

V. CONCLUSION

The main target for the ancient Egyptians was how to get rid of all evils from the world of the living and the hereafter. They believed that the fate of the enemies of the gods was the destruction of their souls after death.

The place of execution took the shape of a shrine, upon which a knife descended to cut off heads. It was known in the Old Kingdom and continued to be known in the Greco-Roman Period. The only representation we have of the place of execution is in Spell 50 of the Book of the Dead. This place was represented as two upright posts, and a huge knife descending downwards.

The ancient Egyptians never represented the act of decapitation clearly in art. Nevertheless, the heads were cut off in many scenes, even when the tool of execution was represented as in the Book of the Dead, only the tool, not the act, as if they meant only to warn people from falling in this torturing place.

The author concluded that the deceased might survive with the help of:

- I-The magical spells that helped the deceased from falling in the place of execution, as the deceased prayed to survive total extinction by decapitation. Even in the case of decapitation, his head was never taken away from his body, it was always represented beside his body, hoping to rejoin the body by magical spells.
- II- The sacrifice of an animal to avoid the ugly fate of entering the place of execution, as seen in the similarity between the slaughter of an animal and that of the human, e.g.,
 - 1-The scenes of the convicted that showed the person with his hands tied from behind, as animals were tied well before slaughtering.
 - 2-The sharp knives to cut off heads were mentioned when punishing the guilty, as they were necessary when slaughtering animals.
 - 3-The drops of blood were shown dripping from the knife in the Book of the Dead, while the deceased was shown in good shape without any injuries in the body.
- III-Finally, with the help of the deities they may survive by the petitions made for all severe deities as Sekhmet and the above mentioned.

BIBLIOGRAPHY

- ABUEL-YAZID, M.: «Architecture of the Slaughterhouse of the Seti Temple at Abydos, in Abydos: The Sacred Land at the Western Horizon», *British Museum Publications on Egypt and Sudan 8*, Paris (Peeters) 2019, 7-24.
- ALLAM, SCH.: *Strafrechtliches im Pharaonischen Ägypten*“, In *Strafe und Strafrecht in den Antiken Welten, Unter Berücksichtigung von Todesstrafe, Hinrichtung und Peinlicher Befragung* (Harrassowitz Verlag) Wiesbaden 2012, 129-145.
- ALLEN, J.: *Ancient Egyptian Pyramid Texts*, Atlanta (Society of Biblical Literature) 2005.
- ALLEN, TH.G., *The Book of the Dead or Going Forth by Day*, Studies in Ancient Oriental Civilization 37, Chicago (The University of Chicago Press) 1974.
- AMIN, S. & SUZAN, A.: *al-Ġarīmah wa'l-siqāb fī al-Fīkr al-Mīṣrī al-Qadīm*, Alexandria (Dar El Maarefa El Gameia) 2001.
- BAKIR, A.: «A Donation Stela of the Twenty-Second Dynasty», *ASAE 43*, Le Caire, 1943,75-81.
- BARGUET, P.: *Le Livre des Morts des anciens Égyptiens*, Paris (Éditions du Cerf) 1967.
- BAZIN, L.: «Enquête sur les lieux d'exécution dans l'Égypte ancienne, Égypte», *Afrique et Orient 35*, 2004, 31-40.
- BUDGE, W.: «The Egyptian Heaven and Hell II, The Short Form of the Book Am-Tuat and the Book of Gates», *Books on Egypt and Chaldea 21*, 1906.
- BUDGE, W.: *Book of the Dead*, 3 vols, London (Kegan Paul, Trench, Trubner & Co.) 1909
- BUDGE, W.: *A Hieroglyphic Vocabulary to the Theban Recension of the Book of the Dead*, vol. 30, London (Kegan Paul, Trench, Trubner & Co.) 1911.
- BLOK, M.: «Eine Magische Stele aus der Spätzeit», *Acta Orientalia*, vol. 12, 1961,97-113.
- BOOCKS, W.: «Strafen», In *LÄ VI*, Wiesbaden (Otto Harrassowitz) 1986, 68-72.
- BOOCKS, W.: «Religiöse Strafen, in Ursula Verhoeven and Erhart Graefe» eds., *Religion und Philosophie im Alten Ägypten: Festgabe für Philippe Derchain zu seinem 65 Geburtstag am 24. Juli 1991*», *OLA 39*, Leuven 1991, 57-64.
- VAN DEN BOORN, G. P. F.: *Duties of the Vizier: Civil Administration in the New Kingdom*, Studies in Egyptology, London and New York (Kegan Paul International) 1988.
- CAPART, J.: «Note Sur la Décapitation en Égypte», *ZÄS 36*, Leipzig 1936, 125-126.
- CAUVILLE, S., *Le Temple de Dendara. Les Chapelles Osiriennes. Transcription et Traduction III*, *Dendara 10*, Le Caire (IFAO) 1997.
- CICCARELLO, M.: «Shesmu, The Letopolite, Studies in Honor of George R. Hughes», *Studies in Ancient Oriental Civilization 39*, Chicago, 1977, 43-54.
- CHASSINAT, É.: *Le Temple d'Edfou I-VII*, Le Caire (IFAO) 1884-1932.
- CLOSSE, K.: «*Les Ânes dans l'Égypte Ancienne*», *Anthropozoologica 27*, 1998, 27-39.
- CRUZ-URIBE, E.: «*sth ʕ phty* : Seth, God of Power and Might», *JARCE 45*, 2009, 201-226.
- DAVIES, N. DE G.: «Five Theban Tombs», *Archaeological Survey of Egypt 21*, London (Kegan Paul, Trench, Trubner & Co.: B. Quaritch) 1913.
- DE BUCK, A.: *The Egyptian Coffin Texts*, 7 vols, Chicago (The University of Chicago Press) 1935-1961.
- DRIOTON, E.: «Une Statue Prophylactique de Ramses III», *ASAE 39*, 1939, 57-89.
- DE WIT, C.: *Le Rôle et Le Sens du Lions dans l'Égypte Ancienne*, Leiden (E.J.Brill) 1951.
- DERCHAIN, Ph.: «A Propos d'une Stele Magique du Musée Kestner À Hanovre», *RdE 16*, 1946, 19-23.
- EISSA, S.: «knife in Ancient Egypt from the Predynastic Periods to the End of the New kingdom», *Ma Thesis / Cairo University*, 2009.
- ERMAN A., & GRAPOW, H., *Wörterbuch der Ägyptischen Sprache im Auftrag der Deutschen Akademien*, Bd. 1-6, Leipzig-Berlin (Akademie Verlag) 1825-1955 [=Wb].

- FAULKNER, R.O.: *The Ancient Egyptian Book of the Dead*, London (British Museum Publications) 1985.
- FAULKNER, R.O.: *The Ancient Egyptian Coffin Texts*, 3 vols, Warminster (Aris&Philips) 1973–1978.
- FAULKNER, R.O.: *Ancient Egyptian Pyramid Texts*, Oxford (Clarendon Press) 1969.
- FAULKNER, R.O.: *A Concise Dictionary of Middle Egyptian*, Oxford (University Press) 1962.
- FAULKNER, R.O.: «The Bremner-Rhind Papyrus-III. D. The Book of Overthrowing Apep», *JEA* 23, 1937, 160-185.
- FAULKNER, R.O.: *The Papyrus Bremner-Rhind*, BM 10188, Bruxelles (Fondation Égyptologique Reine Élisabeth) 1933.
- FISHER, H.G.: *Ancient Egyptian Representations of Turtle*, The Metropolitan Museum of Art, New York (Metropolitan Museum of Art) 1968.
- GARDINER, A., *Egyptian Grammar*, Oxford (Oxford University Press) 1957.
- GUENTCH-OGLOUEFF, M.: «Noms Propres Imprécatoires», *BIFAO* 40, 1940, 117-133.
- GUERMEUR, I.: «Les cultes d'Amon Hors de Thèbes. Recherches de Géographie Religieuse», *BEPHE* 123, Paris (Brepols) 2005, 200-201.
- HANNIG, R., *Großes Handwörterbuch ägyptisch-Deutsch (2800-950v.Chr.) Kulturgeschichte der Antiken Welt* 64, Mainz (Verlag Philipp von Zabern) 2006.
- HELCK, W.: «Schesemu», In *LÄ* 5, Wiesbaden (Otto Harrassowitz) 1985, 590-591.
- HELCK, W.: «Hinrichtungsgerät», In *LÄ* 2, Wiesbaden (Otto Harrassowitz) 1977, 1219.
- HELCK, W.: *Urkunden der 18. Dynastie. Heft 17*, Berlin (Akademie Verlag) 1955-57.
- HOENES, S.: *Untersungen zu Wesen und kult der Göttin Sachmet*, Bonn, (Rudolf Habelt Verlag GmbH) 1976.
- HORNUNG, E.: *Das Amduat I, Texte*, Wiesbaden (Harrassowitz) 1963.
- HORNUNG, E.: *Das Amduat: Die Schrift des verborgenen Raumes 1-2*, ägyptologische Abhandlungen 7, Wiesbaden ((Harrassowitz) 1967.
- HORNUNG, E.: *Altägyptische Höllenvorstellungen*, *ASAW* 59/3, Berlin (Akademie-Verlag) 1968.
- HORNUNG, E.: *The Valley of the Kings: Horizon of Eternity*, translated by David Warburton, New York (Timken Publishers) 1990.
- HORNUNG, E.: *Die Unterweltsbücher der Ägypten*, Zürich & München (Artemis-Verlag) 1992.
- HORNUNG, E.: «Texte zum Amduat 3», *Aegyptiaca Helvetica* 15, Genève (Editions de Belles Lettres) 1994, 645-850.
- JUNKER, H.: *Die Onurislegende*, Wien (Alfred Hölder) 1917.
- KAKOSY, L.: «Mehit», In *LÄ* 4, Wiesbaden (Otto Harrassowitz) 1982, 5-6
- KEES, H.: *Der Götterglaube im Alten Aegypten*, Berlin (Akademie-Verlag) 1956.
- LEAHY, A.: «Death by Fire in Ancient Egypt», *JESHO* 27, 1984, 199–206.
- LEFEBURE, E.: *Le Mythe Osirien, les yeux d'Horus*, Étude Égyptologique 3, 1874.
- LEFEBURE, E.: *Le Tombeau de Séti I^{er}*, Paris (E. Leroux) 1886.
- LEITZ, CHR.: *Lexikon der Ägyptischen Götter und Götterbezeichnungen 7 Bde*, *OLA* 128, Leuven-Paris (Peeters) 2003.
- LEPSIUS, R.: *Das Todtenbuch der Ägypter: nach dem Hieroglyphischen Papyrus in Turin*, Leipzig (Georg Wigand) 1842.
- LESKO, L.: *The Ancient Egyptian Book of Two Ways*, California (University of California Press 17), 1972.
- LESKO, L.: *A Dictionary of Late Egyptian*, Berkeley, California (B.C.Scribe Publications) 2002.
- LORTON, D., «The Treatment of Criminals in the Ancient Near East», *JESHO* 20, 1977, 2–64.
- M.MAHMOUD: *Al -Garimat wa- al- iqab fi Misr al-qadimat*, Cairo (Wizarat al-taqafat) 2003.
- MARIETTE, A., *Dendérah IV : description générale du grand temple de cette ville*, Paris (Librairie A. Franck, F. Vieweg, propriétaire) 1873-1874.

- MC DOWELL, A. G.: «Crime and Punishment», In DONALD B. REDFORD(ed.), *The Oxford Encyclopedia of Ancient Egypt* 1, Oxford 2001, 315–20.
- MORENZ, L.D.: «Apophis: On the Origin, Name, and Nature of an Ancient Egyptian Anti-God», *JNES* 63/3, University of Leipzig, 2003, 201-205.
- MORET, A.: «Horus Sauveur», *Revue de l'Histoire des Religions*, T.71, 1915, 254.
- MÜLLER-WOLLERMANN, R.: Todesstrafe und Folter im Pharaonischen ägypten, In *Strafe und Strafrecht in den Antiken Welten*, Wiesbaden (Harrassowitz) 2012, 147-158.
- MUNRO, I.: «The Significance of the Book of the Dead Vignettes, Book of the Dead Becoming God in Ancient Egypt», *OIMP* 39, 2018, 56.
- NAVILLE, E.: *Das ägyptische Todtenbuch, der XVIII bis XX Dynastie*, Berlin (A. Asher & Co.) 1886.
- O'CONNOR, D., «The Narmer Palette: A New Interpretation», in E. TEETER (ed.), *Before the Pyramids, Oriental Institute Museum Publications* 33, Chicago 2011, 149-152.
- PETRIE, W. M. F.: Ceremonial Slate Palettes, *BSEA* 66, London, 1953.
- PETERSON, B.J.: «Der Got Schesemu und das Wort mdd», *Orsucana* 12, 1964, 83-88.
- PIANKOFF, A.: *The Tomb of Ramesses VI*, New York (Pantheon Books) 1954.
- PICARDO, N. S.: «Semantic Homicide and the so Called Reserve Heads: The Theme of Decapitation in Egyptian Funerary Religion and Some Implications for the Old Kingdom», *JARCE* 43, 2007, 221ff.
- PORTER B. & MOSS, R.L.B., *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings VII*, Oxford (Griffith Institute) 1959=[PM.].
- QUIBELL, J.E., *Hierakonpolis*, Pt.II, Plates and Discoveries, London (B.Quaritch) 1898-1899.
- SCHMITZ, B.: «Schesmu», In *LÄ V*, Wiesbaden (Otto Harrassowitz) 1985, 325.
- SCHOTT, S. «Das Blutrunstige keltergerat», *ZÄS* 74, 1938, 88-93.
- SCHOTT, S.: *Urkunden Mythologischen Inhalts*, Leipzig (J.C. Hinrichs'sche Buchhandlung) 1929-1939.
- SETHE, K.: *Die Altägyptischen Pyramidentexte* 2, Leipzig (J.C.Hinrichs) 1910.
- SEEBER, CH., *Untersuchungen zur Darstellung des Totengerichts im Älten Ägypten*, München ; Berlin :(Deutscher Kunstverlag) 1976.
- «Shesmu»: <https://ancientegypt.fandom.com/wiki/Shezmu>. Accessed on 01/01/2022
- TAYLOR, R.: «Deconstructing the Iconography of Seth», PhD Thesis, University of Birmingham 2016.
- TAYLOR, R *Spells for Eternity, The Ancient Egyptian Book of the Dead*, London (British Museum Press) 2010.
- TROY, L.: «The Question of Evil in Ancient Egypt», *JEA* 98/1, 2017, 323-326.
- VANDIER, J., *Le Papyrus Jumilhac*, Paris (Centre National de la Recherche Scientifique) 1961.
- WEBER, M.: «Harmerti», In *LÄ II*, Wiesbaden (Otto Harrassowitz) 1977, 996.
- WILKINSON, R.H.: *Reading Egyptian Art, a Hieroglyphic Guide to Ancient Egyptian Painting and Sculpture*, London (Thames and Hudson) 1992.
- WILKINSON, R.H., *The Complete Gods and Goddesses of Ancient Egypt*, Cairo (The American University in Cairo Press) 2003.
- WILLEMS, H.: «Crime, Cult and Capital Punishment (Mo`alla Inscription 8)», *JEA* 76, 1990, 27-54.
- WILSON, P., *A Ptolemaic Lexikon*, Leuven (Peeters) 1997.
- ZANDEE, J.: «Death as an Enemy According to Ancient Egyptian Conceptions», *Studies in the History of Religions* 5, Leiden (Arno Press) 1960.

2023

THE TITLES OF AHMOSE [THE OWNER OF THEBAN TOMB N^o. 224]

Nelli Boraiei

Lecture at Egyptology Department, Faculty of Archaeology, Cairo University, Egypt.,
nelli.saber@hotmail.com

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Boraiei, Nelli (2023) "THE TITLES OF AHMOSE [THE OWNER OF THEBAN TOMB N^o. 224]," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 4.

Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/4>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in Journal of the General Union of Arab Archaeologists by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

THE TITLES OF AHMOSE

[THE OWNER OF THEBAN TOMB N^o. 224]

BY

Nelli Boraie

Lecture at Egyptology Department, Faculty of Archaeology, Cairo University, Egypt.

ABSTRACT

[AR]

ألقاب أحمس، صاحب المقبرة الطيبية رقم 224

تهدف هذه الورقة إلى دراسة ألقاب أحمس، المشرف على المخازن، الذي عمل خلال عهد تحتمس الثالث (الأسرة 18). وهو صاحب المقبرة رقم 224 التي تقع في جبانة شيخ عبد القرنة بطيبة الغربية. وتسلط مزيداً من الضوء على أهمية صاحب المقبرة ومكانته الاجتماعية بناءً على ألقابه، سواء تلك التي ظهرت على بعض مقتنياته (بقايا تماثيل طيبية، ومخروط جنائزي مشكوك في انتسابه أو تلك الألقاب الموجودة في مقابر أبنائه، وكذلك اقتفاء أثرها في نقوش مقبرته.

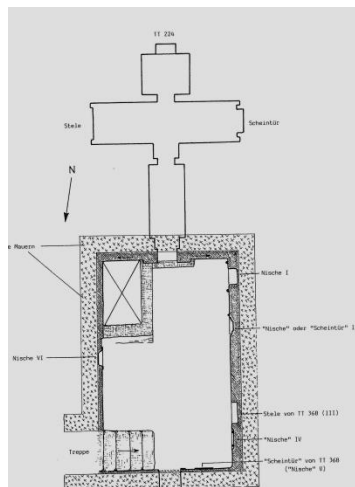
[EN] This paper investigates the titles of Ahmose, the granaries' superintendent during Thutmose III's reign (18th dynasty), and the owner of tomb 224 at Šaīh ʿAbdel al -Qurna in western Thebes. The paper highlights his social status based on his titles, whether those which appeared in his possessions (fragments of Thebes' statues and a questioned funerary cone) or those in his sons' tombs, as well as tracing them in his tomb inscriptions.

KEYWORDS: Ahmose, Cone Titles, TT 224, Non-cone titles, Ahmose's sons, Ahmose's career, Sennefer, Amenemopet.

I. INTRODUCTION

The Theban Tomb, TT 224, [FIGURE 1] is located near the Ramessuem, in the lower necropolis of Šaīḥ ʿAbdel al -Qurna ¹. It belonged to Ahmose, the granaries' superintendent during Thutmose III's reign (18th dynasty)². There is no analytical publication for the tomb TT 224. Furthermore, most references are brief observations or simple descriptions of a fragmentary statue and a questioned funerary cone³.

There are various difficulties concerning Ahmose's era: career, tomb construction, and statue. Furthermore, no comprehensive study deals with these subjects. Therefore, In this paper investigate, Ahmose's titles and career according to the existing inscriptions from which his titles can be deduced.



[FIGURE 1]: Plan of TT224. KAMPP 1996: 498, FIG. 390.

Dating of TT 224

The lack of genealogical material raises suspicion concerning the period in which Ahmose lived. Although all scholars agree that Ahmose lived during the 18th dynasty, there is controversy about which reign, Hatshepsut's or Thutmose III. The overriding opinion is that he lived during the reigns of both of them⁴. In contrast, the minority believe he was active during Thutmose III's reign only⁵.

¹ «Tombs of Ancient Egypt»: https://www.osirisnet.net/tombes/nobles/sennefer/e_sennefer_p.1. Accessed on 25/05/ 2020.

² HELCK 1958: 297; PORTER & MOSS 1960: *PM I-1*: 325; KAMPP 1996: 498; WEST 2019:155; 439.

³ PORTER & MOSS 1960: *PM I-1*: 325; KAMPP 1996: 498.

⁴ Porter and Moss dated the tomb to Hatshepsut/ Thutmose III. Whale stated that he was working under Hatshepsut/ Thutmose III. PORTER & MOSS 1960: *PM I-1*: 325; WHALE 1989: 83; BRANDT 2016: 137; WEST 2019: 155; Kampp describe the tomb and its architecture in her study. *Die Hebanische Nekropole*, she dates TT 224 to Hatshepsut/Thutmose III. KAMPP 1996: 499; Zenihiro indicated that the owner of TT 224 was linked with Hatshepsut – Thutmose III's reign, based on seals with four vertical inscriptions appeared during the reign of Hatshepsut/Thutmose III. ZENIHIRO 2009: 77.

⁵ Helck dated the tomb under Thutmose III's reign, and noted some of Ahmose's titles in his *Urkunden*. HELCK 1958: 297.





However, Gardiner and Weigall think that Ahmose lived during the reign of Thutmose I⁶. Brayn believes he lived during the reign of Amenhotep I⁷. Unfortunately, none of the scholars offered any evidence to support their claims. However, his stela on the left narrow wall of the transverse hall, with the cartouche of Thutmose III, ensures that Ahmose served under Thutmose III⁸ [FIGURE 2].



[FIGURE 2]: Cartouche of Thutmose III on the Ahmose's stela ©Photo taken by Researcher.

II. THE CAREER OF THE OWNER OF THEBAN TOMB 224

1. The Name of the Tomb's Owner

 *Tḥ-Ms* «Ahmose», is also called  *Hmy* «Humy»⁹, which appears to be his nickname¹⁰. Although the name «Ahmose» dominates his tomb, another one  *Htp-dy*, or  *Imn-htp* occurs on the courtyard stela with the same title as Ahmose, «overseer of the god's wife of Amun»¹¹. However, there are various controversies around this name. The author should investigate them.

⁶ Gardiner & Weigall dated TT 224 to the reign of Thutmose I with simple remarks Ahmose's titles in their catalogue of Theban private tombs. GARDINER & WEIGALL 1913: 36.

⁷ Brayn states that Ahmose Humy was a royal nurse in the reign of Amenophis I, without any evidence. BRAYN 2006: 98.

⁸ The king's representations were not common in tomb stelae throughout the 18th dynasty; only their names were inscribed at the top of the stelae. The first half of the 18th dynasty is represented by TT 224, 125, 110, & 53. The nobleman in TT 224 is kneeling beside Thutmose III's cartouches to offer two vases: ABDUL-QADER 1957: 39; KAMPP 1996: 501.

⁹ The owner tombs TT 83, TT 121, & TT 241 were also called *Tḥ-ms*. GARDINER & WEIGALL 1913: 36; RANKE 1935: PN I: 12, N^o. 19; PORTER & MOSS 1960: *PM I-1*: 325; PORTER & MOSS 1960: *PM I-1*: 167, 235, 331; WEST 2019: 155.

¹⁰ DAVIES & GARDINER 1915: 4.

¹¹ GARDINER & WEIGALL 1913: 36; PORTER & MOSS 1960: *PM I-1*: 325.

Graefe reads 𓆎𓅓𓏏𓏏 *Htp-mi*, and claims that the restorers misread Ahmose's nickname *-Hmy*. This mistake was caused by a mix-up of the names 𓆎𓅓𓏏 *H(w)y*¹² and 𓆎𓅓𓏏 *hw-dy*, an abbreviation form of *Imn-htp*¹³.

Whale proposes that they are two separate persons: *I^ch-ms* «Ahmose» and *Imn-htp*, who worked at the end of the 18th dynasty and was perhaps a descendant of Ahmose. The name *Imn-htp* on the stela may be obtrusive with no relation to Ahmose's family. As for *Htp-dy*, he may be a colleague or relative of Ahmose¹⁴. While Kampp states that the texts were destroyed through the Amarna period, when restored later, *Imn-htp* was misspelled as *I^ch-ms*¹⁵.

According to Brandt, the name 𓆎𓅓𓏏𓏏 *Imn-htp* results from a misinterpretation during the restoration. It is also visible on the left outside frame of the courtyard stela¹⁶. Ultimately, one could conclude that 𓆎𓅓𓏏𓏏 *Htp-dy*, or 𓆎𓅓𓏏𓏏 *Imn-htp* are the same individual, Ahmose Humy. The owner of TT 224 and the restorers mistook the name 𓆎𓅓𓏏 for “ 𓆎𓅓𓏏 ”.

2. The Career of Ahmose

Ahmose possessed various titles. Some were documented in several references briefly, while others were recorded in his possession, claiming that they did not belong to him. Moreover, due to TT 224's current condition, no autobiographical inscription or visible evidence attests to the presence of these titles in his tomb, which might reveal to understand his career stages. So, the author has significantly expanded what disputed about Ahmose's titles, by investigating Ahmose's possessions: one doubtful funerary cone (N^o. 94)¹⁷ [FIGURE 3], a granite kneeling statue¹⁸ [FIGURE 4], a fragment of Hu¹⁹?

¹² RANKE 1935: PN I: 23, N^o.19.

¹³ GRAEFE 1981: 15.

¹⁴ WHALE 1989: 84.

¹⁵ KAMPP 1996: 499.

¹⁶ For more cones with four vertical inscriptions, (Cf. # 84, # 88, and # 120); DAVIES & MACADAM 1957: N^o. 94; ZENIHIRO 2009: 77; BRANDT 2016: 141. The provenance, according to Naguib, is at Šālḥ ‘Abdel al - Qurna: NAGUIB 1987: 75. Her claim is based on the tomb location, without any evidence, and it is not mentioned in any further references. According to Munsell: 7.5 R 5/8 =slightly more than Red 10; NAGUIB 1987: 75; MUNSELL 1988: 7.5 R 5/8, 7.5R N3/0;

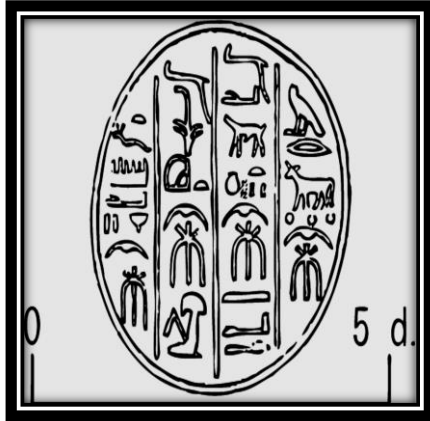
¹⁷The only cone recognized as belonging to the owner of TT 224 by DAVIES & MACADAM is N^o. 94, indicating that his life and influence were linked with Hatshepsut –Thutmose III's reign. It is based on the fact that several seals with four vertical inscriptions, each including title and name, appeared during the reign of Hatshepsut/Thutmose III. DAVIES & MACADAM 1957: N^o. 94. For more information about the details of the cone N^o. 94; PETRIE 1887: 24; DARESSY 1893: 275 [19], Fasc. 2; NAGUIB 1987: 75; Zenihiro stated that most references make it difficult to conclude that this cone belongs to Ahmose of TT 224. However, based on the textual evidence, I believe this cone is his (as will be mentioned in the following pages, 13). ZENIHIRO 2009: 77; Notably, cones with the name and titles of Theban Tomb owner Amenemhat (TT 123) (Thutmose III's reign) were scattered throughout it, indicating that it was later used as a store.

¹⁸ For more details on the statue, description and Province: WEIGALL 1906: 133[18]; ENGELBACH 1921: 70 [7]; PORTER & MOSS 1960: PM II-2: 427.

¹⁹ We should consider that *Hw* might be a full name of 𓆎 *Hw* or *Hmy* as it written 𓆎𓅓𓏏 , 𓆎𓅓𓏏𓏏 ; RANKE 1935: PN I: 234, N^o.11, 240, N^o.23.

Statue²⁰ [FIGURE 5], and a false door stela in the courtyard of TT 224²¹. [FIGURE 6]. The author will also analyze the inscriptions of his sons' tombs (TT 96, TT 29).

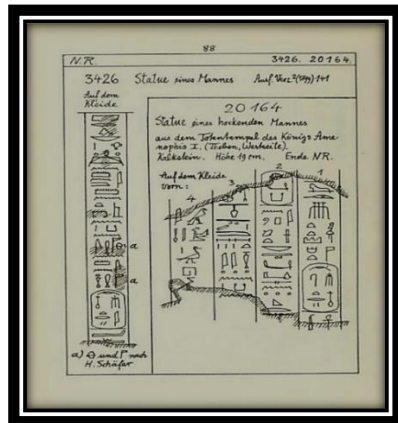
Finally, the author will compare these titles with those found in Ahmose's tomb. The titles listed below have been identified.



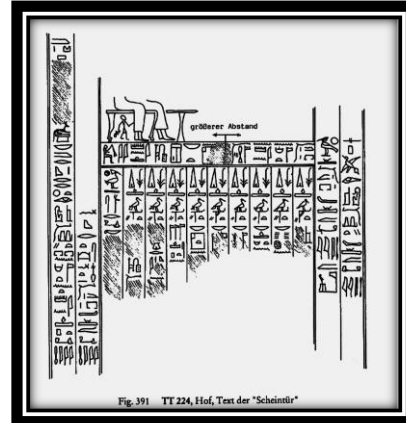
[FIGURE 3]: Cone N°.94.
DAVIES & MACADAM 1957: N°.94



[FIGURE 4]: Fragment of granite statue.
WEIGALL 1906: 133[18]



[FIGURE 5]: Fragment of statue of Hu?
KAMPP 1996: 499, FIG.391.



[FIGURE 6]: False door stela of Ahmose
ROEDER 1899: 88, N°.3426.

• *it mn^c* « Father Nurse/Tutor »

The title occurs on his funerary cones, where he is referred to as *it mn^c*²². In Sennefer's tomb TT 96, Ahmose held the title *mn^c nsw* royal tutor²³, and in

²⁰ The Berlin Museum dated it to the end of the New Kingdom. Because the text has been destroyed and the name of *hw* is incomplete, it is uncertain if this fragment belonged to Ahmose, the owner of (TT 224). ROEDER 1899: 88, N°.3426; GRAEFE 1981: 16.

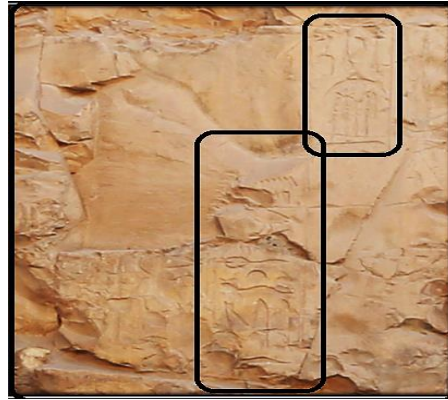
²¹ KAMPP 1996: 499, FIG.391.

²² PETRIE 1887: 24; ERMAN, A. & GRAPOW, H. (eds): *WB* 1971: vol.2: 78[13]; BRUNNER 1977: vol.2, 20 ff; NAGUIB 1987: 76; TAYLOR 2001: 75, N°. 683; ZENIHIRO 2009: 77.

²³ This title could be seen on the north wall of the passage at (10) on the PORTER & MOSS plan (TT 29. HELCK 1961: vol.4, 1439[13-14 & 1964: 35, N°.1; CUMMING 1984: 137; PORTER & MOSS 1960: *PM* I-I: 44, and 46. *Mn^ct* is the most popular term for «nurse». The title, which designates the deceased king's divine nurse, was rare in the Old Kingdom. It is only used as a title for a living person in the Middle Kingdom and

«[tutor] of the[king's] son [of] his body, his beloved, ///the scribe, Ahmose». The author may fill in the missing title in Ahmose's tomb by using the identical title in Hekerneheh's tomb (TT 64), as «tutor of the king's son Amenophis III» *s3 nsw n ht.f mry.f Imn-htp* ³³ [

FIGURE 7].



[FIGURE 7]: The title *it mn^c* on left of the tomb's entrance of TT 224 ©Photo taken by Researcher

Consequently, the author assumes that Ahmose served under Thutmose III around the same time and age as Min, Amenophis II's royal tutor. Ahmose held three titles, including the word *mn^c*, which have the same meaning but represent different periods. The title *it mn^c* «father nurse/tutor» appeared on his funeral cone, while *mn^c n s3 nsw n ht.f mry.f* implies that he was Amenophis II's childhood tutor. Whereas *mn^c nsw* "royal tutor," which only appears in his son's tomb, indicates that Amenophis II became king.

• ³⁴ *it ntr* «Father of the God/God's Father»

It appears on the fragment of the statue of Hu (?)³⁵ , Which is attested according to Burckhardt at the end of the 18th dynasty?³⁶ It is another variant of which refers to a priestly title.

³⁷ *pr nb hr wdhw n Imn m Mn -st*³⁹ *n k3 n it ntr hm ntr n Imn hm ntr tpi Tch-ms Nfirtiri Hw//*

³² Roehrig read it as: *n s3 nswt n ht.f mry.f mn//// /// ///// s3 Tch-ms* which is not accurate; ROEHRIG 1990: 193, N^o. 608.

³³ NEWBERRY 1928: PL. 12; TAYLOR 2001: 116, N^o. 1067.

³⁴ Kees investigated the title thoroughly. KEES 1961: 115-125; ROEDER 1899: vol.2, 88, N^o. 3426.

³⁵ Probably from Amenhotep I's Mortuary Temple and Queen Ahmose-Nefertari (?)Destroyed, on the West Bank. ROEDER 1899: vol.2, 88; N^o.3426; PORTER & MOSS 1960: *PM I-2*: 711, *PM II-1*, 4: 422; GRAEFE 1981: 16; PORTER & MOSS 1960: *PM II-1*, 4: 422.

³⁶ BURCHARDT 1910: 22.

³⁷ Roeder mentioned that Schäfer restored *It hm ntr*. ROEDER 1899: vol.2, 88, N^o.3426. However, Graefe read the title as *it ntr n Imn* «god's father of Amun», without *hm*. GRAEFE 1981: 16.

³⁸ ROEDER 1899: vol.2, 88, N^o.3426.

«Everyone goes with offering table of Amun in Meniset for the *k3* of god's father, a high priest of Amun (and) Ahmose-Nefertari, Hw//? ».

Because the text has been lost and the name of Hu⁴⁰ is incomplete⁴¹, it is unsure whether this fragment belonged to Ahmose, the owner of (TT 224). Moreover, the Berlin Museum dates it to the end of the New Kingdom.

The author assumes that Ahmose's titles do not include (*it ntr*) because of the followings: Burckhardt's previous comment assumed that the damaged name belonged to another Hu. Ahmose never held the title of a priest. Furthermore, it does not exist in his son's tombs. As a result, these titles belong to someone else rather than Ahmose.

• **Imy- r3 Ipt Nsw « Overseer of the Royal Harem »**⁴²

According to Helck⁴³ along with Kees,⁴⁴ this title was mentioned in TT 224. The title *Imy-r3 Ipt Nsw* is inscribed on the cone of Userhat, (N^o. 406), the owner of TT 47, who held the same title during Amenophis III's reign (18th dynasty)⁴⁵. However, Graefe considers this title «Overseer of the Royal Harem of the King's Wife», which varies from Helck's previously described title⁴⁶.

Furthermore, this title appears in Ahmose's funerary cone (N^o. 94), but not in the tombs of his sons (TT 96, TT 29) or Ahmose's two fragmentary statues. However, it may be inscribed in Ahmose's tomb, as stated by Helck and Graefe, although the title is now damaged due to the poorly preserved wall.

³⁹ Name of the Mortuary Temple of Amenophis I and Queen Ahmose-Nefertari (?) (Meniset *Mn-st*). PORTER & MOSS 1960: *PM* II-1, 4 [422]; LEITZ 2002: LGG III: 283.

⁴⁰ We should consider that *Hw* might be a full name of *Hw* or *Hmy* as it written . RANKE 1935: PN I: 234, N^o. 11, 240, N^o. 23.

⁴¹ GRAEFE 1981: 16.

⁴² It dates back to the Old Kingdom and has many writing and translation variations: «Overseer of the King's (Private) Apartment/Lodging», «Overseer of the King's/ Royal (Private) Apartment/s/ Chamber/es», «Overseer of the Royal Counting House», «Royal Harem Superintendent», . TAYLOR 2001: 11, N^o. 95; ERMAN, A. & GRAPOW, H. (eds): *WB* 1971: vol.1, 67 (14-15). JONES 2000: vol.1, 56, N^o. 271; ALLAM 1977: 104-113; SEIPEL 1977: 982-985; WEBER 1977: 988-991. There are interpretations of *ipt*, origin, and relation to *nsw*. MELTZER 1990: 503 ff; FRANKE 1990:231.

⁴³ HELCK 1958: 439.


⁴⁴ Kees stated that Humy, Sennefer's father, was a royal educator (so-called wet nurse) and bailiff of the divine wife (Ahmose -Nefertari). He distinguished himself by marrying a favorite royal Nbw. However, under Amenophis' reign. Sennefer the son was far more popular than his father. KEES 1953: 55-56.

⁴⁵ The title with the same writing on his cone. DAVIES & MACADAM 1957: N^o.406; PORTER & MOSS 1960: *PM* I-1: 87; ZENIHIRO 2009: 169. Consider the various seals with four horizontal inscriptions that included the title and the name during Amenhotep III's reign and differed from those of Hatshepsut/Thutmose III. See the cone of Ahmose, 5.

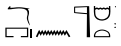
⁴⁶ GRAEFE 1981: 15; TAYLOR 2001: 11, N^o. 98.

-  *jmj-r3 jhw* «Overseer of the Cattle»⁴⁷

This title appears only in Ahmose's funerary cone [N^o.94]⁴⁸.

-  *Imy-r3 hnw* «Chamberlain»⁴⁹


This title appears only in Ahmose's funerary cone (N^o. 94)⁵¹. It may also be observed on the cone of Senenmut (N^o.88), the owner of TT 71, who held the same title during Hatshepsut's reign (18th dynasty)⁵². Notably, the three preceding titles may have occurred in Ahmose tombs but are now ruined.

-  *imy-r3 pr n hmt ntr* «Steward of the God's Wife»⁵³

It appears twice in Sennefer and Amenmopet Tombs (TT 96⁵⁴, TT 29)⁵⁵. Notably, it does not occur in Ahmose's belongings or on his tomb (TT 224), indicating that this title was secondary at the end of his career. Furthermore, Ahmose was most likely given this title after finishing his tomb decorations⁵⁶.

⁴⁷ ERMAN, A. & GRAPOW, H. (eds): *WB* 1971: vol.1, 119 [21].

⁴⁸ TAYLOR 2001: 12, N^o. 105; ZENIHIRO 2009: 77.

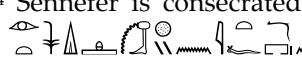
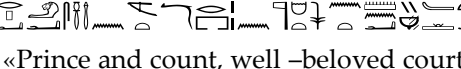
⁴⁹ It is attested from the Middle Kingdom until the late period. It was replaced by the title  *imy-r3 hnw* «overseer of the residence», which appeared in the Old Kingdom. ERMAN, A. & GRAPOW, H. (eds): *WB* 1971: vol.1, 227 (2); WARD 1982: 21, N^o. 132. ; JONES 2000: vol.1, 197, N^o. 738; ZENIHIRO 2009: 77.

⁵⁰ For further meanings: «Overseer of the sanctuary (cellars?)» «Overseer of the residence» PETRIE 1887: 24; ERMAN, A. & GRAPOW, H. (eds): *WB* 1971: vol.1, 227 (1); WARD 1982: 14, N^o. 72; JONES 2000: 197, N^o. 738; TAYLOR 2001: 16; ZENIHIRO 2009: 77. According to Briant, this title is frequently used in connection with *Imy-r3 snwty* as administrative title for high officials. BRIANT 1991: 38.

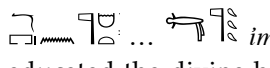
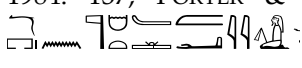
⁵¹ ZENIHIRO 2009: 77.

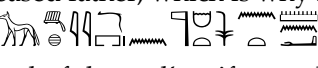
⁵² TAYLOR 2001: 16, N^o. 144

⁵³ *Imy-r3 pr* «steward/administrator». WARD 1982: 21, N^o. 132; TAYLOR 2001: 26, N^o. 246.

⁵⁴ Sennefer is consecrated before his parents on the west wall of the inner pillared hall with the text:  *Irtp htp di nsw wcb sp-sn n it imy-r3 pr n hmt ntr* *Hwmy m3c hrw in h3ty c n rsyt smcw Sn-nfr* «Making a doubly pure Hotp-di-nesu offering to his father, the steward of the god's wife, Humy, justified, by the Mayor of the Southern City, Sennofer». While the second text is on another TT 96 Wall:  *Rp h3ty smr c3 n mrt imy r3 pr n hmt ntr mn c nsw Hmy m3c hrw* «Prince and count, well-beloved courtier, the steward of the god's wife, and tutor of the king, Humy, justified». PORTER & MOSS 1960: *PM* I-I: 199[22], plan 196 (TT 96); HELCK 1961: vol.4, 1432 (10-14)& 1964: 35, N^o. 1 (5th text) CUMMING 1984: 129 -130.

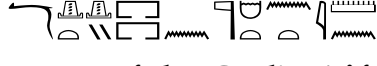
⁵⁵ This title could be seen on the north wall of the passage at (10) on the Porter & Moss plan (TT29):

 *imy-r3 pr n hmt ntr sd h w- ntr Hmy -dy? m3c hrw* «Steward of the god's wife, ...who educated the divine body, Humy-dy?, justified»; HELCK 1961: vol.4, 1439[14]& 1964: 35, N^o. 1; CUMMING 1984: 137; PORTER & MOSS 1960: *PM* I-I: 44, 46. Once again the title appeared in TT 29:  *imy r3 pr n hmt ntr Hmy* « steward of the god's wife, Humy»; HELCK 1961: 94 & 1961: vol.4, 1438(18); CUMMING 1984: 136.

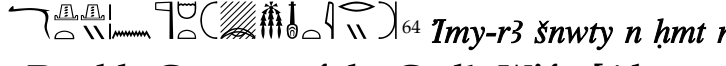
⁵⁶ To support this claim, Whale argued that the term *s3b*, which accompanied the text, was used as a form of reverence for a son's deceased father, which is why it was never used of a son by his father. WHALE 1989: 261. The text as follows:  *s3b im3hy imy r3 pr n hmt ntr mn c nsw* «The dignitary and venerable one, steward of the god's wife, royal nurse». HELCK 1961: vol.4, 1439[13]; CUMMING 1984: 137.

•  *Imy-r3 šnwtj* «Overseer of the Double Granary»⁵⁷

It is an administrative title held solely by high-ranking officials who command the whole granary complex⁵⁸. Taylor lists the title in many tombs throughout the 18th dynasty while he omits it on TT 224⁵⁹. It appears only in the columns of the false door stela in the courtyard of TT 224⁶⁰.

•  *Imy-r3 šnwtj n hmt ntr nt Imn*⁶¹ «Overseer of the Double Granary of the God's Wife of Amun»⁶²

It appears in the columns of the false door stela in the courtyard of TT 224⁶³. Taylor states that it corresponds to TT 224.

•  *Imy-r3 šnwtj n hmt ntr [Tḥ-ms] Nftr-iri*⁶⁵ «Overseer of the Double Granary of the God's Wife, [Ahmose] –Nefertari».

Gardiner and Weigel's listed TT 224 in the catalogue of Theban private tombs with this title along with the foregoing title *Imy r3 gs- pr n hm ntr*. Regardless of the date

⁵⁷ WARD 1982: 49, N^o.385; FAULKNER 1991: 113; KAMPP 1996: 499, FIG. 391.

⁵⁸ In the category «Higher Officials», this title includes state officials who held high titles in the country it is distinct from *imy-r3 šnwtj*, which emerged by «lower officials» and still performed minor administrative responsibilities for the state. BRIANT 1991: 15 [N^o.5], 48; WILSON 1997: 1020.










⁵⁹ TAYLOR 2001: 48, N^o. 444. [TT 87, TT 123, TT 353].

⁶⁰ KAMPP 1996: 499, FIG. 391.

⁶¹This title belonged to Ahmose-Nefertari in the 18th dynasty and means «the God's Wife of Amun». She was the first royal woman to be given the title *hmt ntr*, an act described in Ahmose I's Stela of Donation in the temple of Amun at Karnak. It was once interpreted as an «heiress» epithet, indicating the woman the king must marry to legitimize his claim to the throne. However, it is now simply a priestly office related to the cult of Amun (carrying entitlement to an agriculture estate and personnel), which would gain greater political significance during the Late Period. SHAW 1995:19; LEITZ 2002: LGG vol.5, 136.

⁶² GRAEFE 1981: 15; TAYLOR 2001: 50, N^o. 461.

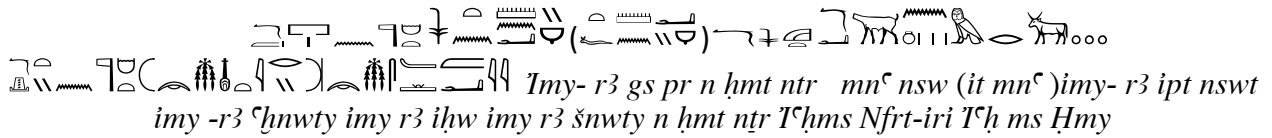
⁶³ KAMPP 1996: 499, FIG. 391.

⁶⁴ While Gardiner and Weigall recorded it  with one granary sign and two- house determinatives. The author thinks this writing is inaccurate. Based on author observations of the title *imy r3 šnwtj* in TT 224 and his stela, *šnwtj* recorded with two-grain signs and with  or  without two house determinatives. To support this claim, the title occurred with the same writing  in TT 123 of the owner Amenemhat who worked under Thutmose III. However, the reign of H/Th III, *šnwtj* was written with variations as , ,  (TT 81, TT 87) as the same as the reign of the III/A.II (TT 96 and TT 29). The author can deduce that the writing of *šnwtj* ,  with two-grain signs, was distinct during Thutmose III's reign. GRAEFE 1981: 15; TAYLOR 2001: 48-51.

⁶⁵ Ahmose-Nefertari was the wife of Ahmose I, the founder of the 18th dynasty. She died sometime during Thutmose I's reign. Her political and religious titles, like those of her grandmother Tetisheri and mother Ahhotep I, have helped to illuminate the various new political roles adopted by women in the early sixteenth century BC. She is described as *mwt nsw* (kings' mother) to her son Amenophis I and *hmt nsw wrt* (kings' principal wife) to her brother and husband Ahmose I. REDFORD 2001: vol.1, 47; SHAW 2002: 19.

they assigned to Ahmose under Thutmose I reign, they did mention Ahmose's possession of this title,⁶⁶ without its location in the tomb.

According to Helck, the titles *Imy r3-gs pr n hmt ntr* and *imy-r3 šnwtj n hmt ntr Tḥ-ms Nfirt-iri* were stated in TT 224⁶⁷ as long as other titles (two of which were based on Kees' brief observations in Pritestertum 1953)⁶⁸. Helck, on the other hand, provided no evidence. The titles are as follows:



Imy- r3 gs pr n hmt ntr mn^c nsw (it mn^c)imy- r3 ipt nswt
imy -r3 ḥnwtj imy r3 ihw imy r3 šnwtj n hmt ntr Tḥms Nfirt-iri Tḥ ms Hmy

«Overseer of the estate of the god’s wife, tutor, overseer of the king's apartment, chamberlain, overseer of the cattle, overseer of the double granary of the god’s wife, Ahmose-Nefertari, Ahmose-Humy»

Graefe considers these significant titles as well, but his chronological order differs from Helck's as follows:


⁶⁹.

Imy -r3 ḥnwtj imy -r3 ipt hmt nsw⁷⁰ mn^c nsw imy-r gs - pr n hmt ntr imy r3 šnwtj n hmt ntr Tḥ-ms Nfirt-iri

«Chamberlain, overseer of the royal apartment of the king’s wife, tutor, overseer of the estate of the god’s wife, overseer of the double granary of the god’s wife, Ahmose-Nefertari».

Graefe additionally argues that this title indicates that Ahmose was serving as an overseer of Ahmose-Nefertari’s funeral endowment; however, it is just a suggestion that must be proven⁷¹.

Although Helck and Graefe disagree about the order of titles, they both agree that Ahmose held the position of *imy -r3 šnwtj n hmt ntr Tḥ-ms Nfirt-iri* «overseer of the double granaries of the god’s wife of Ahmose - Nefertari» at some point in his career.

⁶⁶ GARDINER & WEIGALL 1913: 36.

⁶⁷ HELCK 1958: 439.

⁶⁸ Kees stated that Humy, Sennefer's father, was a royal educator (so-called wet nurse) and bailiff of the divine wife (Ahmose -Nefertari), and he distinguished himself by marrying a royal favorite *Nbw*. However, under Amenophis' reign, Sennefer, the son was far more popular than his father. KEES 1953: 55-56.

⁶⁹ GRAEFE 1981: 15.

⁷⁰  *imy-r3 ipt hmt nsw* «overseer of the royal apartment of the king’s wife, differs from *imy r - ipt nsw* which Helck mentioned. GRAEFE 1981: 15; TAYLOR 2001: 11, N^o. 95, 98.

⁷¹ The author agrees with Graefe since only context can distinguish between national authorities and those on the local, temple, or private estates, such as *imy-r3 pr šnwt* "estate supervisor of the granary. Regarding the temple. Similarly, Ahmose titles include *imy-r3 šnwtj n hmt ntr* (Ahmose -Nefertari), *imy-r3 šnwtj n hmt ntr n Imn*, and a specific mention of *hmt ntr Tḥ-ms-Nfirt-iri* estate, considering her as Amun's God's wife. So, the title benefits the *hmt ntr*'s estate, particularly the funeral endowment along with Amun’s estate. GRAEFE 1981: 16, 50; QUIRKE 2004: 63.

The author confirmed that Ahmose possessed the title *imy-r3 šnwtj n hmt ntr T^ch-ms Nfirt-iri*, which was revealed in the text of the fourth register in the vertical column (at the bottom) of the long hall's left wall painting.

The author considers the following: the titles recorded by Helck: *mn^c nsw (it mn^c) imy-r3 ipt swt imy-r3 ^chnwtj imy-r3 ihw* in TT 224 (damaged now?)⁷² belonged to Ahmose; the titles «*imy-r3 šnwtj n hmt ntr T^ch-ms Nfirt-iri*» are a simple set of the chronology titles *imy-r3 gs pr n hmt ntr imy-r3 šnwtj n hmt ntr T^ch-ms Nfirt-iri rp^c(.t) h3ty-^c mn^c nsw (it mn^c) imy-r3 ipt nsw imy-r3 ^chnwtj imy-r3 ihw*.

Moreover, the funerary cone (mentioned above) with identical titles and chronology «*jtj mn^cj, jmj-r3 jp3t-nswt, jmj-r3 ^chnwtj, jmj-r3 jhw*» belongs to Ahmose, the owner of TT 224. The title *Imy-r3 šnwtj* is probably connected with *imy-r3 gs*. Based on the rest of Ahmose's tomb inscriptions, it is most likely that this title referred to Ahmose-Nefertari's estate⁷³.

• ⁷⁴ *Imy-r3 gs pr* «Overseer of the Estate»⁷⁵

The term *gs-pr* first appears in Old Kingdom titles, referring to some administrative structure⁷⁶. *gs-pr* is either a purely administrative entity or a specific location with workshops and living quarters⁷⁷. The investigation reveals that this just appeared on his courtyard stela in the vertical column of Ahmose's false door stela⁷⁸.

• ⁷⁹ *Imy-r3 gs-pr n hmt ntr* «Overseer of the Estate of the God's Wife»

TT224 was included in Gardiner and Weigel's (1913) catalogue of Theban private tombs, and they recorded the title along with *imy-r3 šnwtj n hmt ntr T^ch-ms Nfirt-iri* with some brief notes and the title⁸⁰:

⁸¹ *Imy-r3 gs-pr n hmt ntr [Hw] -dy? m3^c hrw*. It also occurs on his fragmentary kneeling statue. The text reads as follows⁸²:

⁷² On the Porter & Moss plan, this is at (3). Some broken writing columns identify a large standing figure of Humy; Roehrig read some of them during the winter of 1984/85. It is written as follows: *n s3 nswt n ht.f mry.f mn/* (column split off) *sš T^ch-ms m3^c hrw*. PORTER & MOSS 1960: PM I-1: 318; ROEHRIG 1990: 191, 193, N^o. 601, 608.

⁷³ Duawynehh, the owner of tomb TT 125 was given the title *imy-r šnwtj nfr(t) ntrt* «overseer of the double granary of the good goddess (Hatshepsut)», along with *imy-r3 gs pr n Imn* «overseer of the *gs pr* or workrooms». It is highly likely that this title related to the temple of Amun, based on the remainder of his tomb inscriptions. TAYLOR 2001: 50[N^o], 59[N^o. 542], 475.

⁷⁴ TAYLOR 2001: 60, N^o. 545.

⁷⁵ GRAEFE 1981: 15; CUMMING 1984: 130.

⁷⁶ WILSON 1997: 1108.


⁷⁷ HANNIG 1995: 65.

⁷⁸ KAMPP 1996: 499, FIG. 391.


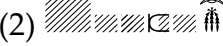
⁷⁹ TAYLOR 2001: 60, N^o.545

⁸⁰ GARDINER & WEIGALL 1913: 36; PORTER & MOSS 1960: PM I-1: 325.

⁸¹ HELCK 1961: vol.4, 1432.


⁸³////*Mntw nb Drt Hmy m3c hrw imy -r3 gs pr (n) hmt ntr*
Hmy m3c hrw «////Month, Lord of Tud, Humy justified,» «Overseer of the estate »⁸⁴.

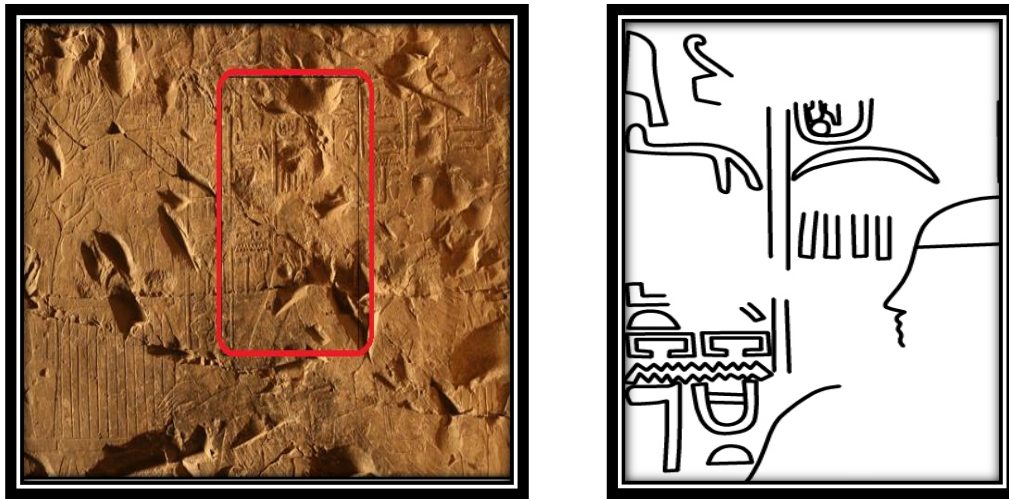
Ahmoose possessed this title in his tomb TT 224 together with *imy-r3 šnw ty n hmt ntr n Tch- ms Nfrit-iri* in the text of the fourth register in the vertical column (at the bottom) of the long hall's left wall painting, as follows:

(1)  (2)  [FIGURE 8]⁸⁵.


(1) *In Imy -r gs pr //// imy-r3 [šnw]*⁸⁶ *ty n hmt ntr* (2) *////////// Tch- ms*

«By the overseer of the estate [of the god's wife], Overseer of the [double granary] of the god's wife, (Ahmoose- Nefertari) Ahmoose » [FIGURE 8].

The broken column might be read as: *in imy r3 gs pr n hm ntr imy r3 šnwy n hm ntr Tch ms-Nfrit-iri Tch-ms*. It appears a suitable reading since the cartouche is still apparent, and the titles fit the uneven gaps.



[FIGURE 8]: The title *imy r3 šnwy n hmt ntr Tch-ms Nfrit-iri* on the long hall's left wall.
 © Photo and Facsimile taken by Researcher.


Imy-r3 gs pr n hmt ntr n Imn «Overseer of Estate of the God's Wife of Amun»⁸⁷

According to Graefe, Ahmoose held this title and claimed it was in TT 96, TT 224, Ahmoose's court stela, and his fragmentary kneeling statue⁸⁸, but the author's examination

⁸² ENGELBACH 1921: 70 [7]; PORTER & MOSS 1960: *PM* I 1-2: 427.

⁸³ WEIGALL 1906: 133[18]; ENGELBACH 1921: 70 [7]; HELCK 1961: 94 (2nd text) & 1961: vol.4, 1433.

⁸³ CUMMING 1984: 130.

⁸⁴ While Cumming translated it «superintendent of the temple of the god's wife Humy justified». WARD 1982: 52, N^o. 411; CUMMING 1984: 130; TAYLOR 2001: 59.

⁸⁵The fourth register in the vertical column (at the bottom) of the long hall's left wall painting has disclosed both titles.

⁸⁶ It is writing of  *šnwy*, compare its writing on false door steal. FIG.6

⁸⁷ TAYLOR 2001: 60, N^o.546.

⁸⁸ GRAEFE 1981: 15-17.

revealed that it appeared only on his court stela. The three titles *Imy-r3 gs pr*, *Imy-r3 gs pr n hmt ntr*, *Imy-r3 gs pr n hmt ntr n Imn* were never recorded in Ahmoses's son's tombs (TT 96, TT 29). But only on his false door-stela (*Imy-r3 gs pr*) and *Imy-r3 gs pr n hmt ntr n Imn*. While (*Imy-r3 gs pr n hmt ntr*) recorded on his fragmentary kneeling statue, and TT 224. It might imply that these were the chief titles of Ahmose, and he was the supervisor of the estate of the god's wife (*T^ch-ms Nfrit-iri*) (*hmt ntr*) of Amun at some point during his career, maybe when his sons were still young.

•  ***Rꜥ(.t) ḥꜣty-ꜥ* «Prince and Count»⁸⁹[FIGURE 9]**

This title was revealed in several places throughout Ahmose's tomb (TT 224), including the first register of the right wall of the long hall, the lintel of the second door leading to the transversal hall, and the marsh scene on the transverse hall.

Rꜥ(.t) ḥꜣty-ꜥ appears in Sennefer's tomb (TT 96),⁹⁰ along with the title *smr ʿ3 n mrt*, but does not appear in Amenmopet's tomb (TT 29). Sennefer, like Amenmopet, bore the same title, *Rꜥ ḥꜣty-ꜥ*⁹¹. On the other hand, Taylor did not include the combined title among the 18th dynasty titles but listed *rpꜥ* and *ḥꜣty-ꜥ* separately⁹².

It seems that Ahmose owned this title from the middle of his career to the end of his life. While his son, Amenmopet hold the same title by inherited right.



[FIGURE 9]: The title *Rꜥ-ḥꜣty-ꜥ* in TT 224 during and after cleaning the wall.
Photo taken by Researcher

⁸⁹ *Rꜥ(.t) ḥꜣty-ꜥ* is a combination of *iry pꜥt /rpꜥt*, which was attested from the old kingdom and means «hereditary prince/nobleman», «keeper of the patricians», and *ḥꜣty-ꜥ* means «count, mayor/nobleman», it is also known from the Old Kingdom. WARD 1982: 102, N°. 850, N°. 854; 104, N°. 864; JONES 2000: vol.1, 315, N°. 1157; TAYLOR 2001: 136, N°. 1319.


⁹⁰ CUMMING 1984: 130; HELCK 1961: vol.4, 1432[13] & 1964: 35, N°. 1(5th text).

⁹¹ HELCK 1961: vol.4, 1421[17], 1224[7].

⁹² TAYLOR 2001: 136, 142, N°. 1319, N°.1381.

-  *hm ntr n Imn* «Prophet of Amun,»⁹³ «God's Servant of Amun»⁹⁴

It appears on the fragmentary statue of Hu (?)⁹⁵. As previously stated, do not include titles (*hm ntr n Imn hm ntr tpi Tch- ms Nfirt-iri*). Moreover, he does not own them.

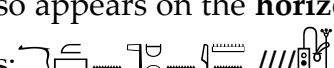
-  *hm ntr tpi Tch-ms Nfirt-iri* «Chief God's-Servant⁹⁶/First Prophet / High Priest»

Taylor listed the first part of this title, *hm ntr tpi*⁹⁷.

-  *smr ʕ n mrt* «Companion/Friend Great of Love»⁹⁸

It occurs on TT 96 with the title *Rpʕ(.t) h3ty-ʕ*⁹⁹. Nevertheless, not found in Amenmopet's tomb (TT 29). Despite having the same title as his father, as noted above, with the title *rpʕ(.t) h3ty-ʕ*, *smr ʕ n mrt* may suggest that Ahmose was in the middle of his career.

-  *sš* «Scribe»

Taylor referenced this title in TT 81 and TT 82 but not in TT 224.¹⁰⁰ It is inscribed on the left side of the tomb's entrance façade[FIGURE 7]. It also appears on the **horizontal inscription band of the false door courtyard stela** as follows:  *Imy-r3 gs pr n hmt ntr n Imn////sš* «Overseer of Estate of the God's Wife of Amun...the scribe.»¹⁰¹ However, it does not appear in his sons' tombs, indicating that Ahmose began his career as a scribe, a position he valued even later in life.

⁹³ TAYLOR 2001: 148, N^o. 1438.

⁹⁴ WARD 1982: 108, N^o. 898.

⁹⁵ ROEDER 1899: vol.2, 88, 141; PORTER & MOSS 1960: *PM I-2*: 711; GRAEFE 1981: 16.

⁹⁶ WARD 1982: 112, N^o. 936, N^o. 937.

⁹⁷ TAYLOR 2001: 151, N^o. 1478.

⁹⁸ TAYLOR 2001: 202, N^o. 1973.

⁹⁹ TT 21, TT 39, TT 55, TT 85, TT 88, TT 93, TT 99, TT 100, TT 353. TAYLOR 2001: 201, N^o. 1967. Notably, Sennefer held this title with the other title *smr waty n mrt*, «sole and beloved companion/friend». TAYLOR 2001: 202, N^o. 1974.

¹⁰⁰ TAYLOR 2001: 208, N^o. 2025.

¹⁰¹ TAYLOR 2001: 60, N^o. 546.

III. CONCLUSION

The study of ownership titles adds new data and corrects information in standard reference works. Ahmose Humy's career appears to have been most significant during Thutmose III's reign, based on the cartouche with Thutmose III's praenomen on his stela.

Ahmose held several important positions in Thutmose III's administration. His titles reveal that he began his career as a scribe, a position he valued until old age. His titles refer that he held significant positions as the «Overseer of the God's Wife's Estate» (*imy-r3 gs pr n hm ntr*), «Overseer of the Double Granary of the God's wife Ahmose-Nefertari» (*Imy-r3 šnwty n hmt ntr Tḥ-ms Nfirt-iri*). This position most likely serves Amun's consort (*hmt ntr Tḥ-ms Nfirt-iri*), as referenced in Ahmose's title «Overseer of the Double Granary of the God's Wife of Amun » (*Imy- r3 šnwty n hmt ntr nt Imn*) on the false door stela, which suggests that he is in charge of the Funeral Endowment. Consequently, both titles were considered Ahmose's primary titles for many years.

Amid his career, Ahmose had the title *Rp^c(.t)-h3ty-^c*, which he retained even during Sennefer's time; Furthermore, when the author determines that Ahmose is the owner of the cone. 94, further information about his status becomes clear as follows: the title «Tutor» (*it mn^c*), implies that he was Amenhotep II's childhood tutor in his elderly age and lived until Amenhotep II became a king. He held additional titles as «Overseer of the king's Harem» (*jmj-r3 jpt-nsw*), «Chamberlain», (*jmj-r3 jhw*) «Overseer of the Cattle. »

As a result, the entire chronological title of Ahmose is as follows: *sš imy r3 gs- pr n hmt ntr imy r3 šnwty n hmt ntr Tḥ-ms Nfirt-iri rp^c(.t) h3ty-^c mn^c nsw (it mn^c) imy r3 ipt nsw imy r3 ḥnwty imy r3 ihw*. Despite the relatively simple tomb of Ahmose, this examination of Ahmose's titles has proven that Ahmose was far more significant in his career and connection to the kingship. The following is a list of the disclosed Ahmose titles, as seen in the [TABLE 1].

Title	TT224	TT96	TT29	Stela	Statue (Berlin)	Statue (Cairo)	Comments
<i>It mnc</i>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<i>It mnc</i> is attested only in Ichmose's tomb.
<i>Mnc nsw</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				While <i>mnc nsw</i> is attested in tombs of his sons. It doesn't belong to him.
<i>It ntr</i>					<input checked="" type="checkbox"/>		It is most likely destroyed in Ichmose's tomb.
<i>Imy-r3 ipt swt</i>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	It is most likely destroyed in Ichmose's tomb.
<i>imy-r3 ihw</i>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	It is most likely destroyed in Ichmose's tomb.
<i>Imy-r3 shwty</i>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	It is most likely destroyed in Ichmose's tomb.
<i>Imy-r3 pr n hmt ntr</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				Attested solely in his sons' tombs, most likely for two reasons: the severe damage of TT224, or he bore this title after finishing the tomb.
<i>Imy-r3 shwty</i>				<input checked="" type="checkbox"/>			
<i>Imy-r3 shwty n hmt ntr nt Imn</i>				<input checked="" type="checkbox"/>			He held it at some time during his career.
<i>Imy-r3 shwty n hmt ntr Thms Nfrtri</i>	<input checked="" type="checkbox"/>						It was Ichmose's primary title in TT224, along with <i>imy-r3 gs pr n hmt ntr</i> .
<i>Imy-r3 gs-pr</i>				<input checked="" type="checkbox"/>			
<i>Imy-r gs-pr n hmt ntr</i>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	It was Ichmose's primary title, along with <i>imy-r3 shwty n hmt ntr</i> , as recorded in TT224.
<i>Imy-r3 gs-pr n hmt ntr n Imn</i>				<input checked="" type="checkbox"/>			See the title <i>Imy r3 shwty n hmt ntr nt Imn</i> .
<i>Rp h3ty-c</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					Ichmose had this title in the middle of his career and kept it even during Sennofer's period, as he acknowledged it in his tomb while Amenmopet was still young.
<i>Hm ntr n Imn</i>					<input checked="" type="checkbox"/>		It doesn't belong to him.
<i>Hm ntr tpi Thms Nfrtri</i>					<input checked="" type="checkbox"/>		It doesn't belong to him.
<i>Snr 3 n mrt</i>		<input checked="" type="checkbox"/>					It implies that Ichmose was in the midst of his career.
<i>Ss</i>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			It indicates that his early career was a scribe.

[TABLE 1]: Done By researcher

ACKNOWLEDGMENT

This paper is part of the author's publication of Tomb 224. As a consequence of the conservation team's work, I am grateful to the Ministry of Antiquity for allowing me to reopen, clean, and publish the tomb.

BIBLIOGRAPHY

- ABDUL-QADER, M.: *The Development of the Funerary Beliefs and Practices Displayed in the Private Tombs of the New Kingdom at Thebes*, Cairo (Ministry of Culture and National Guidance. Antiquities Department of Egypt) 1966.
- ALLAM, Sh.: «Familie (Struktur)», *LÄ 2*, Wiesbaden (Otto Harrassowitz) 1977, 104-113.
- BRANDT, K. E.: «Die Scheintüren und Entablaturen in den thebanischen Beamtengräbern des neuen Reiches», PhD Thesis, Philosophischen Fakultät - Ruprecht-Karls-Universität, Heidelberg, 2016.
- BRIANT, B.: «The Overseers of Double Granaries of Upper and Lower Egypt in the Egyptian New Kingdom, 1570-1085 BC», PhD Thesis, New Haven (CU), Yale University, 1991.
- BRAYN, B.: *Administration in the Reign of Thutmose III*, in: E.H. CLINE & D. O'CONNOR (eds.), *Thutmose III, A New Biography*, Michigan (University of Michigan Press) 2006.
- BRUNNER, H.: «Erzieher», *LÄ 2*, Wiesbaden, (Otto Harrassowitz) 1977, 20-22.
- BURCHARDT, M.: «Das ägyptische Wort für Vater», *ZÄS 48*, 1910, 18-27.
- CUMMING, B.: *Egyptian Historical Records of the Later Eighteenth Dynasty*, Fasc. 2: From the Original Hieroglyphic Text as Published in W. Helck «URKUNDEN DER 18 DYNASTIE», HEFT 17-19, Warminster -England (Aris &Phillips Ltd) 1984.
- DARESSY, G.: *Recueil de cones funéraires*, MMAF 8, Fasc.2, Paris (Ernest Leroux)1893.
- DAVIES, N. & GARDINER, A. H.: *The Tomb of Amenemhet (N°.82)*, Oxford (Cambridge University Press) 1915.
- DAVIES, N. & MACADAM, M. F. L.: *A Corpus of Inscribed Egyptian Funerary Cones*, vol.1, Oxford (The Griffith Institute at the University Press) 1957.
- EATON, M.: «The Fate of Sennefer and Senetnay at Karnak Temple and in the Valley of the Kings», *JEA 85*, 1999, 113-129.
- NGELBACH, R.: «Report on the Inspectorate of Upper Egypt from April 1920 to March 1921», *ASAE 21*, 1921, 188-196.
- ERMAN, A. & GRAPOW, H. (eds.): *Wörterbuch der ägyptischen Sprache / im Auftrage der deutschen Akademien herausgegeben [=WB]*, Berlin, 7Bde., 1971.
- FAULKNER, R.: *A Concise Dictionary of Middle Egyptian*, Oxford (Griffith Institute Ashmolean Museu) 1991.
- Franke, D.: «Essays on Feminine Titles of the Middle Kingdom and Related Subjects by William A. Ward», *JEA 76*, 1990, 228-232.
- FISCHER, H. G.: «An Old Kingdom Monogram», *ZÄS 93*, 1966, 56-69.
- FISCHER, H. G.: «Two Old Kingdom Inscriptions Restored», *JEA 65*, 1979, 42-46.
- GARDINER, A.H. & WEIGALL, A.: *A Topographical Catalogue of the Private Tombs of Thebes*, London (Bernard Quaritch) 1913.
- GARDINER, A.: *Egyptian Grammar. Being an Introduction to the Study of Hieroglyphs*, 3rd, Oxford (Oxford University Press) 1957.
- GRAEFE, E.: *Untersuchungen zur Verwaltung und Geschichte der Institution der Gottesgemahlin des Amun vom Beginn des neuen Reiches bis zur Spätzeit*, *Ägyptologische Abhandlungen 37*, Bd. 1, Wiesbaden (Harrassowitz Verlag; Print on Demand-Nachdruck edition) 1981.
- HANNIG, R.: *Die Sprache Pharaonen: Großes Handwörterbuch. Ägyptisch-Deutsch (2800-950 v.Chr.)*, Mainz (Philipp von Zabern)1995.
- HELCK, W.: *Zur Verwaltung des mittleren und neuen Reichs. Probleme der Ägyptologie*, 3.Bd., Leiden (Brill) 1958.
- HELCK, W.: *Urkunden der 18. Dynastie: Übersetzung zu den Heften 17-22 / Bearbeitet und Übersetzt*, Berlin (Akademie Verlag) 1961.
- HELCK, W.: *Der Einfluss der Militärführer in der 18. ägyptischen Dynastie*, Hildesheim (Reprint Georg Olms)1964.

- JONES, D.: *An Index of Ancient Egyptian Titles, Epithets and Phrases of the Old Kingdom*, 2vols., Oxford (Archaeopress) 2000.
- KAMPP, F.: *Die Thebanische Nekropole. Zum Wandel des Grabgedankens von der XVIII. Bis zur XX. Dynastie*. 2Bde, Mainz am Rhein (Philipp von Zabern) 1996.
- KEES, H.: *Das Priestertum im ägyptischen Staat vom neuen Reich bis zur Spätzeit*, Leiden-Köln (Leiden & Köln: Brill) 1953.
- KEES, H.: «Gottesvater' als Priesterklass», *ZÄS* 86, 1961, 115-125.
- LEITZ, Ch.: *Lexikon der ägyptischen Götter und Götterbezeichnungen*, OLA 112, Leuven-Paris-Dudley, MA (Peeters) 2002 = [LGG]
- LUSTIG, J.: «Kinship, Gender and Age in Middle Kingdom Tomb Scenes and Texts», *Anthropology and Egyptology: A Developing Dialogue, Monographs in Mediterranean Archaeology* 8, 1997, 43-65.
- MELTZER, E.: «Queens, Goddesses and Other Women of Ancient Egypt (review article on W. A. WARD, *Essays on Feminine Titles*, & L. Troy, *(Patterns of Queenship)* », *JAOS* 110, 1990, 503-509.
- MUNSELL, C.: *Munsell Soil Color Charts*, (Addition), Baltimore, Maryland (Munsell Color, Baltimore, Md.,)1988.
- NAGUIB, A.: «Le cône 483 de Macadam et autres cônes funéraires à Oslo», *BSEG* 11, 1987, 71-86.
- NEWBERRY, E.: «The Sons of Thutmose IV», *JEA* 14, 1928, 82-85.
- PETRIE, W.F.: *A Season in Egypt 1887*, London (Field & Tuer, «The Leadenhall Press» E.G.) 1887.
- PORTER, B. & MOSS, R.: *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings* I, vol.1, Oxford (The Griffith Institute, University of Oxford) 1960.
- QUIRKE, S.: *Titles and Bureaux of Egypt 1850-1700 BC*, *GHP Egyptology* 1, London (Golden House Publications) 2004.
- RANKE, H.: *Die Ägyptischen Personennamen*, Bd. 1: Verzeichnis der Namen, Glückstadt (Glückstadt, Hamburg, New York, Augustin) 1935.
- REDFORD, D. B.: *The Oxford Encyclopedia of Ancient Egypt*, vol. 1, Oxford (Oxford University Press) 2001.
- ROEDER, G.: *Aegyptische Inschriften aus den Staatlichen Museen zu Berlin*, Band.2; *Königliche Museen zu Berlin. Ausführliches Verzeichniss der Aegyptischen Altertümer, Gipsabgüsse und Papyrus*, Berlin (Spemann) 1899.
- ROBINS, G.: «The Relationships Specified by Egyptian Kinship Terms of the Middle and New Kingdoms», *CdÉ* 54, 1979, 197-217.
- ROEHRIG, C. H.: «The Eighteenth Dynasty Titles Royal Nurse (*mn^ct nswt*), Royal Tutor (*mn^c nswt*) and Foster Brother/Sister of the Lord of the Two Lands (*sn/snt mn' n nb t3wy*) », PhD thesis/University of California, Berkeley, 1990.
- SHAW, I.: *British Museum Dictionary of Ancient Egypt*, London (British Museum) 1995.
- SETHE, K.: «Über einige Kurznamen des neuen Reiches», *ZÄS* 44, 1907, 87-92.
- SEIPEL, W.: «Harim», *LÄ* 2, Wiesbaden, (Otto Harrassowitz) 1977, 982-985.
- STRUDWICK, N. & TAYLOR, H.: *The Theban Necropolis: Past, Present, and Future*, London (British Museum Press) 2003.
- STRUDWICK, N.: *The Tomb of Pharaoh's Chancellor Senneferi at Thebes (TT99)*, Oxford (Oxbow Books) 2016.
- TAYLOR, A.: *An Index of Male Non-Royal Egyptian Titles, Epithets & Phrases of the 18th Dynasty*, London (Museum. Bookshop Publications) 2001.
- «Theban Tomb Tracings Made by Norman and Nina De Garis Davies»: [Http://www.griffith.ox.ac.uk/gri/4TT29.html](http://www.griffith.ox.ac.uk/gri/4TT29.html). Accessed on 23/06/2022.
- «Tombs of Ancient Egypt»: https://www.osirisnet.net/tombes/nobles/sennefer/e_sennefer_p.1-9. Accessed on 25/05/2020.
- ZENIHIRO, K.: *The Complete Funerary Cones*, Tokyo (Maruzen Co., Ltd.) 2009.
- ZENIHIRO, K.: «The Career of Nakhtmin (TT 87) as Revealed by his Funerary Cones», *Proceedings of the XI International Congress of Egyptologists, Florence Egyptian Museum, Florence*, 2015, 2017.
- WARD, W.: *Index of Administrative and religious titles of the Middle Kingdom*, Beirut (American University of Beirut) 1982.
- WARD, W.: *Essays on Feminine Titles of the Middle Kingdom and Related Subjects*, Beirut (American University of Beirut) 1986.

THE TITLES OF AHMOSE [THE OWNER OF THEBAN TOMB N°. 224]

- WEIGALL, A.: «A Report on the Excavation of the Funeral Temple of Thoutmosis III at Gurneh», *ASAE* 7, 1906, 121-141.
- WEBER, M.: «Harimsverschwörung», *LÄ* 2, Wiesbaden (Otto Harrassowitz) 1977, 988-991.
- WEST, G.: *The Tekenu and Ancient Egyptian Funerary Ritual*, *Archaeopress Egyptology* 23, Oxford (Glennise West and Archaeopress) 2019.
- WHALE, Sh.: *The Family in the Eighteenth Dynasty of Egypt: A Study of the Representation of the Family in Private Tomb*, Sydney (Australian Centre for Egyptology) 1989.
- WILSON, P.: *A Ptolemaic Lexicon. A Lexicographical Study of the Texts in the Temple of Edfu*, Leuven (Peeters) 1997.

THE WORSHIPPING FORMULAE OF ROYAL ADORATION SCENES IN ANCIENT EGYPTIAN TEMPLES FROM THE OLD KINGDOM TILL THE END OF THE LATE PERIOD

Rabee Eissa

Senior Archaeologist, Excavation Instructor and Ph D in Egyptology, Supreme Council of Antiquities, Egypt,
rabeeeissa1@gmail.com

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Eissa, Rabee () "THE WORSHIPPING FORMULAE OF ROYAL ADORATION SCENES IN ANCIENT EGYPTIAN TEMPLES FROM THE OLD KINGDOM TILL THE END OF THE LATE PERIOD," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 5.

Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/5>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in Journal of the General Union of Arab Archaeologists by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

**THE WORSHIPPING FORMULAE OF ROYAL ADORATION SCENES
IN ANCIENT EGYPTIAN TEMPLES FROM THE OLD KINGDOM
TILL THE END OF THE LATE PERIOD**

BY

Rabee Eissa Mohamed

Senior Archaeologist, Excavation Instructor and PhD in Egyptology, Supreme Council of Antiquities, Egypt

ABSTRACT

[AR] الصيغ المعنونة لمناظر التعبد الملكية في المعابد المصرية القديمة منذ عصر الدولة القديمة حتى نهاية العصر المتأخر يتناول هذا البحث عرض ودراسة ست صيغ لغوية قام الباحث بتصنيفها خلال حصره مناظر تعبد الملوك في المعابد المصرية منذ عصر الدولة القديمة حتى نهاية العصر المتأخر. وقد ظهرت هذه الصيغ كعنوان لمناظر التعبد الملكية حيث أظهرت الدراسة اختلاف الصيغ الست في المعنى، كما اقتصر ظهور بعضها في مناظر ملوك بعينهم. وتهدف الدراسة إلى مناقشة وتحليل التطورات والتغيرات التي طرأت على صيغ التعبد محل الدراسة في مصر القديمة.

[EN] This paper aims to discuss the adoration formulae that appear as titles introducing the royal adoration scenes in ancient Egyptian temples from the Old Kingdom till the end of the Late Period. Six different linguistic formulae were collected during this study. They vary in meaning and some appear only in specific kings' scenes. The study demonstrates these six types, confirms their development and points out their modifications and changes in ancient Egypt.

KEYWORDS: Adoration, worshipping, king, deity, temple, *dw3-ntr*, kissing the ground.

I. INTRODUCTION

In this paper, I discuss the development of the royal adoration formulae that appear as a title introducing the adoration scenes. Six formulae were collated during this study¹ to describe the king during worshipping. These formulas vary in meaning and usage. The earliest formula defines the aggregate of adorations, which range between two and four times as, $\overline{\text{𓄏}}^{\text{𓄏}}$, $\overline{\text{𓄏}}^{\text{𓄏}}$ and $\overline{\text{𓄏}}^{\text{𓄏}}$, *dw3-ntr sp snw*, *dw3-ntr sp hmt* and *dw3-ntr sp fdw*. The second formula specifies the adored deity such as, $\overline{\text{𓄏}}^{\text{𓄏}}$, *dw3-Wsir-Wnn-Nfr*, «Adoring Osiris Wennnefer». The third type defines the adoring king and the adored god as, $\overline{\text{𓄏}}^{\text{𓄏}}$, *dw3-ntr [sp fdw] in nsw.t nb-t3.wy* (*Wsr-m3^c.t-R^c stp-n-R^c*) *n it .f Imn-R^c ir.f di ^cnh*, «Adoring the god [four times] by the king of Upper Egypt, lord of two lands (Usermaatre-Setepenre) to his father Amun-Re, that is what he did, may life is given to him». While the fourth formula combines the adored deities with the adoration time, as $\overline{\text{𓄏}}^{\text{𓄏}}$, *dw3.f R^c-hr-3h.ty m wbn.f* «He adores Re-Hararkhty when he rises». The fifth one includes «kissing the ground before the deity» in the formula, for example $\overline{\text{𓄏}}^{\text{𓄏}}$, *r(3)-n sn t3 rdi.t hr h.t sn t3 m db^c.w.f*, «Utterance of kissing the ground, placing himself upon the belly to kiss the ground and to touch it with his fingers». Finally, the sixth formula is brief and only refers to the adoration significance as, $\overline{\text{𓄏}}^{\text{𓄏}}$, [...] *dsw dswr h^ct hr dw3-ntr ir.f di ^cnh mi R^c*, «Sanctuary of the sanctuaries shines while the adoring of the god; that is what he did; may he is given life like Re».

Nevertheless, it is essential to point out that the adoration rituals were described not only in temple scenes, but also in the pyramids texts², royal tombs scenes³ and royal funerary stelae⁴. Correspondingly, the adoration process was done by the individuals in their private tombs and funerary stelae⁵. According to Chauvet, the *dw3-ntr* «Adoring the god» in the private tombs bears two different meanings: one refers to «praise the god», and the other could mean «to thank the god»⁶.

II. DISCUSSION AND ANALYSIS OF THE ADORATION FORMULAE

1- First Formula [TAB 1]

The First Formula was the most familiar one; it stated the number of adoration performed by the king or his representatives during the daily rituals to the god statue. Based on the collected data, the maximum adorations time performed by the king was four, and the minimum was two, possibly done every day⁷.

¹ For documentation of these formulae, see: [TABLES 1-6].

² SETHE 1908: PT. 254 §§ 285c; PT. 504 §§ 1087d-e.

³ LD 1900-1913: vol.6, BL 134; LD 1900-1913: vol.7, BL 234; BAINES & MALEK 1980: 100; SHAW 2000: 288.

⁴ MARIETTE 1880: PL. 27; PETRI 1903: PL. XXXII.3.

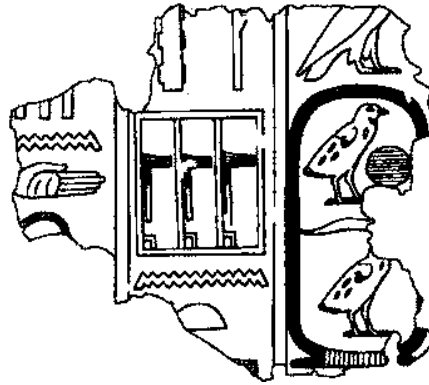
⁵ For the privates' adoration scene features see: GUNN 1916: 81-94; BAINES 1987: 79-98.

⁶ CHAUVET 2015: 74-78.

⁷ For all details about the references of these data see: [TABLE 1] in this article.







A. Adoring the God Four Times

The formula *dw3-ntr sp fdw* «Adoring the god four times», is the most common from the Old kingdom to the late period. According to Čwiek, the earliest possible example of a royal adoration scene is on a Fourth Dynasty broken limestone block found at Lisht and belonging to Khufu⁸ [FIGURE 1].



[FIGURE 1]: Limestone block bearing the oldest adoration formula, dating back to Khufu.

GEODICKE 1971: 20, N^o. 5.

As Čwiek mentions, in the third column we read:  (...) 4? *n dw3* (...), «Four times? of adoring (...)». The earliest complete formula of «Adoring the god four times» appears in Senusret I's adoration scenes in the White Chapel at Karnak. The text is vertical between the king and the worshipped deity. The Middle Kingdom examples appear in two forms: ⁹ and ¹⁰. In some cases, this formula was extended with other expressions such as ¹¹ *dd mdw dw3-ntr sp fdw*, «Word spoken: adoring the god four times» and ¹², *dw3-ntr sp fdw ir.f di ʿnh* «Adoring the god four times. That is what he did; may he is given life»¹³. In Senusret III's adoration scene to Montu in his temple in Medamud, the king says, ¹⁴, *dw3-[ntr] sp fdw ir.f di ʿnh d.t*, «Adoring [the god] four times». «That is what he did; may he is given life forever».

⁸ Unfortunately, due to the rare preservation of Old Kingdom temples, no explicit royal adoration scenes, except this one that Čwiek mentions. ČWIEK 2003: 241.

⁹ LACAU & CHEVRIER: 1969, PL. 2, 27, 36, 41.

¹⁰ ČERNÝ 1955: PL. XXV, XXVI.

¹¹ LACAU & CHEVRIER 1969: PL. 34.

¹² LACAU & CHEVRIER 1969: PL. 34.

¹³ Based on Teeter, the early examples of this formula are dated to Senusret I. Its different forms appear with various offerings, including incense, libations, cakes, wine, milk and bread. The meaning changes according to *ir, di ʿnh*, and whether the *f* refers to the donor or the recipient. The translations of *ir.f di ʿnh* in the middle kingdom are «he makes given life» and «He who has given life. «While during the New Kingdom and the Late Period, it could be translated as it is done for him as the one who has given life. «He may make given life» and « He shall act for him who has given life». TEETER 1997: 55-9.

¹⁴ WERNER 1985: FIG. 8.

In Senusret III and Amenemhat II's scenes at Serabit el-Khadim, a more straightforward form $\star\text{𓆎}$ appears¹⁵ [FIGURE 2].



[FIGURE 2]: Amenmhat III adores Hathor. ČERNÝ 1955: PL. XXV.

Thirty-seven of thirty-nine scenes representing the Eighteenth Dynasty evidences in this article employ the adoration formula *dw3-ntr sp fdw*, «Adoring the god four times». It took various forms, including $\text{𓆎}\star\text{𓆎}$, $\star\text{𓆎}$, $\star\text{𓆎}$, $\text{𓆎}\star\text{𓆎}$, $\text{𓆎}\star\text{𓆎}$, $\text{𓆎}\star\text{𓆎}$, $\text{𓆎}\star\text{𓆎}$, $\text{𓆎}\star\text{𓆎}$. In $\text{𓆎}\text{𓆎}$ some cases, this formula is followed by $\text{𓆎}\text{𓆎}$, *ir.f di ʿnh*, «That is what he did; may he is given life», or $\text{𓆎}\text{𓆎}\text{𓆎}$, *ir.f di ʿnh mi Rʿ*, «That is what he did; may he is given life like Re».

dw3-ntr sp fdw, also occurs in Seti I's scenes. The most interesting new form occurs in Seti I's small temple at Reddisiaa¹⁶, It is inscribed [FIGURE 3].


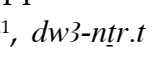
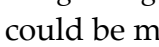


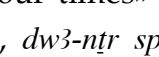
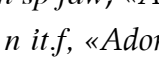
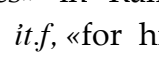
[FIGURE 3]: Seti I adores Isis. LD 1900-1913: vol.6, ABTH III, 141.




¹⁵ ČERNÝ 1955: PL. XXV, XXVI.

¹⁶ LD 1900-1913: vol. 6: ABTH III, 141.

Here, the figure of the king was utilized as a part of the adoration formula to Isis. It could be a cryptographic inscription¹⁷. In this example, the author assumes that the inscriber replaced the verb * dw3 «adore» by the adoration gesture, which depicts the king standing with both arms raised and open hands toward the goddess. This explanation indicates that Seti I is doing the ritual by himself. According to Mahmoud El-Khadragy, the earliest appearance of the adoration gesture is found in the temple reliefs of Sahure¹⁸. Also, it appeared in several private tombs of the Old and Middle Kingdoms¹⁹.

Seti I's formula «adoring the god four times» mentions three female adored deities. One is dedicated to Isis with the hymn ,²⁰ [dw3]-ntr.t n sp fdw, «Adoring the goddess four times». Strangely, the other two appeared with Horus and Re-Harakhty. They are inscribed consecutively read * ,²¹ dw3-ntr.t sp fdw, «Adoring the goddess four times» and ,²² [dw3]-ntr.t sp fdw, «Adoring the goddess four times». The adoring female formula used with these two male gods could be mistaken here²³.

The formula «adoring the god four times» appeared in Ramses II's scenes in new hieroglyphic writings such as * ,²⁴ dw3-ntr sp fdw, «Adoring the god four times» and * ,²⁵ dw3-ntr n it.f dd mdw in sp fdw, «Adoring the god, for his father, words spoken four times» and * ,²⁶ dw3-ntr sp fdw n it.f, «Adoring the god four times for his father». The formula «adoring the god four times» in Ramses II's scenes witnessed important additional of the unique expression n it.f, «for his father». With this phrase, the king emphasizes that he belongs to the deities' family and also he is a god. This phrase was not associated with the adoration of a specific god, but it appears in a number of scenes showing him adoring Ptah, Thoth, Re-Harakhty, Khonsu and Re²⁷.

The adoring four times formula of Merenptah demonstrates that each king of the Nineteenth Dynasty had an exceptional adoring performance. Merenptah made two changes to the formula. Firstly, he joined two formulae of different rites — m33 dw3-ntr sp fdw, «Seeing and adoring the god four times». This form appears in two different ways as  and . Then, the standard form is shortened to * ,²⁸ dw3 sp fdw, «Adoring four times».

¹⁷ Cryptography was very well known in ancient Egypt from the third dynasty, but was used extensively during the Ramesside Period. For more details see: TATERKA 2015: 71-89.

¹⁸ BORCHARDT 1913: PL. 1, 5, 7, 12; EL-KHADRAGY 2001: 187, N^o. 2.

¹⁹ EL-KHADRAGY 2001: 187-201.

²⁰ CALVERLEY & BROOME 1933: PL. 20

²¹ CALVERLEY & BROOME 1933: PL. 28.

²² CALVERLEY & BROOME 1935: PL. 16.

²³ This explanation is supported by the king's hymns for Horus and Re-Harakhty, which speaks about Hathor's role in the destruction of mankind story. BLEEKER 1973: 48-51; LICHTHEIM 1976: 199-200.

²⁴ DONADONI et Al. 1975: PL. XIII.

²⁵ EISSA 2017: PL.105.

²⁶ NELSON 1981: PL.100.

²⁸ FRANKFORT: 1933, PL. LXXIII.

A new form of the adoration formula «Adoring the god four times» appeared in Ramses III temple at Medinet Habu; it was different from those discussed above as $\overline{\text{𓄏}}\overline{\text{𓄏}}\overline{\text{𓄏}}\overline{\text{𓄏}}$ ²⁹. The known royal adoration scenes from the Late Period also occurs with these formulae. Taharqo adores Hathor at Barqal temple, with $\overline{\text{𓄏}}\overline{\text{𓄏}}\overline{\text{𓄏}}\overline{\text{𓄏}}$ ³⁰, *dw3-ntr sp fdw*, «Adoring four times», while Nectanebo I, adores Sopdu at the Shrine of Saft El-Henneh, with $\overline{\text{𓄏}}\overline{\text{𓄏}}\overline{\text{𓄏}}\overline{\text{𓄏}}$ ³¹, *dd mdw dd in Dhwtj dw3-ntr sp fdw*, «Word spoken, utterance by Thoth: Adoring the god four times».

One of the most noteworthy results of this paper is that there are no adoring scenes to Thoth from Thutmose I to Thutmose IV, although their names are derived from the god's name. This could be comprehended by Nectanebo I's adoration formula mentioned above, which explains that the utterance is hymned by the god Thoth himself.

As it well known, when carrying out certain religious rites, Thoth's role as *hry-hp(.t)* (lector priest)³² was assumed by the king. Another form of this title appears as *hry-hp-wr-m-3t-ntryt* «Great lector priest in the gods' hill»³³. That means all Thutmoses, whose names are derived from the word Thoth cannot be depicted as the adorer king to Thoth.

Although the formula *dw3-ntr* occurs in the non-royal context³⁴, the formula *dw3-ntr sp fdw*, «Adoring the god four times», is usually used as a recitation of the king. It was found twice only in a non-royal context from Abydos. The first use was by Second Intermediate Period private individuals depicted adoring Min-Harnakht with *dw3-ntr sp fdw*³⁵. This may reflect kingship weakness during that period. In the absence of a strong central ruler, private individuals may have usurped what were traditionally royal formulae on their own stela³⁶. The second example is a unique scene in the northern wall of the second hypostyle hall of Seti I's temple at Abydos. The adoration process is marked by six deities, Isis, Imentet, and Nephthys on the left and Maat and Renpet on the right, while Osiris is seated, being adored. Both Maat and Renpet adore Osiris with *dw3-ntr sp fdw in ntr.wt* «Adoring the God four times by the goddesses».

²⁹ EPIGRAPHIC SURVEY 1964: PL. 491.

³⁰ LD 1900-1913: vol.10, ABTH V, 8.

³¹ NAVILLE 1885: PL. 1.

³² BOYLAN 1922: 143.

³³ LGG. 2002: vol. 6, 38 ; LGG 2002: vol. 8, 718.

³⁴ CHAUVET 2015: 74-78.

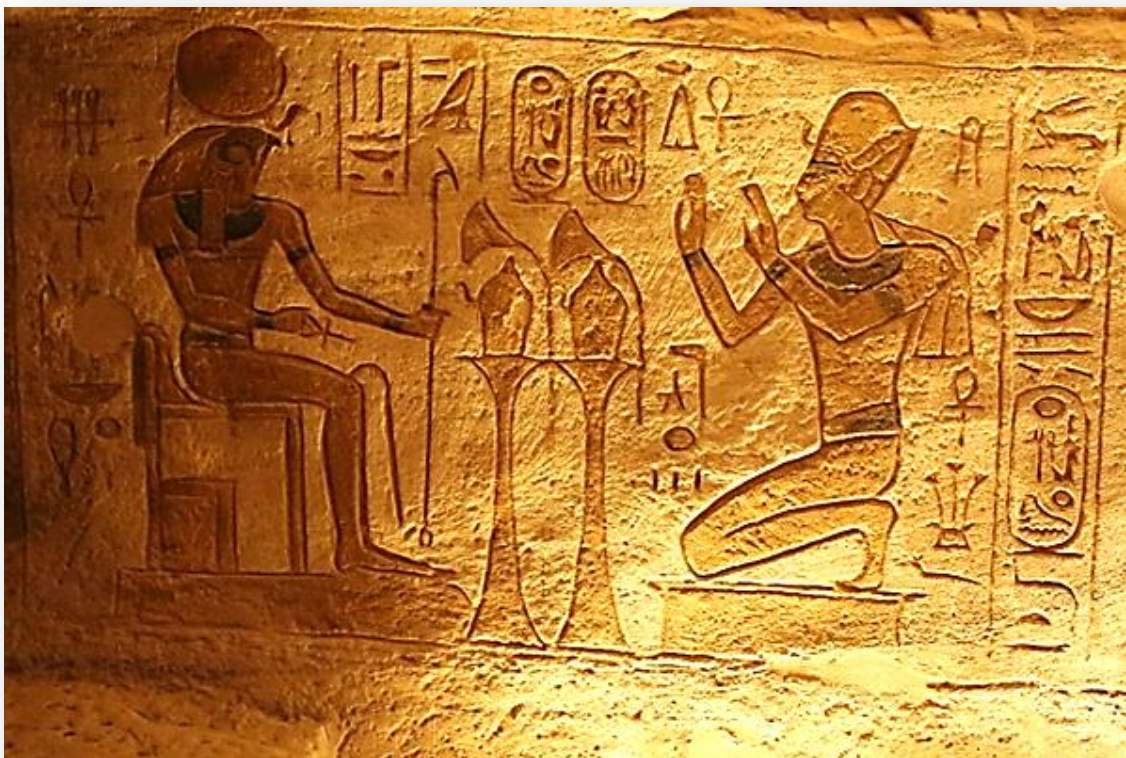
³⁵ GAUTHIER 1931: 562; CRAMER 1936: 87-8; SIMPSON 1974: 20-2, PLS. 65, 67, 82, (ANOCs 49.2, 65.4 & 67.1); AUFRERE 1986: 26-7.

³⁶ For more details about the political situation of the Second Intermediate Period, see: RYHOLT 1997; ABDEL WHAB & EISSA 2017: 181-193.

Adoring the God Three Times

The data collated in this study shows that the adoration formula «*Adoring the god three times*» is rare compared to the formula «*Adoring the god four times*»; it only appears in four scenes. The earliest adoration formula was with Ahmose I worshipping Min in Horus temple at Buhen³⁷, It is inscribed *𓆎𓆏𓆏, *dw3-ntr sp hm.t* «*Adoring the god three times*».

The second is with Thutmose III adoring Horus Lord of Baki at El-Lessiya chapel³⁸. It reads 𓆎*𓆏𓆏, *dw3-ntr sp hm.t* «*Adoring the god three times*». The third example is in an unpublished scene in the Grand Temple at Abu-Simbel temple, which shows Ramses II kneeling and praying in front of Re-Harakhty god 𓆎*𓆏𓆏³⁹, *dw3-ntr sp hm.t*, «*Adoring the god three times*» [FIGURE 4]. The fourth and last is the well-known example of Osorkon II worshipping Bastet on a limestone block from the Bastet temple at Bubastis 𓆎𓆏𓆏*𓆏𓆏⁴⁰.



[FIGURE 4]: Ramses II adores Re-Harakhty.
©Center of Documentation of the Ministry of Antiquities Egypt.

³⁷ MACIVER & WOOLLEY 1911: PL. 35.

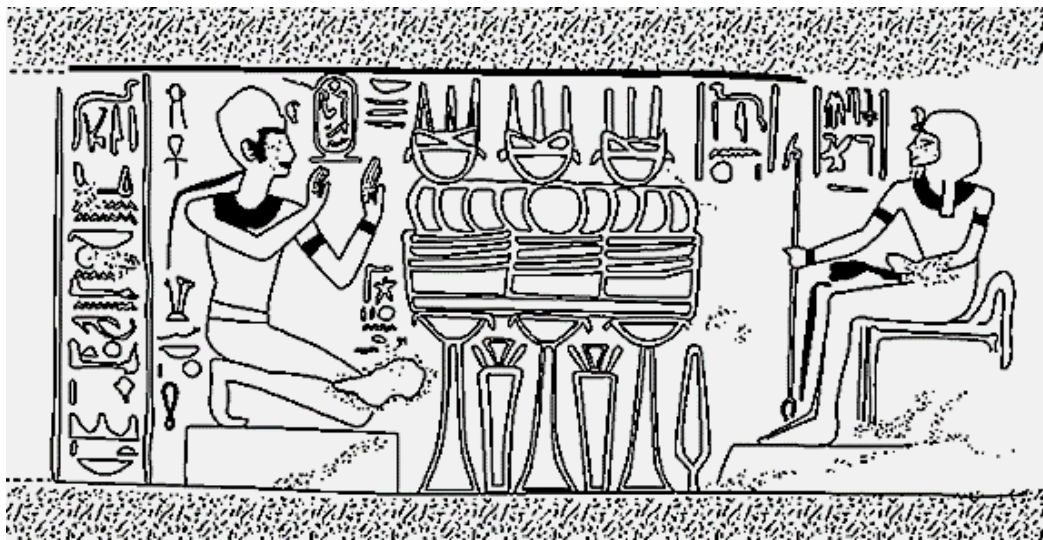
³⁸ EL-ACHIERY & ALY & DEWACHTER 1968: PL. XI,d2.

³⁹ An unpublished scene in room 4 of the northern rooms at the Grand Temple of Abu Simbel.

⁴⁰ NAVILLE 1891: PL. XLVII.

B. Adoring the God Two Times

Only two adoration scenes with formula «*Adoration the god two times*» were found and dated to the Nineteenth Dynasty. The first example shows Seti I adores Nefertum in his temple at Abydos with *𓆎𓆏𓆑𓆒𓆓𓆔𓆕⁴¹, *dw3 ntr htp sp snw hr dd-mdw b'ḥ it.f*, «*Adoring and pleasing the god two times saying the words and providing his father by offerings*». The second example is most important. It is in a unique scene of Ramses II adoring himself in the Grand Temple at Abu-Simbel [FIGURE 5].



[FIGURE 5]: Ramses II adores himself. EISSA 2023: FIG. 1.

The adorer king Ramses II hymns his defied form by saying *𓆎𓆏𓆑𓆒𓆓𓆔𓆕, *dw3-ntr sp snw n it.f*, «*Adoring the god two times to his father*». The adored god is sitting on his throne outside a shrine in complete human form. The inscription before the god reads 𓆎𓆏𓆑𓆒𓆓𓆔𓆕 *dd mdw in R^c-ms-sw p3 ntr t3* «*word spoken by Ramses, god of the earth*»⁴².

Generally, the adoration formulae of Ramses II represented him as a member of the deities' realm⁴³. The equivalency is clear when he added «*to his father*» and «*to his mother*». The author assumes that Ramses II praised himself only two times rather than four to be far from an absolute deity. Ramses II also showed his human personality by being an ordinary king, son of the god through the expression «*to his father*», which is added to the adoration formula. Interestingly, the appearance of Ramses II's name outside the cartouche, in the same way the deities' names were written, could be another method reflecting the divinity of Ramses II. The writing of royal names without cartouches is recognized as deliberately reflecting the orthography of their divine names and highlighting the divine persona of the king named⁴⁴.

⁴¹ MARRITTE 1869: PL. 38a.

⁴² This scene is discussed in detail in a forthcoming article by the author entitled «*Did Ramses II Really Adore himself? Clear Evidence from Abu-Simbel*», forthcoming 2022.

⁴³ For more details about the artistic methods that showed Ramses II as a god, see: HABACHI 1969: 1-10.

⁴⁴ GIORGINI 1998: PL. 260-261.

This method was clearly used with Amenhotep III and Tutankhamen in the Eighteenth Dynasty and Seti I and Ramses II in the Nineteenth Dynasty⁴⁵.

Ramses II's name as a deified king was also written outside a cartouche on the stela of Nakht found in the forecourt of the temple of Aksha at Nubia, built by Ramses II. This stela shows Nakht adoring Ramses II, who united with Amun (belongs to) Wser-maat-Re Setep-en-Re⁴⁶. Ramses II was deified during his lifetime. Similarly, Amenhotep III, at his temple in Soleb, presented offerings to himself as «*Nebmaatre, the great god*», and his name was written without a cartouche. These scenes show that the king established himself as a god and was worshipped as such while still alive⁴⁷.

Generally, it is noteworthy that most of the first adoration formula type includes adoring four times, while four examples mention the adoration three times and only two examples of adoration two times. Sethe mentions that the number four has many religious connotations; it was mainly related to the four cardinal directions, north, south, east and west⁴⁸. The number four was also involved with many royal religious rites, such as purification, sailing through the Nile, burning of incense, and it was used with different offerings, such as bread, jars four times, the ritual of four magic bricks, and rituals of throwing balls and shooting arrows in four directions⁴⁹. The question then arises if the kings were adored four times under the four compass directions, and what does it mean when they are worshipped only two or three times? I suggest that «four times» refers to four different times of the day: dawn, sunrise, noon, and sunset. While the formula «adoring god three times» expresses completeness and perfection because the value of the number three was a signifier of plurality – or unity expressed in plurality⁵⁰. This is apparent, for instance, in hieroglyphic writing: to express the plural, an ideogram may be repeated three times or have three strokes placed after the sign for the noun⁵¹. So, we can say that the three strokes under the *sp* sign refer to the complete plurality of the required times of worship during the day and therefore mean the same as four times.

2- Second Formula [TAB 2]

The second adoration formula mentions the names of the adored deities. The earliest example dates to Mentuhotep II. The scene shows the king praising Amun-Min in his temple at Deir El-Bahari, saying, *dw3-ntr Imn* [...], «*Adoring the god, Amun-...*»⁵².

The second use of this formula was by Senusret I, who adores Amun with *dw3-Imn hr hnd hr ir-f di ʿnh*, «*Adoring Amun upon Horus' throne. That is what he did; may the life is given to him*»⁵⁴.

⁴⁵ BELL 1985: 42 N^o. 5.

⁴⁶ FUSCALDO 1990: 19-34.

⁴⁷ GIORGINI 1998: Pl. 260-61.

⁴⁸ SETHE 1916: 31-32.

⁴⁹ The symbolism of the number four in Ancient Egyptian is discussed in detail in SETHE 1916: 31-32; RAGAIE 2007.

⁵⁰ SALES 2012: 118.

⁵¹ TE-VELDE 1971: 80.

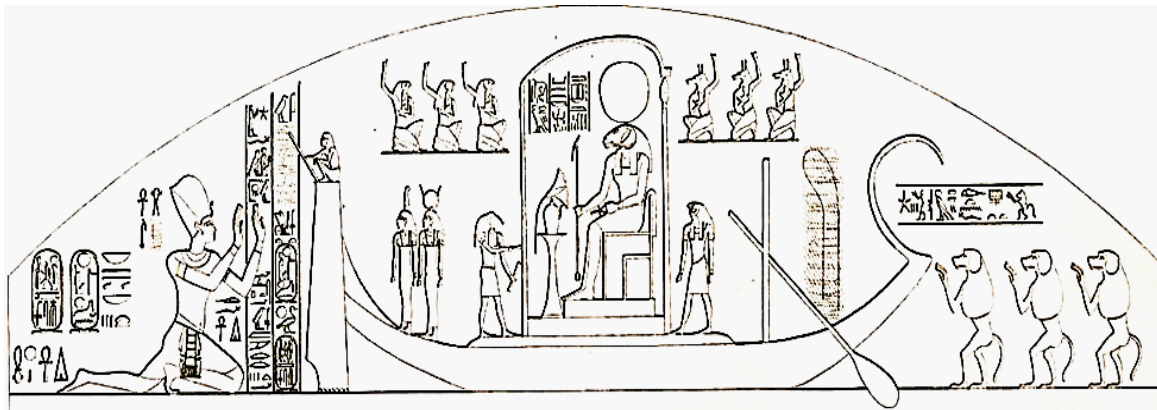
⁵² NAVILLE 1910: Pl. Vc.

⁵³ LACAU & CHEVRIER 1969: Pl. 41.

Fourth Formula [TAB 4]

The fourth type of royal adoration formula combines names of the adored deities with the time of the adoration. The author found six examples of this formula, all dated to the Ramesside Period⁶⁵. The first and second examples show Ramses II worshipping Re and Re-Harakhty consecutively in his temples at Abydos and El-Seboua with

*𓂏𓂏𓂏𓂏𓂏𓂏⁶⁶, *dw3.f R^c-hr-3h.ty m wbn.f*, «He adores Re-Hararkhty when he rises» [FIGURE 8] and *𓂏𓂏𓂏𓂏𓂏⁶⁷, *dw3 R^c m inm.t*, «Adoring Re at the west in the sunset time».



[FIGURE 8]: Ramses II adores Re-Harakhty. LD 1900-1913: vol. 7, ABTH III, 181.

The rest dated to Ramses III and show him adoring Re or Re-Harakhty in his temple at Medinet Habu with 𓂏𓂏𓂏𓂏⁶⁸, *dw3 R^c m htp.f*, «Adoring the god when he rests»⁶⁹, and *𓂏𓂏𓂏𓂏𓂏⁷⁰, *dw3-R^c m wbn.f m 3h.t*, «Adoring Re when he rises on the horizon» and *𓂏𓂏𓂏𓂏𓂏⁷¹, *dw3-R^c (m) htp.f m ʿnh* «Adoring Re when he rests in life» and 𓂏𓂏𓂏𓂏𓂏⁷¹, *sw3š R^c-hr-3h.ty hft wbn.f m 3h.t i3bt.t, n(y.t) p.t*. «Adoring Re-Horakhty when he rises in the eastern horizon of the sky».

It seems that the fourth formulae are strongly related to the rising and setting of the solar deities. That bears indications of two probable interpretations. First of which, notice that all of words *imn.t* «west», *3h.t* «horizon» and *3h.t i3bt.t* «eastern horizon» refer to places on the horizon. The second one, which the author support, notices that these formulae refer to the timing of the royal adoration activities, which is supported if we consider the meaning of each formula. In other words, the meaning of *𓂏𓂏𓂏𓂏𓂏 refers to rising when the daytime starts. Furthermore, the meaning of *𓂏𓂏𓂏𓂏𓂏 clearly indicates sunset when the nighttime begins.

⁶⁵ This type of adoration formulae that mentions both the names of the adored deities and the adoration time is very common in sun hymns in privates' tombs during the New Kingdom; for details see: ASSMANN 1971: 1-34.

⁶⁶ LD 1900-1913: vol.7, ABTH III, 181.

⁶⁷ ISKANDER & GOELET 2015: PL. 4.2.15.

⁶⁸ EPIGRAPHIC SURVEY 1963: PL. 421c.

⁶⁹ I see that his resting refers to the sunset time.

⁷⁰ EPIGRAPHIC SURVEY 1963: PL. 431.

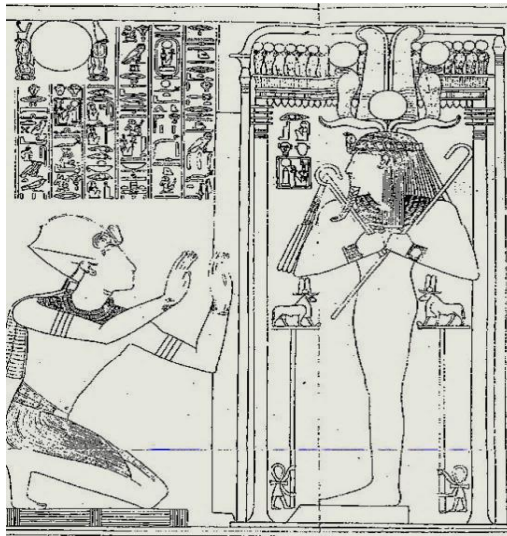
⁷¹ EPIGRAPHIC SURVEY 1963: PL. 433.

So, these formulae enhanced that «adoring god four times» refers to four different times during the day rather than four directions.

These four times could be w^3h , «dawn», wbn , «sunrise», hrw , «noon» and grh , «sunset» or possibly «night time». Finally, it is noteworthy that this adoration formula is only dedicated to Re and Re-Harakhty, the two main solar gods. It is well known that the Ramesside Period was recognized for its devotion to solar religion⁷² which is re-informed by the king's names, who are mostly called «Ra-ms-sw» namely «Re bore him»⁷³.

Fifth Formula [TAB 5]

The fifth royal adoration formula, «Utterance of kissing the ground, placing himself upon the belly to kiss the ground», is used only by Seti I and its first part was used by Siptah⁷⁴. The earliest royal scene mentions this formula dates to Seti I; however, various forms appeared in Seti I's scenes, such as $\text{r}(3)\text{-n sn t}^3 \text{rdi.t hr h.t sn t}^3$ ⁷⁵, $\text{r}(3)\text{-n sn t}^3 \text{rdi.t hr h.t sn t}^3 \text{m db}^c.\text{w.f}$ ⁷⁶, $\text{r}(3)\text{-n sn t}^3 \text{rdi.t hr h.t sn t}^3 \text{m db}^c.\text{w.f}$ ⁷⁷. Generally, this unique formula has two forms. The short one was, $\text{r}(3)\text{-n sn t}^3 \text{rdi.t hr h.t sn t}^3$, «Utterance of kissing the ground, placing himself upon the belly to kiss the ground», while the long one was, $\text{r}(3)\text{-n sn t}^3 \text{rdi.t hr h.t sn t}^3 \text{m db}^c.\text{w.f}$, «Utterance of kissing the ground, placing himself upon the belly to kiss the ground and to touch it with his fingers». Strangely, none of Seti's scenes with the formula «Kissing the ground, laying on the belly and kissing the ground» actually show him in this position [FIGURE 9].



[FIGURE 9]: Seti I adores Osiris. CALVERLEY & BROOME 1935: PL. 13.

⁷² ASSMANN 2009: 156-185.


⁷³ BECKERATH 1984: 88-97.

⁷⁴ It is important to note that the earliest mention of kissing the ground rite dates back to the Middle Kingdom. In other words, Sinuhe's story is the oldest known text that mentions the pose of lying prostrate on the ground. It mentions that Sinuhe directly laid on his belly and prostrated on the ground when he saw the king sitting in his golden kiosk, see: TAWFIK 1973: 77-80; LICHTHEIM 1973: 231; TOBIN 1995: 175, N°59.

⁷⁵ CALVERLEY & BROOME 1933: PL. 4.

⁷⁶ CALVERLEY & BROOME 1935: PL. 13.

⁷⁷ CALVERLEY & BROOME 1935: PL. 14.

The only king depicted in this pose was Akhenaten,⁷⁸ but is not accompanied by this formula. Seti I did not represent accurately lying on his belly, accompanying this formula, could be due to the narrow space between the figure of the king and his adored deities. However, Siptah was the only king worshipping Amun-Re with a hymn entirely different from those used by his ancestors. His formula is a long one consisting of two different phrases. It reads ⁷⁹, *rdi.(t) i3w.t n Imn-R^c sn.t t3 n k3 .f*, «I give praises to Amun-Re and kissing the ground to his Ka» [FIGURE 10]. The expression *rdi(t) i3wt* is the principal used one in adoration scenes on non-royal funerary stelae⁸⁰.



[FIGURE 10]: Siptah adores Amun-Re. LD 1900-1913: vol 6, ABTH III, 202a.

According to Dimitri Meeks, *dw3* is more closely related to royal adoration activities than *t3w*, which is generally used, with some exceptions⁸¹, in non-royal tombs and private funerary stelae⁸². According to Violaine Chauvet, the idiom of *dw3-ntr* beard two different meanings in the private tombs along the idiomatic use: one is «to praise the god» and the other is «to thank the god»⁸³.

Furthermore, the earliest known example of *dw3* in a temple is dated to Khufu,⁸⁴ while the earliest attestation of *t3w* appears in Sahure's temple at Abusir, the scene shows a group of men adore the king's name⁸⁵.

The second part of Siptah's adoration formula reads *snt t3 n k3.f*, «Kissing the ground for his ka». Strangely, this formula is dedicated to the Ka of the god, not the god himself. The earliest use of this formula was in Sinuhe's tale⁸⁶.

⁷⁸ VERGNIEUX & GONDRAN 1997: 73-75, 170-173.

⁷⁹ LD 1900-1913: vol. 7, ABTH III, 202a.

⁸⁰ For the private adoration scene features see BAINES 1987: 79-98; GUNN 1916: 81-94.

⁸¹ MEEKS 2000: 9-23.

⁸² SIMPSON 1974: 20-2, PL. 67, 65, 82, (ANOC 49.2, 65.4, 67.1).



⁸³ CHAUVET 2015: 74-78.

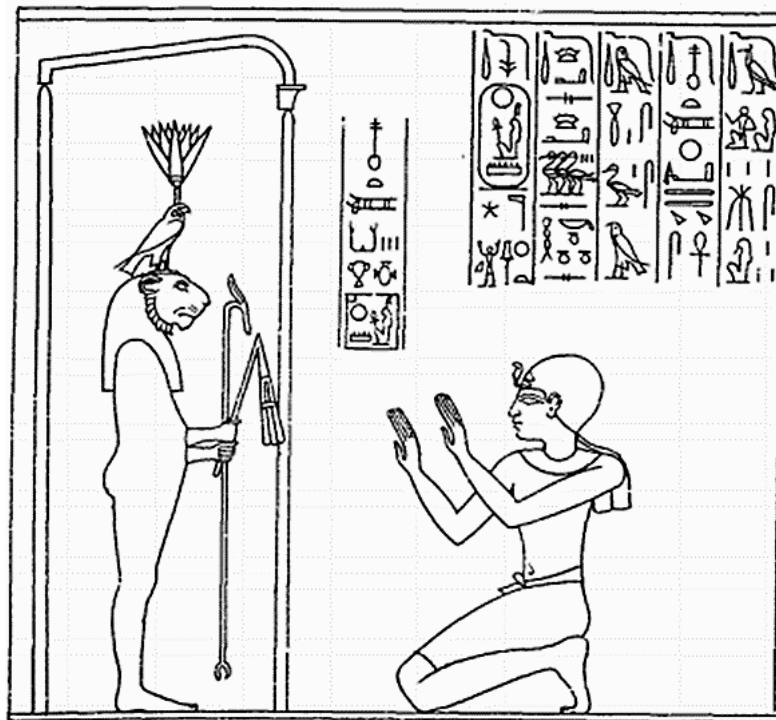
⁸⁴ ĆWIEK 2003: 241.

⁸⁵ BORCHARDT 1913: 12.

Alike, the earliest mention of Aten appeared in the same text⁸⁷. Therefore, there might be a connection between Aten, kissing the grounds and lying on the belly, which raises the question of whether the actual depiction of royal prostration and kissing the ground was only connected with worshipping Aten? considering that Akhenaten was the only king depicted kissing the ground and lying on his belly?⁸⁸.

Sixth Formula [TAB 6]

The Sixth and last type of royal adoration formulae is brief and has no specific category. According to the available data, only two examples were found. The first one belongs to Thutmose III adoring Hathor with ⁸⁹ [...] *dsr dsrw h't hr dw3-ntr ir f di 'nh mi R'*, «The sanctuary of the sanctuaries shines while the adoring of the god; that is what he did; may he be given life like Re». The second shows Seti I adoring Nefertum at Abydos with ⁹⁰ *dw3-ntr k3 shm.t*, «Adoring the god, raising the strength» [FIGURE 11]. According to Christian Leitz, who translated *k3 shm.t*, to «the one with high power», this title appeared for the first time in the New Kingdom, and it was only used with Re and Re-Harakhty⁹¹.



[FIGURE 11]: Seti I adores Nefertum. MARRITTE 1869: PL. 39b.

⁸⁶ LICHTHEIM 1973: 231; TOBIN 1995: 175, N^o. 59.

⁸⁷ TAWFIK 1973: 77-80.

⁸⁸ EISSA 2017: 209-19.

⁸⁹ NAVILLE 1904: PL. XCII.

⁹⁰ MARRITTE 1869: PL. 39b.

⁹¹ LGG 2002: vol. 7, 168.

III. CONCLUSIONS

Six royal adoration formulae were used to introduce worshipping scenes in temples from the old kingdom throughout the end of Late Period.


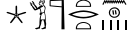



















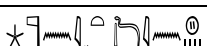
The most earlier and standard was the formula that determines the number of the adoration times, especially «*Adoring the god four times*». The formula 'Adoring the god three times' appeared in only four royal scenes. Moreover, the formula 'adoring the god two times'. the formula 'adoring the god two times' is used exclusively by Seti I at his temple in Abydos and by Ramses II at the Grand Temple of Abu-Simbel. The earliest examples of the adorer king's formula with their names or titles dated to the Nineteenth Dynasty. One could notice that the formula determining the adoration times was related to solar deities and restricted to the Rameside period. Few of these formulae mentioned the names of the adorer kings and the adored deities.

Eventually, based on the surveyed scenes, one could conclude that: The formula «Adoring the god four times» is the earliest to appear, 95% of the Eighteenth Dynasty surveyed scenes are entitled with this formula, and it was used during the Third Intermediate and the Late Periods. However, the formula «adoring the god four times» appeared with the adoration formula, which mentions the adored deities in the Middle Kingdom scenes. Finally, Seti I and Ramses II utilized new adoration formulae. Some of them did not use after that, like the formula «adoring the god two times» and the added phrase «to his father» or «to his mother» that distinguishable Ramses II's scenes. On the other hand, some of these formulae continued to be used subsequently, like «kissing the ground», which entitles Siptah's scene and the formulae that combine the adored deities with the time of the adoration, which distinguished Ramses III's adoration scenes.

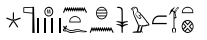
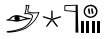
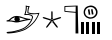









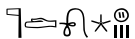


Adore god four times				
King	Deities	Temple	Adoration Formula	Bibliography
Senwsrt I	Amun-Re	White Chapel	𓆎*𓆑	LACAU & CHEVRIER 1969: PL. 2, 27 (right side)
Senwsrt I	Atum-Amun	W. Chapel	𓆎*𓆑	LACAU & CHEVRIER 1969: PL. 2, 27 (left side)
Senwsrt I	Amun-Re	W. Chapel	𓆎𓆎*𓆑	LACAU & CHEVRIER 1969: PL. 34 (right side)
Senwsrt I	Amun-Re	W. Chapel	𓆎𓆎*𓆑	LACAU & CHEVRIER 1969: PL. 34 (left side)
Senwsrt I	Amun-Re	W. Chapel	𓆎*𓆑	LACAU & CHEVRIER 1969: PL. 36 (right side)
Senwsrt I	Amun-Re	W. Chapel	𓆎*𓆑	LACAU & CHEVRIER 1969: PL. 36 (left side)
Senwsrt I	Amun-Re	W. Chapel	𓆎*𓆑	LACAU & CHEVRIER 1969: PL. 41 (right side)
Senwsrt III	Montu	Medamud	𓆎*𓆑	WERNER 1985: FIG. 8.
Senwesrt III	Hathor	Serabit el-Khadim	*𓆑	ČERNY 1955: PL. XXV
Amenemhat III	Hathor	Serabit el-Khadim	*𓆑	ČERNY 1955: PL. XXVI.
Ahmose I	Horus	Buhen	*𓆑	RANDALL-MACIVER & WOOLLEY 1911: PL. 35.
Amenhotep I	Amun	Karnak	𓆎*𓆑	BARGUET 1962: PL. XXXVIII
Amenhotep I	Amun-Re	Karnak	𓆎𓆎*𓆑	LETELLIER & LARCHÉ 2013: PL. 263 (669)
Amenhotep I	Amun-Re	Karnak	𓆎*𓆑	LETELLIER, LARCHÉ 2013: PL. 263 (669)
Amenhotep I	Amun	Karnak	𓆎*𓆑	LETELLIER, LARCHÉ 2013: PL. 25, 33.
Thutmose I	Anubis	D. Bahari	𓆎*𓆑	NAVILLE 1895: PL. IX.
Hatshepsut	Isis	Buhen	𓆎*𓆑	CAMINOS 1974: PL. 64.
Hatshepsut	Amun-Re	Red Chapel	𓆎*𓆑	BURGOS & LANCHE 2014: 60.
Hatshepsut	Amun-Re	R. Chapel	𓆎*𓆑	BURGOS & LANCHE 2014: 188.
Hatshepsut	Amun-Re	R. Chapel	𓆎*𓆑	BURGOS & LANCHE 2014: 178.

THE WORSHIPPING FORMULAE OF ROYAL ADORATION SCENES IN ANCIENT EGYPTIAN TEMPLES FROM THE OLD KINGDOM TILL THE END OF THE LATE PERIOD






Hatshepsut	Amunet	R. Chapel	𓆎*𓏏	BURGOS & LARCHE 2014: 71.
Hatshepsut	Sobek	R. Chapel	𓆎*𓏏	BURGOS & LARCHE 2014: 116.
Hatshepsut	Amun-Re	D. Bahari	𓆎*𓏏	NAVILLE 1901: PL. XCIX
Thutmose III	Horus	Buhen	𓆎*𓏏	CAMINOS 1974: PL. 44.
Thutmose III	Horus	El-Lessiya	𓆎*𓏏	EL-ACHIERY & ALY & DEWACHTER 1968: PL. XXXV.
Thutmose III	Re-Harakhty	Amada	𓆎*𓏏	ALY & ABDEL-HAMID & DEWACHTER: 1967: FIG. 20-2.
Thutmose III	Amun	Amada	𓆎*𓏏	ALY & ABDEL-HAMID & DEWACHTER: 1967: FIG. J10.
Thutmose III	Montu	Armant	𓆎*𓏏	MOND & MAYER 1940: PL. CIII.
Thutmose III	Amun-Re	Karnak	𓆎*𓏏	LEGRAIN 1902: PL. XIII B.
Thutmose III	Amun-Re	R. Chapel	𓆎*𓏏	BURGOS & LARCHE 2014: 62.
Thutmose III	Sopdu	Karnak	𓆎*𓏏	LD 1900-1913: VOL.5, ABTH III, 35.
Thutmose III	Amun	D. Bahari	𓆎*𓏏	NAVILLE 1906: PL. CXXIII.
Thutmose III	Amun	D. Bahari	𓆎*𓏏	NAVILLE 1897: PL. XXIX.
Thutmose III	Hathor	D. Bahari	𓆎*𓏏	NAVILLE 1901: PL. XCIX.
Thutmose III	Hathor	D. Bahari	𓆎*𓏏	NAVILLE 1907: PL. 28E.
Thutmose III	Amun-Re	R. Chapel	𓆎*𓏏	BURGOS & LARCHE 2014: 191.
Thutmose IV	Re-Harakhty	Amada	𓆎*𓏏	ALY & ABDEL-HAMID & DEWACHTER: 1967: C2.
Thutmose IV	Ptah	Amada	*𓏏	ALY & ABDEL-HAMID & DEWACHTER: 1967: C37-8.
Thutmose IV	Amun-Re	Karnak	𓆎*𓏏	LETELLIER & LARCHÉ 2013: PL. 5.
Thutmose IV	Amun-Re	Karnak	𓆎*𓏏	LETELLIER & LARCHÉ 2013: PL. 7.
Thutmose IV	Amun-Re	Karnak	𓆎*𓏏	LETELLIER & LARCHÉ 2013: PLS. 34, 38.
Thutmose IV	Amun-Re	Karnak	𓆎*𓏏	LETELLIER & LARCHÉ 2013: PL. 67.
Thutmose IV	Amun	Karnak	𓆎*𓏏	CHEVRIER 1951: FIG. 4.
Amenhotep III	Amun	Soleb	𓆎*𓏏	GIORGINI 1998: PL. 28.
Amenhotep III	Amun-Re	Qurna	𓆎*𓏏	BICKEL 1997: PL. 80.
Amenhotep	Amun-Re	Luxor	𓆎*𓏏	BRUNNER 1977: PL. 70.

III				
Seti I	Isis	Abydos		CALVERIEY & BROOME 1933: PL. 20.
Seti I	Horus	Abydos		CALVERIEY & BROOME 1933: PL. 28.
Seti I	Re-Harakhty	Abydos		CALVERIEY & BROOME 1935: PL. 14.
Seti I	Re-Harakhty	Abydos		CALVERIEY & BROOME 1935: PL. 16.
Seti I	Ptah	Abydos		CALVERIEY & BROOME 1935: PL. 27.
Seti I	Ptah	Abydos	----	CALVERIEY & BROOME 1935: PL. 27.
Seti I	Ptah	Abydos		CALVERIEY & BROOME 1935: PL. 33.
Seti I	Nefertum	Abydos		CALVERIEY & BROOME 1935: PL. 37 (Eastern Jamb)
Seti I	Nefertum	Abydos		CALVERIEY & BROOME 1935: PL. 37 (Western Jamb)
Seti I	Soker	Abydos		Unpublished scene in Soker's chapel at Seti I's temple at Abydos.
Seti I	Soker	Abydos		Unpublished scene in Soker's chapel at Seti I's temple at Abydos.
Seti I	Isis	Reddisia		LD 1900-1913: VOL.6, ABTH III, 141.
Seti I	Re-Harakhty	Qurna		One of Seti I's funerary stela at the open court of the king's temple at Qurna.
Ramses II	Amun-Khent	Abou Simbel		DONADONI & EL-ACHIRIE & LEBLANC & ABDEL-HAMID 1975: PL. XV.
Ramses II	Re-Harakhty	Abou Simbel		DONADONI & EL-ACHIRIE & LEBLANC & ABDEL-HAMID 1975: PL. XIII.
Ramses II	----	Abou Simbel		DONADONI & EL-ACHIRIE & LEBLANC & ABDEL-HAMID 1975: PL. XXXIV.
Ramses II	Thoth	Abou Simbel		DONADONI & EL-ACHIRIE & LEBLANC & ABDEL-HAMID 1975: PL. XXXIII.
Ramses II	Thoth	Abou Simbel		DONADONI & EL-ACHIRIE & LEBLANC & ABDEL-HAMID 1975: PL. XXXI.
Ramses II	Ptah	Abou Simbel		EGBERTS 1995: PL. 53 .
Ramses II	Amu-Re	Abou Simbel		EISSA 2017: FIG. 102.
Ramses II	Re-Harakhty	Abou Simbel		EISSA 2017: FIG. 103.
Ramses II	Re-Harakhty	Abou Simbel		EISSA 2017: FIG. 104.
Ramses II	Thoth	Abou Simbel		EISSA 2017: FIG. 105.



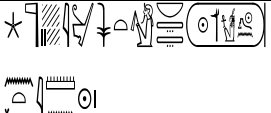

THE WORSHIPPING FORMULAE OF ROYAL ADORATION SCENES IN ANCIENT EGYPTIAN TEMPLES FROM THE OLD KINGDOM TILL THE END OF THE LATE PERIOD

Ramses II	Khonsu	Karnak		NELSON 1981: PL. 100.
Merenptah	Osiris	Osireion		FRANKFORT 1933: PL. LXXIII.
Merenptah	Osiris	Osireion		FRANKFORT 1933: PL. LXXIII.
Merenptah	Re-Harakhty	Osireion		FRANKFORT 1933: PL. LXXIII.
Merenptah	Re-Harakhty	Osireion		FRANKFORT 1933: PL. LXXIII.
Ramses III	Amun-Re	Habu		EPIGRAPHIC SURVEY 1964: PL. 491.
Taharqo	Hathor	Barkal		LD 1900-1913: VOL. 10 ABTH III, 8.
Taharqo	Nefertum-Harakhty	Kawa		LAMING MACADAM 1955: PL. XVIIc.
Nectanebo I				NAVILLE 1885: FIG. 1.
Adore god three times				
Ahomse I	Min	Buhen		RANDALL-MACIVER & WOOLLEY 1911: PL. 35.
Thutmose III	Horus	El-Lessiya		EL-ACHIERY& ALY & DEWACHTER 1968: PL. XI, D2.
Ramses II	Re-Harakhty	Abou Simbel		Unpublished Scene at room 4, the northern rooms at The Grand temple of Abu-Simbel.
Oserkon	Bastet	Bubastet		NAVILLE 1891: PL. XLVII.
Adore god two times				
Seti I	Nefertum	Abydos		MARRITTE 1869: PL. 38A
Ramses II	Ramses II/Re	Abou Simbel		EISSA 2023: FIG. 1.

[TABLE 1]: Adoration formulae use the number of the adoration times. © Rabee Eissa.

King	Deities	Temple	Adoration Formula	Bibliography
Mentuhotep II	Amun-Min	D. Bahari		ARNOLD 1977: PL. 25.
Senwsrt I	Amun	W. Chapel		LACAU & CHEVRIER 1969: PL. 41.
Thutmose III	Amun-Re	Karnak		BARGUET 1962: PL. XVII.
Seti I	Osiris	Abydos	`	CALVERLEY & BROOME 1938: PL. 13.
Ramses II	Isis	Abou Simbel		DONADONI & EL-ACHIRIE & LEBLANC & ABDEL-HAMID 1975: PL. XXVII.
Ramses II	Amen-Re	Karnak		NELSON 1981: PL. 36.

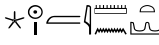


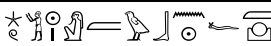


[Table 2]: Adoration formulae mention the adored deities © Rabee Eissa.

King	Deities	Temple	Adoration Formula	Bibliography
Seti I	Amun-Re	Abydos		CALVERLEY & BROOME 1958: PL.47.
Seti I	Osiris	Abydos		CALVERLEY & BROOME 1938: PL.12A.
Ramses II	Amun-Re	Karnak		NELSON 1981: PL. 89.
Ramses III	Atum	Habu		EPIGRAPHIC SURVEY 1963: PL. 421C.




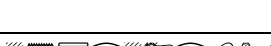


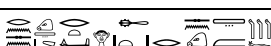

[TABLE 3]: Adoration formulae use the adorer kings with their names or titles beside the adored deities.

©Rabee Eissa

THE WORSHIPPING FORMULAE OF ROYAL ADORATION SCENES IN ANCIENT EGYPTIAN TEMPLES FROM THE OLD KINGDOM TILL THE END OF THE LATE PERIOD

King	Deities	Temple	Adoration formula	Bibliography
Ramses II	Re	Abydos		ISKANDER & GOELET 2015: PL. 4.2.15.
Ramses II	Re-Harakhty	E-Seboua		LD VII: ABTH, 181 .
Ramses III	Atum	Habu		EPIGRAPHIC SURVEY 1963: PL. 421C.
Ramses III	Re	Habu		EPIGRAPHIC SURVEY 1963: PL. 431 (Right side).
Ramses III	Re	Habu		EPIGRAPHIC SURVEY 1963: PL. 431.
Ramses III	Re-Harakhty	Habu		EPIGRAPHIC SURVEY 1963: PL. 433.

[TABLE 4] : Adoration formulae combine the adored deities with the time of the adoration © Rabee Eissa.

King	Deities	Temple	Adoration formula	Bibliography
Seti I	Osiris	Abydos		CALVERLEY & BROOME 1933: PL. 4.
Seti I	Osiris	Abydos		CALVERLEY & BROOME 1933: PL. 13.
Seti I	Isis	Abydos		CALVERLEY & BROOME 1933: PL. 18.
Seti I	Horus	Abydos		CALVERLEY & BROOME 1933: PL. 26.
Seti I	Amun-Re	Abydos		CALVERLEY & BROOME 1933: PL. 4.
Seti I	Re-Harakhty	Abydos		CALVERLEY & BROOME 1933: PL. 14.
Seti I	Ptah	Abydos		CALVERLEY & BROOME 1935: PL. 22.
Siptah	Amun-Re	Silsilah		LD 1900-1913: vol.6, ABTH, 202.

[TABLE 5]: Adoration formulae of kissing the ground and lying on belly before the deities © Rabee Eissa.

BIBLIOGRAPHY

- ABDEL WHAB, W. & EISSA, R.: «Remarks on Four Unusual Adoration Scenes from Abydos», *Memnonia* 28, 2017, 181–193.
- ALY, M. & ABDEL-HAMID, F. & DEWACHTER, M.: *Le temple d'Amada: Dessins, Index, tables de concordances. Cahier IV*, vol. 54(*Collection scientifique*), Le Caire (Centre de documentation et d'études sur l'ancienne Égypte) 1967.
- ARNOLD, DI.: *Der Tempel des Königs Mentuhotep von Deir el-Bahari II. Die Wandreliefs des Sanktuaries*, AV 11, Mainz (Verlag Philipp von Zabern) 1977.
- ASSMANN, J.: «Zwei Sonnenhymnen der Späten XVIII. Dynastie in thebanischen Gräbern der Saitenzeit», *MDAIK* 27, 1971, 1-33.
- ASSMANN, J.: *Egyptian Solar Religion in the New Kingdom. Re, Amun and the Crisis of Polytheism*, Translated by Anthony Alcock, London (Routledge) 2009.
- AUFRERE, S.: *Stele de Khonsou*, FOISSY-AUFRERE M.P (ed.), Égypte & Provence. Civilisation, survivances et «cabinet de curiosité». Exposition au Musée Calvat, 16 novembre 1985/31 mars, Avignon, 1986, 26–27.
- BAINES, J. & MALEK, J.: *Atlas of Ancient Egypt*, Oxford (AUC Press) 1980.
- BAINES, J. «Practical Religion and Piety», *JEA* 73, 1987, 79–98.
- BARGUET, P.: *Le temple d'Amon-Rê à Karnak. Essai d'exégèse (Recherches d'archéologie, de philologie et d'histoire 21)*, Le Caire (IFAO) 1962.
- Bell, L.: «Aspects of the Cult of the Deified Tutankhamun», P. POSENER-KRIEGER (ed.), *Melanges Gamal Eddin Mokhtar*, *BDE* 97, 1985, 39-59.
- BICKEL, S.: *Untersuchungen im Totentempel des Merenptah in Theben III. Tore und Andere Wiederverwendete Bauteile Amenophis' III*, *BeiträgeBf* 16, Stuttgart (Franz Steiner Verlags) 1997.
- BLEEKER, C.J.: *Hathor and Thoth. Two Key Figures of the Ancient Egyptian Religion*, Leiden (E. J. Brill) 1973.
- BORCHARDT, L.: *Das Grabdenkmal des Königs S'ahu-Re (Band 2): Die Wandbilder: Abbildungsblätter*, Leipzig (J. C. Hinriches'sche Buchhandlung) 1913.
- BOYLAN, P.: *Thoth, the Hermes of Egypt*, Oxford (Oxford University Press) 1922.
- BRUNNER, H.: *Die südlichen Räume des Tempels von Luxor*, AV 18, Mainz (Verlag Philipp von Zabern) 1977.
- BURGOS, F. & LARCHE, F.: *La Chapelle Rouge. Le sanctuaire de barque d'Hatshepsout I. Fac-similés et photographies des scènes*, Paris (Culturesfrance, Département des Publications et de l' Ecrit), 2014.
- CALVERLEY, A.M. & BROOME, M.F.: *The Temple of King Sethos I at Abydos I. The Chapels of Osiris, Isis and Horus*, London/Chicago (The University of Chicago Press) 1933.
- CALVERLEY, A.M. & BROOME, M.F.: *The Temple of King Sethos I at Abydos II. The Chapels of Amen-Rê', Rê'-Harakhti, Ptah, and King Sethos*, London/Chicago (The University of Chicago Press) 1935.
- CALVERLEY, A.M. & BROOME, M.F.: *The Temple of King Sethos I at Abydos III. The Osiris Complex*, London/Chicago (The University of Chicago Press) 1938.
- CALVERLEY, A.M. & BROOME, M.F.: *The Temple of King Sethos I at Abydos IV. The Second Hypostyle Hall*, London/Chicago (The University of Chicago Press) 1958.
- CAMINOS, R.A.: *The New-Kingdom Temples of Buhen I*, *ASEg* 33, London (Egypt Exploration Society) 1974.
- ČERNÝ, J.(ed.): *The Inscriptions of Sinai from Manuscripts of Alan H. Gardiner and T. Eric Peet II. Translations and commentary*, part.2, 45th Memoir of the Egypt Exploration Society, London, 1955.
- CHAUVET, V.: *Who Did What and Why: The Dynamics of Tomb Preparation*, JASNOW, R. & COONEY, K. (eds.), *Joyful in Thebes: Egyptological Studies in Honor of Betsy M. Bryan*, Atlanta (Lockwood Press) 2015, 63-78.
- CHEVRIER, H.: «Rapport sur les travaux de Karnak 1950–1951», *ASAE* 51, 1951, 549–572.
- CRAMER, M.: «Ägyptische Denkmäler im Kestner-Museum zu Hannover», *ZÄS* 72, 1936, 81–108.
- ĆWIEK, A.: *Relief Decoration in the Royal Funerary Complexes of the Old Kingdom. Studies in Development, Scene Content and Iconography*, Warsaw (Warsaw University) 2003.

THE WORSHIPPING FORMULAE OF ROYAL ADORATION SCENES IN ANCIENT EGYPTIAN TEMPLES FROM THE OLD KINGDOM TILL THE END OF THE LATE PERIOD

- DONADONI, S. EL-ACHIRIE, H. LEBLANC, C. ABDEL-HAMID, F.: *Grand temple d'Abou Simbel. Le salles du trésor sud (fascicules I-II)*, Collection Scientifique 48, Le Caire, 1975.
- EGBERTS, A.: *In Quest of Meaning. A Study of the Ancient Egyptian Rites of Consecrating the Merit-Chests and Driving the Calves*, *EgUit* 8, Leiden (Nederlands Instituut voor het Nabije Oosten) 1995.
- EISSA, R.: *Mnāẓr wa nuqūš t 'bd al-muluk fī al-m'ābad al-Mšrīya al-Qadīma ḥilāl 'ašr al-dawla al-Ḥadīṭa: Dirāsa fī al-ašl wa al-tṭur* «The kings' Adoration Scenes and Inscriptions in Ancient Egyptian Temples during the New Kingdom. A study in their origins and their development», PhD thesis, Faculty of Archaeology, Fayoum University, 2017.
- EISSA, R.: «Did Ramses II Really Adore himself? Clear Evidence from Abu-Simbel», *MDAIK* 79, 2023, Forthcoming.
- EL-ACHIERY, H. & ALY, M. DEWACHTER, M.: *Le speos d'el-Lessiya II. Plans d'architecture, dessins, index*, Collection Scientifique 63, Le Caire (Centre de Documentation et d'études sur l'Ancienne Egypte) 1968.
- EL-KHADRAGY, M.: «The Adoration Gesture in Private Tombs up to the Early Middle Kingdom», *SAK* 29, 2001, 187-201.
- Epigraphic Survey (ed.): *Medinet Habu. The Temple Proper II. The Re Chapel, the Royal Mortuary Complex, and Adjacent Rooms with Miscellaneous Material from the Pylons, the Forecourts, and the First Hypostyle Hall*, *OIP* 84, vol. 6, Chicago (The University of Chicago Press) 1963.
- EPIGRAPHIC SURVEY (ed.): *Medinet Habu VII. The Temple Proper III. The Third Hypostyle Hall and all Rooms Accessible from it with Friezes of Scenes from the Roof Terraces and Exterior Walls of the Temple*, *OIP* 93, vol. 7, Chicago (The University of Chicago Press) 1964.
- FRANKFORT, H.: *The Cenotaph of Seti I at Abydos*, London (Egypt Exploration Society) 1933.
- FUSCALDO, P.: «Aksha (Serra West): The Stela of Nakht», *GM* 119, 1990, 19-36.
- GAUTHIER, A.: «À propos des hymnes adressés au dieu Min», *BIFAO* 30, 1931, 553-564.
- GUNN, B.: «The Religion of the Poor in Ancient Egypt», *JEA* 3, N°. 2/3, 1916, 81-94.
- HABACHI, L.: *Features of the Deification of Ramesses II*, *ADAIK* 5, Glückstadt (Verlag J.J. Augustin), 1969, 1-10.
- ISKANDER, S. & GOELET, O.: *The Temple of Ramesses II in Abydos I. Wall Scenes*, Atlanta (Lockwood Press) 2015.
- LACAU, P. & CHEVRIER, H.: *Une chapelle de Sésostriis I^{er} à Karnak. Planches*, Le Caire (Imprimerie de l'Institut français d'archéologie orientale) 1969.
- LEPSIUS C.R.: *Denkmaeler aus Aegypten und Aethiopien. Nach den Zeichnungen der von Seiner Majestät dem Koenige von Preußen Friedrich Wilhelm IV. nach diesen Ländern gesendeten und in den Jahren 1842-1845 ausgeführten wissenschaftlichen Expedition auf Befehl Seiner Majestät*, Leipzig (Nicolaische Buchhandlung) 1897-1913.
- LEGRAIN, G.: «L'aile nord du pylône d'Aménophis III à Karnak», *Annales du Musée Guimet* 30/1, 1902, 1-22.
- LETELLIER, B. & LARCHE, F.: *La cour à portique de Thoutmosis IV*, Paris (éditions Soleb), 2013.
- Leitz, C.(ed.): *Lexikon der ägyptischen Götter und Götterbezeichnungen VI*, *OLA* 113, Leuven (Uitgeverij Peeters en Departement Oosterse Studies), 2002.
- Leitz, C.(ed.): *Lexikon der ägyptischen Götter und Götterbezeichnungen VII*, *OLA* 113, Leuven (Uitgeverij Peeters en Departement Oosterse Studies), 2002.
- Leitz, C.(ed.): *Lexikon der ägyptischen Götter und Götterbezeichnungen VIII*, *OLA* 113, Leuven (Uitgeverij Peeters en Departement Oosterse Studies), 2002.
- LICHTHEIM, M.: *Ancient Egyptian Literature. A Book of Readings I. The Old and Middle Kingdoms*, Los Angeles (University of California Press) 1973.
- LICHTHEIM, M.: *Ancient Egyptian Literature. A Book of Readings II. The New Kingdom*, Los Angeles (University of California Press) 1976.
- MARIETTE, A.: *Abydos. Description des fouilles exécutées sur l'emplacement de cette ville I*, Paris (Librairie A. Franck) 1869.

- MARIETTE, A.: *Abydos. Description des fouilles exécutées sur l'emplacement de cette ville II*, Paris (Librairie A. Franck) 1880.
- MEEKS, D.: *La prière en Égypte. Entre textualité et oralité*, DORIVAL, G. & PRALON, D. (Eds.), *Prières méditerranéennes hier et aujourd'hui. Actes du colloque organisé par le Centre Paul-Albert Février (Université de Provence-C.N.R.S.) à Aix-en-Provence les 2 et 3 avril 1998*, Aix-en-Provence (Publications de l'Université de Provence (PUP) 2000, 9–23.
- MOND, R. & MYERS, O.H.: *Temples of Armant. A Preliminary Survey*, *Memoir EES* 43, London (Egypt Exploration Society) 1940.
- NAVILLE, E.: *The Shrine of Saft el Henneh and the Land of Goshen (1885)*, *Memoir EEF* 5, London (Egypt Exploration Fund) 1887.
- NAVILLE, E.: *Bubastis 1887-1889*, London (Egypt Exploration Fund) 1891.
- NAVILLE, E.: *The Temple of Deir el Bahari I. The North-Western End of the Upper Platform*, *Memoir EEF* 13, London (Egypt Exploration Fund) 1895.
- NAVILLE, E.: *The Temple of Deir el Bahari II. The Ebony Shrine. Northern Half of the Middle Platform*, *Memoir EEF* 14, London. (Egypt Exploration Fund) 1896.
- NAVILLE, E.: *The Temple of Deir el Bahari IV. The Shrine of Hathor and the Southern Hall of Offerings*, *Memoir EEF* 19, London (Egypt Exploration Fund) 1901.
- NAVILLE, E.: *The Temple of Deir el Bahari V. The Upper Court and Sanctuary*, *Memoir EEF* 27, London (Egypt Exploration Fund) 1906.
- NAVILLE, E.: *The XIth Dynasty Temple at Deir el-Bahari I*, *Memoir EEF* 28, London (Egypt Exploration Fund) 1907.
- NAVILLE, E.: *The XIth Dynasty Temple at Deir el-Bahari II*, *Memoir EEF* 30, London (Egypt Exploration Fund) 1910.
- NELSON, H.: *The Great Hypostyle Hall at Karnak, The Wall Reliefs, vol.1*, *OIP* 106, Chicago (The University of Chicago Press) 1981.
- PETRIE, W.M.F.: *Abydos II*, *Memoir EEF* 24, London (Egypt Exploration Fund) 1903.
- QUIRKE, S.: *Ancient Egyptian Religion*, London (British Museum Press) 1992.
- RAGAIE, M.: *Rmzitt al-Rqam arb'a fi al-Hadāra al-Msrīya al-Qadīma htta Nihayaīt al-Dawla al-Hadīta = «The Symbolism of Number Four in Ancient Egyptian Civilization to the End of the New Kingdom*, MA Thesis, Ain Shams University, 2007
- RANDALL-MACIVER, D. & WOOLLEY, C.L.: *Buhen*, Philadelphia (The University Museum Philadelphia), 1911.
- RYHOLT, K.S.B.: *The Political Situation in Egypt during the Second Intermediate Period, 1800–1550 BC*, *CNIP* 20, Copenhagen (Museum Tusculanum Press) 1997.
- SALES, J. DAS C.: «Divine Triads of Ancient Egypt», *Hathor Studies of Egyptology*, vol.1, Lisboa, Instituto Oriental/ CEAUCP, 2012, 115-135.
- SCHIFF GIORGINI, M.: *Soleb V. Le temple. Bas-reliefs et inscriptions*, *Bibliothèque générale* 19, Le Caire (*Institut français d'archéologie orientale*), 1998.
- SETHE, K.: *Die Altaegyptischen Pyramidentexte I. Text, erste Hälfte. Spruch 1–468 (Pyr. 1–905)*, Leipzig (J.C. Hinrichs'sche Buchhandlung) 1908.
- SETHE, K.: *Von Zahlen und Zahlworten bei den Alten Ägyptern und was für Andere Völker und Sprachen Daraus zu Lernen ist. Ein Beitrag zur Geschichte von Rechenkunst und Sprache*, Straßburg (Verlag Karl J. Trübne) 1916.
- SHAW, I.: *The Oxford History of Ancient Egypt*, Oxford (Oxford University Press) 2000.
- SIMPSON, W.K.: *The Terrace of the Great God at Abydos. The Offering Chapels of Dynasties 12 and 13*, *PPYE* 5, New Haven/Philadelphia (The University Museum of the University of Pennsylvania) 1974.
- TATERKA, F.: «Ancient Egyptian Royal Cryptography in the Ramesside Period», ZADKA, M. & BUCZEK, K. & P.P. CHRUSZCZEWSKI, PP. & KNAPIK, A.R. & MIANOWSKI, J. (eds.), *Antropologia Komunikacji od Starożytności do Współczesności, Prace Komisji Nauk Filologicznych Oddziału Polskiej Akademii Nauk we Wrocławiu* 7, Wrocław (Polska Akademia Nauk) 2015, 71-89.

THE WORSHIPPING FORMULAE OF ROYAL ADORATION SCENES IN ANCIENT EGYPTIAN TEMPLES FROM THE OLD KINGDOM TILL THE END OF THE LATE PERIOD

TAWFIK, S.: «Aton Studies», *MDAIK* 29, 1973, 77–86.

E. TEETER, E.: *The Presentation of Maat: Ritual and Legitimacy in Ancient Egypt*, *SAOC* 57, Chicago (McNaughton & Gunn Press) 1997.

TE-VELDE, H.: «Some Remarks on the Structure of Egyptian Divine Triads», *JEA* 57, 1971, 80-86.

TOBIN, V.A.: «The Secret of Sinuhe», *JARCE* 32, 1995, 161–178.

VERGNIEUX, R. & GONDRAN, M.: *Aménophis IV et les pierres du soleil. Akhénaton retrouvé*, Paris, 1997.

BECKERATH, J.: *Handbuch der ägyptischen Königsnamen*, *MÄS* 20, München/Berlin, 1984.

WERNER, E.K.: «The God Montu. From the Earliest Attestation to the End of the New Kingdom», PhD Thesis, Yale University, 1985.

2023

RAINMAKING THROUGH THE ROCK ART IN EAST AND SOUTH AFRICA: A COMPARISON WITH CURRENT TRADITIONAL TRIBES

Zainab Khamis

Assistant Professor, Department of Egyptology, Faculty of Archeology - Aswan University, Egypt,
Nfrtkmt77@yahoo.com

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Khamis, Zainab (2023) "RAINMAKING THROUGH THE ROCK ART IN EAST AND SOUTH AFRICA: A COMPARISON WITH CURRENT TRADITIONAL TRIBES," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 6.

Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/6>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in Journal of the General Union of Arab Archaeologists by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

RAINMAKING THROUGH THE ROCK ART IN EAST AND SOUTH AFRICA: A COMPARISON WITH CURRENT TRADITIONAL TRIBES

BY

Zainab Abd El-Twab Riyad

Assistant Professor, Department of Egyptology, Faculty of Archeology-Aswan University, Egypt.

ABSTRACT

[AR]

صناعة المطر من خلال الفن الصخري في شرق وجنوب أفريقيا: مقارنة بالقبائل البدائية الحالية

كانت صناعة المطر واحدة من أهم الطقوس الحياتية في أفريقيا منذ عصور ما قبل التاريخ لا سيما خلال العصر الحجري الحديث، وذلك بسبب تحول المناخ إلى الجفاف في ذلك الوقت، فأصبح للمطر دور مهم في الحياة، ومن ثم يحاول البحث توضيح أهمية طقوس صناعة المطر كمصدر للمياه، ودور صانع المطر ومكانته المميزة في مجتمعات شرق وجنوب إفريقيا خلال عصور ما قبل التاريخ، وذلك من خلال دراسة مناظر صناعة المطر ورموزه في الفن الصخري آنذاك. تباينت رموز صناعة المطر في الفن الصخري ما بين الرموز الحيوانية والهندسية التي تنوعت بين أشكال الدوائر المتداخلة، الأشكال الحلزونية، النقاط السوداء وجميعها كانت رموز تشير إلى صناعة المطر. ولقد ارتبطت صناعة المطر أيضاً ببعض الطقوس المتعلقة بالسحر، والدين والرقص والصلاة وتقديم القرابين والأضاحي البشرية والدفنات الحيوانية، أما إله المطر فقد ارتبط بالعديد من الرموز مثل قوس قزح والثعبان، وأعتبر قوس قزح بمثابة قلادة الله. وكان صانع المطر هو الوسيط بين إله المطر وبين قومه. سيتناول البحث أيضاً أهم أماكن صناعة المطر وخاصة التلال والكهوف والملاجئ الصخرية، كما سيوضح العلاقة بين أرواح السلف من الأجداد وصناعة الأمطار، ويوضح أيضاً كيف ارتبطت القرابين والدفنات الحيوانية بصناعة الأمطار في ذلك الوقت، وكيف أكدت رموز الفن الصخري على ذلك. أخيراً، يهدف البحث إلى إعادة تفسير رموز ومشاهد الفن الصخري التي تدل على طقوس صناعة المطر في عصور ما قبل التاريخ، من خلال مقارنتها بالطقوس الحالية لبعض القبائل البدائية في شرق وجنوب إفريقيا.

[EN] *Rainmaking* was one of the most important life rituals since prehistoric times, especially in the Neolithic era, because of the dry weather at that time, and the centrality of water for life. This article tries to clarify the significance of *rainmaking* and its rituals, and the role of the rainmaker in eastern and southern African societies, by studying *Rainmaking* scenes through rock art and its symbols in prehistoric times. The symbols of *rainmaking* included various animal and geometric symbols. The geometric designs include circles, spirals, and black dots, which related to rain making during prehistoric times. *Rainmaking* connected with rituals that expressed magic, and religion, and were often associated with dances, prayer, and offering sacrifice or burial of animals, especially during the Neolithic period. Rain-gods were connected also with symbols such as the rainbow, since early humans considered the rainbow as the God's necklace, and python snakes. The rainmaker had a great social position in his tribe because he was a mediator between the people and the rain god. The article will also study the most important places of *rainmaking*, which include hills, caves, and rock shelters. These places were associated with *rainmaking* during prehistoric times. The article will clarify the link between the souls of the ancestors and *rainmaking*, the animal sacrifices associated with the *rainmaking* at that time, and the symbols of rock art indicative of that. Finally, the article aims to reinterpret the symbols and scenes of rock art indicative of rain-making rituals in prehistoric times, by comparing them with the current rituals of traditional tribes in eastern and southern Africa.

KEYWORDS: Animal, *rainmaking*, rock art, rainbow, ritual, snake, symbols.

I. INTRODUCTION

Water is one of the most important foundations for life, so early humans believed rain to be scared; they considered it the root of life. *Rainmaking* is depicted in prehistoric rock art in Africa, especially in East and South Africa, and it is still known in numerous African communities. «*Rainmaking*» means the actions or rites done for making rain¹. God creates rain for people. Hence, the rainmaker must request god's rain. The term *rainmaking* point to local practices and rituals associated with rainfall, and this term is connected also with the rainmakers who have the power to perform those rituals².

In African belief, rain may be invoked with prayers. Both private and public, *Rainmaking* rituals are reported in all parts of the African continent. Riverbanks, waterfalls, groves, caves, or mountains may be used as places for rain rituals. Rainmakers occupy a position of significant impact in the community. They do not only make rain but also stop it when too much comes or when it is not welcome at a given moment³.

The article aims to reinterpret the symbols and scenes of rock art that indicate *rainmaking* in prehistoric times, by comparing them with the current rituals of the tribes in eastern and southern Africa.

II- THE GOD OF RAIN

Rain was important in African religion and mythology. Early humans expressed the rain god through rock art, by drawing rain symbols, or by depicting kinds of rain animals. The existence of the god of rain is seen in African tribes. Many African traditional tribes think that rain indicated that the god is weeping; water was the god's tears, and therefore rain was considered a sacred gift. When it failed to rain, that meant something wrong had happened. The Shaman was responsible for making rain by performing rituals⁴.

At Nuer (Sudan) for example, the rain god is considered as a «Spirit in the Sky», who was associated with the sun, moon, stars, and natural phenomena, and his words were like thunder and lightning. The rain god united with the rainbow which is called the «god's necklace»⁵. In (Sudan) the shaman connected the god with the people, and he was responsible for making rain⁶.

There are many natural phenomena associated with rain or the deity of rain, such as lightning and thunder. So, the mighty roar and fiery light can fill the mind with images of the supernatural and bring forth both fear and reverence. For that reason, "celestial thunder" is recorded in the mythologies of various cultures. Thunder is personified as a spirit inherent in the storm, and it has been looked upon by many cultures as the voice of a god. Sacred Thunder often «chose» future shamans by hitting them with lightning⁷.

¹SOUKOPOVA 2020: 80.

²OMBATI 2017: 81.

³SOUKOPOVA 2020: 80.

⁴LYNCH 2010: 108.

⁵LYNCH 2010: 71.

⁶LYNCH 2010: 92.

⁷PARKMAN 1993: 90.

In the Itanda waterfalls in Uganda tribes, there are several symbols associated with the deity of rain, such as the rainbow, and the python. Even the rain god must create rain, not by magic, but by filling heaven with physical water flowing in the river. The force of the waterfalls testifies to the immense powers of the rain god and the python, and the rainbow connected with heaven to create the rains⁸.

Many African societies connected god with the sky; when it rains, the Masa people living near Lake Chad say, «God is falling». The clouds are God's body and when it starts to rain the Masa and Nuer in southern Sudan and Ethiopia say, «God copulates with Earth» or «God gave birth». While rain is a direct manifestation of God, or sometimes even a personification of God, water bodies such as lakes or rivers are entities dominated by water spirits. Water was the main component of ancient rituals: in Egypt, the first rite performed at the king's accession was his symbolic purification with the water of life⁹. According to Uganda tribes, the river-Gods live in the river and the waterfalls, and is related to a beautiful cosmology, shining like the rainbow itself. The rain-God is linked also with the pythons, and the waterfalls¹⁰.

III- THE RAINMAKER

According to early people thoughts, the events in the world we live in are directly dependent on two features: the first is the unseen power or heavenly power, and the second feature is the belief that specific persons can contact other worlds or unseen powers. In this way, these persons can affect our life¹¹. The rainmaker is commonly the most remarkable one during prehistoric times and today; he resolves problems according to set societal rules, and he is responsible for all general life¹².

Rainmaking is still practiced today in many African cities and tribes. In Kenya, especially among the Akamba community, *rainmaking* is performed through dancing rituals, which are public events lead by rainmakers who are believed to have the energy and power to create rainfall¹³. In African thought, the contact with the other world is made through a visit by auxiliary spirits. The shaman is linked between these spirits and *rainmaking* through symbols often in animal form, such as the snake [FIGURE 1]. Shaman figures appeared in most rock art related to *rainmaking*. In traditional Africa, the rainmaker could use this energy for healing, and *rainmaking* in his community¹⁴.

⁸OESTIGAARD 2019: 12.

⁹SOUKOPOVA 2020: 80.

¹⁰OESTIGAARD 2019: 10.

¹¹LYNCH 2010: 111.

¹²WENDORF 1998:117.

¹³OMBATI 2017: 82.

¹⁴LYNCH 2010: 111.



[FIGURE 1]: *Rainmaker holding a snake*. CLOTTES 1998: 24.

East Africa contains numerous examples of rock art, but the largest rock art site is in central Tanzania (Kondoa) where some pictures may be dated to 7,000 years old. Around the Lake Victoria Basin, there are many sites containing geometric paintings originally made by hunter-gatherers. These places are still used as sacred places for making rain, while the same practice is noted also in Northern Kenya in the Kerio Valley¹⁵.

The famous images at Game Pass Shelter were interpreted as a sequence of «trance images» in visible form. Rainmakers invited the ancestors' souls to support this duty. The soul shapes were of various animal figures. These soul shapes are pictured as wasted, symbolizing their condition as lifeless, but not anymore completely human. This is of course confirmed in southern San rituals¹⁶.

Among the Southern-Bushman San of the Transkei region of South Africa, the rock cave art reflected symbols of shamanistic nature associated with trance. The San descendants lived in rock shelters and visited caves situated adjacent to rivers to conduct *rainmaking* rituals¹⁷.

The prevailing thought was that Rainmakers, or «Shamans», were entering a trance for making rain in the invincible realm. During droughts, the San were summoned to come and pray for rain. On such occasions, the rainmaker disappeared into isolation to the rock shelters in secret and experienced a trance, sometimes described as a dream or vision, and in return, it would rain¹⁸. Shamanistic art relates to the power of persons to affect their tribe during their trance journeys. Most of those rituals connected with *rainmaking* was shown in rock art¹⁹.

A picture containing details from a large panel of Bushman paintings was found in Zimbabwe.[FIGURE 2]. The panel, from a ceiling of a cave in South Africa's Drakensberg, shows a man sleeping on his side, wearing the antelope's head; it depicts an important rainmaker or Shaman reclining in trance.

¹⁵TARA 2010: 6.

¹⁶SOLOMON 2006: 105.

¹⁷OMBATI 2017: 88.

¹⁸OMBATI 2017: 88.

¹⁹WOODHOUSE 1989: 17.

The oldest Zimbabwe paintings are 7,000 years old; one depicts two therianthropes with antelope heads and hooves. The right-hand figure is covered in feathers²⁰.



[FIGURE 2]: Bushman painting in Mashonaland, Zimbabwe. TARA 2010: 45.

Despite the importance of the rainmaker in Africa, the rainmakers were often killed if they failed to bring rain, or would lose their authority when they grew older²¹.

IV- ANCESTORS AND RAINMAKING

In Africa, the spirits of ancestors are linked with rain making, and their powers are derived from their ancestors and their gods. The rainmaker was a common factor between his tribe and the rain god²².

In Africa, ancient spirits were able to bring rain through their thoughts, in which they overcome evil spirits and foretell the future²³. The rock art expressed *rainmaking* and the role of the ancestors in *rainmaking*. There were many types of rock art associated with the ancestors' worship in places that related to sacrificed animals, which were slaughtered at these sites to ensure rainfall, health, and good harvest in society²⁴.

In Zambia, the ancestral spirits played a significant role in making rain. The «mizhimo» was the person who contacts humans and God. The rainmaker in Sudan received his tools and powers to get rain from the ancestors and establish his connection with God²⁵.

In the Shona community in Zambia, the ancestor's souls were sacred and connected with the rituals of *rainmaking*. Shona people were interested in providing the most sacrifices to their royal ancestors because their spirits needed to be prayed to for the *rainmaking* rites. There was a deep respect for the ancestor's souls, especially the royal tribe's souls in the Shona society, so, worship of the spirits of earlier primordial people was necessary for *rainmaking*²⁶.

²⁰TARA 2010: 45.

²¹WENDORF 1998: 117.

²²WENDORF 1998: 117.

²³TARA 2010: 48.

²⁴KILONZO 2017: 70.

²⁵LYNCH 2010: 10.

²⁶HUMBE 2020, 34.

The community of «Zimunya» usually provides offerings to the rain spirit by preparing beer on the day of the celebrations. Six pots of beer are brought to the hill and a pot is offered to each ancestor buried at the site. Some of the beer is splashed onto the rock paintings. The ceremony is characterized by singing and dancing²⁷. It was thought that ancestors, other local or natural spirits, and God were able to control the elements of life, especially rain through the rituals performed at sacred places like shelters, hills, and caves²⁸. The «Akamba» community in Kenya believed that invisible *rainmaking* ancestral spirits attended the «Kilumi dances». These dances were accompanied by the pouring of libations and the offering of sacrifices to calm the spirits. Dryness was assumed as damnation for evil while rainfall indicated success²⁹.

V- RAIN PLACES

Mountains, caves, shelters, and high places were considered sacred places and were associated with rain in Africa. Rain rituals were frequently associated with mountains and stones.

1. *Rainmaking* Hills

Because of the importance and sanctification of the mountains, rainmakers climb specific mounds, such as the Zimbabwe hills, to draw the rain down. *Rainmaking* hills in Africa are distinctive in that these are hard to reach; they are steep, tiny and unstable, and covered with pottery and offerings offered on the hill from several periods. The rain hills are the mountains that are the root of rivers; these rain hills stand out at the site, in the land of miraculous forces³⁰.

In Shona, the rock art sites and mountains, hills, perennial pools, and big trees, are all considered sacred places, especially by the current Shona people. One such rock art site, Zimbabwe hill, is a major *rainmaking* center of the Zimunya community³¹. The main ceremony for the community is held at this painted hill. Archaeologically, it is accepted that the rock art was drawn by Late Stone Age hunter-gatherer communities who used to inhabit the whole of southern Africa before the Bantu people arrived about 2000 years ago³². Zimbabwe Hill consists of different rock shelters [FIGURE 3]. The painting appeared in one instance where three large panels made up of stone artifacts on the floor. The art includes both human and animal figures. Interestingly, it is also one of the only two sites out of over one hundred rock art sites found in the Zimunya that have depictions of giraffes. The dominant painted animal is the kudu, which is a ubiquitous animal in the rock art of Zimunya³³.

²⁷PWITI 2007: 105.

²⁸PRINS 1994: 177.

²⁹OMBATI 2017: 82.

³⁰HUFFMAN 2011: 66.

³¹HUMBE 2020, 93.

³²PWITI 2007: 104.

³³PWITI 2007: 104.



[FIGURE 3]: Zimbabwe Hill, Zimunya. PWITI 2007: PL.1.

The Zulu, for example, make collective pilgrimages to certain hills to bring an end to droughts, whereas Pedi, Tswana, and Venda rain-controllers use hills, which are off-limits to other members of their communities³⁴.

Excavations at other rock art sites in this area indicate that they date to the eighth millennium BC. Another shelter has house remains and pottery, showing its use as a settlement site in later prehistoric times. The rain custodian also informed us that the hill was also used for settlement by his ancestors before they moved to the plains below the hill. After this, it was used as a burial place and for rituals associated with *rainmaking*³⁵. The archaeological evidence of pre-historic ceremonial rites and behavior proved that in South Africa the rainmakers, in times of severe drought, climb specific hills to bring rain. So, they considered the *Rainmaking* hills as a source of streams and cisterns that represent pools. These *rainmaking* sites stand outside home settlements, on hilltops associated with heavenly bodies. At the sacred sites, rituals incorporated the roles of every citizen in the city; these rites involved the daily behavior of the community³⁶.

2. *Rainmaking* Caves, Shrines, and Rock Shelters

Caves and shrines were among the places that were associated with rainmaking during prehistoric times, and even among many of the current tribes. In northern Sudanese tribes, there are shrines or sacred places, used by the rainmakers as common divine places³⁷.

In South Africa, caves are considered sacred places for making rain. Rain medicines are often kept in caves or small rock shelters. Zulu rain-controllers use caves because they must keep their rain medicines in a cool location. Nineteenth-century Pedi and Tswana chiefs also used rock shelters. In the Northwest Province, shelters and caves were key pre-colonial rain-control sites. Caves are «sacred places» for the Venda. The last topographic feature is pools or other bodies of water³⁸.

³⁴SCHOEMAN 2006: 154.

³⁵PWITI 2007: 105.

³⁶OMBATI 2017: 85.

³⁷ WENDORF 1998: 117.

³⁸SCHOEMAN 2006: 154.

The caves that were confirmed as sacred places were used by both the San and Bantu speakers for *rainmaking* rituals, and were decorated with art. Caves are known as divine *rainmaking* places. Moreover, in the Matopos in Zimbabwe, the iconography contains, geometric designs, like lines, and finger paintings³⁹. As to be expected, «*rainmaking* shrines», were considered sacred places, and used for the rain making rituals. These places connected with the religious practices of other sites, though most rites were done in the caves in Zimbabwe⁴⁰.

In Zimbabwe, the granite stones, and rock shelters played an acute role in human beliefs about life at this time. The link between the rock shelters and caves with *rainmaking* and a belief system was manifested there. It is no accident that other important religious places are characterized by natural rock shelters, caves, and hills⁴¹.

So, a shrine in Zimbabwe is a religious site that contains tribal systems, such as Totems, motifs of the local identity, since it was the home to Zimbabwe's ancestral spirits. As a result, the rock shrine continues to play a major ceremonial function and hosts various religious rituals connected with *rainmaking*. Zimbabwe communities have continued to use the site for *rainmaking*. Because the *rainmaking* shrines in Zimbabwe were known as divine places these sites were protected by various taboos and Totems⁴².

In East Africa, in the Uganda community, the rock shelters were used as hunting camps and also as ceremonial places for rites. The rainmakers lived in caves and were associated with them like their ancestors⁴³. The rain animals were pictured on the walls of rock shelters, and sometimes, the less common animal was painted in a faint color, while the most prevalent animal was depicted in vibrant color. The death of the shelter-keeper or the rainmaker, and sometimes after the death of the rainmaker and his sacred-animal, was marked by drawing his rain animal on the walls of the rock shelter. In the Bantu community in South and Central Africa, rock shelters were considered sacred places for ceremonial rituals. The Bantu people often scratch off some of the colors, believing that there is a power within the raindrops, treats diseases, and provides other benefits. The farmers still use the rock shelter with natural drawings to bring the rain for them, and there is a belief that the cave is a heavenly place that connects them to the ancestors⁴⁴.

Paintings are believed to have magical powers. Rain rituals are reported also in north Africa, from the Tassili mountains in Algeria. Milk and oil are poured into the Tin Tekelt shelter, which has prehistoric rock art, suggesting that it has been used as a ritual place for several thousand years. Some of the mythological themes circulating in Africa today seem to be thousands of years old. In the field of religion, people are extremely conservative and although various peoples in Africa are separated by great distances, their philosophical systems are fundamentally similar.

³⁹PRINS 1994: 177.

⁴⁰NDORO 2005: 35.

⁴¹NDORO 2005: 35.

⁴²NDORO 2005: 8.

⁴³ROBERTSHAW 2012 :104.

⁴⁴FERNÁNDEZ 2011:290.

Very little has changed over time with the *rainmaking* rituals in northern Nigeria and South Africa. Some sites may have been used for *rainmaking* rites for thousands of years⁴⁵.

In Bantu in South Africa, the rock shelters were used for ceremonial rituals for *rainmaking*, and in northern Transvaal are additional *rainmaking* shelters, which are decorated with different motifs and symbols. This may be related to a belief that caves, holes, and rock shelters provided access to the ancestor world, and were places connected to the ancestor's spirits and other gods⁴⁶.

As noted above, rock art sites are regarded as sacred and spiritually powerful places and are also being used in other unusual ways for the well-being of contemporary Bantu communities, besides *rainmaking*. In Botswana, the rock art sites at the Tsodilo Hills have historically been used for *rainmaking*⁴⁷.

VI- THE RAIN ANIMALS

Rainmaking was shown in rock art throughout its scenes, and attention to clouds was prevalent in rock scenes. An image from the Wodehouse District, South Africa [FIGURE 4] shows clouds with rain downfall⁴⁸.



[FIGURE 4]: Clouds and rain (Wodehouse District)- South Africa. WOODHOUSE 1989: ILLUS. 27.

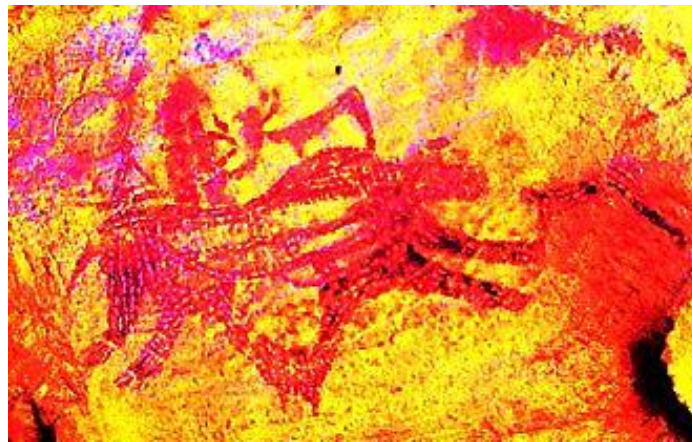
⁴⁵SOUKOPOVA 2020: 81.

⁴⁶PRINS 1994: 177.

⁴⁷PWITI 2007: 107.

⁴⁸WOODHOUSE 1989: 24.

In east and south Africa, there are several symbols that appear in rock art associated with *rainmaking*. They varied between animal and geometric symbols and other figures connected with *rainmaking*. The rock art in the Central Saharan Round Head art is attributed to hunters living in the region from 10,000 BP. There are unidentifiable quadrupeds that bear striking similarities to the southern African rain animals: they are bulky, hippopotamus-like, and head down. Sometimes their bodies are filled with decorative elements that could be interpreted as rain, such as dots or dotted stripes and parallel lines exiting down from their bodies. The back of these animals is often made of two parallel lines, which is a later repainting: if it was indeed a rain animal in a *rainmaking* place, with each ritual the image was simply repainted instead of making a new one⁴⁹ [FIGURE 5].



[FIGURE 5]: Bulky quadruped, head down, with internal decoration made of dotted stripes is interpreted as a rain animal, Libyan- Acacus. SOUKOPOVA 2020: FIG.15.

The existence of rain animals is attested to in southern African rock art. They are often rounded, big bodies evoking a hippopotamus⁵⁰.

1. The Eland

Eland was one of the most important rain animals. In the Kalahari, for example, Eland relates to rain. Also, in Bushman culture eland was painted before them as one of the rain animals in the shamanic art⁵¹. The eland is the chief animal of the San (Botswana, Namibia, South Africa), who considered it the rain animal because it is a major food source, and serves an important religious role as a sacred symbol, or totem. The eland relates to ancestor's spirits. When an eland dies, the shaman performs some rituals, such as dancing, and jumping, and invites the spirit of the animal to enter his body. The power of the animal spirit is used to make rain and heal diseases⁵².

The Eland paintings were often associated with red lines on the faces, which is depicted in some rock arts such as [FIGURE 6] and [FIGURE 7]. These figures depicted a supernatural ability to live underwater, which is related to the rain making ritual.

⁴⁹SOUKOPOVA 2020: 84.

⁵⁰SOUKOPOVA 2020: 83.

⁵¹LEWIS-WILLIAM 2004: 208.

⁵²LYNCH 2010: 64.

Painting certain parts of the body such as the eland's horns, was engaged in ritual, either to make rain or to separate a serious thunderstorm⁵³.

The red color relates to blood and life, and is aligned with the fantastic imagery of a deep trance, in which the color red enhanced the power of the ritual⁵⁴.



[FIGURE 6]: The rain animals and red lines- Kalahari- South Africa. LEWIS-WILLIAM 2004: FIG.3.

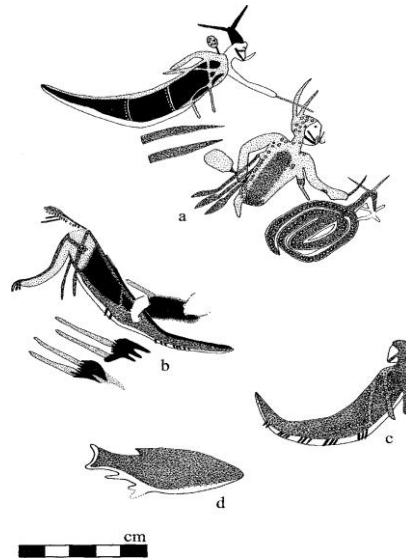


[FIGURE 7]: Eland horns in a rain-control panel- - Kalahari- South Africa.
LEWIS-WILLIAM 2004: FIG.3.

⁵³LEWIS-WILLIAM 2004: 210.

⁵⁴LAHELMA 2008: 60.

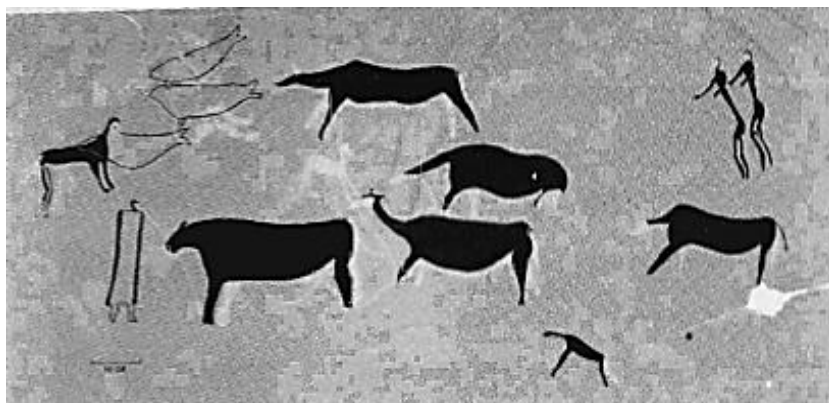
There are more than sixteen figures of Eland rain, some partly protected, known as «parts of Eland». They portray the top parts of elands' heads, and there is also a separated couple of eland horns in the upper left of the picture. This couple and others are pictured in San rock art with black color, whiel some were painted in white color. Among the other details that appeared in San's art were two human figures with eland horns. The focus was very clearly on the horns as a part of the animal⁵⁵ [FIGURE 8].



[FIGURE 8]: Selected images from FIG.7-Kalahari- South Africa. LEWIS-WILLIAM 2004: FIG.4.

The Eland was also most frequently painted in the Natal Drakensberg and Lesotho in Southern Africa. Most paintings clearly depict the Eland as a rain animal and portrayed the people holding the Eland's tail, which surely illustrates the rain animal⁵⁶.

The famous scene at Prozesky's Shelter shows [FIGURE 9] a sitting mythical being with wings and porpoise-like fish, which relates to *rainmaking*⁵⁷.



[FIGURE 9]: Rain eland (Clocolan District)- South Africa. WOODHOUSE 1989: ILLUS.26.

⁵⁵LEWIS-WILLIAM 2004: 209.

⁵⁶WOODHOUSE 1989: 24.

⁵⁷WOODHOUSE 1989: 24.

2. The Snakes

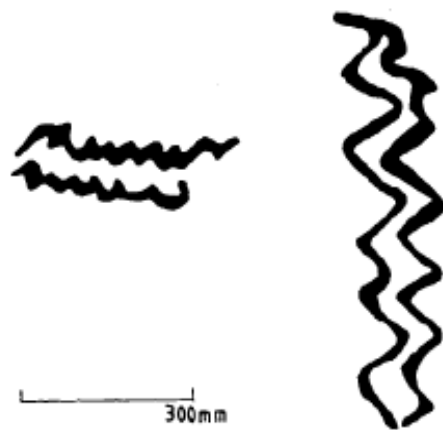
Snakes played prominent roles in African mythology, and were commonly associated with rain and the rainbow⁵⁸. In middle Africa, the Democratic Republic of the Congo snakes were associated with making rain⁵⁹.

In East Africa, in central Malaŵi, pythons were kept in baskets at shrines. The snake, called Thunga, was the central cult object associated with the shrine and the sacred pool. Thunga and the python are also linked to the rainbow. The Cheŵa believe that a python always lies underneath and that the rainbow is the breath of the python. A python is related to healing and rain rituals⁶⁰. In west Africa, the Baga of Guinea held the snake sacred because they connected with their ancestor's souls. So, snakes played various roles in several African cultures⁶¹.

Long lines, sometimes laying horizontally and other times vertically have been interpreted as snake-like motifs. A single, snake-like line design is found at a significant percentage of sites, but this has no obvious parallel in eastern Zambia⁶².

In Zimbabwe in South Africa, the Zulu and Cape Nguni rainmakers go to pools or streams to wait for the snake. The snake is depicted at the top a large rock on its top, and is drawn with a human figure next to it, pointing to the rainmaker⁶³.

Snakes were linked with *rainmaking* and fertility in several places in South Africa. In ancient Zimbabwe, the relationship between souls, kings, ancestors, and rain making appeared through Snake-like scribbling's. They appeared in graphical depictions of serpents that occur in finger paintings⁶⁴ [FIGURE 10].



[FIGURE 10]: Snake-like scribbling's at Rukurongo, Lake Victoria. PRINS 1994: FIG.6.

⁵⁸LYNCH 2010: 10.

⁵⁹LYNCH 2010: 20.

⁶⁰ZUBIETA 2006: 103.

⁶¹LYNCH 2010: 114.

⁶²ZUBIETA 2006: 102.

⁶³WOODHOUSE 1989: 24.

⁶⁴ PRINS 1994: 180.

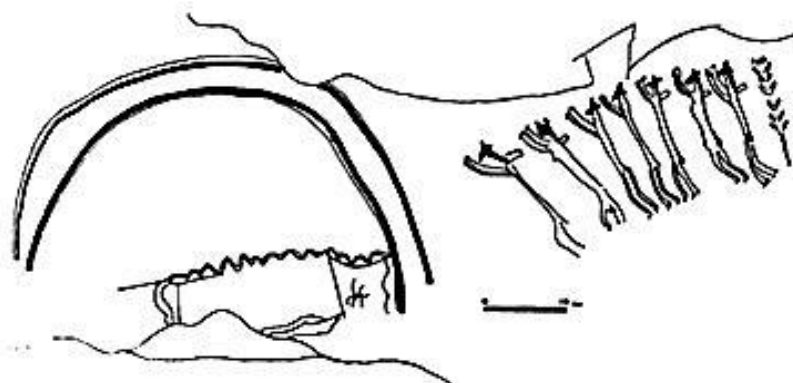
The snake was considered a particularly important totem in most African civilizations, because it relates to healing, fertility, and *rainmaking*. Snakes were related to other iconography such as the rainbow, and other mysterious symbols. Snakes were also connected with quickness, and power, which are characteristics related to innovation and renewal, and eternity⁶⁵.

In Africa, rainbows relate to snakes and *rainmaking*, from the Itanda- on the White Nile River in Uganda- waterfalls help create perfect, beautiful rainbows. The cascading torrents of water in the waterfalls splash water high into the air. One can see the water droplets being dragged up to heaven. The rainbow is like a reversed waterfall, filling heaven with water⁶⁶. Because the rainbow is linked to rain, it also plays a significant role in different mythologies. In the Lotuko of Sudan, the rainbow is seen as a viaduct between sky and earth⁶⁷. The rainbow was interpreted in the Yombe of Zaire in Congo as a water snake or rain serpent, Mbumba, who ascends to the sky by climbing trees; in this case, it was known as the cosmic serpent. As for the Nuer of Sudan, the rainbow was known as «God's necklace»⁶⁸.

The rainbow snake is often considered the guardian monster of wells, and was also the breath of a great serpent. This cosmic serpent was responsible for bringing rain and making rivers⁶⁹.

The link between snakes and *rainmaking* is illustrated through the connection between snakes and water, especially in San mythology. Many San people believe that snakes relate to bodies of water and in some instances, the creation of these bodies of water⁷⁰.

Since the snake was considered a guardian of water sources, some considered the snake a totemic symbol. In Southeast Africa, at Beersheba at a site in Ficksburg, a figure shows a group of human bodies dancing and jumping, and in front of them, the rainbow shape is depicted in an explicit reference to the ritual of bringing rain [FIGURE 11]⁷¹.



[FIGURE 11]: Dancing therianthropes with rainbow Ficksburg District. WOODHOUSE 1989: 22.

⁶⁵LYNCH 2010: 114.

⁶⁶OESTIGAARD 2019: 11.

⁶⁷LYNCH 2010: 108.

⁶⁸LYNCH 2010: 109.

⁶⁹LYNCH 2010: 114.

⁷⁰TURNER 2012: 108-110.

⁷¹WOODHOUSE 1989: 24.

According to **Woodhouse** , in explaining what a picture of a rain animal means to the Bushman, that snakes are associated with *rainmaking* practices throughout southern Africa. Many pictures of rain snakes are portrayed by the dots as water that fall from them⁷².

Depicting rainbows in the rain-making scenes was normal; the rainbow was associated with rain, and its colors were seen immediately after the rain fell.

3. The Crocodiles

In Africa, crocodiles are illustrated in many rock art sites and were considered symbolic of fertility and associated with water. In Venda and the Bemba, the crocodile was associated with the rain rituals and preserving the fertility of the earth, while the pool of water was associated with the eye of a crocodile. The spiral design and circles refer to the crocodile's eye and its relationship to making rain⁷³. These were considered to be the sacred blessing of the ancestors.

People in the Lowveld Sotho community wear crocodile masks as totems during rituals. This community also made clay statues of crocodiles, amongst other objects, which were a part of their culture⁷⁴ [FIGURE 12]. Because crocodiles are reptiles that live in water, the association of the crocodile with rain making was logical and reasonable, Therefore it is normal to take use the crocodile as a symbol in *rainmaking* rituals.



[FIGURE 12]: Crocodiles as motifs of *rainmaking* at Thandwe, eastern Zambia. PRINS 1994: 185, FIG.7.

⁷²WOODHOUSE 1989: 20.

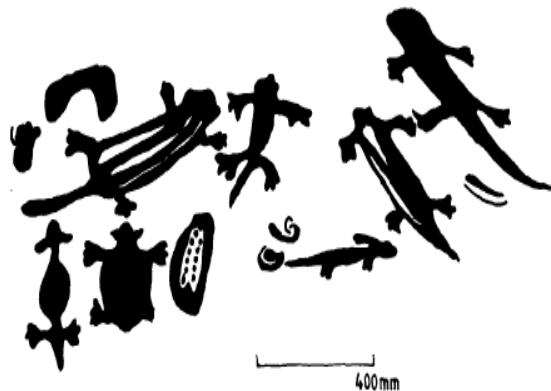
⁷³PRINS 1994: 179.

⁷⁴PRINS 1994: 184.

Lizards also played a significant part in the rain making rituals. In Makgabeng, in northern Transvaal, southeast Africa, lizards were shown to be contributory to *rainmaking* rites. In northern Sotho group rain ceremonies, some finger paintings of lizards and other motifs were depicted in shelters.

It is undecided whether monitor lizards were also linked with *rainmaking* in the north as well, but it is certain that numerous painting motifs establish a link between lizards and crocodiles [FIGURE 13] strongly suggesting they are tied with *rainmaking*⁷⁵.

Because lizards were desert reptiles, one might ask what their role is in the rain rituals? In this case, the lizards were referencing the desert and a desire to transform this arid land through rain.



[FIGURE 13]: Lizards as rain motifs at Msule Irimiya, Tanzania. PRINS 1994: FIG. 5.

Some kinds of lizards can walk on water. These lizards are distinguished by their amazing ability to run over the water without drowning. Such lizards are able to run with tremendous speed and accuracy on the surface of the water so that it maintains the balance of its body upwards without submerging in the water. These lizards use their tails to maintain balance so as not to fall on one of its sides. So, because of their proficiency in water, both water monitors and the mangrove monitors have spread over huge areas and inhabit numerous islands⁷⁶. All these reasons are why the Lizard is considered a kind of rain animal (amphibian).

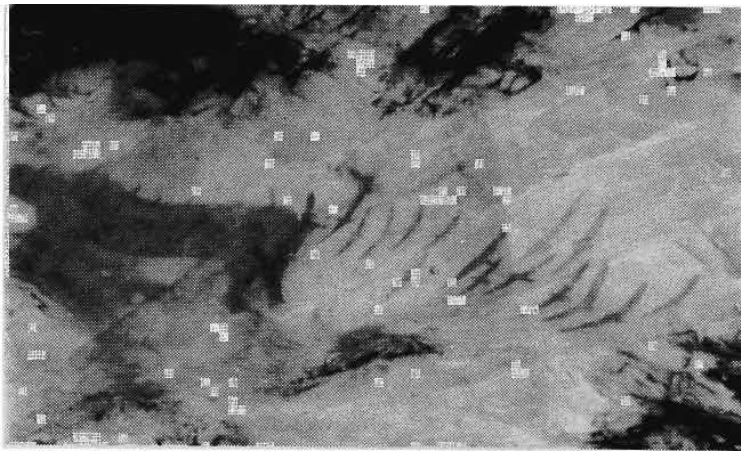
5. The Elephant

Elephants were of the most important rain animals in Africa. Because they carry water with their snouts and spray it on their bodies like a fountain, Africans associated the elephant with rain rituals. Elephants were associated with *rainmaking*, at Mrewa in Zimbabwe and have also been depicted also in the Eastern Cape where an elephant is pictured with vultures on the roofing of a rock shelter. This same painting shown in the Western Cape too⁷⁷ [FIGURE 14].

⁷⁵PRINS 1994: 180.

⁷⁶BENNETT 1995: 30-31.

⁷⁷WOODHOUSE 1989: 22.



[FIGURE 14]: Rain elephant on 'roof' of shelter (Uitenhage District. WOODHOUSE 1989: ILLUS. 12.

The elephant was sometimes depicted on visible high rocks, which are some of the features that distinguished Zimbabwe. Elephants were also painted inside the caves and on the rocky hills as sacred places for *rainmaking*. In Ruchera Cave in the Mtoko region in Zimbabwe, the elephant was pictured nearly life-size, emphasizing its importance⁷⁸.

4. The Eagle

The eagle was one of the birds connected with *rainmaking* in Africa. Some spread-eagled designs are found in many sites associated with other designs such as circles, and snake-like forms. These figures are steeped in symbolism. For example, in the Chewâ culture of south-central Arica, the python was a messenger of God and is invoked in both stopping and providing rain. Snake-like forms and spread-eagled designs have positive effects, but also negative effects. The White Spread-eagled tradition displays some interpretative challenges⁷⁹.

These challenges are complicated because the convention of depicting the spread-eagled designs make it difficult to recognize which species of animals are being represented. A picture can often depict a non-material subject, and sometimes a painting is not recognizable to people who are unaware of local conventions of depiction or iconography. It has thus been through a contextual analysis of the links between the Chinamwaliin Southern Malawi, and the rock art tradition that some of the meanings can be discerned.⁸⁰ [FIGURE 15].



[FIGURE 15]: The spread-eagled, circles, and snake. ZUBIETA 2006: FIG. 4.22.

⁷⁸WOODHOUSE 1989: 20.

⁷⁹ZUBIETA 2006: 105.

⁸⁰ZUBIETA 2006: 105.

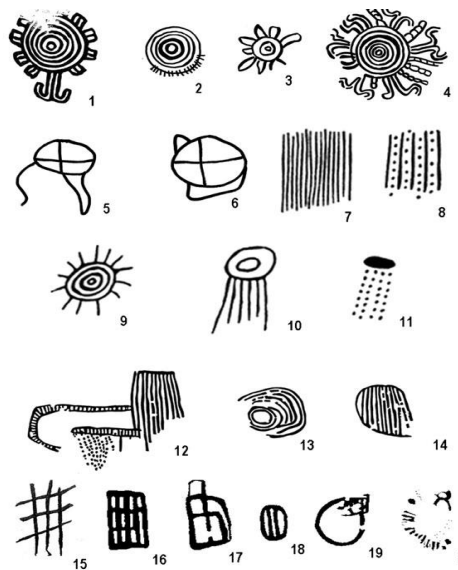
The black dots depicted on the bodies of some spread-eagled designs were also used to resemble the dotted pattern of the python. The python is believed to bring rainfall and fertility to the land and humans. Black is related to rain and fertility, and it is the color of the cloth that covers the sacred drum of the Chewâ, which are used in rain ceremonies. Black is also the color in which Makewana in central Malawi dressed⁸¹.

Another animal depicted in the White Spread-eagle tradition is the chameleon because of its role in Chewâ myths as the symbol of life and creation.

Although the meaning of each of the figures in the panel is unclear, to interpret any of the associations of the figures it is important to keep in mind that the figures are linked to the *Chinamwali* ceremony in Southern Malawi⁸².

VII- THE SYMBOLS OF GEOMETRIC DESIGNS

The symbols of rock art were associated with several topics, the most important one was rainmaking. Geometric designs are also connected with rain making, which appeared in many rock art sites in North, East, and South Africa. In the rock art of San, for example, there are many geometric motifs collected through the rock art as shown in [FIGURE 16]. Some motifs such as straight lines and dotted bands resemble rain⁸³.



[FIGURE 16]: Geometric symbols of rock art related to rainmaking. FERNÁNDEZ 2011: FIG.8.

Fernández collected many motifs of geometric designs related to *rainmaking*. In Zambia for example, he recorded straight lines, spirals, circles, and suns, and he argued that these symbolize climatic features, such as water, *rainmaking*. So, in the Katulula community in Zambia, stones are thrown at the rock art sites as a ritual to bring rain. This stone-throwing ritual is still practiced in some African rock art sites today, for the same purpose⁸⁴.

⁸¹ZUBIETA 2006: 108.

⁸²ZUBIETA 2006: 108.

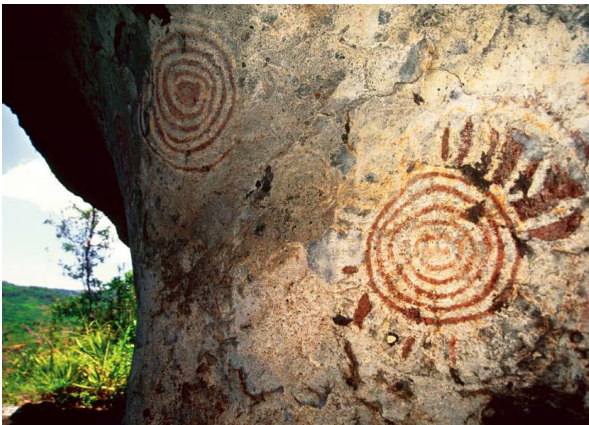
⁸³FERNÁNDEZ 2011: 290.

⁸⁴FERNÁNDEZ 2011: 290.

The concentric circles were the most important design connected with *rainmaking* in Nero (Uganda). An ancient local race of dwarves known as «yellow-skinned dwarves used the rock art sites in ritual *rainmaking*». **Fernández** confirmed this by the red lines pictured on the shapes in many rock paintings in Zambia with the motifs painted by dwarves from neighboring Congo on tree bark and animal skins⁸⁵.

Zubieta has suggested that the circles motifs and crescents reerence the connection between the lunar cycle and female menstruation. Even more, according to him, these circles may refer to the egg as a representation of life.

The geometric rock art in Zambia and Malawi consists of red designs and fading white designs. The images in Zambia and Malawi include fantastic animals that emphasize the ears and the horns in in a composite view. The art found in the Lake Victoria Basin contains geometrical red and white dingy designs, containing dots, concentric circles, and spirals⁸⁶ [FIGURE 17] & [FIGURE 18].



[FIGURE 17]: Spiral circles with sun rays - a shelter on Mfangano Island, Lake Victoria.
TARA 2010: 37.



[FIGURE 18]: Concentric Circles, from a shelter in Lukoba Island, Tanzania.
TARA 2010: 44.

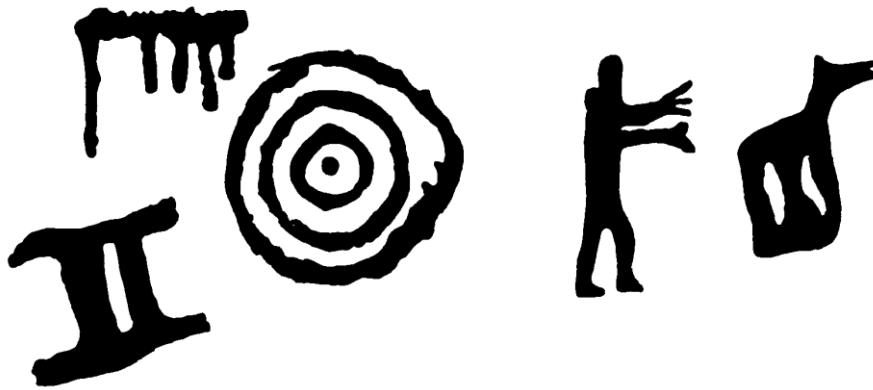
Kharodia supposed that there is a connection between the motifs of this schematic art which consists of many geometrical designs with red and white lines. The motifs contain circles with spiral lines, oval shapes, and wavy lines like zigzags. Some of these designs could symbolize the sun, rain, clouds, which are all motifs that are connected to *rainmaking* cults⁸⁷.

⁸⁵FERNÁNDEZ 2011: 292. 9

⁸⁶TARA 2010: 37.

⁸⁷KHARODIA 2006: 34.

Circles and spiral designs were more widely varied in several sites of east Africa. These motifs connected with the rainmaker or Shaman and his position but were also used in various fields connected with fertility and augury. That combination of symbols and their repetition indicate their association with rain making rituals in African rock art⁸⁸ [FIGURE 19].



[FIGURE 19]: Circle motif with humans and animal figures at Sibafu, Zimbabwe. PRINS 1994: FIG.3.

In Africa, the spiral or circle motif is considered a symbol of life. The spirala or circle motif is like the unseen link between two people, or the umbilical cord that connects the mother and the fetus. The motif looks as though it stood for a mysterious or magical flow between mother and child when they are in a dangerous situation⁸⁹.

In Egypt, geometric symbols appeared within the rock art decorations in the Western Desert in southern Egypt and were associated with climate change and drought. The increase of specialized pastoralism in the Neolithic era resulted in the Sahara. After 5300 BC, which rock art appeared in places such as Jebel Ouenat and Gilf Kebir. This suggests that people were searching for places with permanent access to water as the climate gradually changed, especially in northern Egypt⁹⁰. Gharb Aswan has a varied assemblage with vast differences in geometric forms (circles, arches, net), whereas more complex designs are not only different but also extremely hard to compare. These simple forms are associated with «stylized» humans, crocodiles, some other figures such as «snakes» and handprints⁹¹, and geomatic forms, all of which relate to *rainmaking*. There are comparable motifs present among the «rolling lines», spirals, circles, and other geometric designs near the Ghubari road between Dakhla and Kharga⁹² [FIGURE 20].

⁸⁸PRINS 1994: 179.

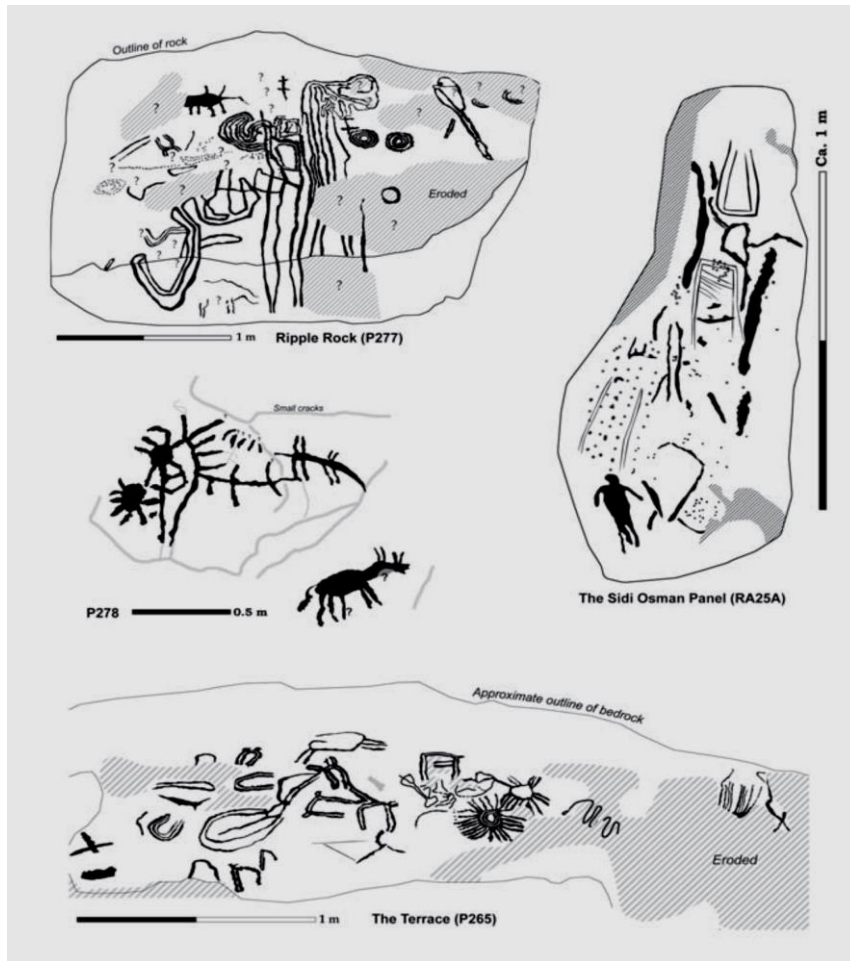
⁸⁹KI-ZERBO 1981: 675.

⁹⁰BOBROWSKI 2021: 123.

⁹¹STOREMYR 2009: 128-130.

⁹²STOREMYR 2009:136.

- These geometric motifs also reflected the rituals of «rainmaking».



[FIGURE 20]: Geometric rock art in the Wadi el-Tilal. STOREMYR 2009: FIG.13.

VIII- THE RITUALS OF RAINMAKING

In African belief, rain may be invoked by prayers. Both private and public, *rainmaking* rituals are reported in all parts of the African continent. Riverbanks, waterfalls, groves, caves, or mountains may be used as places for rain rituals. Rainmakers occupy a position of profound influence in the community. They not only make rain but also stop it when too much comes or when it is not welcome at a given moment. There are some sites in east and south Africa, which have suitable rainfall, where *rainmaking* is a lucrative and prestigious profession⁹³. Rain was important and agreeable in African traditions, especially in dry areas. Incalculable prayers and rituals were enacted to provide rain as a main source of water for drinking and agriculture⁹⁴. In Uganda, river spirits and rain-gods are considered the sources of life; the good rains came after a *rainmaking* ritual and a sacrifice. It seems impossible for a local healer or rainmaker to procure the necessary rains through prayer, sacrifice, and ritual⁹⁵.

1- The Ritual Dancing

Rainmaking in Africa is associated with many rituals such as «dance». The dance is considered a kind of prayer. Shamans and other persons jump and trying to catch the rain animal, and the imagery of trance was distinguished among the artists' subject matter⁹⁶. The Akamba community in Kenya believed that unseen *rainmaking* ancestral spirits attended the Kilumi dances. The participants, therefore, were obligated to make excellent performances to impress the spirits. These dances were also attached with the pouring of libations and the offering of sacrifices to satisfy the spirits⁹⁷.

The ritual significance of rock shelters in *rainmaking* ceremonies was based on observations of the integration of Stone Age cultural material, especially in the form of rock art sites, which are found in many places in eastern such as Zimbabwe and in other parts of the southern African sub-region, particularly Mozambique and Botswana⁹⁸.

In general, dancing to bring rain was not only known in African tribes but also known among many of the primitive tribes⁹⁹.

2. *Rainmaking* Prayer

In general, rain making was connected with some rituals which expressed magic, and religion, and were often associated with dances, prayer, and offering sheep sacrifices¹⁰⁰.

During light droughts, tribes of northern Nigeria offer prayers under a baobab tree, but during severe droughts prayers for rain are offered on top of a rock; the priests carry two stones which they hit against each other because the stones symbolize extra power which brings rain.

⁹³SOUKOPOVA 2020: 80.

⁹⁴WITZEL 2015: 21.

⁹⁵OESTIGAARD 2019: 10.

⁹⁶DAVIS 1984: 24.

⁹⁷OMBATI 2017: 82.

⁹⁸PWITI 2007: 103.

⁹⁹GRAY 2009: 499.

¹⁰⁰KI-ZERBO 1981: 675.

In the Ethio-Sudanese borderlands when the rainy season fails to come, people pray under a particular rock decorated with symbolic paintings of the ancients, which are believed to be possessed with magical powers¹⁰¹.

IX- BURIAL OF ANIMALS

After 7000 BC, the emergence of domestic animals lead people away from a nomadic, hunter-gathering existence. During the sixth millennium BC, the decrease in seasonal rainfall resulted in the dryness of the Egyptian desert, and an increase in the desert spot in the western desert. In the first half of the fourth millennia BC, «full desert conditions were all over Egypt», causing populations to leave the Western Egyptian Desert in the Nile Valley¹⁰². During droughts, the importance of rain increased, and it was customary to offer sacrifices and animal burials. The phenomenon of animal burial was known in Nabta Playa during the Neolithic, which is why Wendorf named this place «Wadi of Sacrifices»¹⁰³. To understand this phenomenon, we need to consider why this custom was prevalent so quickly and over such a big region, and what significance it had. There a was link between short-term or even sudden periods of drought and the corresponding ritual/social adaptations in pastoral Saharan societies to deal with the difficult conditions. The cause-and-effect relationship between the climate crisis at the end of 6000 BC and the emergence of cattle sacrifices and burials in the vast expanses of the Sahara at a similar time is particularly puzzling here. It should be emphasized that the legacy of animal sacrifice or other rituals related to animals was a long-standing cultural phenomenon.

In Qadan at the Tushka 8905 site in southern Egypt in the Sahara Desert, we could already observe the crucial role of the aurochs; the skulls of these animals were placed in graves to mark the head of the buried person. There was probably something that forced human groups to move and spread the practice of breeding cattle. There was also more megalithic architecture, which were used for animals, especially cows. there were many rituals developed by pastoral groups (related to *rainmaking* ceremonies). In Bargat El-Shab, there was a ceremonial center associated with the *rainmaking* rites, in addition to Nabta Playa¹⁰⁴.

The funerary importance of this site was confirmed through the small animal burials under the stones and the remains of seven small burials which were discovered on the western end of the huge valley north of Napata Playa, the «Valley of the Sacrifice» [FIGURE 21]. Wendorf clarified that the cattle burials may be considered a kind of sacrifice for animals connected with making rain, so these animal burials were offerings that indicate the existence of a cattle cult during the Neolithic period, around ca. 7500-7400. The discovery of cattle burials led to a reconsideration of the fact that this place had ceremonial activity in Napata, which was associated with a cattle cult¹⁰⁵.

¹⁰¹SOUKOPOVA 2020: 80-81.

¹⁰²ANSELIN 2018: 635.

¹⁰³WENDORF 1998: 108.

¹⁰⁴BOBROWSKI 2021: 127.

¹⁰⁵WENDORF 1998: 108.



[FIGURE 21]: Small rock-covered tumulus containing the burial of a complete young cow. WENDORF 1998: 1998: FIG.4.

The use of stone structures or megalithic buildings to bury cattle and other animals based on rites developed by pastoral groups (related to rain ceremonies) could have also served the purpose of designating territory by pastoral groups/families. Climate change, including a southward shift in the scope of cyclic monsoon rains, which started around the middle of the 4th Millennium cal BC, triggered the desertification process of the Eastern Sahara¹⁰⁶.

The Nubian Megalith also has circles of large upright stones with junior flat stones upon the burial. These are used during the ritual fire ceremony, and cattle are sometimes presented as a sacrifice as part of the ceremony¹⁰⁷.

X- THE RAIN ANIMAL SACRIFICE

Offerings or sacrifices often accompany *rainmaking* rituals until today. In the Kitui region of Kenya, they make a special ritual for making rain, where a girl and a boy drive a goat or a bull around a hill seven times. Then an old man slaughters the animal and some of the blood is poured into a sacred place. A similar concept of a sacrificed animal is known from the ethnography of the San people in South Africa. In an unconscious state, they hunt the rain animal, and sacrifice it. They lead it above the sky to the site of the sacrifice, where it is slaughtered in a dry place that needs rain, or to a nearby hill where the animal is killed and its blood falls like rain¹⁰⁸.

The kind of animal is challenged by the shaman, who recognizes it during the stage of trance and then orders the sacrifice of this animal. The most dangerous type of rain is associated with the sacrifice of bulls. The bulls are pushed from above High to bring heavy thunder rain, which is frequent in southern Africa¹⁰⁹ [FIGURE 22].

¹⁰⁶ZUBIETA 2006: 201.

¹⁰⁷WENDORF 1998: 118.

¹⁰⁸SOUKOPOVA 2020: 80.

¹⁰⁹SULLIVAN & LOW 2014: 216-217.



[FIGURE 21]: Men and women capturing a rain animal- Melikane and Mangolong- south Africa.

SULLIVAN & LOW 2014: FIG.1.

Animal sacrifice is also practiced in the Botswana community, in South Africa. Rain animals are sacrificed for making rain, which is shown in their traditional rites. These animal sacrifices relate to Sun symbols as a part of the same sacred background¹¹⁰.

The black sheep was among the most special sacrificed rain animal. In the Oampo tribe a spotless black bull or a cow that had just carried a young calf and whose udder was dripping with milk was sacrificed. This type of practice is also found among their Kavango neighbors. Sometimes the sacrifice consisted of a young antelope or a young girl before puberty¹¹¹. In Bushman tribes the Eland is considered the most important sacrifice animal, because it gives the shaman the strength and ability to reach the stage of ritual death, preparing for the rain¹¹².

XI- HUMANE SACRIFICES

The custom of human sacrifice was known in many African sites, and it was often associated with rainmaking. Some primitive tribes still offer human sacrifices or parts of the human body as an offering to bring rain within the rituals associated with ancestors and making rain¹¹³. In South Africa, at Waltondale, in the Marondera area of Mashonaland, a strange sight was found that is difficult to explain; it has been interpreted as a scene related to human sacrifice, which was part of the rain-making ritual in Zimbabwe¹¹⁴ [FIGURE 22].

¹¹⁰KI-ZERBO 1981: 675.

¹¹¹SALOKOSKI 2006: 223.

¹¹²WILLIAMS 1987: 169.

¹¹³MASOGA 2018: 6.

¹¹⁴WOODHOUSE 1989: 20.



[FIGURE 22]: Human sacrifice during the *rainmaking* rituals. (Marondera- previously Marandellas - District, Zimbabwe.

WOODHOUSE 1989: ILLUS. 8.

Among the opinions that Woodhouse mentioned in his study is that this tree is considered the «tree of life» which rises from the body of the sacrificed victim¹¹⁵.

¹¹⁵WOODHOUSE 1989: 20.

XII. CONCLUSION

Rainmaking was known in African rock art during prehistoric times. The drought and dry climate were among the most important reasons for rainmaking, especially during the Neolithic time.

ngRainmaki rituals have continued in Africa until today in many communities. The rock images depict rain making through many geometric and animal symbols and red stripes which refer to the red line on the Elands head. The eland appears in many scenes to be blessed and close to this sacred animal and the red line refers to the power of life in shamanic rituals.

Rain animals are known through rock art. The most important of the rain animals were deer, crocodiles, elephants, and cows.

The most important and most prevalent animals in *rainmaking* scenes were the Eland and snakes, which appeared in many ritual rain sciences in Africa. The elephant was one of the most important rain animals because it resembled a large sprinkle of water, so it was depicted in *rainmaking* images. *Rainmaker* was one of the most notable members of society, who was considered a mediator between God and the common people, and he was responsible for bringing rain. The rainmaker was responsible for making rain in many African sites, east and south, through dancing, prayer, or Mountain climbing.

Caves, mountains, and rock shelters were among the most sacred places for *rainmaking*. Crocodiles and lizards were among the most important rain animals, and this was demonstrated through rock art in east and south Africa. The spirits of the ancestors were one of the most crucial factors for making rain, which is why prayers and offerings were made to the spirit of the ancestors.

The snake was associated with *rainmaking* and was associated with the rainbow, which was considered in many sites in Africa as a sacred necklace of God.

The Eland was considered a symbol of totemism. In a trance ritual, the shaman would jump on the Eland to become united with the sacred rain animal. This ritual was the shaman's attempt to associate with that sacred body in order to make rain.

Geometric decorations were among the most important symbols of *rainmaking*, and circles and spiral shapes were among the most important indicators of *rainmaking*.

The spiral ornament and the rope ornament were *rainmaking* symbols because they refer to the connection between the earth and the sky.

Cows and bulls were the most important rain-making animals, and the evidence of this was the burial of cows below the Megalith in Napata Playa.

There were practices and rituals performed to make rain, and dancing and entering the unseen world, and praying for God were among the most important of those rituals.

The custom of human sacrifice was among the *rainmaking* rituals that were known in various places in Africa.

BIBLIOGRAPHY

- ANSELIN, A.: «Archaeology of the Images, and the Words of the Ancient Egyptian World: from Pools of Gone Saharan Cultures to Current Sociological Parallels», *Studies in African Archaeology* 15, 2018, 635- 668.
- BENNETT, D.: *Little Book of Monitor Lizards: A Guide to the Monitor Lizards of the World and Their Care in Captivity*, British Library (Viper Press) 1995.
- BOBROWSKI, P. et AL.: *Awaiting the Rain, Early and Middle Holocene Prehistory of Bargat El-Shab Playa on Western Desert of Egypt*, the Institute of Archaeology and Ethnology Polish Academy of Sciences, (Poznan Warsaw) 2021.
- CLOTTES, J.: «The Shaman's journey», *The UNESCO courier: a window open on the world* 51/4, 1998, 24-28.
- DAVIS, W.: «Representation and knowledge in the prehistoric rock art of Africa», *African Archaeological Review* 2, 1984, 7-35.
- DOWSON T.A.: *Rain in Bushman belief, politics and history : the rock-art of rain-making in the south-eastern mountains, southern Africa, Archaeology of rock-art*, Cambridge (Cambridge University Press) 1988.
- FERNÁNDEZ, V.M.: «Schematic Rock Art, Rain-Making and Islam in the Ethio-Sudanese Borderlands», *African Archaeological Review* 28, 2011, 279–300. DOI 10.1007/s10437-011-9101-9.
- GRAY, P.: «Play as a Foundation for Hunter-Gatherer Social Existence», *American Journal of Play* 1/4, 2009, 476-522.
- HAMBLY, W.D.: «The Serpent in African Belief and Custom», *American Anthropologist* 4/31, 1929, 655-666.
- HUFFMAN, T.N.: «Archaeology, and Rainmaking at Modipe Hill, Kgatleng», *Botswana Notes and Records* 43, 2011, 64-75.
- HUMBE, B.P.: «The Meaning of African Traditional Religion for Modern Society: Zimbabwe as a Case Study», PhD Thesis, Faculty of Theology/ University of the Free State, 2020.
- KHARODIA, A.I.: «Chongoni Rock Art Area», *Malawi*, N^o. 476, ICOMOS, April 2006, 33-40.
- KILONZO, K. B.: «Rock Art, and Tourism in Tanzania: In Search for Innovations», *Academica Turistica- Tourism and Innovation Journal* 10/1, 2017, 69-81.
- KI-ZERBO, J.: «African Prehistoric Art», *The General History of African Prehistory*, UNESCO, 1981 &1990.
- LAHELMA, A.: A Touch of Red: Archaeological and Ethnographic Approaches to Interpreting Finnish Rock Paintings, *ISKOS* 15, 2008, 10-76.
- LEWIS-WILLIAM, J.D. & PEARCE, D.G.: «Southern African San Rock Painting as Social Intervention: A Study of Rain-Control Images», *African Archaeological Review* 21/4, December 2004, 199-228, DOI: 10.1007/s10437-004-0749-2.
- LYNCH, P.A & JEREMY ROBERTS: *African Mythology A to Z*, 2nd (ed.), New York, 2010.
- MASOGA, M. A. & RUGWIJI, T.: «A Reflection on Ritual Murders in the Biblical Text an African Perspective», *Scriptura* 117/1, 2018, 1-13. <http://dx.doi.org/10.7833/117-1-1427>.
- NDORO, W.: *The Preservation of Great Zimbabwe: Your Monument, Our Shrine*, Rome (ICROM) 2005.
- OESTIGAARD, T.: *Rainbows, Pythons and Waterfalls: Heritage, Poverty, and Sacrifice Among the Busoga, Uganda, Current African Issues* 67, UPPSALA (The Nordic Africa Institute) 2019.
- OMBATI, M.: «Rainmaking Rituals: Song and Dance for Climate Change in the Making of Livelihoods in Africa», *International Journal of Modern Anthropology* 10, 2017, 74-96, DOI: <http://dx.doi.org/10.4314/ijma.v1i10.3>.
- PARKMAN, E.B.: «Creating Thunder: The Western Rain-Making Process», *Journal of California and Great Basin Anthropology* 15/ 1, 1993, 90-110.
- PRINS, F.E. & HALL, S.: «Expressions of Fertility, in the Rock Art of Bantu-Speaking Agriculturists», *The African Archaeological Review* 12, 1994, 171-203.
- PWITI, G. NHAMO, A. KATSAMUDANGA, S. & SEGOBYE, A.: «Makasva: Archaeological Heritage, Rainmaking and Healing in Southern Africa with Special Reference to Eastern Zimbabwe», *ZIMBABWE* 9, 2007, 103-111.
- ROBERTSHAW, P.: «African Archaeology, Multidisciplinary Reconstructions of Africa's Recent Past, and Archaeology's Role in Future Collaborative Research», *African Archaeological Review* 29, 2012, 95–108. DOI 10.1007/s10437-012-9113-0.
- SALOKOSKI, M.: «How Kings are made- how Kingship Changes», PhD Thesis, Helsinki University Printing House, 2006.

- SCHOEMAN, M.H.: «Imagining Rain-places: Rain-Control and Changing Ritual Landscapes in the Shashe-Limpopo Confluent Area, South Africa», *South African Archaeological Bulletin* 61, 2006, 152–165.
- SOLOMON, A.: «Roots and Revolutions: a Critical Overview of Early and Late San Rock Art Research, Verdier», *Afrique & Histoire* 6/2, 2006, 77-110.
- SOUKOPOVA, J.: «Rain and Rock Art in the Sahara: A Possible Interpretation», *EXPRESSION* N°. 28, June 2020, 79-97.
- STOREMYR, P.: «A Prehistoric Geometric Rock Art Landscape by the First Nile Cataract», *ARCHÉO-NIL* N°.19, 2009, 121-150.
- SULLIVAN, S., & Low, C., «Shades of the Rainbow Serpent? A KhoeSan Animal between Myth and Landscape in Southern Africa – Ethnographic Contextualisations of Rock Art Representations», *Arts* 3, 2014, 215-244, Doi:10.3390/arts3020215.
- TARA, «The Dawn of Imagination, Rock Art in Africa», *TARA* 15, April 2010, 1-49. www.africanrockart.org.
- TURNER, C.: «An Interpretation of Rock Art Imagery from the Brandberg/Dâures, Namibia», Ma Thesis, University of the Witwatersrand, Johannesburg, 2012.
- WENDORF, F. & SCHILD, R.: «Nabta Playa and its Role in Northeastern African Prehistory», *Journal of anthropological archaeology* 17, 1998, 97–123.
- WILLIAMS, L.: «A Dream of Eland: An Unexplored Component of San Shamanism and Rock art», *World Archaeology* 19/2, 1987, 165-177.
- WITZEL, M.: «Water in Mythology», *Daedalus* 144/3, 2015, 18-26.
- WOODHOUSE, H.C.: «Motivation and the Rain Animal in the Rock Art of Southern Africa», *South of African Journal of Art History* 4/3, 1989, 15-25.
- ZUBIETA, L.F.: *The Rock Art of Mwana was Chentcherere II Rock Shelter, Malaḡwi, A Site-Specific Study of Girls' Initiation Rock Art*, N°. 83, Leiden (African Studies Centre) 2006.

TWO COPTIC INSCRIPTIONS IN THE ABOU EL-GOUD STORAGE MAGAZINE

Ahmed Taleb Abdeldayem Khalil

Department of Archaeology, Faculty of Arts, Minia University, Egypt, ahmed.khalil@mu.edu.eg

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Khalil, Ahmed Taleb Abdeldayem () "TWO COPTIC INSCRIPTIONS IN THE ABOU EL-GOUD STORAGE MAGAZINE," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 7.

Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/7>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in Journal of the General Union of Arab Archaeologists by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

TWO COPTIC INSCRIPTIONS IN THE ABOU EL-GOUD STORAGE MAGAZINE

By

Ahmed T. A. Khalil

Lecturer at Department of Archaeology, Faculty of Arts, Minia University, Egypt

ABSTRACT

[AR] إثنان من النقوش القبطية المحفوظة بالمخزن المتحفي بمنطقة أبو الجود تتناول هذه المقالة نشر إثنان من النقوش القبطية المحفوظة بالمخزن المتحفي بمنطقة أبو الجود، أحدهما تم تسجيله في مجموعة تحمل عنوان البرت تاوضروس، والآخر هو جزء من مجموعة بعنوان زيادات معبد الأقصر. هذان النقشان كتبا باللهجة الصعيدية. وعلى الرغم من عدم وجود أي بيانات عن موقعهما الأصلي. إلا أنه من المحتمل أنه تم العثور عليهما في جبانات تقع بالقرب من أديرة.

[EN] In this article, two inscriptions preserved in the Abou El-Goud storage magazine are published. One of them was registered in a collection entitled «Albert Tawdros», while the other is a part of a collection entitled «Ziyādāt Ma'bad al-Uqşur» (Surplus from the Luxor Temple). These inscriptions are written in Sahidic Coptic. Despite there is no data on their provenances, they likely come from cemeteries located near monasteries.

KEYWORDS: Armant, Dayr Anba Hadra, epitaphs, inscriptions, monastery of St. Pisentios, Sahidic Coptic, stonemason.

I. INTRODUCTION

The two inscriptions published below were kept in Luxor temple storage rooms before being transferred to the Abou El-Goud storage magazine. There is no information on these inscriptions except that one of them was registered in the collection entitled «Albert Tawdros» under the registration number 305. This stela was in possession of a person called Albert Tawdros before the Antiquities Protection Law of 1983 and it was given to the Egyptian Antiquities Organisation as a gift by his heirs in 1984, while the other was registered in the collection entitled «Ziyādāt Ma'bad al-Uqsur» (Surplus from the Luxor Temple), and it bears the registration number $\frac{452}{س}$.

The first epitaph is for a sister called Gera. This text is composed of four formulae and does not mention any information on her character. The second gravestone is for a monk called John. The text is composed of one formula including the name and function of the tombstone owner.

II. EPITAPH OF GERA, A SISTER [FIGURE 1]

Albert Tawdros

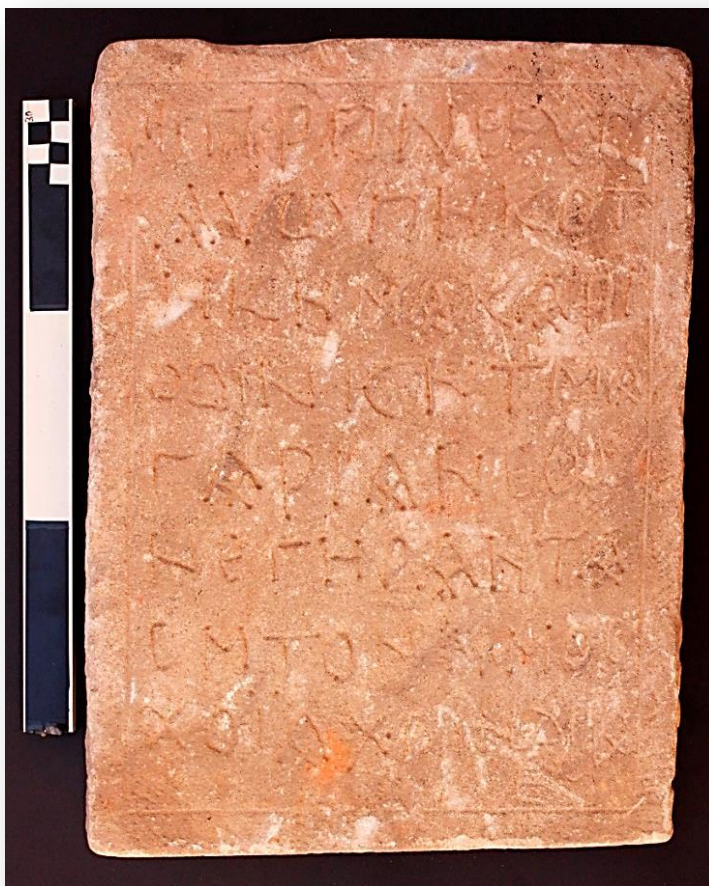
Registration N^o. 305

Dayr Anba Hadra (?)

716-768 AD (?)

This is a rectangular sandstone stela. Its measurement is h. 35.8 cm x w. 26.0 cm. The text starts with the cross potent¹ and consists of nine lines written in Sahidic Coptic and framed by incised line. Margins are mostly regular. No decorative elements are incised. The ends of letters are irregularly marked by a point. Some odd spellings appear (ll. 1-4). Letters are large, irregular and shallow cut. Letter α written in a capital form. Superlinear strokes are used irregularly. Trema is placed above ι (l. 8). Letter \omicron in $\text{IN}\Delta\text{IOK}$ written below the letter ι (l. 8).

¹ KAMEL & GIRGIS 1987: 24.



[FIGURE 1]: Epitaph of Gera, a sister ©Photo taken by the researcher

Text

- [1] † ΠΡΗΜΕΕΥΕ
- [2] ΔΥΩ ΠΗΚΟΤ-
- [3] ΗΚ ΝΜΑΚΑΡΙ-
- [4] ΟΟ ΕΝ ΙC ΝΤΜΔ-
- [5] ΓΑΡΙΑ ΝCΩ-
- [6] ΝΕ ΓΗΡΑ ΝΤΔ-
- [7] CΜΤΟΝ ΜΜΟC
- [8] ΧΟΪΑΧ Θ ΙΝΔΙΟΚ/
- [9] €

1. ΠΡΗΜΕΕΥΕ: ΠΡΗΜΕΕΥΕ || 2-3. ΠΗΚΟΤ|ΗΚ: ΠΕΝΚΟΤ|ΕΚ || 3-4. ΜΑΚΑΡΙ|ΟΟ: μακάρι|ος || 8. ΙΝΔΙ{Ο}Κ(ΤΙΑΝΟC): ΙΝΔΙΟΚ/
stone, ἰνδικτιών.

Translation

† The memorial and the blessed rest in Jesus of the blessed sister Gera, who went to rest on Khoiakh 9, indiction 5.

Commentary

The writer has divided the text into four formulae; the opening formula ⲛⲣⲛⲙⲉⲉⲩⲉ | ⲁⲩⲱ ⲛⲛⲕⲟⲩⲛⲕ ⲛⲙⲁⲕⲁⲣⲓⲟⲟ ⲉⲛ ⲓⲥ (ll. 1-4), name formula ⲛⲧⲙⲁ|ⲓⲅⲁⲣⲓⲁ ⲛ̄ⲥⲱ|ⲛⲉ ⲓⲅⲣⲁ (ll. 4-6), death formula ⲛⲧⲁ|ⲥⲙⲧⲟⲛ ⲙⲙⲟⲥ (ll. 6-7), and the date formula ⲭⲟⲓⲁⲭ ⲑ ⲓⲛⲁⲓⲟⲕ/| ⲉ (ll. 8-9).

- 1–4 ⲛⲣⲛⲙⲉⲉⲩⲉ | ⲁⲩⲱ ⲛⲛⲕⲟⲩⲛⲕ ⲛⲙⲁⲕⲁⲣⲓⲟⲟ ⲉⲛ ⲓⲥ Similar opening formulae appear in two epitaphs from Dayr Anba Hadra: [ⲛ]ⲉⲗⲟⲟⲩ ⲙⲡⲣ ⲛⲙ|[ⲉⲉⲩⲉ]ⲉ ⲁⲩⲱ ⲛⲉⲛⲕⲟ|[ⲧⲕ ⲙ̄ⲛⲉⲛ]ⲙⲁⲕⲁ|[ⲣⲓⲟⲥ ⲛ̄ⲉⲓ]ⲱ[ⲧ], and ⲛⲡⲣ^(sic)ⲛⲙⲉⲉⲩⲉ | ⲁⲩⲱ ⲛⲛⲕⲟⲩ ⲛ̄^(sic)|ⲛⲙⲁⲕⲁⲓⲟⲛ^(sic) | ⲛⲛⲉⲛⲙⲁⲕⲁⲓ[ⲟⲛ] | ⲛⲱ^{(sic)2}. As for ⲛⲣⲛⲙⲉⲉⲩⲉ, the interchange of ⲛ and ⲙ is usual³, but it is noticeable that it was later neglected in the genitive ⲛ (l. 3). It is remarkable that this word ⲛⲣⲛⲙⲉⲉⲩⲉ came at the beginning of the tombstones of Hermonthis and Qasr Ibrīm also, but in this formula ⲛⲣⲛⲙⲉⲉⲩⲉ ⲛ̄-/ⲙ̄- NN⁴. The Coptic word ⲛⲕⲟⲩⲛⲕ is close to ⲛⲕⲟⲩⲧⲕ. This interchange of ⲛ and ⲉ is not used in the whole of the text except in this word⁵. This unusual spelling ⲙⲁⲕⲁⲣⲓⲟⲟ of the Greek word *μακάριος* is not attested in Förster⁶. It is certain that the last ο of ⲙⲁⲕⲁⲣⲓⲟⲟ is ⲥ, but it is written in a non-common way because it appears like this on other funerary stelae dated to the eighth century from Dayr Anba Hadra⁷.
- 4–6 ⲧⲙⲁ|ⲓⲅⲁⲣⲓⲁ ⲛ̄ⲥⲱ|ⲛⲉ ⲓⲅⲣⲁ This variant ⲙⲁⲓⲅⲁⲣⲓⲁ of the Greek word *μακάριος* is not attested in Förster⁸. One should note that the stonemason uses the interchange between ⲓ and ⲕ⁹ herein in contrast to the previous case in ⲙⲁⲕⲁⲣⲓⲟⲟ (ll.3-4). It is possible that Gera, whose funerary stela this is, was a nun. The name ⲓⲅⲣⲁ occurs in this spelling ⲕⲓⲅⲣⲁ in Dayr Anba Hadra¹⁰.
- 6–7 ⲛⲧⲁ|ⲥⲙⲧⲟⲛ ⲙⲙⲟⲥ This formula, in general, was commonly used in the tombstones¹¹. Apparently, the use of this formula on the gravestones of Dayr Anba Hadra appeared in 716-768 AD (the 2nd redaction) and 786-892 AD (the 3rd redaction) according to Munier's classification and Krause's correction to the dates of the tombstones of that region¹². Despite this formula is distinguished by adding the pronominal preposition (i.e. ⲛ̄ⲧⲁⲕⲙ̄ⲧⲟⲛ ⲙ̄ⲙⲟⲕ ⲛ̄ⲗⲏⲧⲩ) to its end, it sometimes occurs without it¹³.

² MUNIER 1930–31: N^o. 138, ll. 2-5, N^o. 140, ll. 2-6 (=HASITZKA 1993: vol.1, N^o. 636 & N^o. 638).

³ KASSER 1964: 32; KAHLE 1954: vol.1, 98-100.

⁴ DEKKER 2015: 12.

⁵ KASSER 1964: 37; For the interchange of ⲛ and ⲉ, see KAHLE 1954: vol.1, 70-71.

⁶ FÖRSTER 2002: 491-496.

⁷ KHALIL 2019: N^o. 3, l. 3, ll. 5-6, N^o. 5, l. 2; It occurs also on an ostrakon dated to the seventh and the eighth centuries from Maks Qibli-Elhesn, see: AHMED 2009: 172, 174 [N^o.3], 178, 184.

⁸ FÖRSTER 2002: 491-496.

⁹ KAHLE 1954: vol.1, 95-96.

¹⁰ MUNIER 1930–31: N^o. 93, l. 4 (=HASITZKA 1993: vol.1, N^o. 591).

¹¹ On this formula, see: TUDOR 2011: 196.

¹² MUNIER 1930–31: 259; KRAUSE 1975: 79.

¹³ It appears in the second and the third redactions, see: MUNIER 1930–31: 259 & N^o. 17, ll. 6-7 (=HASITZKA 1993: vol.1, N^o.514) the case in which the pronominal preposition does not appear.

8 $\text{IN}\Delta\text{IO}\text{K}$ /This variant $\text{IN}\Delta\text{IO}\text{K}$ /of the Greek word ινδικ(τιών) is not mentioned in Förster¹⁴.

The formulae of this epitaph are very close to those of Dayr Anba Hadra. Based on Munier and Krause¹⁵, the use of the death formula and the absence of the prayer formula «in the bosom of Abraham, Isaac and Jacob» at the end of the text set the current epitaph in the second redaction (716-768 AD).

III. EPITAPH OF JOHN, A MONK [FIGURE 2]

Ziyādāt Maʿbad al-Uqṣur

Registration N^o. $\frac{452}{\text{س}}$

Armant (?)

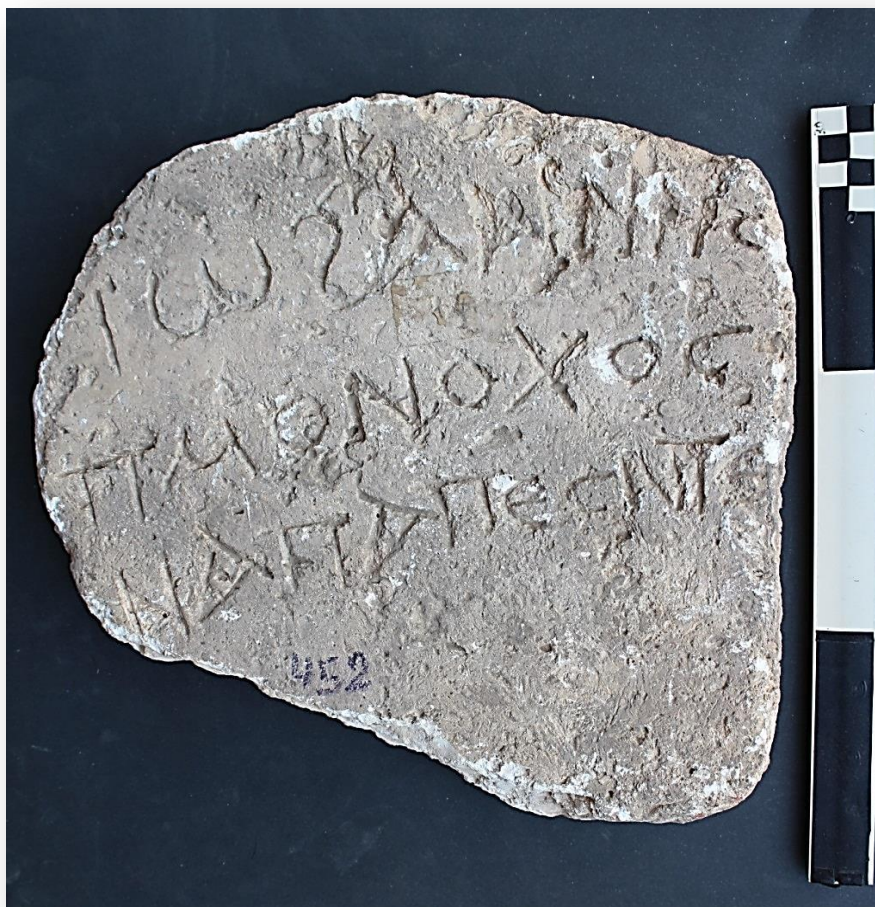
6th-8th cent. (?)

Irregular shape of limestone stela. Its measurement is h. 28.0 cm x w. 25.6 cm. It contains a four-line inscription written in Sahidic Coptic, leaving a big blank margin below the text. The irregular shape of the left-hand side is caused by some broken parts. The Monogram of Christ¹⁶ carved above the text. The inscription lacks any decorative elements. Lines seem slightly sloping. Letters are upright and clear. Superlinear stroke is neglected above the genitive N (l. 4). Trema is placed over I (l. 2).

¹⁴ FÖRSTER 2002: 347-352.

¹⁵ MUNIER 1930-31: 259; KRAUSE 1975: 79.

¹⁶ KAMEL & GIRGIS 1987: 24.



[FIGURE 2]: Epitaph of John, a monk ©Photo taken by the researcher

Text

- [1] ⲛ
- [2] ἸΩΑΝΝΗΣ
- [3] ΜΟΝΑΧΟΣ
- [4] ΑΠΑ ΠΕΣΕΝΤΕ

Translation

ⲛ John, the monk of Apa Pesente.

Commentary

This funerary stela only mentions the name formula. The scribe did not record the date of death or any other information about the deceased except that he was a monk in the monastery of St. Pisentios.

2–4 ἸΩΣΑΝΝΗΣ | ΠΜΟΝΟΧΟΣ | ΝΑΠΑ ΠΕΣΝΤΕ A similar formula appears in some undated tombstones. Two of them are from unknown provenances †. ΛΠΑ ΙΣΑΚ | ΠΝΕϸ ΠΜΟ|ΝΟΧΟΣ ΝΑ|ΠΑ ΠΕΣΝΤΕ¹⁷ and ΜΑΦΑΜ ΠΜΟΝΟΧΟΣ | ΝΑΠΑ ΠΕΣΝΤΕ ΕΤ | ΝΑΝΟΥϸ ΦΑΡΜΟΥΘΙ Β¹⁸. Three others are from Armant ΧΜΓ | ΕΙΣ ΘΕΟΣ Ω ΒΟΗΘΩΝ ΔΜΗΝΖΙ^(sic) ΙΩΒ | ΠΜΟΝΟΧΟΣ ΝΝΑΠ|Δ ΠΕΣΣΝΤΕ,]ΑΖΑΜ ΠΜΟΝ|ΟΧΟΣ ΝΑΠΑ ΠΕΣ|ΝΤΕ, and †ΠΛΗΜΨΥΡΟΣϸ ΠΔΙ|ΔΚΩΝϸ ΝΑΠΑ ΠΕ|ΣΝΤΕϸ¹⁹. One should note that all texts almost agree on this expression NN ΠΜΟΝΟΧΟΣ ΝΑΠΑ ΠΕΣΝΤΕ, where the orthographic form of Greek word ΜΟΝΟΧΟΣ (μοναχός)²⁰ and the saint’s name ΠΕΣΝΤΕ are almost the same. On the other hand, the current gravestone lacks ornamental and decorative elements, unlike the previous ones²¹. The absence of information on the monks of monastery of Apa Pesente seems to have been common in the gravestones of Armant. A large number of them have been dated between the sixth and the eighth centuries²².

The formula of this tombstone is very close to those of the monastery of Apa Pesente in Armant, and John, whose epitaph this is, may have been a monk in the same monastery. Because many of the region’s funerary stelae have been dated between the sixth and the eighth centuries. Therefore, I speculate that this epitaph might have been engraved at the same time as well.

IV. CONCLUSION

Although there are neither date nor data on the provenance of the two Coptic inscriptions published above. In this paper, I suggest that the epitaph of Gera might be written in Dayr Anba Hadra between 716 and 768 AD, while the epitaph of John might be inscribed in the monastery of Apa Pesente in Armant between the 6th and the 8th centuries.

¹⁷ BIONDI 1907: N^o. 17, ll. 1-4 (=HASITZKA 1993: vol.1, N^o. 692).

¹⁸ BRUNSCH 1994: N^o. A 11872, ll. 1-3 (=HASITZKA 2006: vol.3, N^o. 1638).

¹⁹ CRUM 1902: N^o. 8449, ll. 1-5, N^o. 8472, ll. 1-3, N^o. 8655, ll. 1-3; BOUD’HORS & HEURTEL 2010: 25, footnote 122.

²⁰ FÖRSTER 2002: 531-532.

²¹ For the ornamental and decorative elements of these funerary stelae, see CRUM 1902: N^o. 8449, PL. X, N^o. 8472, PL. XIII & N^o. 8655 [Crum mentions that its style is as the same of N^o. 8636, PL. XL].

²² BOUD’HORS & HEURTEL 2010: 25.

BIBLIOGRAPHY

- AHMED, S.: «Four Coptic Ostraca from Kharga Museum», *BACPSI* 26/1, 2009, 163-186.
- BIONDI, G.: «Inscriptions Coptes», *ASAE* 8, 1907, 77-96, 161-183.
- BRUNSCH, W.: «Koptische und Griechische Inschriften aus Alexandria», *WZKM* 84, 1994, 9-33.
- BOUD'HORS, A. & HEURTEL, C.: *Les ostraca coptes de La TT 29. Autour du moine Frangé*, Études d'archéologie thébaine 3, Bruxelles (CREA-Patrimoine) 2010.
- CRUM, W. E.: *Catalogue général des antiquités égyptiennes du Musée du Caire, Nos. 8001-8741: Coptic Monuments*, Le Caire (Imprimerie de l'institut français d'archéologie orientale) 1902.
- DEKKER, R.: The Memorial Stone of Bishop Joseph III of Aswan, in ŁAJTAR, A., OCHAŁA, G. & VAN DER VLIET, J. (eds.), *Nubian Voices II: New Texts and Studies on Christian Nubian Culture (JJP Suppl. 27)*, Warsaw (Wydanie I) 2015, 5-25.
- FÖRSTER, H.: *Wörterbuch der Griechischen Wörter in den Koptischen Dokumentarischen Texten*, Berlin/New York (Walter de Gruyter) 2002.
- HASITZKA, M. R. M.: *Koptisches Sammelbuch I (KSB I)* (Mitteilungen aus der Papyrussammlung der Österreichischen Nationalbibliothek (Papyrus Erzherzog Rainer) N.S. 23/1, Wien (Brüder Hollinek) 1993.
- HASITZKA, M. R. M.: *Koptisches Sammelbuch III (KSB III)* (Mitteilungen aus der Papyrussammlung der Österreichischen Nationalbibliothek (Papyrus Erzherzog Rainer) N. S. 23/3, München-Leipzig (K. G. Saur) 2006.
- KAHLE, P. E.: *Bala'izah: Coptic Texts from Deir El-Bala'izah in Upper Egypt*, vol. 1, London (Oxford University Press) 1954.
- KAMEL, I. & GIRGIS, G. D.: *Coptic Funerary Stelae. Catalogue général des antiquités du Musée copte Nos. 1-253*, Le Caire (l'Organisation égyptienne générale du Livre) 1987.
- KASSER, R.: *Compléments au dictionnaire copte de Crum (Bibliothèque d'études coptes 7)*, Le Caire (Imprimerie de l'institut français d'archéologie orientale) 1964.
- KHALIL, A.: «Six Coptic Funerary Stelae with the Commemorative Day Formula from the Abou El-Goud Storage Magazine», *JEA* 105/2, 2019, 275-283.
- KRAUSE, M.: Die Formulare der Christlichen Grabsteine Nubiens, in MICHAŁOWSKI, K. (ed.), *Nubia: Récentes recherches. Actes du colloque nubologique international au Musée National de Versovie, 19-22 Juin 1972*, Versovie (Musée National), 1975, 76-82.
- MUNIER, H.: «Les stèles coptes du Monastère de Saint-Siméon à Assouan», *Aegyptus* 11, 1930-31, 257-300, 433-484.
- TUDOR, B.: *Christian Funerary Stelae of the Byzantine and Arab Periods from Egypt*, Marburg (Tectum Verlag) 2011.

2023

NEW LIGHTS ON A RARE ABBASID DIRHAM IN THE NAME OF THE CALIPH HĀRŪN AL-RAŠĪD MINTED IN AL-MUḤAMMADĪYA, 173 AH

Othman Salama Attia

Lecturer at Faculty of Archaeology, Islamic Department, Luxor University, Egypt.,
osmanalashkar2017@gmail.com

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Attia, Othman Salama (2023) "NEW LIGHTS ON A RARE ABBASID DIRHAM IN THE NAME OF THE CALIPH HĀRŪN AL-RAŠĪD MINTED IN AL-MUḤAMMADĪYA, 173 AH," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 8.

Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/8>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in *Journal of the General Union of Arab Archaeologists* by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

**NEW LIGHTS ON A RARE ABBASID DIRHAM
IN THE NAME OF THE CALIPH HĀRŪN AL-RAŠĪD
MINTED IN AL-MUḤAMMADIYA, 173 AH**

BY

Othman Salama Attia

Lecturer at Islamic Department, Faculty of Archaeology, Luxor University, Egypt

ABSTRACT

[AR] أضواء جديدة على درهم عباسي نادر باسم الخليفة هارون الرشيد ضرب المحمدية سنة 173 هـ. تُلقى هذه الدراسة الضوء على درهم عباسي نادر، ضرب المحمدية، مؤرخ بسنة 173 هـ، يحمل اسم الخليفة العباسي هارون الرشيد ويحيى وبهلول. وفي الحقيقة، أن هذا الدرهم سبق وأن تم نشره من قبل، إلا أن المؤلفات والدراسات السابقة التي تناولت هذا الدرهم اكتفت بنشر نصوص كتاباته فحسب، دون الغوص في تحليل الكتابات المسجلة عليه وذلك من أجل التعرف والوقوف على ماهية وحقيقة أسماء تلك الشخصيتين الواردين ضمن نصوص كتاباته، وهما يحيى وبهلول، وما الوظيفة التي خولت لهم تسجيل أسمائهم بجانب اسم الخليفة هارون الرشيد على هذا الدرهم موضوع الدراسة، لا سيما أن الباحثين في مجال علم النُميات قد اختلفوا في تحديد هويتهم، وهذا ما سنوضحه بالشرح والدراسة والتحليل، وذلك من خلال عرض ما ذكرته المصادر التاريخية عنهم، ومحاولة الوصول لما أغفلت المصادر والمراجع الحديثة ذكره عمداً أو عن غير قصد، ولدراسة هذا الدرهم أهمية كبيرة إذ سمحت لنا بإعادة النظر في ترتيب ولاية الري الذي وضعه زامبور في معجمه، فمن خلال النقود يمكن كشف النقاب عن حقائق تاريخية لم يكن من اليسير التوصل إليها. وقد اتبعت في دراسة هذا الدرهم المنهج الوصفي التحليلي، وذلك من خلال وصفه وصفاً علمياً دقيقاً للكتابات المسجلة عليه وشكله العام وزخارفه، ثم القيام بدراسة تحليلية لكتاباته؛ وذلك من أجل الوقوف على الجوانب التاريخية التي صاحبت درهما موضوع الدراسة، ليكون بذلك إضافة لرؤية جديدة للنقود الإسلامية عامة، والنقود العباسية في عهد الخليفة هارون الرشيد خاصة.

[EN] This paper sheds light on a rare Abbasid dirham minted in al-Muḥammadiya, dated 173 AH, with the name of the Abbasid Caliph Hārūn al-Rašīd, Yaḥyā, and Bahlūl. This dirham was published, but previous studies addressed its inscriptions only without analysis to identify the nature and the truth of the names of the two personalities «Yaḥyā and Bahlūl», whose names were inscribed on this dirham. This paper also identifies the function that empowered them to inscribe their names next to the name of the Caliph Hārūn al-Rašīd on that dirham. Researchers in the field of numismatics have differed in determining their identity, which will be illustrated through this paper based on discussion, study, and analysis. The paper discusses what historical sources mentioned about these persons to identify what the sources neglected to mention intentionally or unintentionally. Studying this dirham is highly important, as it makes it possible to reconsider the sequence of the governors of al-Rayy prepared by Zambaur in his lexicon. Coins help reveal historical facts that were not easy to obtain. This paper adopted the descriptive analytical approach for this dirham in terms of the general form and inscriptions to identify the accompanying historical aspects to be an addition to a new vision for Islamic coins, especially the Abbasid coins in the era of the Caliph Hārūn al-Rašīd.

KEYWORDS: Islamic coins, Abbasid dirham, Hārūn al-Rašīd, Yaḥyā, Bahlūl, al-Muḥammadiya, 173 AH.

I. INTRODUCTION

Islamic coins are one of the main sources concerned with studying history, archaeology, and Islamic civilization. They help reveal historical facts neglected by ancient historical sources and modern scientific studies can be reached, as they are a type of official document. They are also an important statement of actual power, which every ruler was keen to take right after assuming power¹.

Islamic coins play a prominent historical role in political life, as they provided the names of caliphs, kings, sultans, princes, ministers, governors of regions, and others. By classifying coins, researchers can obtain lists of countries, families, and ruling dynasties in the Islamic world to adjust the history of their rule with precision and perfection².

This paper presents a study of a rare Abbasid dirham, minted in al-Muḥammadiya, dating back to 173 AH, with the name of the Abbasid Caliph Hārūn al-Rašīd, Yaḥyā, and Bahlūl. This dirham was published by some researchers in the field of numismatics. For example, Stanley Lane Poole published it in his catalogue of coins of the Eastern Caliphate under N^o.193³, George C. Miles published it in his book on the numismatic history of Rayy under N^o.37A⁴, and Wadād al-Qazzāz published it in her study of the Abbasid dirham in the time of Hārūn al-Rašīd under N^o.6/7945⁵. It was also discussed by Abū al-Faraġ al-^cuš in his book on the Arabic and Islamic coins preserved in the National Museum of Qatar under N^o.1643⁶. Nicholas Lowick and Elizabeth Savage referenced it in their book on early Abbasid coins under N^o.1683⁷, and Ahmad Tony Rostom published it in his dissertation on Iranian silver coins in the first and the second Abbasid periods⁸. The dirham was published by Hassan Abed Al-Zayoud in his dissertation on the coins of Hārūn al-Rašīd⁹. Rowaida Raaft Al-Nabarāwī published two models for this dirham in her dissertation on the coins of al-Muḥammadiya under N^{os}.31 & 32¹⁰. In addition, other studies published this dirham.

However, the aforementioned studies discussed the identity of these two personalities, «Yaḥyā and Bahlūl», whose names were mentioned in the inscriptions of this dirham but did not find a clue. This study aims to identify these persons to discover the role they played in the reign of Hārūn al-Rašīd, a point that previous studies did not specify in detail.

¹ AL-NABARĀWĪ 2000: 5; MANSOUR 2008:19.

² AL-^cUŠ 1984: 10; MANSOUR 2008 :118.

³ LANE POOLE 1875: vol.1, 76 [193]

⁴ MILES 1938: 55[73A].

⁵ AL-QAZZĀZ 1965: 195 [6/7945].

⁶ AL-^cUŠ 1984: 388 [1643]

⁷ LOWICK 1996: 198 [1683].

⁸ ROSTOM 2002: 127.

⁹ AL-ZAYŪD 2010: 446 [466].

¹⁰ RAAFAT 2015: 55, 56 [31-32].

II. HĀRŪN AL-RAŠĪD (170-193 AH / 786-808 A.D)

Abū Ja‘far Hārūn b. Muḥammad b. ‘Abdallāh b. Muḥammad b. ‘Alī b. ‘Abdullāh b.al-‘Abbās al-Hāshimī, the fifth Abbasid caliph¹¹. Hārūn al-Rašīd was born in al-Rayy in 148 AH/665 AD¹². He assumed the caliphate in 170 AH /786 AD¹³.

His age when he was in charge of the caliphate was twenty-one or twenty-two, according to some researchers¹⁴ He stayed in power until he died at the age of forty-five¹⁵ in 193 AH/808 AD¹⁶. Thus, the period of his caliphate was twenty-three years¹⁷.

III. DESCRIPTIVE STUDY «GENERAL SHAPE»

The type of this dirham is characterized by double concentric linear circles surrounding the inscriptions on the obverse. The outer circle is touched by three circular rings. Between each of these rings are two small circles, while the inscriptions of the reverse field came within two concentric linear circles. The legends of the reverse margin are surrounded by a linear circle, and all the reverse inscriptions are surrounded by a linear circle. The legends of the field of the obverse come in three parallel lines, while the legend of the field of the reverse appears in six parallel lines. Both obverse and reverse legends are inscribed in simple Kufic epigraphy, as follows [FIGURE 1]:

Obverse		Reverse
Field, within a double circle	لا اله الا الله وحده لا شريك له	يحيى محمد رسول الله صلي الله عليه وسلم الخليفة الرشيد بهملول
Obv. margin within a double circle	بسم الله ضرب هذا الدرهم بالمحمدية سنة ثلث وسبعين ومئة	Rev. margin within a circle محمد رسول الله ارسله بالهدى ودين الحق ليظهره علي الدين كله ولو كره المشركون

¹¹ AL-ṬABARĪ 1966: vol.8, 230; AL-ḌAHABĪ 1982: vol.9, 286; ĪBN AL-ḤAYĀT 1995: 447; ĪBN KAṬĪR 2004: vol.2, 1558.

¹² ĪBN AL- ‘AṬĪR 1987: vol.5, 277; ABŪ ḤALĪL 1999:15.

¹³ The night al-Rashid assumed the caliphate's throne was described as a miraculous night. It was a witness to the death of a caliph, the pledge of allegiance to a caliph, and the birth of a caliph. In it, al-Hadi died, al-Rashid became caliph, and al-Ma‘mun was born. There was no night in history in which a caliph was born, a caliph died, and a caliph pledged allegiance. That's why some called it the night of the caliphs. See: ĪBN AL-ĠWZĪ 1992: vol.8, 320; ĪBN KAṬĪR 2004: vol.2, 1538; AL-ZAYŪD 2010:18; RAAFAT 2015: 217.

¹⁴ AL-ṬABARĪ 1966: vol.8, 345; ĪBN AL- ‘AṬĪR 1987: vol.5, 277; ĪBN KAṬĪR 2004: vol.2, 1562.

¹⁵ AL-ṬABARĪ 1966: vol.8, 345; ĪBN KAṬĪR 2004: vol.2, 1565.

¹⁶ ĪBN AL-ĠWZĪ 1992: vol.9, 231-232; ĪBN AL- AṬĪR 1987: vol.5, 352; ĪBN AL-ḤAYĀT 1995: 460.

¹⁷ ĪBN AL- ‘AṬĪR 1987: vol.5, 354; ĪBN AL-ĠWZĪ 1992: vol.9, 232.

NEW LIGHTS ON A RARE ABBASID DIRHAM IN THE NAME OF THE CALIPH HĀRŪN AL-RAŠĪD
MINTED IN AL-MUḤAMMADIYA, 173 AH



[FIGURE 1]: Abbasid dirham of Hārūn al-Rašīd, minted in al-MuḤammadiya in 173 AH, W. (2, 82G), D. (24 mm)¹⁸

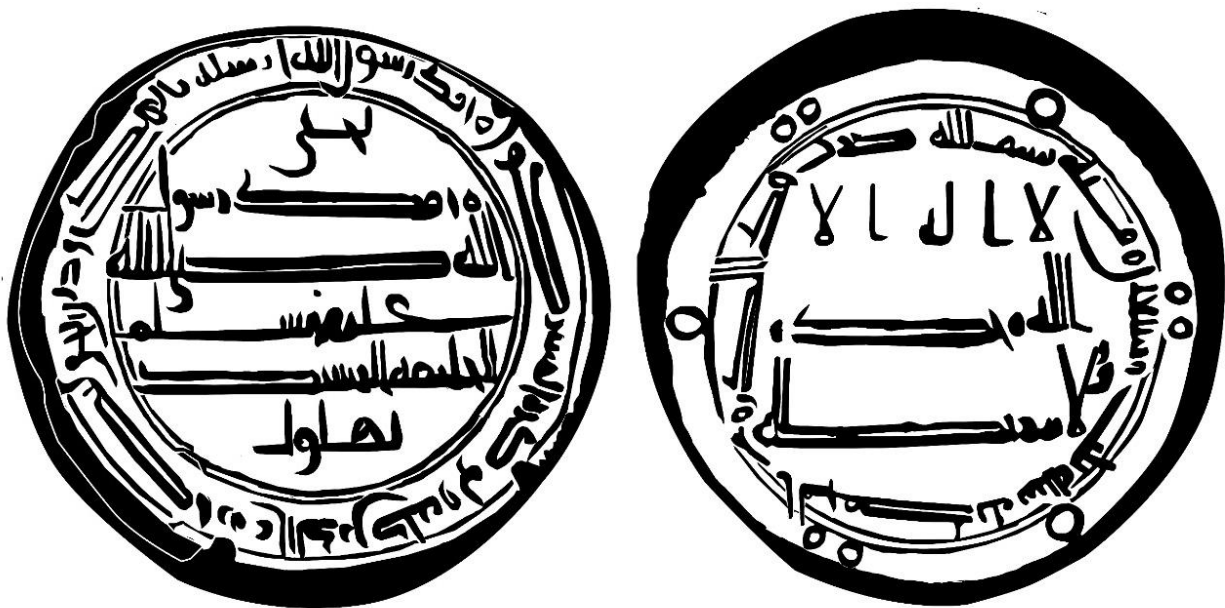


ILLUSTRATION OF THE ABOVE DIRHAM ©done by the researcher

¹⁸ A rare Abbasid dirham in the name of Hārūn al-Rašīd, minted in al-MuḤammadiya in 173 AH, W. (2,83 G), D.(24 mm). LANE POOLE 1875: vol.1, 76 [193], MILES 1938: 55[73A]; AL-QAZZĀZ 1965: 195[6/7945]; AL-^cUŠ 1984: 388 [1643], LOWICK 1996:198[1683]; AL-ZAYŪD 2010: 446[466]; ZENO: Nr^o. 83932.

IV. ANALYTICAL STUDY

Obverse Inscriptions

Field: It is clear from the inscriptions of this dirham that šahāda was inscribed in the obverse field: « لا إله إلا الله وحده لا شريك له » « There is no god has the right to be worshipped but Allah alone, Who has no partner ». Šahāda represents the first pillar of the Islamic faith, without which one's Islam is not correct and upright. It is inscribed in the field of the obverse due to its importance, for it is the basis of the belief of Muslims, in general.

The first one inscribed Šahāda as above is the Caliph Abd al-Malik b. Marwan, on a pure Islamic style coinage in 77 AH/ 696 AD. It was inscribed in three consecutive and parallel lines in the inscriptions of the field of the obverse of dinars and dirhams¹⁹.

Margin: The inscriptions of the obverse margin begin with a part of the basmalla as follows « بسم الله » «In the name of Allah». The basmalla is followed by «ضرب هذا الدرهم» «this dirham was minted». Then, the name of the mint was inscribed as follows: «بالمحمديّة» «in al-Muḥammadiya» followed by the date of minting «سنة ثلث وسبعين ومئة» «173».

The City of al-Muḥammadiya «The Mint»:

It was known in the past as the city of al-Rayy. It was known in ancient Greece as 'Rhages'²⁰. It was located at the northeastern tip of Jibal province²¹, now found south of Tehran²². The Abbasid Caliph Muḥammad al-Mahdī b. al-Mansur 158-169AH/775-785 AD built the city of al-Rayy during his father's caliphate, surrounded it with a trench, and built a mosque. He completed its landmarks in 158 AH/774AD and named it al-Muḥammadiya after him²³. The city of al-Rayy was renamed the city of al-Muḥammadiya during the era of the Abbasid Caliphate²⁴. It became the largest mint in Jibal region of Iran. Al-Rayy appeared on the coins from 21 AH to 148 AH. Then, its name was changed to al-Muḥammadiya. Al-Muḥammadiya mint was engraved on the coinage from 148 AH to 407 AH, except for some coins that were minted in 148 AH, 168 AH, and 179 AH and appeared with the name al-Rayy. Then, the name of al-Rayy was rewritten on the coins from 407 AH to 733 AH, except for 429 AH, when the name of al-

¹⁹ MANSOUR 2008: 473-474; ABŪ ZAID 2008: vol.18, 109.

²⁰ LESTRING 1954: 249.

²¹ Jibal region: It was a vast region in the northeast of Iraq. It included the region northwest of Iran. It was known as Kurdistan for the first time in the 6th H./ 12th G. century. This region includes Hamadan, Isfahan, Dinour, Qom, and al-Rayy. The name of Jibal was changed after the middle of the 5th H./11 G. century and became known as Iraq Al-Ajam to distinguish it from Iraq or Iraq al-Arab. Al-Maqdisī said about it: «به الري الجلييلة وهمذان، والكورة النفيسة إصهان» Jibal was divided between Arabs and Persians before Islam. For more information, see: AL- MAQDISI 1991: vol.2, 384; OTHMAN 2010: 27-28; AL-HĀDRIBIK N.D: 36, LESTRING 1954: 249.

²² SHAMMA 1995: 293.

²³ AL-QAZZĀZ 1965:169; SHAMMA 1995: 293; RAAFAT 2015: 23.

²⁴ BAQIR 1976: vol.7, 169; ALBUM 2011: 63.

Muḥammadiya was inscribed on the coins minted in 429 AH²⁵. Coins of all types were minted in it, including the dirham under study, as there is a type of dinar known as al-Muḥammadiya's dinars. Those dinars were minted by Ja'far b. Yaḥyā al-Barmakī during the reign of Hārūn al-Rašīd and named al-Muḥammadiya's dinars attributed to this city²⁶. The city of al-Rayy « al-Muḥammadiya » was the first Islamic mint for which a detailed study was prepared under the title «The Numismatic History of Rayy » by George C. Miles in 1938²⁷.

Reverse Inscriptions:

Field: In the field of the reverse of that dirham risāla «محمد رسول الله» «Muḥammad is the Messenger of Allah» was inscribed. This phrase refers to the acknowledgment of the message of Prophet Muḥammad. The Abbasids inscribed risāla to remind people of their kinship with the Messenger of Allah. Also, the inscription of risāla represents a message to the *al-ʿIwyyin al-šyʿah* (Alawites) who involved Abbasids in their struggle against the Umayyads that the caliphate passed to their cousins, the family of the Messenger of Allah, so they should accept and acknowledge the rule of the Abbasids²⁸. Then, this was followed by the phrase «صلى الله عليه وسلم» «Prayers and Blessings of Allah be upon him».

This phrase appeared for the first time on Islamic coins during the era of the Abbasid Caliph Muḥammad al-Mahdī in 159 AH/775 AD²⁹. On the fifth line of the reverse field, the name of Hārūn al-Rašīd was inscribed as follows: «الخليفة الرشيد» «Caliph al-Rashīd ».

Yaḥyā's name was inscribed at the top of the reverse field «يحيى» «Yaḥyā», and at the bottom of the field of the reverse was the name «بهلول» «Bahlūl», which is the focus of discussion in the following parts of this study.

Margin: In the margin of the reverse, the Qur'anic quote from Surat al-Tawbah «v. 33» or Surat al-Šaff «v. 9» was inscribed:

«محمد رسول الله أرسله بالهدى ودين الحق ليظهره على الدين كله ولو كره المشركون»

«Muḥammad is the messenger of Allah. He who sent His Messenger with guidance and the religion of truth to manifest it over all religion, although those who associate others with Allah dislike it. ».

This quotation represents the second pillar of the Islamic faith, indicating that Prophet Muḥammad, «Prayers and Blessings of Allah be upon him», is the last of the prophets and messengers and the beholder of the true religion that Allah manifests over all other religions and beliefs, even if the unbelievers and haters dislike his message³⁰.

²⁵ BAQIR 1976: vol.7, 169.

²⁶ ZWAIN 2016: vol.3, 158.

²⁷ ZAMBAUR 1968: 129.

²⁸ MANSOUR 2008: 68.

²⁹ SHAMMA 1995: 293; MANSOUR 2008: 68.

³⁰ MANSOUR 2008: 62-63.

V. IDENTIFICATION OF «يحيى» «YAḤYĀ» AND «بهلول» (BAHLŪL), WHOSE NAMES WERE REGISTERED ON THE REVERSE FIELD INSCRIPTIONS

Firstly: Identification of the Name «يحيى» «Yaḥyā» Registered Above the Reverse Field Inscriptions:

The name Yaḥyā was registered above the reverse field inscriptions, as previously mentioned. So, who is Yaḥyā, who was mentioned here? Before we start identifying the personality of Yaḥyā, whose name is inscribed on the dirham... understudy, we must first point out that all types of coinage witnessed an important development under Caliph Hārūn al-Rašīd, where rulers of provinces and states also registered their names on the coins³¹. Accordingly, the names of governors appeared on gold, silver, and copper coins³². al-Maqrizī mentioned that Caliph al-Rašīd was the first to stop personally supervising the minting of coins, entitling the governors of the provinces and the rulers to undertake this task³³, contrary to what was prevalent, as the caliphs themselves checked the minting process before Caliph al-Rašīd³⁴. In this regard, al-Maqrizī says:

« وهارون الرشيد أول خليفة ترفع عن مباشرة العيار بنفسه، وكان الخلفاء من قبله يتولون النظر في عيار الدراهم والدنانير بأنفسهم...»³⁵.

It is worth noting that there were many important personalities known by the name «Yaḥyā» during the reign of Hārūn al-Rašīd. Abū al-Faraḡ al-^ʿuṣ mentioned three of them, but there was a mistake by Abū al-Faraḡ al-^ʿuṣ, when he mentioned Yahyā b. Ḥalīd al-Barmakī, Yahyā b. Dāwūd b. Mamdūd and Yahyā b. Sa'īd al-Harashī. It was found that Yaḥyā b. Dāwūd b. Mamdūd and Yaḥyā b. Sa'īd al-Ḥrṣy is the same person, while Abū al-Faraḡ al-^ʿuṣ referred to them as two different persons, so two of them will be mentioned, not three, as Abū al-Faraḡ al-^ʿuṣ said, namely:

³¹ MANSOUR 2004:192.

³² For example, Ali's name was inscribed on dinars in 170 AH and 171 AH. He was Ali b. Suleiman, the governor of Egypt in 169-171 AH. Musa's name appeared on dinars in 171 and 172 AH. He was Musa b. Issa b. Muhammad, the governor of Egypt in 171-172 AH/ 787-788 AD. Dāwūd's name on dinars in 174 AH, 175 AH. He was Dāwūd b. Yazyd bin Ḥātim al-Mahlby 174-175 AH/790-791 A.D. The same applies to the dirhams, where the rulers of the provinces inscribed their names on the dirhams multiplied in their states, such as Asad b. Yazid b. Mazyad, the governor of Armenia and Mosul, whose name appeared on the dirhams in 185 AH and 186 AH and on the Aran dirhams from 183 A.H to 186 AH. Dāwūd's name appeared on the dirhams. He was Dāwūd bin Ḥātim al-Mahlby, the governor of Ifriqiya and Sindh and other rulers who registered their names on coinage during the reign of al-Rašīd. See MANSOUR 2004: vol.1, 192, 203; AL-ZAYŪD 2010:163, 164,170,185,192,202.

³³ MANSOUR 2004: vol.1, 192.

³⁴ AL-QAZZĀZ 1965:167; AL-MAQRIZĪ 1998 :165.

³⁵ AL-MAQRIZĪ 1998:165.

- **Yaḥyā b. Ḥalīd al-Barmakī:** He was the governor of Azerbaijan 158-161 AH/ 774-777 AD. Then, he became the tutor of Caliph Hārūn al-Rašīd in 161AH/777A.D. After that, he became in charge of the Correspondence Office «Diwan al-Rasael» in 163AH/ 779AD, then assumed the position of Al-Rašīd's vizier³⁶.
- **Yaḥyā b. Sa'īd al-Ḥrṣy:** He was the governor of Tabaristan, Royan, and Gorgan in 166AH/782AD³⁷, then Armenia in 179AH/795 AD³⁸. After that, he ruled Mosul in 180-182AH/ 796-798 AD³⁹, then Jībal in 184-189AH/800-804 AD⁴⁰.

Although many persons were called Yaḥyā during Hārūn al-Rašīd's rule who assumed important positions, Abū al-Faraġ al-^cuṣ did not mention. For example, Yaḥyā b. Sulaym was a scribe during the reign of Hārūn al-Rašīd ⁴¹. Yaḥyā b. Aban's name appeared on fils dated 181 AH, but the history books did not refer to his job, and we did not find a governor in the name of Yaḥyā b. Aban, so it is most likely that he was the mint supervisor. The same is true for Yaḥyā b. Qumous, whose name appeared on fils minted in Ramla in 190 AH⁴². However, the history books did not refer to his job, and we did not find a governor in this name during Hārūn al-Rašīd's rule, so most likely, he was in charge of the mint at that time, along with other people named Yaḥyā during Hārūn al-Rašīd's reign⁴³.

When George C. Miles and Abū al-Faraġ al-^cuṣ published this dirham, they said that « Yaḥyā » referred to Yaḥyā b. Ḥalīd al-Barmakī, the vizier of Caliph Hārūn al-Rašīd ⁴⁴. Abū al-Faraġ al-^cuṣ mentioned that he was in favor of considering Yaḥyā to be Yaḥyā al-Barmakī, as the honorary governor, besides being the vizier of Caliph Hārūn al-Rašīd ⁴⁵. Still, Abū al-Faraġ al-^cuṣ didn't present any scientific justifications confirming his conclusion. He only mentioned that Yaḥyā here was Yaḥyā al-Barmakī because of the powers granted to him by Hārūn al-Rašīd that allowed him to inscribe his name on the coins⁴⁶. According to another researcher, Yaḥyā here referred to Abu Salih Yaḥyā b. Sa'īd al-Ḥrṣy ⁴⁷, but the researcher did not also provide any evidence or any reasons to support his statement. In the following parts of this study, we try to add a new vision by presenting historical sources and recent studies to verify Yaḥyā's name.

³⁶ ZAMBAUR 1980: 13; AL-^cUṢ 1984: vol.1, 347, 388.

³⁷ AL-ṬABARĪ 1966: vol.8, 163; AL-'AṬĪR 1987: vol.5, 254.

³⁸ ZAMBAUR 1980: 273; AL-^cUṢ 1984: vol.1, 347.

³⁹ ĪBN AL-'AṬĪR 1987: vol.5, 311; AL'AZDY 2007: vol.1, 517; MISKAWEYA D.T: vol.3, 222.

⁴⁰ AL-ṬABARĪ 1966: vol.8, 272; ĪBN AL-'AṬĪR 1987: vol.5, 321; ĪBN ḤĀLDUN 2000: vol.3, 286.

⁴¹ ĪBN AL-ḤĀYĀT 1995: 456; AL-ZAYOUD 2010: 41-42.

⁴² AL-ZAYOUD 2010 :199.

⁴³ Among the personalities with the name Yaḥyā during the reign of Hārūn al-Rašīd, we do not have enough space to mention them, e.g., Yaḥyā b. Sāad al-Saadī, Yaḥyā b. Zākaria b. Abi Zāida, Yaḥyā b. Al-Yāman, and Yaḥyā b. Bishr b. Hājwan Al-Hārithi, Yaḥyā Al-Hārithi was one of the governors of Kūfa in the era of Al-Rašīd. See: ĪBN AL-ḤĀYĀT 1995: 295, 302, 304,306.

⁴⁴ MILES 1938: 55; AL-^cUṢ 1984: vol.1, 388.

⁴⁵ It was customary in the Abbasid era for the governor to stay in Baghdad and send another person to act on his behalf. Most of these governors were from the Abbasid dynasty. See: AL-^cUṢ 1984: vol.1, 388.

⁴⁶ AL-^cUṢ 1972: 97.

⁴⁷ AL-ZAYOUD 2010: 182.

It is most likely that Yaḥyā, whose name is inscribed on the dirham understudy, is not Yaḥyā al-Barmakī, as Abū al-Faraġ al-^ċuš and others said, for several reasons mentioned below:

The First Reason: We did not find any explicit or general indication in historical sources or modern references confirming that Yaḥyā al-Barmakī inscribed his name on coins. In contrast, historical sources mentioned that Ğaʿfar and al-Faḍl, the sons of Yaḥyā al-Barmakī minted coins with their names⁴⁸. al-Maqrizī mentioned that when Hārūn al-Rašīd granted Ğaʿfar b. Yaḥyā the right to mint coins and supervise the minting process, Ğaʿfar b. Yaḥyā inscribed his name on dinars and dirhams in madīnat al-salām and al-Muḥammadiya. Al-Maqrizī said:

« فلما صيرهارون الرشيد السكك إلي جعفر بن يحيى البرمكي
كتب اسمه بمدينة السلام وبالمحمدية من الري على الدنانير والدرهم... »⁴⁹.

It is well known that the direct supervision of coinage, especially dinars, was for the caliph alone⁵⁰. The Caliph al-Rašīd was the first to stop personally supervising the coinage. Therefore, Ğaʿfar b. Yaḥyā al-Barmakī was the first to have the honor of supervising the minting of coins on behalf of the caliph, according to al-Maqrizī:

« وهارون الرشيد أول خليفة ترفع عن مباشرة العيار بنفسه، وكان الخلفاء من قبله يتولون النظر في عيار الدرهم والدنانير بأنفسهم، وكان هذا
مما نوه باسم جعفر بن يحيى البرمكي إذ هو شئ لم يتشرف به أحد قبله.»

So, al-Rašīd ordered that the name of Ğaʿfar b. Yaḥyā al-Barmakī be written on dinars and dirhams in madīnat al-salām and in al-Muḥammadiya, as Ğaʿfar b. Yaḥyā al-Barmakī was a close friend of the Caliph Hārūn al-Rašīd more than anyone else⁵¹, which enabled him to obtain all these privileges, including minting the coins in his name and supervising the minting process, which was one of the most important tasks of the Caliph. al-Ġihšyārī spoke about the friendship of al-Rašīd and Ğaʿfar, as follows:

«وغلِب جعفر على الرشيد غلبة شديدة حتى صار لا يُقدم عليه أحداً، وأنس به كل الأنس، وأنزله بالخلد، بالقرب من قصره»⁵².

Thus, it is clear that Ğaʿfar b. Yaḥyā al-Barmakī was the first to have the honor of supervising the minting of coins on behalf of the caliph, according to al-Maqrizī.

Based on the aforementioned, it is more likely that Ğaʿfar was the first Barmakid vizier who registered his name on the coins during the reign of Harun al-Rashid and not his father, Yaḥyā al-Barmakī.

The same is true for al-Faḍl b. Yaḥyā al-Barmakī, who inscribed his name on coins. al-Maqrizī also mentioned that when the Caliph al-Amin b. Hārūn al-Rašīd, charged al-Abbās b.

⁴⁸ For examples of coins with the name of Ğaʿfar and al-Faḍl, sons of Yaḥyā al-Barmakī, see: MILES 1938: 67-81[80E, 81C, 82A, 83A, 83D, 83C, 83B, 84, 84c]; LOWICK 1996:174-192 [1292, 1294,1302,1308]; AL-^ċUŠ 1984: vol.1, 378 & beyond[1614, 1632, 1663,1673, 1705, 1710, 1736, 1738]; KAZAN 1983: 221-227 [88, 90, 92, 93, 94, 98, 100, 115, 120]; AL-ZAYOUD 2010: 295 & beyond [24, 27, 30, 33, 36, 39, 43, 46, 48].

⁴⁹ AL-MAQRIZĪ 1998:165.

⁵⁰ MANSOUR 2004:193

⁵¹ AL-MAQRIZĪ 1998:165; AL-DOURY1997: 126.

⁵² AL-ĠIHŠYĀRĪ 1938 :189.

al-Faḍl b. al-Rabīe with the minting process, he inscribed at the top of dinars and dirhams the phrase «ربي الله» «My Lord is Allah» and at the bottom «العباس بن الفضل» «Al-Abbās b. al-Faḍl»:

« حتى كان أيام الأمين محمد بن هارون الرشيد، فصير دور الضرب إلي العباس بن الفضل بن الربيع، فنقش في السكة بأعلي السطر (ربي الله) ومن أسفلها (العباس بن الفضل) »⁵³

We did not find any reference by al-Maqrizī or other historians that Yahyā al-Barmakī minted coins and registered his name on them. If he exercised this right and registered his name on the coins, historical sources and modern references would mention, as they did with his two sons Ḡaʿfar and Al-Abbās b. al-Faḍl.

The Second Reason: al-Ṭabarī and al-Ġihšyārī mentioned in the events of 170 AH /786 AD that al-Rašīd appointed Yaḥyā b. Ḥalīd as vizier and told him:

« قد قلدتك أمر الرعية وأخرجته من عنقي إليك، فاحكم في ذلك بما ترى من الصواب، واستعمل من رأيت، وامض الأمور على ما ترى »⁵⁴.

ībn Ḥaldun mentioned in this regard:

« فلما ولي الرشيد إستوزريحي وفوض إليه أمور ملكه... »⁵⁵.

According to al-Ṭabarī, al-Ġihšyārī, and ībn Ḥaldun's words, the Caliph Hārūn al-Rašīd delegated Yahyā al-Barmakī in all matters related to his affairs. The Caliph also delegated him to appoint whoever he deemed appropriate from the judges and governors of the provinces and states, as well as the mint supervisors, their assistants, and others. Yahyā al-Barmakī was in charge of all the matters to the extent that Caliph Hārūn al-Rašīd gave him his own seal and then the seal of the Caliphate that Yahyā al-Barmakī became the most influential person in the state affairs⁵⁶. al-Rašīd assigned Yaḥyā b. Ḥalīd with the subject's affairs to rule fairly and to eliminate injustice and oppression. Al Rashīd was aware of the magnitude of the responsibility and believed that he might deviate from the right path if he undertook it alone. He, therefore, engaged Yaḥyā with this responsibility to govern with justice and equity, sharing this responsibility with him, as he feared that he might become confused and forget the affairs of his subjects, causing the wrath of God. Hārūn al-Rašīd's action is considered the first step towards task delegation so that the Caliph would not be unilaterally in charge of all matters of the state⁵⁷.

Thus, and in view of his preoccupation with the affairs of the state, Yahyā al-Barmakī might not be interested in registering his name on the coins. Possibly, he gave up this right and assigned it to the governors of the provinces, their assistants, and the mint supervisors, that right which, if he had wished to have, the governors of the provinces would do it at once, given his high position in the state at that time, but he might refuse to exercise the right of minting coins in his name.

⁵³ AL-MAQRIZĪ 1998:166.

⁵⁴ AL-ĠIHŠYĀRĪ 1938: 177; AL-ṬABARĪ 1966: vol.8, 233; AL-DOURY 1997:106; AL-WAKEEL 1998:194.

⁵⁵ ĪBN ḤALDUN 2000: vol.3, 280; ĪBN AL OMRANI 1999: 75.

⁵⁶ HASSAN 1996: vol. 2, 212.

⁵⁷ AL-WAKEEL 1998: 195.

Moreover, Yahyā al-Barmakī was an ascetic vizier in worldly matters and might not be interested in registering his name on dinars and dirhams, confirming his asceticism, as reported by al-ʿAsmaʿī when he said:

« سمعت يحيى يقول: الدنيا دول، والمال عارية، ولنا بمن قبلنا أسوة، وفينا لمن بعدنا عبرة»⁵⁸.

Also, according to Ibn Kaṭīr, Yahyā al-Barmakī used to tell his sons:

« إذا أقيمت الدنيا فأنفقوا منها فإنها لا تبقى، وإذا أدبرت فأنفقوا منها فإنها لا تبقى»⁵⁹.

As Ibn Kaṭīr said about Yahyā al-Barmakī:

« كان إذا سأله سائل في الطريق وهو راكب أقل ما يأمره بمائتي درهم»⁶⁰.

The Third Reason: If we presume that according to Abū al-Farağ al-^cuṣ and others, that Yahyā whose name was inscribed on the dirham understudy, is Yahyā al-Barmakī, even if he is an honorary governor besides being a vizier as mentioned by Abū al-Farağ al-^cuṣ⁶¹, then why did his name appeared on this dirham minted in 173 AH and did not appear after that on the coins minted during al-Rashid's rule? Yahyā al-Barmakī assumed the vizier's position in the first year of Al-Rashid's rule and for seventeen years. Inscribing his name on this dirham then stopped to inscribe his name on the coins after 173 AH, which was uncommon for viziers but more so for governors and their subordinates. The mint of this dirham was al-Muḥammadiya. So, why the name of Yahyā al-Barmakī appeared only on al-Muḥammadiya dirham? This is a matter uncommon for viziers as well. If the intended person is Yahyā al-Barmakī, as some believed, his name would appear on all or most coins minted during his vizierial tenure. Also, it would have been better for his name to appear on the coins minted in the metropolis, the center of government and the caliphate, Baghdad, and not on the coins of only a city or a state affiliated to the Abbasid Caliphate.

The Fourth Reason: If we presume that Yahyā al-Barmakī registered his name on the coins and given his high position in the Abbasid Caliphate, would it not be better for him to register his name on the gold coins «dinars», the most widespread and the highest in value, and not on silver coins «dirhams» only? However, as far as I know, no gold coins with the name of Yahyā al-Barmakī have been revealed yet

On the other hand, it is more likely that Yahyā, whose name was inscribed on this dirham, refers to Yahyā b. Saʿīd al-Ḥrṣy, who was the governor of Armenia in 179 AH/795 AD⁶², then the governor of Mosul in 180AH/796AD⁶³, and after that, the governor of Jībal in 184-189 AH/800-804 AD⁶⁴. Many reasons made us suggest that Yahyā, whose name is inscribed on the dirham understudy, is Yahyā b. Saʿīd al-Ḥrṣy as follows:

⁵⁸ AL-ĠIḤŠYĀRĪ 1938 :203; AL-ZAHABĪ 1982: vol.9, 88; ĪBN ḤALLĪKĀN 1977: vol.6, 221.

⁵⁹ ĪBN ḤALLĪKĀN 1977: vol.6, 226; AL-WAKEEL 1998: 231; ĪBN KAṬĪR 2004: vol.2, 1558.

⁶⁰ ĪBN KAṬĪR 2004: vol.2, 1558.

⁶¹ AL-^cUṢ 1984: vol.1, 388.

⁶² ZAMBAUR 1980: 273, AL-^cUṢ 1984: vol.1, 347.

⁶³ ĪBN AL-ʿAṬĪR 1987: vol.5, 311; ALʿAZDY 2007: vol.1, 517; MISKAWEYA D.T: vol.3, 222.

⁶⁴AL-ṬABARĪ 1966: vol.8, 272; ĪBN AL-ʿAṬĪR 1987: vol.5, 321; ĪBN ḤĀLDUN 2000: vol.3, 286.

The First Reason: According to Zambaur, Yaḥyā b. Sa‘īd al-Ḥrṣy was the governor of al-Rayy «al-Muḥammadiya», as he did not refer to any authority that Yaḥyā al-Barmakī assumed in this city⁶⁵. If Yaḥyā al-Barmakī assumed al-Rayy as the honorary governor, as mentioned by Abū al-Faraġ al-‘uṣ, Zambaur would indicate that.

The Second Reason: Zambaur mentioned that Yaḥyā al-Ḥrṣy’s mandate for al-Muḥammadiya «al-Rayy» was in 184-189 AH/800-804A.D. However, Abū al-Faraġ al-‘uṣ mentioned that the period of Yaḥyā al-Ḥarashī’s rule of al-Muḥammadiya «al-Rayy» during the years 184-189 AH/800-804AD was inappropriate⁶⁶. Therefore, perhaps Yaḥyā al-Ḥrṣy was the governor of al-Muḥammadiya «al-Rayy» during the same period in which Yaḥyā’s name appeared on al-Muḥammadiya dirhams, where Yaḥyā’s name appeared on dirham minted in al-Muḥammadiya, dated in 172 AH [FIGURE 2] and again on the other dirham minted in al-Muḥammadiya as well, dated in 173 AH [FIGURE 1]⁶⁷. Still, historians did not refer to that authority. So, al-Muḥammadiya dirhams reflect the true reality. Naturally, the name of the ruler is registered on the coins during his tenure and not after.

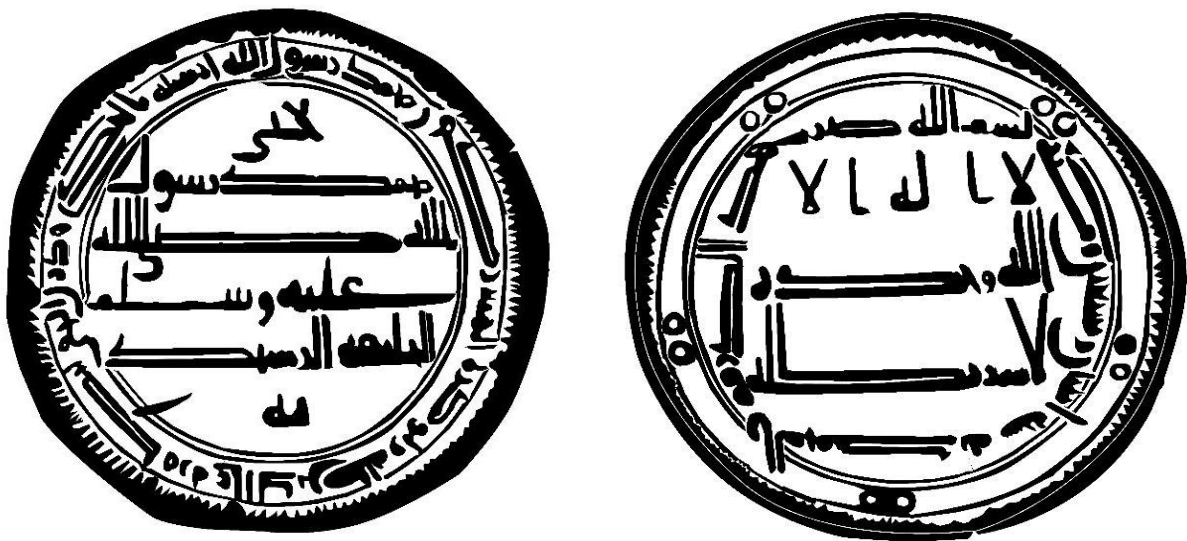
⁶⁵ ZAMBAUR 1980: 70

⁶⁶ AL-‘UṢ 1983: vol.1, 347.

⁶⁷ Such as the coins with the name Yaḥyā, minted in al-Muḥammadiya in 172 AH and in 173 AH. See: MILES 1938: 55 [72E, 73A]; LOWICK 1996: 198, [1676, 1683]; AL-‘UṢ 1984: vol.1, 388-389 [1642,1643]; ROSTOM 2002: 124,127; AL-ZAYOUD 2010:182 [460-461, 466].



[FIGURE 2]: Abbasid dirham of Hārūn al-Rašīd, minted in al-Muḥammadiya in 172 AH, W. (3,1G), D. (24,5 mm)⁶⁸



©Done by the researcher

⁶⁸AL-QAZZĀZ 1965:195[4/7945], ABŪ AL-FARAĠ AL-ʿUŠ 1984: 388 [1642], LOWICK 1996:198 [1676], AL-ZAYOUD 2010 :446 [466], ZENO Nr°. 249984.

NEW LIGHTS ON A RARE ABBASID DIRHAM IN THE NAME OF THE CALIPH HĀRŪN AL-RAŠĪD
MINTED IN AL-MUḤAMMADĪYA, 173 AH

According to the previous suggestion, Ya ḥyā al-Ḥrṣy was the governor of al-Muḥammadiya «al-Rayy» in the same period in which Yaḥyā's name appeared on al-Muḥammadiya dirhams in (172-173AH). Based on the coinage, historical sources, and modern references, the periods of some governors' rule of al-Rayy that Zambaur mentioned can be modified, specifically the period of Saʿd mawli al-Mahdi's rule.

Zambaur mentioned that the mandate of Saʿd for al-Rayy was between 166 to 176 AH⁶⁹. According to Zambaur, the dirham under study was in the period of Saʿd's rule of al-Muḥammadiya, although this study gives another suggestion depending on the following:

- The historians mentioned that Saʿd was the governor of al-Rayy in 166 AH⁷⁰, without clarifying if he continued as a governor of al-Rayy after 166 AH⁷¹.
- Miles published a dirham with the name Saʿd, dated 168 AH⁷², meaning that Saʿd continued as al-Rayy governor until 168 AH.
- After 168 AH, there is no indication in historical sources or modern references confirming that Saʿd continued as a governor of al-Muḥammadiya «al-Rayy».
- No coin with the name of Saʿd after 168 AH, minted in al-Muḥammadiya – as far as I know- has been found.

These reasons prompted the researcher to reconsider the sequence of the governors of al-Rayy, prepared by Zambaur, to be as follows:

Saʿd mawli al-Mahdi (according to Miles's dirham)	166 -168 AH
.....?..... (Perhaps Saʿd continued as a governor of al-Rayy)	169–171 AH
Ya ḥyā al-Ḥrṣy (According to our suggestion)	172-173 AH
.....?.....	174-176 AH

[TABLE 1]: done by the researcher

⁶⁹ ZAMBAUR 1968: 70.

⁷⁰ AL-ṬABARĪ 1966: vol.8, 163; ĪBN AL-ĠWZĪ 1992: vol.8, 286.

⁷¹ MILES 1938: 48.

⁷² MILES 1938: 47 [68E].

The Third Reason: al-Ṭabarī and others, when discussing the events of 184 AH, mentioned the following:

«... وولي داود بن يزيد بن حاتم المهلبى السند، ويحيى الحرشي الجبل»⁷³

According to what the historians mentioned above, Yaḥyā al-Ḥrṣy was the ruler of Jībal province in 184 AH/ 800 AD, and not only al-Muḥammadiya, which at that time was the capital of Jībal⁷⁴. Research and study revealed that no coin minted in al-Muḥammadiya in 184 AH, and thereafter, with the name «Yaḥyā»⁷⁵ had been found, but many names appeared on the coins of al-Muḥammadiya in 184 AH. For example, Dāwūd 's name «داود», referring to Dāwūd b. Yazyd bin Ḥātīm al-Mahlby appeared on dirham dated 184 AH⁷⁶. Muḥammad's name «محمد» appeared on a dirham dated 184 AH. 'Ubayd's name «عبيد» appeared on a dirham dated 184 AH⁷⁷, and Alḥarīb's name «الحرِب» was inscribed as follows: «الحرِب مولى أمير المؤمنين» on the copper issued in 184 AH and 185 AH⁷⁸, confirming that Yaḥyā al-Ḥrṣy was the ruler of the entire province and not only al-Muḥammadiya, which was a part of that province. If he was the governor of al-Muḥammadiya only in 184AH/ 800A.D, his name would have appeared on the coins minted in it during that period.

The Fourth Reason: One of the researchers mentioned in his dissertation on Hārūn al-Rašīd's rule through coinage that Yaḥyā, whose name appeared on the dirham understudy, was Yaḥyā b. Sa'īd al-Ḥrṣy, and not Yaḥyā al-Barmakī⁷⁹, but he did not provide any evidence or any reason to support his statement. This is presented above with explanation, study, and analysis.

In conclusion, it is most likely that Yaḥyā b. Sa'īd al-Ḥrṣy assumed the position of governor in al- Muḥammadiya in 172-173 AH, which was the same period in which the name Yaḥyā appeared on al- Muḥammadiya dirhams. Also, he was not the governor of al- Muḥammadiya «al-Rayy» in 184 AH, as Zambaur mentioned, but he was the governor of the entire Jībal province.

All of these aforementioned reasons make us presume that Yaḥyā whose name was inscribed on the dirham understudy, is Yaḥyā b. Sa'īd al-Ḥrṣy, not Yaḥyā al-Barmakī - as far as I know- which will be evidenced or denied through future studies.

Secondly: Identification of the name «بھلول» «Bahlūl» inscribed below the reverse field inscriptions:

The name «Bahlūl» is inscribed below the reverse field of that dirham. But who was this Bahlūl whose name was inscribed on the dirham understudy? In fact, the narrations differed in identifying the person Bahlūl. We will present those narrations

⁷³ AL-ṬABARĪ 1966: vol.8, 272; ĪBN AL-'AṬĪR 1987: vol.5, 321; ĪBN ḤALDUN 2000: vol.3, 286.

⁷⁴ ZAMBAUR 1980: 70, RAAFAT 2015:24.

⁷⁶ MILES 1938:75 [85B, 85c]; AL-'UŞ 1983: vol.1, 398, [1669].

⁷⁷ MILES 1938:76[85F]; AL-ZAYOUD 2010: 174,177,181.

⁷⁸ MILES 1938:76, 77[85G]; BAQIR 1976: vol.7, 174.

⁷⁹ AL-ZAYOUD 2010: 182.

and the response to each separately to identify the truth of Bahlūl's personality, which is mentioned on the dirham understudy.

Abū al-Farağ al-^ʿuṣ mentioned in his book about the Arabic and Islamic coinage preserved in the National Museum of Qatar that this person, «Bahlūl,» is not known. Then, he inquired: Did he assume the position of assistant governor during that period? Was he a mint supervisor?⁸⁰. Reviewing historical sources and modern references revealed that the researcher did not find the name Bahlūl associated with the name of a governor or even an assistant governor during the period in which the dirham understudy was minted or even in another period of Hārūn al-Rašīd's rule.

As Muḥammad al-Ḥosinī mentioned in one of his articles, Bahlūl, whose name was inscribed on this dirham, is Bahlūl b. ^ʿAmr al-Hāšmy al-Abbāsī. He mentioned that Bahlūl was the governor of al-Muḥammadiya. He wrote in his article, «I strongly believe that Bahlūl is Bahlūl b. ^ʿAmr al-Hāšmy al-Abbāsī»⁸¹.

In order to verify this opinion, that Bahlūl, whose name was inscribed on the dirham understudy was Bahlūl b. Amr, let us first identify Bahlūl b. ^ʿAmr. He was Bahlūl b. ^ʿAmr abū Wahāb b. ^ʿAmr al-Širafī al-Kūfī. He was born in Kūfa and was known for his narrations, poetry, and anecdotes. It was said that Hārūn al-Rašīd and other caliphs summoned him to listen to his words, poetry, and stories, then he became scrupulous and known as the «fool»⁸². The word «Bahlūl» in language dictionaries refers to a person who embodies all the qualities of a fool and is also a kind and humorous person⁸³. Bahlūl was the wise fool. It was said that he once wrote on the wall of al-Rašīd's new palace with coal: ⁸⁴«قصوركم قبوركم قبوركم قصوركم» «Your palaces are your graves, and your graves are your palaces». It was said that he was a Shiite, as once he was told: «بل أشتم»⁸⁵ «أشتم فاطمة ولك درهماً» «Insult Fātima and you have a dirham», but he said:⁸⁵ «بل أشتم» «Instead, I will insult ^ʿA'īša for half a dirham». He was also once asked: «أيا أفضل أبوبكر أم علي رضي الله عنهما؟» «Who is better, Abū Bakr or ^ʿAli? May Allah be pleased with them), He said: «أما وأنا في كنده فعلي، وأما وأنا في ضبة فأبوبكر» «when I am in Kindā, Ali is better, and when I am in ḍabba, Abū Bakr is better». Kinda is in Kūfa, where the supporters of the Shiites while the members of Banū ḍabba tribe are Sunni⁸⁶. Also, it is said that he

⁸⁰ AL-^ʿUṢ 1984: vol.1, 398.

⁸¹ For this article, see the website of the Kuwait International Center for Studies and Consultations on Islamic, Byzantine, and Sasanian Coins, which is available via the following link: «Bahlūl», in <https://alhosini-money.com/showthread.php?t=4178> Accessed 10/04/2022, 9:13:19 PM.

⁸² AL-JABOURY 2003: 364; AL-ZARKALI 2006: 209; AL-BAĠDĀDĪ 2011:65; ĪBN ARABI 2017: 406.

⁸³ ĪBN MANḌŪR D.T: vol. 5, 375; IBRAHIM 2017; BAALI 2011: 28.

⁸⁴ AL-DĪMAŠQĪ 2012: 51.

⁸⁵ AL-NAYSĀBŪRĪ 1987: 144-145; AL-^ʿANDALUSĪ 2017:143.

⁸⁶ AL-QAYRĀWĀNĪ 2018: 167.

was one of the companions of Imam Ġaʿfar al-Sādiq. He feigned insanity to protect himself⁸⁷.

Going back to our dirham and to what was mentioned by al-Hosinī that Bahlūl, whose name was inscribed on this dirham, was Bahlūl b. ʿAmr. I truly disagree with his opinion, as there is no relationship between Bahlūl, whose name was inscribed on this dirham, and Bahlūl b. ʿAmr, for several reasons, which will present here below:

The first reason: Al-Hosini mentioned in his article that Bahlūl was appointed as the governor of al-Muḥammadiya by Hārūn al-Rašīd. Based on research and study, no one named Bahlūl assumed the position of al-Muḥammadiya governor during the reign of Hārūn al-Rašīd⁸⁸.

The second reason: There is no reference in the available history books that Bahlūl b. Amr assumed any administrative positions during the reign of Hārūn al-Rašīd, authorizing him to inscribe his name on the coins.

The third reason: If the researcher's assumption that Bahlūl, whose name appeared on the dirham under study, is Bahlūl b. ʿAmr al-Kūfi is right, then why did his name appear on al-Muḥammadiya dirhams and not on Kūfa dirhams? History books unanimously agree that he was born and lived in Kūfa and met Hārūn al-Rašīd in Kūfa as well⁸⁹, while no reference in the history books associating Bahlūl with al-Muḥammadiya has been found.

The fourth reason: Reviewing history books and Arab sources revealed that Caliph Hārūn al-Rašīd's first encounter with Bahlūl b. ʿAmr al-Kufi was in 188 AH/803 AD. ʿqlāa' al-maġnīn by al-Nisabwī, *al-Muntazim* by Ībn al-Ġwzī, *Al Bedaya wal-Nehaya* by Ībn Kaṭīr, and others mentioned that al-Rašīd went for a pilgrimage in 188 AH/803 AD. On his way in the outskirts of Kūfa, he saw Bahlūl on a riding stick and boys chasing him. al-Rašīd asked who that man was. They said: «بهلول المجنون» «Bahlūl al-maġnoon». al-Rašīd said that he wanted to see him. So, they brought Bahlūl to him without intimidating him. al-Rašīd talked with Bahlūl and, in the end, ordered to give him money to settle his debts, but Bahlūl refused to take money from him⁹⁰. Ironically, the year in which al-Rašīd met Bahlūl in Kūfa was the last year in which al-Rašīd performed pilgrimage 188 AH/803AD⁹¹.

⁸⁷ AL-ĠUBARĪ 2014: 54.

⁸⁸ About the governors of the city of al-Muḥammadiya «al-Rayy» during the period of the rule of Hārūn al-Rašīd, see: ZAMBAUR 1980: 70.

⁸⁹ About Bahlūl his life and upbringing, see: AL-NAYSĀBŪRĪ 1987:139-160; AL-JABOURY 2003: 364; AL-ZARKALI 2006: 209; AL-BAĠDĀDĪ 2011: 65; ĪBN ARABI 2017: 406.

⁹⁰ About the encounter between Hārūn al-Rašīd and Bahlūl b. Amr, see: AL-NAYSĀBŪRĪ 1987:139-140; ĪBN AL-ĠWZĪ 1992: vol.9, 155; ĪBN KAṬĪR 2004: vol.2, 1556.

⁹¹ AL-ṬABARĪ 1966: vol.8, 331; ĪBN AL-'AṬĪR 1987: vol.5, 337.

It is clear from the testimonies of historians that the encounter between Hārūn al-Rašīd and Bahlūl was in 188 AH and not before. So, how can Hārūn al-Rašīd's encounter with Bahlūl be in 188 AH, while the dirham under study was minted in 173 AH? There is a period of not less than fifteen years between the date our dirham was minted and the date al-Rašīd met Bahlūl. Accordingly, Bahlūl, whose name appeared on the dirham, was different from Bahlūl b. Amr al-Kūfi, known as Bahlūl al-majnoon.

Among the narrations that were told about Bahlūl, mentioned on the dirham under study, is that according to zenu.ru, Bahlūl, whose name was registered on the dirham under study, was a commander during Hārūn al-Rašīd's rule⁹². After reviewing available historical sources and modern references, there is no confirmed indication of the presence of a military commander during al-Rashid's time called Bahlūl-as far as I know, or rather, any military commander with the name Bahlūl was not found, when the name Bahlūl appeared on al-Muḥammadiya dirham.

In conclusion, it is more likely that Bahlūl, whose name was mentioned on the dirham under study, was the supervisor or the person in charge of al-Muḥammadiya mint when his name appeared on al-Muḥammadiya coins, specifically in 172-173 AH. Also, one of the researchers agrees with our opinion that Bahlūl here was the supervisor or the person in charge of al-Muḥammadiya mint⁹³. Hence, it leaves no room for doubt that Bahlūl, whose name appeared on the dirham, was not Bahlūl b. Amr al-Serāfī, known as Bahlūl al-Maḡnoon.

⁹² See the details presented by Zeno website during its show of this dirham:« ISLAMIC WORLD», in <https://www.zeno.ru/showphoto.php?> Accessed on 12/6/2022

⁹³ RAAFAT 2015: 226.

VI. CONCLUSION

- It is more likely that Yaḥyā b. Hālīd al-Barmakī didn't inscribe his name on the coins.
- The study shows that Yaḥyā al-Barmakī might not be interested in inscribing his name on the coins. It is more likely that he gave up this right, assigning it to the governors of the provinces, their assistants, and the mint supervisors.
- The study proves that Ğaʿfar b. Yaḥyā al-Barmakī was the first Barmakid vizier who inscribed his name on the coins during the reign of Hārūn al-Rašīd, and not his father, Yaḥyā al-Barmakī.
- The study suggests that Yaḥyā's name inscribed on this dirham refers to Yaḥyā b. Sʿīd al-Ḥrṣy not Yaḥyā al-Barmakī.
- The study presumes that Yaḥyā b. Sʿīd al-Ḥrṣy assumed the position of governor in al-Muḥammadiya in 172-173 AH, which was the same period in which the name Yaḥyā appeared on al-Muḥammadiya dirhams, including the dirham under study.
- Based on the coins, historical sources, and modern references, the study suggests that the periods of some governors' rule of al-Muḥammadiya «al-Rayy» that Zambaur mentioned can be modified to be as shown in [TAB 1].
- The study suggests that Bahlūl, whose name was mentioned on the dirham under study, was the supervisor or the person in charge of al-Muḥammadiya mint in 172-173 AH. Therefore, Bahlūl was not meant here to be Bahlūl b. ʿAmr al-Širafī, as some researchers suggested.

BIBLIOGRAPHY

- «Abbasids, Dirham 173 AH», in: <https://www.zeno.ru/showphoto.php?photo=83932> Accessed on 01/03/2022, 10:30:44 AM.
- ABŪ ḤALĪL, SH.: *Hārūn al-Rašīd, the prince of the caliphs and the honorable of the kings of the world*, 4th (ed.), Damascus (Dār al-Fīkr) 1999.
- ABŪ ZAID, R., S.: «A Rare Indian Mughal Mhour for Emperor Jalal al-Din Akbar at the Museum of Islamic Art in Cairo», *ASJP* 18/2, 2008,107-114.
- ALBUM, S.: *Checklist of Islamic coins*, 3rd (ed.), California (Santa Rosa) 2011.
- AL-'ANDĀLUSĪ, A., A.: *'Aḥbār al-Nisā' fī al-'aqd al-farīd*, Beirut (Dār al-Kītab al-'almīya) 2017.
- IBN AL-'AṬĪR, A., A.: *al-Kamīl fī al-Tārīḥ*, MOHAMED YUSUF AL-DAQQAQ, 1st (ed.), Beirut (Dār al-Kītab al-'almīya) 1987.
- AL'AZDY, Y., M.: *The History of Mosul*, AHMED ABDULLAH MAHMOUD (ed.), 2vols, Beirut (Dar Al-Kutub Al-Ilmiyya) 2007.
- BAALI, H., R.: *Safr Ba'al Al-'azīm «Ḥafrīāt Taqafīya 'ustwriya»*, Amman (durub for Publishing and Distribution) 2011.
- «Bahlūl», in: <https://alhosini-money.com/showthread.php?t=4178> Accessed 10/04/2022, 9:13:19 PM.
- BAQIR, M., H.: «A Study of Nicknames and Titles on Islamic coinage minted in Rayy (al-Muḥammadiya)», *almaskukat magazine* 7, 1976, 165-214.
- AL-DĪMAŠQĪ, M., S.: *alrḥalah al'araqīyah ('aām 1139 h1726/ m) kšt alṣad'a wḡsl al-rān fī zyārah al'arāq wma 'walaha min al-būldān*, MĪ'AD SHARAF AL-DIN AL-KILANI(, Beirut(Dār al-Kītab al-'almīya) 2012.
- AL-DOURY, A.: *The First Abbasid era, a Study in Political, Administrative and Financial History*, Beirut (Dār Al-Tali'a for Printing and Publishing) 1997.
- AL-ḤUDARĪ B., M.: *Lectures of the History of Islamic Nations (Abbasid State)*, SHEIKH MUḤAMMAD OTHMANY(ed.), Beirut (Dār Al-'Arqam) N.D.
- AL-MAQDISĪ, SH., A.: *Aḥsan al-Taḡāsīm fī Ma'rīfat al'Aqālīm*, 3rd ed., 2vols, Cairo (Madbouly Library) 1991.
- AL-MAQRIZĪ, T., A.: *al-Nkūd al-Qadīma al'islamiya Rāsa'l al-Miqrizī*, RAMADAN AL-BADRI & AHMED MUSTAFA QASSEM (eds.), Cairo (Dār Al-Ḥadīt)1998.
- AL-NABARĀWĪ, R.: *The Islamic coins from the beginning of the 6th century till the end of the 9th century AH*, 1st ed., Cairo (maktbīt Zahraa al-Šarq) 2002.
- AL-NAYSĀBŪRĪ, Q., H.: *'qlā' -al-Mḡānīn*, OMAR AL-ASAAD(ed.), Beirut (Dār Al-Naf'aes) 1987.
- IBN AL-'MRĀNĪ, A., A.: *al'anbā' fī Tārīḥ alḥulafā'*, QASIM AL-SAMARRAI(ed.), Cairo (Dār al'afaq) 1999.
- AL-QAYRĀWĀNĪ, A., I.: *ḡām' al-Ḡwāhr fī al-Mlḥ walnawādr*, MOHAMED AL-AZZAZI(ed.), Beirut (Dār al-Kītab al-'almīya) 2018.
- AL-QAZZĀZ, W.: «Abbasid dirham in the time of Caliph Hārūn al-Rašīd », *Sumer* 21, Baghdad, 1965, 167-228.
- AL-ṬABARĪ, A., M.: *Tārīḥ al-Rusūl wl-Mulūk « Tārīḥ al-Ṭabarī»*, MOHAMED ABŪ AL-FADL IBRAHIM(ed.), 2nd ed, 11 vol., Cairo (Dār al-Ma'rīf)1966.
- HASSAN, H., I.: *The History of Political, Religious, Cultural and Social Islam (first Abbasid era)*, 14thed, vol.2, Cairo (the Egyptian Renaissance Library) 1996.
- IBRAHIM, A., A.: *Al-wakhz bl kalimat majazat sahar Al-Rabatab wa Leejam alsharea*, Beirut (The Arab Research Center) 2017.
- IBN ḤAYĀT, A., K.: *Tārīḥ Ḥalīfa b. Ḥayāt*, Beirut (Dār al-Kītab al-'almīya) 1995.
- IBN KAṬĪR, E., A.: *al-Bīdaīya wa' L- Nīhaiya*, HASSAN ABDEL-MANNAN(ed.), 2 vols, Beirut (Bayt al' Afkar al-Dawlīya) 2004.

- ĪBN ḤĀLDUN, A.: *The History of Ībn Ḥaldun «Diwan Al-Mubtada and Al-Khabar in the history of the Arabs, the Berbers and their Contemporaries with the Greatest Authority»*, Khalil shehata(ed.), 8 vols., Beirut (Dār - Elfikr)2000.
- ĪBN ḤĀLLĪKĀN, A., M.: *Wafayaat al'caeyān wa'anba' 'abnā' al-Zamān*, EHSAN ABBAS(ed.), 8 vols., Beirut (Dār - Sader)1977.
- ĪBN MANDŪR, M., A.: *Līsan Al-^crab*, ABDULLAH ALI AL-KABIR & et Al.(eds.), 55 vol, Cairo (Dār al-Ma'rif) D.T.
- AL-JAHSHIYĀRĪ, M., A.: *The Ministers and the Writers*, MUSTAFA AL-SAKA & et Al.(eds.), 1st ed, Cairo (Mustafa Al-Babi Al-Halabi and Sons Press)1938.
- ĪBN AL-ĠAWZĪ, A., A.: *Al-Muntaẓam fī Tārīḥ al -Mulūk wal'umam*, MOHAMED ABDUL-QADIR ATTA & MUSTAFA ABDUL-QADIR ATTA (eds.), Beirut (Dār al-Kītāb al-^calmīya) 1992.
- AL-ĠUBARĪ, A., O.: *Al-Muḥtār fī kašf al'asrār wahatk al'astār*, MUNTHER AL-HAYEK(ed.), Damascus (Dār safahat for publshing) 2014.
- LANE POOLE, S.: *Catalogue of Oriental Coins in the British Museum (The Coins of the Eastern Khaleefehs)* vol.1, London 1875.
- LESTRING, KE.: *Buldan al-Khilafa al-Sharqia*, translated by: BASHIR FRANCIS & CORGIS AWAD, Baghdad (the Iraqi Scientific Academy) 1954.
- MANSOUR, A., R.: *Encyclopedia of Coinage in the Islamic world*, vol.1, Cairo (Dār al-Qahira) 2004.
- MANSOUR, A., R.: *Islamic Coinage and its Importance in Studying History, Archeology and Islamic Civilization*, Cairo (Zahraa Al Sharq Library) 2008.
- MILES, G.: *The Numismatic History of Rayy*, New York (the American numismatic society) 1938.
- NICHOLAS, L.: *Early Abbasid Coinage «a Type Corpus» (132-218 AH/750-833 AD)* London (British Museum)1996.
- OTHMAN, T., A.: *Contributions of Kurdish Scholars in Building Islamic Civilization during the Seventh and Eighth Hijri Centuries (13-14 AD) «Theoretical Sciences»* Beirut (Dār al-Kītāb al-^calmīya) 2010.
- RAAFAT, R.: «Coinage of the City of al-Muḥammadīya during the First and Second Abbasid Periods 148-334 AH/765-945AD», PhD Thesis, Faculty of arts, Ain Shams University, 2015.
- ROSTOM, A., T.: «Iranian Silver Coinage in the First and Second Abbasid Periods» (132-334 AH/749-946AD) «An Artistic Archaeological Study» PhD Thesis, Faculty of Archeology, Cairo University, 2002.
- SHAMMA, S.: *The Events of the Age of al-Ma'mun as Narrated by Coinage*, Jordan (Irbid)1995.
- AL-^cUŠ, M., A.: *The Silver Treasure of Um Hujrah, preserved in the National Museum in Damascus, The silver treasure of Umm Hujrah is preserved in the National Museum in Damascus* Damascus, 1972.
- AL-^cUŠ, M., A.: *the Arabic and the Islamic Coins Preserved in the National Museum of Qatar*, vol.1, Doha, 1984.
- AL-ḌAHABĪ, SH., M.: *Sayr 'Alām al-Nūbalāa*, KAMEL AL-KHARRAT(ed.), 25vols, Beirut (Al-Resala Foundation) 1982.
- ZAMBAUR, E.: *Die Münzprägungen des Islams «Zeitlich und örtlich geordnet»*, Wiesbaden (Franz Steiner Verlag Gmbh)1968.
- ZAMBAUR, E.: *Dictionary of Genealogies and Ruling Families in Islamic History*, directed by: ZAKI MUḤAMMAD HASSAN & HASSAN AHMAD MAHMOUD, Beirut (Dār Al-Raed Al-Arabi) 1980.
- AL-ZAYOUD, H., A.: «*Asr Hārūn al-Rašīd min ḥilal al-Maskūkāt (al-Waṭ' aiq al-Rasmīya al-Mū'asra)* (170-193AH/786-809AD) (*Dīrasāt siāsīya, Eqtišādīya, Eġtimā'īya*)» PhD Thesis, University of Jordan, 2010.
- ZWAIN, A.: «*The Dinar and the Dirham in the Pre-Islamic and the Islamic era*», *Ma'word Magazin*, vol.3, Baghdad ,2016, 154-159.

2023

THE GEOMETRIC KUFIC INSCRIPTIONS ON THE LATE MAMLUK ARCHITECTURE AND ARTIFACTS: A NEW PERSPECTIVE THROUGH SOME ARTIFACTS

Waleed Ahmed Salah al-Din

Lecturer at Tourist Guidance Department, Faculty of Art - Ain Shams University, Egypt,
walid.ahmed@art.asu.edu.eg

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Salah al-Din, Waleed Ahmed (2023) "THE GEOMETRIC KUFIC INSCRIPTIONS ON THE LATE MAMLUK ARCHITECTURE AND ARTIFACTS: A NEW PERSPECTIVE THROUGH SOME ARTIFACTS," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 9.

Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/9>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in Journal of the General Union of Arab Archaeologists by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

THE GEOMETRIC KUFIC INSCRIPTIONS ON THE LATE MAMLUK ARCHITECTURE AND ARTIFACTS: A NEW PERSPECTIVE THROUGH SOME ARTIFACTS

BY

Walīd Aḥmad Ṣalāḥ al-Dīn

Lecturer at Tourist Guidance Department, Faculty of Art-Ain Shams University, Egypt

ABSTRACT

[AR] الخط الكوفي الهندسي على العمارة والتحف الفنية من العصر المملوكي الجركسي. منظور جديد من خلال بعض التحف الفنية. لقد أظهر الفنانون المسلمون براعتهم في إنتاج العديد من التحف الفنية بأشكالها وزخارفها العديدة والمميزة التي لازال الكثير منها بحاجة ماسة للدراسة والفحص. وقد أطنب فنانون العصر المملوكي في زخرفة تحفهم الفنية بالعديد من الزخارف المختلفة ومن أبرز هذه الزخارف هو الخط الكوفي الهندسي الذي لعب دوراً حيوياً وبارزاً في الفن المملوكي. ظهر الخط الكوفي الهندسي على العديد من المباني الأثرية التي ترجع إلى العصر المملوكي، ومن الملاحظ ندرة وجوده على الفنون والتحف التي ترجع إلى تلك الحقبة من الزمن، لذا فقد عمد الباحث إلى دراسة وتحليل ونشر بعض الأمثلة من التحف الفنية والتي توجد في بعض العمائر المملوكية وتحمل في ثناياها زخرفة الخط الكوفي الهندسي المربع. ولقد أظهرت الدراسة ان هناك العديد من الاختلافات والتنوع في الطرز المختلفة للخط؛ كذلك المضمون الذي تشتمل عليه النصوص الكتابية حيث أظهرت الكتابات تنوعاً واختلافاً في المضمون والطرز الفنية أكثر من الكتابات التي مثلت على العمائر الإسلامية التي ترجع إلى نفس الحقبة الزمنية. حيث اعتمد الباحث في الدراسة أيضاً على نشر تحف فنية جديدة من العصر المملوكي الجركسي بصفة خاصة وقد اتبع المنهج التحليلي من حيث المقارنة والوصف حيث تظهر الدراسة ان هناك أيضاً اختلافاً ملحوظاً في الشكل ومضمون الكتابة وطرز الأحرف الهندسية.

[EN] Muslim artisans were talented in producing art objects in various decorative forms that have needed a comprehensive study and examination. They generously decorated their artworks with different motifs, especially the Kufic script that played a vital role in the value of these artworks. The geometric Kufic script is widely shown on many buildings dated to the Mamluk period; however, it is scarcely found on the art objects of the same period. The researcher examined examples of Mamluk art objects and parts from architectural edifices with geometric Kufic inscriptions. After conducting an analysis and comparative study, the researcher found out that the style changed in arts, especially in the content and the forms of the letters. The study concludes that there are many differences in the style and contents of the inscriptions rather than those found in the architecture. This apparent change can be seen in the published and unpublished artifacts of the Mamluk era, especially the late period.

KEYWORDS: Circassian Mamluk arts, Geometric Kufic, kufic inscription, Mamluk inscriptions, Mamluk arts.

I. INTRODUCTION

The geometric Kufic has been given this name because it is formed of sentences in square shape inside square, triangular, rounded, or rectangular frames. Sometimes, this makes it so hard to read¹. Numerous examples of geometric Kufic are found in Mamluk architecture². The first example can be seen on the southern wall of the Mausoleum of al-Manṣūr Qalāwūn 683-684AH/1284-1285AD³, Bayn al-Qasrayn [FIGURE 6], in which the word «Muḥammad» is written twelve times inside a rectangular frame⁴. Those types of early examples are also shown in the Zāwiyah of Zayn al-Dīn Yūsuf beside the main mihrab⁵ and in the Mosque of al-Mu'ayyad Ṣayḥ on the flanks of the main entrance of the Mosque⁶. Another example of the same ornamented square Kufic is shown on the *mihrab* of the Ḥānqāh of al-Ġawrī⁷.

The Origins of Geometric Writings

Many theories discussed the origin of the geometric square Kufic. Luis Hauteceur and Gaston Wiet believed that this type of geometric Kufic originated from the Seljuks and was first found in the Mosque of Quṭb al-Dīn in Sindjār, dated back to 598AH/ 1201AD⁸. Samuel Flūry reported that the origin of this type of Kufic was mainly obscure; however, the Chinese arts played a vital role in the occurrence of this script.

While the Chinese arts were involved in the Iranian arts and architecture⁹, they were mostly seen in the great mosque of Mardīn in Irān¹⁰. Therefore, he believed that the Chinese influences were transferred to the arts of the Mamluks and helped form this type

¹ROGERS BEY 1881:101; ĞUM'AH 1969: 36,45-46; FLURY 1939: 1747; 'ABD AL-ḤALĪM 1991 a: 7

²The mausoleum of Qalawūn, Zawiya of Zayn al-Dīn Yūsuf 697AH/ 1298AD, the Ḥānqāh of Baybars al-Ġāšinkīr 706-709AH/1306-1309AD, the Mosque of al-Ṭanbuġā al-Mardānī 739-740AH/1339-1340AD, the Mosque of Aq Sunqur 747-748AH/1346-1347AD, the Madrasah of Sultan Ḥasan 757-764AH/1356-1362AD, the Tomb of Khawand Samrā' known as al-Turba al-Sultāniya 757-762AH/1356-1360AD, the Ḥānqāh of Sa'd al-Dīn ibn Ġurāb 803-808AH/1400-1406AD, the Madrasah of Ğamāl al-Dīn al-Ustadār 811AH/1408AD, the Mosque of al-Mu'ayyad Ṣayḥ 818-823 AH/1415-1420AD, the Bimaristān of al-Mu'ayyad 821-823AH/1418-1420AD, the Mosque of Kāfūr al-Zammām 829AH/1425AD, the Madrasah of Fayrūz al-Sāqī 830AH/1426AD, and the Mosque of Ğānībak 830AH/1426AD. For more details, see: 'Abd al-Ḥalīm 1991 b: 160-351.

³ The marble slabs are found in two groups; the first is four marble slabs encrusted in the southern marble dado of the mausoleum, each measuring 2.54 m x 1.5 m. They are housing the names of the prophet Muḥammad repeated twelve times each. The second group is four square marble slabs smaller than the others. They are 1.5 m x 87 cm each and house the name of the prophet Muḥammad PBUH repeated four times in square form. 'Abd al-Ḥalīm 1991 a: 106-108.

⁴'ABD AL-WAHHĀB 1946: 118; 'ABD AL-RĀZIQ 2009: 240.

⁵BADR 2002: 155.

⁶ROGERS BEY 1881: 101-106, PL.8; 'ABD AL-ḤALĪM 1991 a: PL.2a.

⁷ṢALĀḤ AL-DĪN 2007: PL.LII.

⁸HAUTECOEUR ET WIET 1932: 301.

⁹FLURY 1939: 1748.

¹⁰CRESWELL 1978: FIG.132.

of script¹¹. Annmarie Shimmel noted that this type of angular Kufic was seen in the Safavid architects of Isfahan writing the names of Allah, his prophet and Imām ‘Alī in the drums of the domes¹². Sami ‘Abd al-Ḥalīm emphasizes that it had originated from Irān, Mesopotamia, and Seljuk arts¹³. Thus, the first appearance was in the mosques of Irān and Irāq applied on the ornamental panels made of Terracotta and burnt bricks¹⁴.

Modern researches, such as Mamoun Sakkāl in his PhD dissertation «Square Kufic Calligraphy in Modern Art, Transmission and Transformation» discussed the writings of the authors, e.g., Ralph Pinder Wilson and Robert Hillenbrand, who published a detailed account on the minaret of Mas‘ūd III (439-509/1099-1115) stating that it carried one of the earliest extant structures where we can observe the beginnings of Square Kufic. He also stated the statements given by Tehnyat Majeed around the origins and the places of this type of scripts¹⁵. He concluded that most of the early extant examples are in the east, especially in the first quarter of the 6th H./12th G. century. Sakkāl gave a conclusive remark that other early square Kufic inscriptions also came from the east on several Ghaznavid coins, which could be easily transported, between regions, helping in the dissemination of the script from east to west¹⁶.

Numerous studies discussed the origin of geometric writing; however, recent studies declared the origins of this type of script to the Seljuks in Irān and its surroundings. A dissertation by Aḥmad Sayid Ṣāfi ‘*al-Ḥaṭṭ al-kūfi al-handasī ‘ala al-‘amā’ir al-dīniyah fī Irān mundu awāḥir ‘aṣr al-dawlah al-suljūqiyah ḥata nahāyat ‘aṣr al-dawlah al-timūriyah (al-ṣakl wa-l-maḍmūn) 485-912AH/1092-1506AD*» in 2020 supported the Iranian theory of Iran being the main center for which the square Kufic originated¹⁷.

II. LITERATURE REVIEW

Several scholars focused on studying the forms of the Kufic script. They put the essential bases for studying this issue. The study of the geometric Kufic writings was the result of the efforts of many scholars and researchers. For instance, Sāmi ‘Abd al-Ḥalīm had two important publications related to the study periods. First, «*al-Ḥaṭṭ al-Kūfi al-Handasī al-Muraba; Ḥilya Mi mārīyah bi Munša’āt al-Mamālīk fī-l-Qāhirah*», 1991¹⁸, introduced a valuable constructive meaning to the types and forms of the square Kufic script.

The second was «*Adwā’ ‘alā al-Hatt al-Kūfi al-Handasī al-Muraba’ wa nuqūsh bi ḡāmi’ al-Mu’ayyad Sayh bi-l-Qāhirah*», 1991¹⁹. Truly, he was the one who laid the

¹¹ FLURY 1939:1748.

¹² SHIMMEL 1990: 11-12.

¹³ ‘ABD AL-ḤALĪM 1991 a: 7.

¹⁴ ‘ABD AL-ḤALĪM 1991 b: 47

¹⁵ SAKKAL 2010: 39-42.

¹⁶ SAKKAL 2010: 43.

¹⁷ ṢĀFI’ 2020: 23-55, 81-202.

¹⁸ ‘ABD AL-ḤALĪM 1991 a: 1-359.

¹⁹ ‘ABD AL-ḤALĪM 1991 b: 3-93.

foundation for understanding the style of calligraphy shown in the architecture of the Mamluks²⁰. One could not also forget the article of the same author «*Mabādi' al-hāṭṭ al-Kuḥfī al-tarbīī*», 2004, that clearly discussed the origin of the square calligraphy, especially in the architectural buildings²¹. The unforgettable work of the same author in his dissertation, Sakkal: «Square Kufic Calligraphy in Modern Art» 2010, obviously discussed the origins of the square Kufic script²².

The dissertation given by 'Alā' al-Dīn 'Abd al-'Āl, entitled «*Al-Nuqūš al-Kitābiyah al-Kūfiyah alā al-umūr al-Islāmiyah fī Miṣr min Bidāyat al-'aṣr al-Ayyubī Wa Ḥata Nahāyat Al-'aṣr al-Ūtmānī*», particularly examined the development and forms of the Kufic writings on the architecture of the Ayyubids and Mamluks in Egypt. It implies a brief study of the development of the geometric types of the Kufic script²³.

III. OBJECTIVES OF THE STUDY

The major goal of this research paper is to determine whether there have been any changes and developments in the formations and style of geometric Kufic writings on the late Mamluks' arts and architecture. In this paper, I adopted both the descriptive and analytic approaches for published and unpublished artistic and architectural artifacts with geometric Kufic writings. The analytical study included an alphabetic analysis of the letters found on the artifacts and a comparison of those from the early Bahary and late Mamluk periods to highlight any changes.

Additionally, I attempted to clarify that the geometric Kufic texts have evolved in terms of structure, content, and style, focusing particularly on the late-Mamluk objects and architecture.

IV. THE DESCRIPTIVE STUDY

[FIGURES 1A&B]

Square panel with colored marble inlay around the central square-Kufic inscription

Date: Mamluk 8th - 9th H/14th -15th G century.

Place of Preservation: Nāṣir Khalili collection–London²⁴.

Inventory N^o: MXD 100.

Measurements: 57 x 57cm.

Technique: Incrustation- blue-red, black, and white marble incrustation.

Status of Publication: Unpublished.

²⁰ 'ABD AL-ḤALĪM 1991 a: 1-359.

²¹ SAKKĀL 2004: 4-12.

²² SAKKAL 2010: 1-45.

²³ ABD AL-'ĀL 2010: 25-28, 986-996, 998.

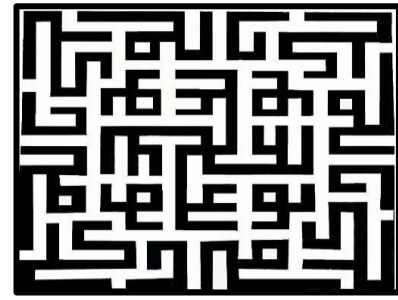
²⁴ «Rectangular panel with coloured marble inlay around the central square-Kufic inscription MXD 100», in: <https://www.khalilicollections.org/collections/islamic-art/rectangular-panel-with-coloured-marble-inlay-around-central-square-kufic-inscription-mxd-100/> Accessed on 22/04/2022



[FIGURE 1A]: «Rectangular panel with colored marble inlay around the central

«Square-Kufic inscription MXD 100», IN: <https://www.khalilicollections.org/collections/islamic-art/rectangular-panel-with-coloured-marble-inlay-around-central-square-Kufic-inscription-mxd-100/>

Accessed on 22/04/2022



[FIGURE 1B]: A drawing of the previous panel done by the researcher

Description: It is a square marble panel encrusted with colored marble inlay. The panel has a delicate frame with incrustated pieces of marble inlay, forming geometric compartments based on intersecting lozenges incrustated in white, blue, orange, gray, and black marble inlay. The frame encloses another square frame. The central frame encloses another small border encrusted with gray incrustation. These types of geometric subjects can be seen extensively in the Mamluk arts of inlaying marble decorating the wall of the religious edifices, such as the dados of the interior walls of the Mausoleum of Qalāwūn²⁵. Decorating the walls of the entrance and the halls of the religious edifices with marble panels was very popular in the arts of the Mamluks. The central square frame encloses a geometric Kufic script that reads from the center to the frames and corners. It encompasses an inscription starting from the center of the writing *I bear trust in (Allah) my cretor* توکلي علي خالقي. During the late Mamluk period, the phrases of invocations were exclusively found in the arts and architecture of the Cairene Mamluk religious edifices. In addition to the invocation phrases, the Quranic inscriptions, and the name of Muḥammad (PBUH) and the witnessing *ṣahādah* were commonly seen in the Mausoleum of Qalāwūn, the Maridānī Mosque, and the Madrasah of Sultan Ḥasan. Later in the Mosque of al-Mu'ayyad Ṣayḥ, the Quranic inscriptions were found in many places of the mosque²⁶. The direction of writings starts from the center of the word توکلي *I bear trust* is repeated four times from the center. The preposition علي is shown repeated four times on the four corners frames of the square. The phrase ends up with خالقي *Allah my Creator, the Creator* and is divided into two parts; حا the initial *ḥā'* and medial *alif* shown beside the preposition علي. The completion of the letters لفي the initial *lam* the medial *qāf* and final *yā'* are seen on a separate position to form one word attached to the frame of the square [FIGURE 1B]. It is noticeable that the techniques of encrusting colored marble *ḥafr wa tanzīl* also distinguished the models of the late Mamluk arts²⁷.

²⁵ CRESWELL 1978:193; ABŪ SEIF 2007:139.

²⁶ ROGERS BEY 1889: N^o.1-8; 'ABD AL-ḤALĪM 1991 a: PL.39, 43- 44, 47, 50; 'ABD AL-'ĀL 2010: 1403. PL.262.

²⁷ A process used extensively in the late Mamluk arts. See: LANE POOLE 1886: 115-123, IBRAHIM 1950: 200 Document, L.1; SALĀḤ AL-DIN 2007: 175-180.

[FIGURES 2 A, B&C]

Ceramic Tile

Place: Museum of Islamic Arts –Cairo

Inventory N^o.2077

Date: First half of the 9th H./15th G. century²⁸.

Technique: Under glazed pottery imitating Chinese porcelain

Place of Discovery: Mosque of Sayyida Nafisah

Measurements: The whole panel measures 44x44cm

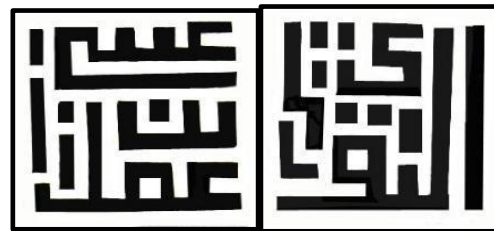
The small panels contain a square Kufic script of 7x7cm.

Status of Publication: The artifact is published²⁹ as a style of art. However, the geometric Kufic text has not been fully analyzed yet.



[FIGURE 2A]: A ceramic tile carries the name of the ceramist Ibn Ġaybī.

©Museum of Islamic Art [Inventory N^o.2077].



[FIGURE 2B] & [FIGURE 2C]

Drawing of the previous panel

©Done by the researcher

Description: It is a square tile made of under glazed pottery. The central area is filled with nashī inscriptions of white on blue coated ground. *توكلي علي خالقي I bear trust in Allah, My Creator.* The Nashī is written in a circular way as the reading ends in the center making a

²⁸ It is an imitation of Chinese porcelain. The museum of Islamic arts in Cairo holds some examples of ceramic fragments carrying the name of Ġaybī (e.g. a ceramic shard Inv.N^o.1124/8). However, this one is made by his son Ibn Ġaybī. It seems that both Ġaybī and his son lived in the Levant in the first half of the 9th AH/15thAD century, as the name of Ġaybī was written in the Complex of Ġars al-Dīn Ḥalīl al-Tawrīzī in Damascus who died in 826AH/1424AD. See: 'ABD AL-RĀZIQ 2007:198, 201; AL-ŠIḤAH 2013: 63-67.

²⁹The artifact is published by many authors as only a brief description. Firstly, it is mentioned by Max Herz in his descriptive catalogue of the Islamic Museum. HERZ 1907: 223- 224. It is also mentioned in the book of *al-Qāhirah, tārḥuha wa funūnaha wa ātārīha* by 'Abd al-Raūf 'Ali Yūsuf, as a description of the fragment without giving an analysis and the style of the letters. A. 'ALI YŪSUF 1970: 117-120; Sāmi 'Abd al-ḥalīm only described the fragment without analyzing the square Kufic text. 'ABD AL-ḤALĪM 1991 b: 175-178. Marilyn Jenkins also gave a description and analysis of the tile without mentioning the forms and the style of the square Kufic text. JENKINS 1984:110,112. The fragment is also mentioned by Dr. Usama Tal'. He didn't state the analysis of the inscriptions. TAL 'AT 2003: 189, PL.7. Another recent study by 'Abd al-Ḥalīq al-Šiḥa also mentioned only the name of Ġaybī and his son without mentioning a full analysis on the style of calligraphy and letters concluding that real name of Ġaybī is Ahmady known as Ġaybī through an artifact in the Museum of Islamic Ceramic at Zamalik [Inv.N^o.7111-2]. AL-ŠIḤA 2013:67, 68.

lobed medallion. A tiny band with Kufic writings runs on the rims of the central decorative scheme and shows a verse from the Qur'an, *إِنَّ الصَّلَاةَ تَنْهَىٰ عَنِ الْفَحْشَاءِ وَالْمُنْكَرِ وَلَذِكْرُ اللَّهِ أَكْبَرُ*, Qur'an XXIX/45. *Indeed, prayer prohibits immorality and wrongdoing, and the remembrance of Allah is greater. And Allah knows that which you do, Allah has spoken in truth.* Four squares intersect Kufic band exhibiting square Kufic inscriptions reading *عمل ابن غيبي- التويرزي* made by *ibn Ġaybī-al-tawrīzī*³⁰. al-Tawrīzī, the craftsman, put his name in other Mamluk pottery wares from the same period³¹.

[FIGURES 3A&B]

A wooden slab on the top of a pulpit

Place: Mosque of ABŪ -l-'Ilā³² in Bulāq

Date: 890AH/1485AD³³

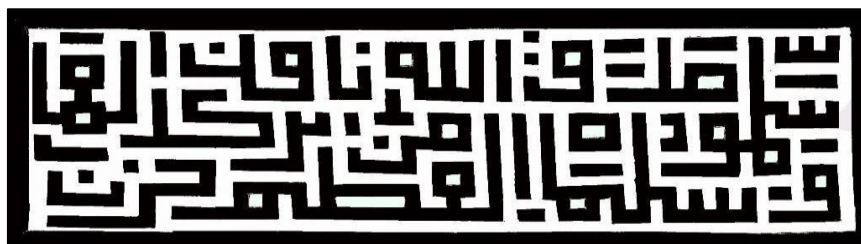
Measurements: 1.20m x 40cm

Technique: Wood inlaid with ivory

Publication: Unpublished- only a part of the writing is read³⁴.



[FIGURE 3A]: A wooden slab on the top of a pulpit in the Mosque of ABŪ -l-'Ilā
Taken by the researcher



[FIGURE 3B]: A drawing of the previous panel. Done by the researcher.

³⁰HERZ 1907: 223-224; YŪSUF 1970: 117-120; 'ABD AL-ḤALĪM 1991 a: 175-178

³¹JENKINS 1984: 110-112; ŠĪHAH 2013: 63-67.

³²Husayn Abi 'Alī known as Abi-l-'Ilā, the pious, the most venerated as he was called by the Sufis. He lived during the sultanate of al-Ašraf Qāyṭbāy in his own cell, where he spent worshipping about 40 years in his own cell of a blocked door; only a small window opened. He had many disciples, such as Ḥawāḡā ibn Qanīš al-Burulūsī who built a small *zāwīya* for the Šayḫ. He was buried in his own *Zāwīyah* in Bulāq adjoining the coast of the River Nile in the 9th AH/15th AD Century. al-Ša'rānī N^o. date: 80. As noted by Ḥasan 'Abd al-Waḥḥāb, the present-day mosque is dated to 890AH/1485AD. 'ABD AL-WAḤḤĀB 1948: 276.

³³'ABD AL-WAḤḤĀB 1948: 276

³⁴Dr Alā' 'Abd al-'Āl only mentioned a part of the script in his dissertation. Moreover, he did not analyze the alphabets and the style of writing. 'ABD AL-'ĀL 2010: 592, 938.

Description: It is a rectangular wooden slab located on the top of the pulpit of the Mosque of Abū al-Ilā. The inscription is rectangular of a geometric Kufic script inlaid with ivory on a wooden background, and the frame is also inlaid. The writing reads from right to left as usual in Kufic models, representing a verse of the Qur'an finalized in an invocation:

وَسَلِّمُوا تَسْلِيمًا. صدق الله العظيم – يا قن(?) من بركة حزن لقمان(?)

Salute him with all respect-God Almighty has spoken the truth. I bear certainty (?) from the blessing of the sorrow of Luqman(?). In the first part, the panel houses the last part of the Quranic verse *وسلمو تسليما- صدق الله العظيم and salute him with all respect-God Almighty has spoken the truth»³⁵*. When seeing the pulpit, the beginning of the verse is not found³⁶, indicating that supposedly another one was assembled and stuck in a certain part from the pulpit, but it is lost. Another possible reading of the second part of the phrase could be read *من* *من بركة حرب المعار(?)* *who gained the blessing of the wars of (?).* In any case, the two possible readings should be taken into consideration as parts of the Sufi conception of the words at that time.

The rectangular panel is framed with a minute frieze of foliate motifs based on small-stylized leaves. The lower part of the panel is framed by another small band with the Nash inscription. It carries the name of the carpenter of the minbar *علي ابن طنين 'Ali ibn Tanin* and reads

«نجارة العبد الفقير إلى الله تعالى الراجي عفو ربه الكريم علي ابن طنين بمقام سيدي حسين أبو علي نفعنا الله»

The woodwork of the poor to Almighty Allah, seeking the mercy of his God 'Ali ibn Tanin in the holy shrine of my lord al-Husayn Abū 'Alī may Allah benefit us. As mentioned by Ḥasan 'Abd al-Wahhāb, this is probably the third signature of a professional and talented carpenter on a pulpit up-to-the end of the Mamluk era. The names of the artisans are rather rare and scarcely found in most Islamic artifacts from different eras. The names of the artisans reflect the artisan's school of art. The carpenters were almost acting like artisans and produced numerous examples of wooden artifacts, such as pulpits, doors, and windows using several methods and techniques of carpentry. They used precious materials such as ivory and mother of pearls to shed light on their decorative elements on the panels and lintels. The carpentry in the late Mamluk period ended, especially when the Ottoman sultan Salim I took most of the professional carpenters to Istanbul after his occupation of Egypt in 923AH/1517 AD³⁷.

³⁵ QUR'AN.XXXIII/56

³⁶A visit to the mosque by the researcher on 21/04/2022

³⁷ For more details, see: 'ABD AL-WAHHĀB:1948: 277; 'ABD AL-WAHHĀB 1955: 545-554.

[FIGURES 4 A, B & C]

Battle axe of a member of the Sultan's guards

Location: Kunsthistorisches Museum, Vienna, Austria.

Museum Inventory Number: HJRK_C_113.

Date of Object: 900–904 / AD 1495–1499.

Material / Technique: Iron, gold damascening, heat-blued.

Dimensions: Length: 99.5cm- Width: 20.5cm.

Period / Era: Late Mamluk.

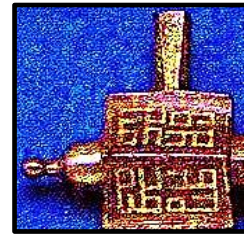
Publication: : Published, but the small geometric Kufic frame is not published.



[FIGURE 4A]



[FIGURE 4B]



[FIGURE 4C]

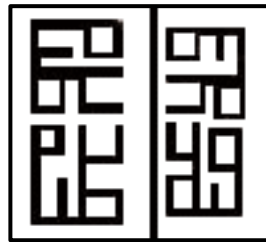
Details Battle axe of a member of the Sultan's guards: Kunsthistorisches Museum, Vienna, Austria

©Museum Inventory N°. HJRK_C_113.

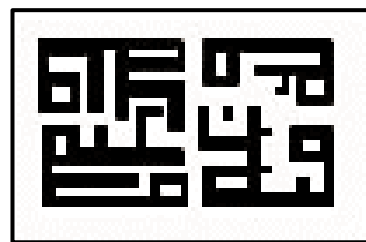
IN: http://islamicart.museumwnf.org/database_item.php?id=object;EPM;at;Mus22;20;en



[FIGURE 4D]



[FIGURE 4E]



[FIGURE 4F]

Drawings in the square panels of the previous axe

©Done by the researcher.

Description: It is an iron battle-axe, which belonged to the guards of the late Mamluk sultan Muḥammad ibn Qāyṭbāy, who ruled Egypt from 901-903AH³⁸ to 1496-1497AD. The blade is encrusted with gold foliate motifs based on some floral scrolls and branches with stems. The epigraphic blazon of the Sultan lies in the middle of the blade of open work technique and reads: «السلطان الملك الناصر ناصر الدين -محمد بن قايتباي - عز نصره» «*The sultan, al-Malik al-Nāṣir Nāṣir al-Dīn Muḥammad ibn Qāyṭbāy, May his victory be glorified*» The handle is slightly

³⁸ ZAMBAUR 1980: 164

decorated; only some hatching makes it easy for the warrior to hold the axe without falling, as well as some foliate designs inlaid with silver. The most obvious part of the axe is a small square frame with geometric square Kufic writings carrying the name of Sultan al-Nāṣir Muḥammad. The shaft is partly faceted and partly fluted a better grip; however, the weapon may have a ceremonial rather than a practical purpose³⁹. Two bands are seen. The first is in the front and has the words of *basmalla* that reads *بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ* and reads in a circular way clockwise from bottom right, up, then left, then down [FIGURE 4D]. The direction moves to the left and then down to the end of the verse. The second frame has square Kufic writings that are so hard to read. The letters are deformed. It is possible that the artisan might make errors and mistakes while trying to get some space or concentrated on the decorative purpose rather than the content. I can assume that has the name of the prophet Muḥammad (PBUH), and the three rightly guided caliphs and read as *عمر و عثمان و علي*⁴⁰. The back has a square frame that holds the square writing in two sections with a four times repeated word «*Muḥammad*» [FIGURE 4E].

[FIGURE 5A&B]

Inscribed wooden lattice window

Date: Egypt 9th -10th H/15th -16th G century.

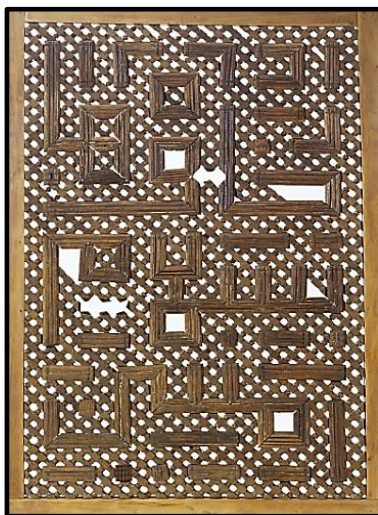
Place: Benaki Museum / Athena.

Inventory N^o: 9286.

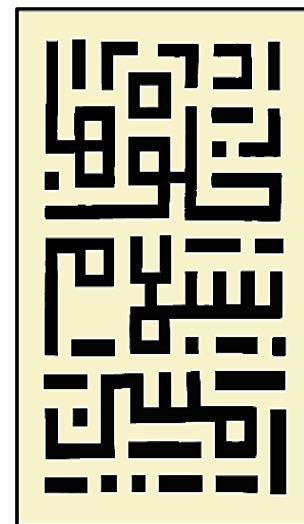
Publication: Unpublished.

Measurements: Height: 113cm- width: 77cm .

Material Technique: Wood carving –open work – assembling.



[FIGURE 5A]: Wooden lattice window
©Benaki Museum [Inventory N^o.9286]



[FIGURE 5B]: Details
©Done by the researcher

³⁹ LEVENSON 1991: 197, PL.87.

⁴⁰This reading is according to the reader's assumption or speculations [FIGURE 4/F].

Description: It is a rectangular wood lattice window considered as a part of a window in a screen or mašrabiya⁴¹. It was supposed to be put in a house or a palace dated to the late Mamluk era. The wooden panel has a wooden frame, and the central part encompasses a rectangular Kufic inscription. A verse of the Qur'an reads (اذْخُلُوهَا بِسَلَامٍ آمِينَ) 46 *Enter ye, here in Peace and Security Qur'an.XV/46*. The formal technique in the background of the script is based on assembled small wooden pieces fixed as the technique used in the mašrabiya. In most secular Mamluk constructions, one could observe this type of windows. This form of windows was seen also in the religious constructions and served as a screen. Walls were put in the maqṣūra of the mausoleums and the spaces between the columns of the arcades⁴². The background of the writings was made of assembled wood units creating geometric formations.

The mašrabiya motifs became one of the focal elements in both the secular and religious Mamluk establishments, confirming both social and religious ideas of Islam and Islamic arts. Later, it became one of the most traditional elements in Islamic architecture, besides its decorative role. It also continued to fulfill its traditional functions, such as circulating air, controlling light, and enabling occupants to retain contact with the outside while preserving their privacy.

The mašrabiya is manufactured by many techniques, e.g., piercing and fixing of two parts; the upper is made of pierced wood, and the lower is made of solid wood⁴³. In the late Mamluk period, the Madrasah of Qāyṭbāy had a rectangle writing on the screen wall of the *Mazmala*⁴⁴.

V. THE ANALYTIC STUDY

The previously described artifacts show characteristics; their shapes, the forms of the letters, and content of each panel vary. The analytic study's methodology starts with the alphabetic analysis of each text, clarifying the crucial changes in the form and content of each text. The analytic methodology proved that obvious changes occurred in the style and forms of the letters, and the content of each panel. **[FIGURES 1 A&B]. A square panel with colored marble inlay around central square- Kufic inscription**

Alphabetic Analysis

The inscriptions are encrusted in a square panel of colored inlaid marble in opaque green **[FIGURE 1A]**. As mentioned before, the phrase forms three repeated words and starts from the center, moving to the corners of the panel, and ending in the four sides of the interior square area. The writing starts from the center by *توكلي* *my trust* repeated four times on the outside corners of the square. The writing then continues with *علي* positioned











⁴¹For more details on the Mašrabiya and its technique and styles. AŠŪR 2018: 245-253.

⁴²Examples could be seen in the Mosque of al-Maridānī and the Azhar Mosque from the works of Qāyṭbāy. CRESWELL 1951: 39; ABŪ SEIF 2007: 185, FIG.133.

⁴³ AŠŪR 2018 :245-253.

⁴⁴ The writings emphasize the šahhādah. See: 'ABD AL-ḤALĪM 1991 a: 312-317.

at the center of the square. The phrase then ends in *خالقي* *Allah, My Creator* repeated four times rotationally on the four sides of the panel [FIGURE 1B]. The final *alif*

Letter	Isolated	Initial	Medial	Final
<i>Alif</i>				
<i>Tā'</i>				
<i>ḥā'</i>				
<i>āyn</i>				
<i>Qāf</i>				
<i>Kāf</i>				
<i>Lām</i>				
<i>Wāw</i>				
<i>Yā'</i>				

[TABLE 1]: Done by the researcher

in *خالقي* is shown like a vertical stroke perpendicular to the horizontal line of the letter *ḥā'*. This form was found in the early types of the Iranian models, as seen in the writings of the main portal of the Mausoleum of Usted Ali at Samarkand (762-782AH/1360-1380 AD)⁴⁵ since the straightening of the angular letters became the basis of the geometric Kufic. It is also shown in the same common form during the early Mamluk and late Mamluk models, as seen in the Mosque of al-Mu'ayyad Ṣayḥ⁴⁶ and all the Mamluk examples found in the religious edifices. The initial *tā'* in *توكلي* forms two strokes; one perpendicular to the other without dots. The letter is shown in this way in the late Mamluk models, as seen in the tile bearing the name of Ibn Ġaybī al-Tawrīzī⁴⁷ [FIGURES 2A&B]. The initial *ḥā'* in *خالقي* forms a half square opened on the left side, forming two right angles. The letter resembles its twin *ḥā'* in the early Iranian models in form and shape⁴⁸. It appears when reading the word Muḥammad in different edifices, especially in the early Mamluk period in the Mausoleum of Qalāwūn⁴⁹ [FIGURE 6], the back of the minbar of Aq Sunqur [FIGURE 8], and the walls of

⁴⁵ TAL'AT 2003: 190, PL.9.

⁴⁶ ROGERS BEY 1889: N^o.1-8.

⁴⁷ TAL'AT 2003: PL.7.

⁴⁸ ŠĀFI' 2020: PLS.27 -28 .

⁴⁹ CRESWELL 1978:193; ROGERS BEY 1889: 104, N^o.8; MAJEED 2006:186-188; ABŪ SEIF 2007:139.

the Qibla in the Maridānī Mosque⁵⁰. The initial *ʿAyn* in علي is shown to resemble the letter *ḥā'* that takes the shape of a half rectangle attached to a lower vertical stroke. It is shown in the early Bahari Mamluk examples in the neck of the Turba al-Sultānīyah, which bears the names of the four rightly guided caliphs of Islam⁵¹. It is also shown in the same form in *Āyat al-kursi* from the Baqarah chapter in the Holy Qur'an, found on one of the panels of the vestibule in the Mosque of al-Mu'ayyad Ṣayḥ⁵². The medial letter *qāf* in خالقي is shown in the form of a square with an elongated line tangent to the following letter. This form of letters is shown in the prototype fixed above the entrance vestibule in the Mosque of al-Mu'ayyad Ṣayḥ⁵³.



[FIGURE 6]: Marble slab- Qalāwun's Mausoleum. Taken by the researcher

The initial *kāf* in توکلي takes the shape of the letter *ʿayn*, but it mainly has a twisted movement to be like the letter "S" and tangent to the base of the following letter. Its style emerged from the early Iranian models as seen in the core of the mihrab of the Mosque of Aštrakan⁵⁴.-The letter *lām* in the word خالقي has two forms in the inscriptions; the first is the initial, which takes the form of a long stroke perpendicular to a horizontal base. The second is the medial *lām* in توکلي which takes the shape of a vertical line perpendicular to a horizontal base, but the medial *lām* in the

⁵⁰ MAJEED 2006:186-187.

⁵¹ ABD AL-ḤALĪM 1991 a: PLS.47, 49.

⁵² ROGERS BEY 1889: N^o.3.

⁵³ ROGERS BEY 1889: N^o.3/a; ABD AL-ḤALĪM 1991 a: 70; ABD al-'ALĪM 1994: PLS.91-92.

⁵⁴ The initial *kāf* in the Quranic verse in the core of the mihrab ليظهره علي الدين كله to proclaim it over all religion is mainly angular and has four right angles. ŠĀFI' 2020: PL.28.



[FIGURE 7]: The Mosque of al-Tanbuḡā al-Mardānī- Square Kufic panel above the south door.
IN: <http://www.islamic-art.org/PhotoArchive/DisplayImages.asp?photoid=972&qualityID=5> Accessed on 02/04/2022



[FIGURE 8]: Marble panel back to the pulpit- the Mosque of Āq Sunque. Taken by the researcher



[FIGURE 9]

&



[FIGURE 10]

Marble panels on the walls flanking the main entrance in the Madrasah of Sultan Hasan. Taken by the researcher.

The word *علي* is quite different, seen like the letter "L" in the four times repeated *علي* running crosswords in the center of the panel. The two medial *lām* are shown extensively in the early Iranian models, as seen in the base of the minaret of the Great Mosque of Mardin (572AH/1176)⁵⁵ and the early Irānian models in the religious buildings, as seen in the *šahādah* in the mihrab of the mosque of Aštrakān⁵⁶. The medial *lām* in *علي* is rare to be found in this form in the Mamluk examples, as seen in the *šahādah* in some of the early Mamluk Monuments, such as the walls of the portal in the Madrasah of Sultan Hasan [FIGURE 10]⁵⁷.

The artisan intended to apply this formation on the final letter to form a decorative centralization of the four words *علي* to be like rays. This formation became one of the characteristics of the late Mamluk style of writing. The final letter *wāw* in *توكلي* is shown in its standard form as a knotted square and turns downwards. It is shown in the same form in the early Bahary Mamluk models, especially in the *šahādah*⁵⁸[FIGURE 10] and in the Mosque of al-Mu'ayyad Šayḥ⁵⁹.

The final letter *yā'* in the three words *توكلي علي خالقي* *I bear trust in Allah, my Creator* makes an inclination to save spaces for writing. In the word *توكلي*, the final *yā'* is broken to set four times on the outside corners of the square. The final *yā'* in *علي* is inclined downwards by the calligrapher to save some space. It is repeated four times with the other analogies. The final *yā'* in the word *خالقي* is seen broken and inclined to set parallel to the sides of the square. The phrase is repeated four times in the panel as one of the focal characteristics of the late Mamluk models of square Kufic.

Rogers Bey describes a similar object that he found on a marble panel in a ruined mosque in *šari' al-Ḥamzāwiy* under the debris; a tile that was a part of a ruined drink basin

⁵⁵ MAJEED 2013: FIG.20[2]

⁵⁶ ŠĀFI' 2020: PLS.27-28.

⁵⁷ ABD AL-ḤALĪM 1991 a: PLS.43-44.

⁵⁸ MAJEED 2006: 212-214.

⁵⁹ ROGERS BEY 1889: N^o.1

for animals carried the same phrase⁶⁰. However, he didn't mention the date of the ruined mosque, which seemed to date back to the late Mamluk era. This tile was not supposed to be used as a part of a drinking basin because of its various colored incrustated surfaces; therefore, it is probably a part of a wall in a religious building, either a mosque or a madrasah dated to the late Mamluk period.

[FIGURES 2A, B & C] A ceramic tile of underglazed pottery imitating Chinese porcelain carried the name of the artisan Ibn Ġaībī al-Tawrīzī

Alphabetical analysis

The initial letter *alif* in *ibn* [FIGURES 2A & B] and *al-tawrīzī* is shown in the form of a vertical stroke applied in a traditional form in the early Bahary Mamluk era, as seen in most of the inscriptions in the Mosque of al-Maridānī⁶¹, *al-Turba al-Sultāniya*⁶². The letter *alif* was shown many times in the early records of the mosques and graves, especially in Iran and Isfahān⁶³. The letter was also shown in this form in the late Mamluk era, especially in the Mosque of al-Mu'ayyad⁶⁴.

⁶⁰He read the text as *توكلت علي خالقي*, but scrutinizing shows that the letter *tā'* in *توكلت* is not found, it is mainly *yā'* but the artisan intended to make a decorative harmony in the interior subject. ROGERS BEY 1889: 104, N^o.7.

⁶¹'ABD AL-'ĀL 2010: 62.

⁶²'ABD AL-'ĀL 2010: 66.

⁶³SAKKAL 2019: 59.

⁶⁴ROGERS BEY 1889: FIG.1.

Letter	Isolated	Initial	Medial	Final
<i>Alif</i> الف				
<i>Bā'</i> باء			ب	
<i>Tā'</i> تاء			ت	
<i>Rā'</i> راء	ر			
<i>Zay</i> زاي			ز	
<i>Ayn</i> عين		ع		
<i>Ġayn</i> غين		غ		
<i>Lām</i> لام				ل
<i>Mīm</i> ميم			م	
<i>Nūn</i> نون				ن
<i>Wāw</i> واو			و	
<i>Yā'</i> ياء			ي	ي

[TABLE 2]: Done by the researcher.

The medial letter *tā'* is shown in a horizontal line. For the first time, one could see the letters dotted; however, the character was not found in the early Mamluk examples of geometric Kufic. The early Iranian letters like *tā'* are not dotted, especially those found in the transitional zones of the dome of the Mosque of Varamin in Tehran 722-726AH/1322-1326AD⁶⁵. The isolated letter *rā'* in التوريزي was shown in its traditional form as two long strokes perpendicular to each other. It is shown with no change even in the early examples like those of al-Maridānī⁶⁶ [FIGURE 7] and al-Sultān Ḥasan⁶⁷ [FIGURE 9]. The isolated letter *zāy* is in the form of a vertical stroke, but it is shown here with a dot. It resembles the letter *rā'* in the form of two perpendicular lines. It is rare to see the dotted letters in the early Mamluk period; however, it could be extensively seen in the late Mamluk period. The initial letter *ayn* in عمل makes a square form opened on the left side, as commonly seen in the late Mamluk inscriptions. However, the style of the letter could be seen in the early Iranian and Ilkhanide monuments, as seen in the recesses of the flanks of Ashtrakān Mosque⁶⁸.

⁶⁵A verse from the Qur'an *al-fath* chapter ان فتحنا لك فتحاً مبيناً is inscribed on the drum, mainly in the inner surface of the mosque. The letter *tā'* is not dotted. ŠĀFI' 2020: 36, FIG.39.

⁶⁶ ABD AL-ḤALĪM 1991 a: PL.39.

⁶⁷ZAKĪ 2012: FIGS.12A, B.

⁶⁸Šāfi' 2020: 107, FIG.28.

On the other hand, the artisan *ḡaybī*, who took the epithet *al-tawrīzī*, or formally *al-tabrīzī*, acquired his talent from *Tabrīz* in Iran⁶⁹. This issue proves the strong relations between the Mamluks in Egypt and the eastern territories. Thus, Iranian traditions were transmitted to the arts of the Mamluks, especially after the Iranian migrations because of the Mongols' attacks. In addition to the Chinese impact on the arts of the Mamluks and the great artistic bond between Egypt and China, the Muslim artisans perfectly imitated Chinese porcelain, especially in Iran, by the Safavids⁷⁰. The final letter *lām* in *عمل* shows a vertical stroke perpendicular to another horizontal one making a right angle. The medial letter *mīm* is shown as a small square in the middle of the word *عمل*. This form could be seen in the early Mamluk examples, such as in the word *محمد* in the Mausoleum of Qalāwūn [FIGURE 6]⁷¹.

The medial letter *wāw* in *التوريزي* takes a quadrangular form tangent to a small horizontal stroke. The form of the letter wasn't shown in the early Egyptian or Iranian examples. The stroke of the letter stands horizontally in alignment with the lower base, unlike the traditional *wāw* [FIGURE 2C], which also occurs in the Iranian arts⁷². In this tile, the style of the letter *wāw* is extremely different; thus, it is only seen in the late Mamluk examples. The final letter *yā'* in *التوريزي* is shown in its normal form, which could be seen in the early types of Kufic script like the letter «Z» with five right angles. It is mainly an Iranian innovation found at the entrance of the Mosque of Ashtrakān⁷³.

The medial *yā'*, in the same word, takes the form of a vertical stroke perpendicular to another horizontal one. The letter is dotted, a style that could be seen for the first time in the late Mamluk models⁷⁴. Analyzing this text showed that it was mainly influenced by the Iranian models.

[FIGURES 3A & B] A wooden slab on the top of a pulpit in the Mosque of Abū -l- 'Ilā Alphabetic analysis

The inscriptions [FIGURE 3B] were applied in rectangle Kufic script within a rectangular frame. They were encrusted in ivory, showing geometric rectangular Kufic script that could be read from right to left as typical Kufic inscriptions.

⁶⁹ALI YŪSUF 1970: 117-120.

⁷⁰ḤASAN 2014: 18-35.

⁷¹CRESWELL 1978: PL.70; 'ABD AL-ḤALĪM 1991 a: PL.2.

⁷²SAKKAL 2010: FIGS.120b1-5

⁷³ The final letter *yā'* could be seen in a panel adorning the right flank of the entrance, which has a panel surmounts a recess in the form of a mihrab and the entrance of this mosque in a phrase *هُوَ الَّذِي أَرْسَلَ رَسُولَهُ بِالْهُدَىٰ وَدِينِ الْحَقِّ لِيُظْهِرَهُ عَلَى الدِّينِ كُلِّهِ وَلَوْ كَرِهَ الْمُشْرِكُونَ* It is He who sent His Messenger with guidance and the religion of truth to manifest it over all religion although those who associate others with Allah dislike it, QUR'AN LXI/9; ŠĀFI' 2020: PLS.27-28.

⁷⁴ By reading and analyzing the styles and the contents of the letters in the early Mamluk models in Cairo, the dots on the letters were not found. I think the artisan put the dots to fill the empty spaces between the letters and the phrases.

Letter	Isolated	Initial	Medial	Final
<i>Alif</i>	ا			آ
<i>Ba'</i>		ب		
<i>Ta'</i>		ت		
<i>Ta' or ta' marbūtah</i>				ة
<i>hā'</i>		هـ		
<i>dāl</i>			د	
<i>Rā'</i>			ر	
<i>zāy</i>			ز	
<i>sīn</i>		س	س	
<i>ṣad</i>		ص		
<i>Za'</i>			ذ	
<i>āyīn</i>			ظ	
<i>qāf</i>			ق	ق
<i>kāf</i>			ك	
<i>lām</i>		ل	ل	ل
<i>mīm</i>		م	م	م
<i>nūn</i>				ن
<i>Hā'</i>				هـ
<i>wāw</i>				و
<i>Yā'</i>		ي	ي	

[TABLE 3]: Done by the researcher.

The isolated letter *alif* in the word الله and العظيم takes the form of a vertical stroke in the usual form of the Mamluk letters. This type of letters is shown in the phrases of *ṣahādah*⁷⁵ as seen in the early Bahary Mamluk models, such as the Mosque of al-Ṭanbuġā al-Maridānī⁷⁶ and the forms in the panels of the madrasah of Sultan Ḥasan⁷⁷. The second type is the final *alif* in the word تسليم that takes the same form of a vertical stroke.

The initial *bā'* in بركة takes the form of two vertical strokes perpendicular to a horizontal base. In the early Mamluk examples, this letter wasn't shown widely but instantly could be noticed in a panel at the entrance of *al-turbah al-sulṭāniyah*⁷⁸. The initial *tā'* in تسليم is similar to the previous *bā'* of two vertical strokes perpendicular to a horizontal base. The form of the letter is seen in the late Circassian models, such as the Mosque of al-Mu'ayyad Ṣayḥ⁷⁹. The letter *tā'* is seen in its final form. Possibly it gives the two conceptions either *tā' marbūṭah* or the normal letter *tā'* that comes at the end of the word; therefore, the word could be read as بركة *barakah*, or بركت *barakat* because the form of the *tā'* is a little bit confusing in reading as it takes a form of a reversed "L" shape. If we consider the reading بركت is the right one, it emphasizes the pronunciation and writing of the final *ta'* in the holy Qur'an⁸⁰.

The initial *hā'* in حزن or حرب is represented in its typical form of a rectangle opened on the left side. This form was shown in the early models, such as the word «*Muḥammad*» in the early Bahary Mamluk examples like that of the walls of the Mausoleum of Qalāwūn [FIGURE 6], the dome of Zayn al-Dīn Yūsuf [697AH/1298AD], and the back of the pulpit of the Mosque of Aq Sunqur^{748AH/1347AD}. It reappeared in the Circassian Mamluk period in the mihrab of the Ḥānqāh of Qansuwah al-Ġawrī 908AH/1503⁸¹. The medial *dāl* in the word صدق is shown in a new form; a special case that mainly differs from those found in the early Mamluk models. This one implements an elongated vertical stroke in the form of reversed letter «L» considering it as a step of the

⁷⁵ The witnessing is seen for the first time in square Kufic in the Minaret of Quṭb al-Dīn Maḥmūd bīn 'Imād al-Dīn Zengī (598 AH/1202 AD) in the plains of Sinjār. MAJEED 2006: 211.

⁷⁶ ABD AL-ḤALĪM 1991 a: PL.39

⁷⁷ MAJEED 2006: 212, FIGS.26-27a .

⁷⁸ ' ABD AL-ḤALĪM 1991 a: PL.49.

⁷⁹ ROGERS BEY 1889: N^o.3.

⁸⁰ In al-Rūm chapter of the Holy Qur'an, Allah, the Almighty says: فَأَقِمْ وَجْهَكَ لِلدِّينِ حَنِيفًا فِطْرَتَ اللَّهِ الَّتِي فَطَرَ النَّاسَ عَلَيْهَا لَا تَبْدِيلَ لِخَلْقِ اللَّهِ ذَلِكَ الدِّينُ الْقَيِّمُ وَلَكِنَّ أَكْثَرَ النَّاسِ لَا يَعْلَمُونَ ۝ The Allah's handiwork according to the pattern on which He has made mankind: no change (let there be) in the work (wrought) by Allah; that is the standard Religion, but most among mankind understand not. Qur'an.XXX/30 . The final letter *ta'* is also mentioned in this form in Maryam chapter from Holy Qur'an ذِكْرُ رَحْمَتِ رَبِّكَ عَبْدَهُ زَكَرِيَّا ۝ A mention of the Mercy of your Lord to his worshiper Zachariah, (2). Qur'an.XIX/2.

⁸¹ Tehnyat Majeed called the formula of the prophet Muḥammad PBUH in the square Kufic panels, such as *char Muḥammad*. She stated that this formula occurred in the square Kufic panels of many places in Cairene edifices. She noted that the straight lines of the *hā'* and the *dāl* are meaningless. MAJEED 2006: 186-187.

evolution of the letter. In the Bahary models, the letter took the form of a small rectangle opened on the left side, as seen in the *ṣahādah* in the Mosque of al-Maridānī⁸². However, in the late Circassian period, the letter took the same form of a small rectangle opened on the left side as seen in the *ṣahādah* of the inner core panel of the mihrab in the Ḥānqāh of al-Ġawrī⁸³.

The medial letter *rā'* in the word برکه is represented like a reversed letter «L». It is shown in its normal form from the early Mamluk models, as seen in the *ṣahādah* examples in the Mosque of al-Maridānī⁸⁴ [FIGURE 7]. The final *zāy* in the word حزن (or *rā'* as حرب) is shown as its similar *rā'* as a horizontal bar perpendicular to a vertical base. The dot of the letter is seen above the letter. The documented data revealed no evidence of the occurrence of this letter in any panel or inscriptions from the Bahary Mamluk period. It was recorded on the panels of the late Mamluk period, as seen in the tile bearing the name of Ibn Ġaybī al-Tawrīzī⁸⁵ [FIGURES 2A&B], while the *zāy* in al-Tawrīzī is quite similar to that in the pulpit of Abū -l-ʿIlā [FIGURE 3B].

The medial letter *sīn* in تسليما is shown in its ordinary form of three vertical strokes set perpendicularly to a horizontal base. This form is seen in the early Iranian types of letters in the core of the mihrab of the Mosque of Ashtarkān⁸⁶. The early types of the *ṣahādah* in the Bahary Mamluk examples were used in the entrance of the Madrasah of Sultan Ḥasan [FIGURE 10]⁸⁷ with the same form of the letter that mainly continued until the late Mamluk period. The initial *ṣād* in the word صدق is seen as a small rectangle resembling the *mīm*. No records were shown in this letter in the Bahary examples. However, in the Iranian models, the letter is depicted in the same form with an unequal side rectangle in the stucco mihrab of the Mosque of Aṣṭrakān⁸⁸. The medial *ayn* in العظيم takes the form of a square with a vertical stroke attached to the following letter.

The medial letter *qāf* in ياقن (or it could be medial *fā'* as نافل and لقمان represented in three forms; the first resembles the *ayn* (as in the form of a square with an elongated neck. The second is a square with a vertical stroke that only touches the left side of the word. This form could be observed in the panel from the entrance of the Mosque of al-Muʿayyad Ṣayḥ⁸⁹. The second form is seen in the word ياقن, which is represented in the form of a square with a neck tangent to the left side of the word. The third form is the final *qāf* in the word صدق is presented in the form of a small square attached to a curved base shown as a square opened on the upper top. In the late Mamluk period, the model of the final *qāf*

⁸² ABD AL-ḤALĪM 1991 a: PL.38.

⁸³ ṢALĀḤ AL-DĪN 2007: PL.LII.

⁸⁴ ABD AL-ḤALĪM 1991 a: PL.38.

⁸⁵ JENKINS 1984: 106, PL.10/d.

⁸⁶ ṢĀFI' 2020: 106, PL.27.

⁸⁷ MAJEED 2006: 212, FIGS.26-27a.

⁸⁸ ṢĀFI' 2020: PL.34, FIG.103.

⁸⁹ ROGERS BEY 1889:N^o.3; MUNTASIR 2000:PL.58.

could be noticed in the final words from the chapter of the Qur'an صدق الله العظيم as seen in a verse from the Qur'an written in a panel of the vestibule in the Mosque of al-Mu'ayyad Šayḥ⁹⁰. The initial *kāf* in بركة forms two horizontal intersected rods located within two vertical angular lines forming the letter «S». This form is shown in the early Iranian types as seen in the cavity of the mihrab of the Mosque of Ashtrakān⁹¹. This form also occurred in the late Mamluk in the Mosque of al-Ġimālī Yūsuf⁹². The letter *lām* is shown in two forms; the first is the initial in the words لقمان-العظيم الله shown in the form of a vertical elongated stroke mainly attached to the following letter by a horizontal line. The form of the letter is shown in the early Iranian models, as seen in the mihrab of the Mosque of Ashtrakān⁹³. It is repeated in the Bahary Mamluk examples, such as the Mosque of al-Maridānī and Sultan Ḥasan⁹⁴. The second type is a medial *lām*, as seen in the words الله and تسليما represented in the same form as the initial one.

The letter *mīm* (or *'ayn* as it could be العمار) has two forms; the first is the medial in لقمان or العمار and is shown as a square attached to a vertical bar. The early Iranian types show this form of *mīm* as seen in the Mosque of Ashtrakān⁹⁵ and the word *Muḥammad* in the Mausoleum of Qalawūn [FIGURE 6]⁹⁶. The medial *mīm* is also seen in the word تسليما in the same form. The second form, which is the final one in the word العظيم is represented in the form of a square attached to an emerging horizontal stroke. The final *nūn* or *rā'* as it could be العمار in the text is seen in the words (لقمان-العمار -حرب)،(حزن) or ياقن- نافل and takes the form of a square opened on the top and has its dot in its gap. This form is seen in the early Iranian prototypes, especially the mihrab of the mosque of Aštrakān⁹⁷. The letter is seen in the Bahary Mamluk models of writing in the drum of the dome of *al-sultāniyah*, but the letter is seen as a square opened on the top and twisted upwards without the dot⁹⁸. The

⁹⁰ It reads في مقعد صدق عند مليك مقتدر In a seat of honor near a Sovereign Perfect in Ability. Qur'an.LIV/55 in a panel fixed in the wall of the entrance vestibule. ROGERS BEY 1889: N^o.3/a; 'ABD AL-ḤALĪM 1991 a: 70; 'ABD AL-'ALĪM 1994: PLS.91-92.

⁹¹The initial *kāf* is seen in a panel inside the mihrab, exhibiting a verse from surat al-Faṭḥ in the Holy Qur'an هُوَ الَّذِي أَرْسَلَ رَسُولَهُ بِالْهُدَىٰ وَدِينِ الْحَقِّ لِيُظَاهِرَهُ عَلَىٰ الدِّينِ كُلِّهِ. It is He who sent His Messenger with guidance and the religion of truth to manifest it over all religion. QUR'AN.LXVIII/28; ŠĀFI' 2020: 108-109, FIG.28.

⁹²'ABD AL-ḤALĪM 1991 a: 295, PL.88.

⁹³ The initial *lām* could be observed in the word of the word of Almighty الله Allah in the Shahada seen in the cupola of the mihrab لا اله الا الله- محمد رسول الله in a form of a vertical stroke perpendicular to a horizontal base and in the word لله in its initial form. It is shown in its medial form in the words - علي - كله in the verse N^o.28 from Surat al-Faṭḥ ليظهره علي الدين كله [see note 93]. ŠĀFI' 2020: 109, FIGS.27-28.

⁹⁴ MAJEED 2006: 213-214, FIGS.25-26.

⁹⁵ ŠĀFI' 2020: 111.

⁹⁶ MAJEED 2006: 195.

⁹⁷ It mainly occurred in the words المشركون، حسين، حسن، عثمان with a square form opened from the top and a dot hollowed inside. ŠĀFI' 2020: FIG.29.

⁹⁸'ABD AL-ḤALĪM 1991 a: 163, PL.49.

final *nūn* is seen in the same form in a marble slab of colored faïence preserved in the King Faiṣal Research Center of Islamic Studies and shown with the dot on the core of the letter⁹⁹.

In the final *hā'* in the word of Almighty Allah صدق الله العظيم in الله, the letter is in the form of a square and seen in its ordinary form in the early Bahary Mamluk examples as seen in the Mosque of al-Maridānī [FIGURE 7]¹⁰⁰.

The final *wāw* in the word وسلموا has never been changed since the occurrence of the early Iranian models in the mihrab of the Mosque of Aṣṭrakān¹⁰¹. This form is extensively shown in many examples of the Bahary period, as seen in the Mosque of al-Maridānī and Sultan Ḥasan [FIGURES 7&9]¹⁰² using the same composition as this one of Abū-l-Īla. The same form occurred in a panel preserved in the Museum of the University of Pennsylvania¹⁰³. The letter *yā'* has two forms. The medial *yā'* in تسليم and العظيم is seen as an elongated square opened on the lower end and is mainly attached to the following letter with a vertical stroke.

[FIGURES 4A, B&C] A battle axe of a member of the Sultan's Guard

Alphabetic Analysis

Letter	Singular	Initial	Medial	Final
<i>Alif</i>				
<i>Bā'</i>		ل		
<i>Ḥā'</i>		ح	ح	
<i>Dāl</i>				د
<i>Rā'</i>				ر
<i>Sīn</i>			س	
<i>lām</i>		ل	ل	
<i>Mīm</i>			م	م
<i>Hā'</i>				ه

[TABLE 4]: Done by the researcher

⁹⁹ It is seen in a Qur'an verse ان المتقين في جنات ونهر Indeed, the righteous will be among gardens and rivers, in the word المتقين . QUR'AN. LIV/54.; 'ABD AL-ḤALĪM 1991 a: 186, PL.54.

¹⁰⁰ MAJEED 2006: 212.

¹⁰¹ ŠĀFI' 2020: FIG.27.

¹⁰² MAJEED 2006: 212.

¹⁰³ It is a panel of red, black, and white stone with pieces of mosaic forming the corner decorations. The inscription says «لا اله الا الله محمد رسول الله صلي الله عليه» «There is no God but Allah, and Muḥammad is His Messenger. Allah may bless him» is rendered in a geometric form. It carries Inventory N^o. NEP58. It was purchased from YOUSSEF BEY CHIHA 1923. 'ABD AL-ḤALĪM 1991 a: 195, PL.55.

The inscription is written in a square type of writing on two sides; the front and the back. The front is mainly comprised of two sections. The first is the *basmalla* and reads from down upwards. The second is hardly readable, but most probably it contains the names of Muḥammad محمد -Umar عمر -Uṭmān عثمان -Alī as the artisan mistakenly forgot to incrust the name of Abū Bakr to fit available spaces in the frame. Therefore, the analysis is concentrated on the style, and the forms of the readable words displaying the *basmalla* and the word of Muḥammad محمد repeated four times. The inscription is applied on an iron surface inlaid with gold. The singular letter *alif* in the word الرحمان and الرحيم takes the form of the classic vertical stroke, as seen in most of the Mamluk examples and models. The final *alif* is also seen in الرحمان, which is not written in the opening of the Holy Qur'an *al-fātiḥah*. The initial *bā'* in the word بسم forms a vertical stroke perpendicular to a horizontal line, as seen in most of the early Mamluk models, such as the Sultaniya Mausoleum¹⁰⁴.

The letter *ḥā'* has two forms, the initial one in الرحمان and الرحيم, which is shown in a unique form like a rectangle opened on the left side, and the right wing is slightly irregular in shape. The *ḥā'* in الرحمان was cut from the left side and first shown in this inscription. The second form is the medial *ḥā'* that is clearly shown as a small rectangle of a 90-degree position, especially in the word «Muḥammad» محمد in the front. This kind of letter might be reduced to get some space in the frame for writing. The second type of the *ḥā'* is shown in the back, as seen in the word «محمد» which is repeated four times [FIGURE 4E]. The letter takes the shape of a square opened from one side. The word is seen as a broken figure, and the main axis is seen after the *ḥā'* and the *mīm* making a central right angle curve. This kind of epigraphic scene is shown in Iranian inscriptions, as seen in the core of the mihrab of the Mosque of Aštrakān¹⁰⁵.

The final letter *dāl* is shown as a square or rectangle opened on one side. A prototype occurred in the early Bahary Mamluk examples, as seen in the Mausoleum of Qalawūn in the word *Muḥammad* formula [FIGURE 6]. Those inscriptions exist in the Mosque of al-Maridānī¹⁰⁶ and the Mosque of Aq Sunqur [FIGURE 8]¹⁰⁷. In the front, the word «محمد» exhibits another form of the letter, seen as a small rectangle opened on one side with a stroke shorter than the other. It could be seen in the models of the 9th H./ 15th G. century as seen in the word «محمد» in the marble slab preserved in the National Museum of Pennsylvania University in Philadelphia¹⁰⁸. The final *rā'* in الرحمان and الرحيم is shown as a straight line, slightly distinctive, in this period. The artisan used to reduce the letters to

¹⁰⁴ ABD AL-ḤALĪM 1991 a: PL.49.

¹⁰⁵The core of the mihrab is filled with three plaques holding the names of the imams محمد وعمر وحسن وحسين

وعمر ومحمد وجعفر وموسى وعمر ومحمد وعمر وحسن ومحمد وعثمان. ŠAFĪ' 2020:FIGS.29, 34.

¹⁰⁶ MAJEED 2006: 209, FIG.18.

¹⁰⁷ ABD AL-ḤALĪM 1991 a: PL.42.

¹⁰⁸ ABD AL-ḤALĪM 1991 a: 192, PL.55.

gain space in the frame. The letter was shown in this way, frequently, in its singular form, as one could see in the *ṣahhādah* of many examples in the Mamluk period. The letter is also shown as a short stroke in a second position at the end of the word الرحمان.

Generally, it could be seen in many ways. However, this form has a unique character as the artisan tried to fit some available spaces for writing in the frame. It could be seen in the Iranian mosques as seen in the cavity of the mihrab of the Mosque of Ashrakān¹⁰⁹. It is worth saying that this style of letters has mostly an Iranian influence. The medial *sīn* in بِسْمِ has the form of a horizontal base with three fluted edges. The medial form of the letter could be noticed in the buildings of the 6th H./12th G. century, as seen in the base of the minaret in the Great Mosque of Mardīn 572AH/ 1176-1177AD¹¹⁰.

The letter *lām* is seen in two forms. The initial form in the word of Allah الله is the *basmalla* of the front in the upper frame [FIGURE 4D]. The ordinary form is shown as a vertical stroke perpendicular to a horizontal line. It is shown with no significant changes. The letter *mīm* is shown in two forms: The initial one on the front side above in the word محمد is in the shape of a square and mainly seen before in most of the Iranian models, such as the inscription *ṣahhādah* of the main iwān in the mosque of Feramin¹¹¹. The form is seen in the name of *Muḥammad*¹¹² in the inner walls of the dome *al-qubba al-manṣuriyah* of al-Manṣur Qalāwūn [FIGURE 6] in Bayna-l-Qaṣrayn¹¹³. This model is also seen in the marble panel in the Museum of Pennsylvania¹¹⁴. The back side has the name of *Muḥammad* [FIGURE 4E]. However, the initial *mīm* takes the shape of a square attached to a long stroke to the next letter. The second form is the medial *mīm*, which is shown in four types; the first is a rectangle opened from one side in the words الرحمن and الرحيم; a style is uniquely shown in Islamic arts as if the artisan tried to make it only for decorative purposes. The second type of the medial *mīm* takes the form of a square with two elongated extensions to the previous and next letter, as seen in the name *Muḥammad* محمد on the back side [FIGURE 4E]. The letter *ha'* in the *basmalla* of the front panel [FIGURE 4D] takes the form of a square

¹⁰⁹ The cavity of the mihrab is ornamented with two rectangular panels carrying the names of the four Caliphs of Islam. The final letter *rā'* in the name of ABŪ Bakr has the same form. ŠĀFI' 2020: FIG.30.

¹¹⁰ In the month of Muḥarram 572AH/ August 1176AD, Quṭb al- Dīn al-Ġāzī, the Artuqid ruler of Diyārbekr (today Diyarbakır in eastern Anatolia) built the stone minaret of the Great Mosque of Mardin. On the other lower end of the minaret, a shallow square band occurred showing four lines of the Qur'an وَمَنْ يَتَوَكَّلْ عَلَى اللَّهِ فَهُوَ حَسْبُهُ «And whoever puts his trust in God, regarding his affairs, He will suffice him». QUR'AN, LXIII/3. As mentioned by Tehnyat Majeed, this type of geometric writing is called *ma'āqilī inscription*, which is a highly stylized form of Arabic found predominantly in architecture and characterized by angular letter forms and the absence of both diacriticals and short vowels. However, two features distinguish *ma'āqilī* from ordinary *Kufic*. First, the rectilinear letter forms are more geometric in appearance as they are designed on a square grid. Second, they are ordered on a strict and consistent negative/positive spatial rhythm. MAJEED 2013: 363-366, FIG.20[2].

¹¹¹ ŠĀFI' 2020: 38.

¹¹² Tehnyat Majeed, in her dissertation called the name of Muḥammad as *Char Muḥammad*. MAJEED 2006: 186.

¹¹³ MAJEED 2006: 186.

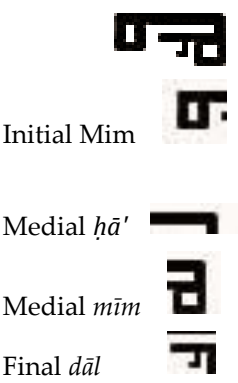
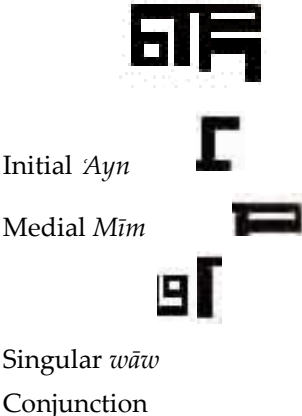
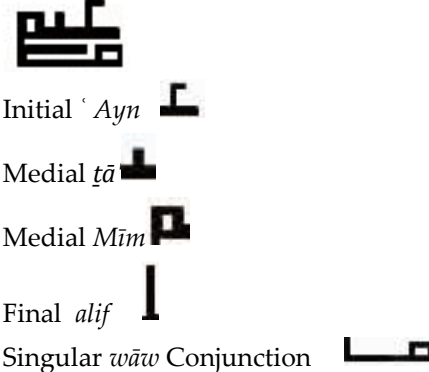
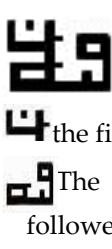
¹¹⁴ For more details on this panel, see: 'ABD AL-ḤALĪM 1991 a: 195, PL.55.

attached to an elongated head set parallel to the previous *lamāt*. It is shown in a unique form supposed to characterize the style of the letters in this period. It is noticeable that the final letters of the *basmallā* were omitted, such as the medial *yā'* in الرحيم and the final *nūn* in الرحمان intentionally by the artisan just to fit available spaces in the writing frame.

For the front of the small panel [FIGURE 4F], the reading of the words in the right section of the panel is somehow problematic. The words are hardly readable. However, I can assume that they can be read as the names محمد and the caliphs عمر – عثمان – علي, from the upper right to the upper left, then lower right and lower left. Here, the direction of the letters starts counter-clockwise from the upper right to the upper left, then lower left and lastly to the lower right.

The previous inscription is hard to read. The names of the rightly guided caliphs could be the estimated interpretation of this reading as they were found in the Mamluk buildings, as seen in the neck of the dome of al-Turba al-Sultāniyah¹¹⁵. So, the names of the caliphs are shown in the Mamluk buildings. The estimated reading of this inscription is the names of Muḥammad (PBUH) and the four caliphs. However, the names of Ali علي and Abū Bakr were omitted, perhaps by the artisan, to fit some spaces in the rectangular frame. The table below shows the estimated reading and analysis for the letters. [TABLE.5]

¹¹⁵ ' ABD AL-HALĪM 1991 a: PL.43-44.

Word	Estimated interpretation
 <p>Initial Mim</p> <p>Medial ḥā'</p> <p>Medial mīm</p> <p>Final dāl</p>	<p>The probable reading of this name is Muḥammad محمد according to the slight presence of the initial <i>mīm</i>, the medial <i>ḥā'</i>, the medial <i>mīm</i> and the final letter <i>dāl</i>. The medial <i>ḥā'</i> could be written in this form intentionally by the artisan to fit the available space for writing, or it could be mistakenly written. [FIGURE 4F]</p>
 <p>Initial 'Ayn</p> <p>Medial Mīm</p> <p>Singular <i>wāw</i> Conjunction</p>	<p>The probable reading of this word is 'Umar عمر, From right to left, starting with the initial 'Ayn, medial <i>mīm</i>, and the final <i>rā'</i> in the form of an elongated vertical stroke. It was not applied in its ordinary form and was put in this way to save space. The conjunction <i>wāw</i> is attached to the final <i>rā'</i> could be the artisan's attempt to fill in some space inside the frame, or the artisan mistakenly wrote it this way. [FIGURE 4F]</p>
 <p>Initial 'Ayn</p> <p>Medial <i>tā'</i></p> <p>Medial Mīm</p> <p>Final <i>alif</i></p> <p>Singular <i>wāw</i> Conjunction</p>	<p>The possible reading of this word is عثمان عثمان the third caliph of Islam. The initial 'Ayn is obvious, like a square opened from the left side. The medial <i>tā'</i> is clearly shown in its ordinary form. The medial <i>mīm</i> is shown like a square with its final completion moved downwards to the final <i>alif</i>. The final <i>alif</i> is curving downwards to fit spaces according to the direction of the word. The <i>wāw</i> conjunction is shown before the word as it is attached to it to be عثمان و as seen in the previous word عمر و [FIGURE 4F]</p>
 <p>the final <i>nūn</i> in <i>Uṭmān</i></p> <p>The conjunction <i>wāw</i> was supposed to be followed by the name of the last caliph 'Ali علي</p>	<p>The possible reading of this word is the completion of the final <i>nūn</i> in <i>Uṭmān</i> عثمان possibly followed by the conjunction <i>wāw</i> and it is supposed to be the beginning of the word علي. However, the artisan didn't find enough space for completing the writing. He also omitted writing the name of Abū-Bakr أبو بكر in order to fit space in the frame. [FIGURE 4F]</p>

[TABLE 5]:Done by researcher

The names of the four caliphs were used in the architectural edifices outside Iran, especially in a stone funerary stela belonging to the Mosque of al-Aliwiyah in Ghazna 451-494AH/1059-1099AD and in the mihrab of al-Nūrī Mosque 568AH/1172AD¹¹⁶. In the Mamluk and late Mamluk eras, the names of the four caliphs could be normally seen in the arts and architecture as a way of venerating the four caliphs of Islam. The idea of inscribing the names of the four caliphs of Islam became one of the formulas in the Mamluk monuments, as seen in the flanks of the entrance in the Madrasah of Sultan Hasan from the Bahri Mamluk era¹¹⁷ and the drum of al-Turba al-Sultaniyah¹¹⁸.

[FIGURE 5/A, 5/B] Inscribed wooden lattice window preserved in Benaki Museum–Athena

Alphabetic Analysis

Letter	Isolated	Initial	Medial	Final
<i>alif</i>				└
<i>Bā'</i>		└ └		
<i>Ḥā'</i>			└ └	
<i>Dāl</i>	└			
<i>Sīn</i>			└ └	
<i>Lām</i>			└ └	
<i>Mīm</i>		└		└
<i>Nūn</i>			└ └	└
<i>hā'</i>		└		
<i>wāw</i>			└ └	
<i>Lām alif</i>				└ └
<i>yā'</i>			└ └	

[TABLE 6]: Done by the Researcher

¹¹⁶ SAKKAL 2010: FIGS. 1.5/a,b.

¹¹⁷ ABD AL-ḤALĪM 1991 a: PL.44.

¹¹⁸ ABD AL-ḤALĪM 1991 a: PL.47.

The inscriptions [FIGURE 5B] were written in a rectangular wooden screen *mašrabiyyah* in assembling work. The panel is framed with a wood frame. The type of script is rectangle Kufic, and the words are read from up to down.

The isolated letter *alif* ألف in ادخلوها is shown as a normal model in the early Mamluk examples. Also, it is shown in the late Mamluk examples as seen in the panels beside the mihrab of the Ḥānqāḥ of sultan al-Ġawrī¹¹⁹. The initial letter *bā'* باء in بسلام is represented as a vertical stroke perpendicular to a horizontal line. The dot was put underneath. This form of letters could be traced in the early Islamic prototypes, as seen in the core of the mihrab of al-Nuri Mosque in Mūsīl 568AH/1172AD¹²⁰. On the other hand, the letter is shown in Iraqi models in two marble panels discovered in Baġdād¹²¹. The isolated *dāl* ادخلوها is represented in its regular form like two horizontal strokes intersected by vertical lines.

The medial letter *sīn* in بسلام is shown in its traditional form. This model was shown in the early Mamluk examples¹²². It is represented in the form of three vertical strokes perpendicular to a horizontal line. This form was also shown in the early Iranian models of inscriptions, especially in the core of the mihrab of the Mosque of Ashtarkān¹²³. The medial *lām* in ادخلوها takes the form of a vertical stroke perpendicular to the rest of the letter *ḥā'*. This form was not changed in the previous models.

The letter *mīm* here is shown in two forms: The first, i.e., the final *mīm* in بسلام, is shown like a square with a straight-line perpendicular to an elongated vertical stroke. The second is the initial *mīm* in آمنين, which takes the form of a square connected to a horizontal stroke. It is shown in its ordinary form, as seen in most of the models of the Bahary and late Mamluk inscriptions¹²⁴. The letter *nūn* is shown in two forms. The first is the medial *nūn* in آمنين, which is shown in its normal form of two vertical strokes perpendicular to a straight line, and its dot is shown above. The second is the final *nūn* in the same word in the form of a half square on a lower level than the preceding letters, while its dot is shown above it¹²⁵. The initial *ḥā'* in the word ادخلوها is shown as two squares tangent above each

¹¹⁹ ṢALĀḤ AL-DĪN 2007: 272, FIG.244.

¹²⁰ GRASSI 2013: FIG.3.

¹²¹ Two marble slabs were discovered by C. Niebuhr in Kufa during the mission of 1833 and published in 1780. He announced that he discovered many examples of this model in Baġdād. One of those pieces holds an inscription of square Kufic from the Holy Qur'an بعد من قبل ومن بعد *To Allāh belongs the command [i.e., decree] before and after* QUR'AN. XXX/4; MARCEL 1833: 227, PL.I.

¹²² 'ABD AL-ḤALĪM 1991 a: PL.39, 43-44, 47, 50.

¹²³ ṢĀFI' 2020: 106, PL.27.

¹²⁴ The initial *mīm* is shown in this form, especially in the inscriptions comprising the *ṣahādah* and the names of the prophet Muḥammad especially those found in the Mausoleum of Qalāwūn. VAN BERCHEM 1894: 139. al-Taṇbuġā al-Maridānī, Madrasah of sultan Ḥasan, the mosque of Aq Sunqur, and later in the Mosque of al-Mu'ayyad Ṣayḥ from the late Mamluk period. ROGERS BEY 1889: PLS.2,3; 'ABD AL-ḤALĪM 1991 a: PL.39, 43-44, 47, 50, 101.

¹²⁵ In the Iranian prototypes, the letter *nūn* is shown in its straight form equal to the alignment of the main line as seen in the inscriptions of the mihrab of the Mosque of Aštrakān 715-716 AH/1315AD. ṢĀFI' 2020: 113, PL.27.

other. This model of letters is shown in the Iranian inscriptions in a rectangle divided into two equal parts¹²⁶.

The final letter *wāw* in ادخلوها is shown in the form of a square creating vertical and horizontal intersected lines. This form of *wāw* resembles the early Mamluk models, as seen in the words *al-šahādah*, which once became a model in some religious buildings¹²⁷. The final letter *wāw* is not changed also in the late Mamluk models, such as the flanks of the main entrance of the Madrasah of Fayrūz al-Sāqī 803AH/1426AD¹²⁸. The final letter *lam alif* in بسلام is shown in its ordinary form, like two squares. The upper is opened on the top. The letter here is represented in the same form as the early Mamluk examples, as seen in the Maridānī Mosque [FIGURE 7] and the Madrasah of Sultan Ḥasan [FIGURES 9,10]¹²⁹. Accordingly, the form of the letter never changed in the early or late Mamluk period. The medial letter *yā'* in آمنين is shown as two vertical bars perpendicular to a straight line, and the dots underneath take the shape of a horizontal stroke¹³⁰. In the late Mamluk period, the dots of letters were frequently used. A good example is seen in the inscriptions of the tile with the name of Ġaybī al-Tawrīzī [FIGURES 2B & 2C]. In this slab, the dots were attached to the letters, especially in the letter *hā'* in ادخلوها. The dot was put over the letter. Therefore, the dots became a main characteristic of the geometric Kufic script.

After studying and making an alphabetic analysis of the artifact, a conclusive remark could be made as the invocation texts and phrases became one of the focal evolution in the contents of the texts of the late Mamluk geometric Kufic. Another important observation was that the direction of the text was not running clockwise or radically. It ran from up to down which was not usual in the Mamluk models. This scheme became one of the characteristics in late Mamluk models of the geometric Kufic script.

The previous survey of the published and unpublished objects, comprising geometric Kufic script, explored conspicuous observations and the development of the script, stated in the table below: [TABLE 7]

¹²⁶ It is clearly shown in the core of the mihrab of the Mosque of Ašhtrakān 715-716AH/1315 AD in هو as a part of the Qur'an ودين الحق رسوله بالهدى هو الذي أرسل QUR'AN. LXI/9; ŠĀFI' 2020: 114, PL.27.

¹²⁷ The *šahādah* phrases were shown mostly in marble panels in the Mosque of al-Maridānī, the Madrasah of sultan Ḥasan, the *sultāniya* dome, and the flanks of the main entrance in the Madrasah of Ġamāl al-Dīn al-Ustadār. 'ABD AL-ḤALĪM 1991 a: PL.39, 43-44, 60-61; MAJEED 2006: 209-210.

¹²⁸ 'ABD AL-ḤALĪM 1991 a: PL.80-81; A. 'ABD AL-'ĀL 2010: FIG.166.

¹²⁹ 'ABD AL-ḤALĪM 1991 a: PLS.38-39, 43.

¹³⁰ In the Iranian models, the letter *yā'* has taken the same form but without the main dots. It is shown in the main mihrab of the Mosque of Ashtarkan. ŠĀFI' 2020: PL.28.

Points of Comparative Analysis	Bahrite Mamluk inscription models	Late Mamluk inscription models Evolutionary aspects
Word formation	Singular and complete phrases were used. Singular words, like «Muḥammad», are among the earliest examples known as «mirrored inscriptions» and are found in the Mausoleum of Qalāwūn ¹³² [FIGURE 6], al-Mardānī ¹³³ [FIGURE 7], and Aq Sunqur ¹³⁴ [FIGURE 8].	The form of the phrases changed in the late Mamluk models showing two separate phrases together, such as in [FIGURES 2A&B] with the inscription عمل ابن غيبي – التوريزي. A new style of words was formed. The final <i>tā'</i> in the inscriptions of Abū -l-'Ilā [FIGURE 3B] showed the two forms of <i>tā' marbūṭah</i> and the normal letter <i>tā'</i> at the end of the word. Therefore, the word could be read as <i>بركة barakah</i> , or <i>بركت barakat</i> , possibly <i>بركت</i> by emphasizing the pronunciation and writing the final <i>ta'</i> as in the holy Qur'an. ¹³¹
Text direction	Most of the text models run clockwise as seen in the panel flanking the main entrance in the Madrasah of Sultan Ḥasan ¹³⁵ [FIGURES 9&10]. The words run from upper to lower right then lower to upper left. Repetitive words on the panel decorating the drum of <i>al-turbah al-ṣultāniyah</i> show the names of the four caliphs «محمد- أبو بكر – عمر – عثمان – علي» and are read clockwise from upper and lower right to lower and upper left. The same direction occurred in the <i>Ṣahhādah</i> phrase in a marble slab preserved in the right wall of the entrance in the Madrasah of Sultan Ḥasan [FIGURE 10], as well as the panel with the names of Muḥammad and the four caliphs in the same location at the entrance of the same Madrasah of Sultan Ḥasan ¹³⁶ [FIGURE 9].	Inside the square epigraphic panels, the words radiate from the center to the corners of the panels. This phenomenon could be seen in the marble incusted panel preserved in the Naṣir Ḥalīlī collection in London [FIGURE 1A]. The initial <i>yan</i> in علي seen in the form like the initial <i>kāf</i> [FIGURE 1B] was uncommon in Mamluk models. Due to the radiating phenomena, the artisan had to minimize some letters, like the initial <i>kāf</i> in توكلت, which is seen in the central part of the panel. Also, the final <i>tā'</i> in the same word is minimized and mixed with its three twins uniquely shown in the Mamluk models of square epigraphy. The final letter <i>yā'</i> in خالقي was also minimized by the artisan to get some space for completing the other words. It took the shape of a reversed letter «L» set in the same alignment as the square frame.

¹³¹ QUR'AN.XIX/2.

¹³² ABD AL-ḤALĪM 1991 a: PL.2.

¹³³ ABD AL-ḤALĪM 1991 a: PL.37.

¹³⁴ ABD AL-ḤALĪM 1991 a: PL.42 .

¹³⁵ ABD AL-ḤALĪM 1991 a: PL.43.

¹³⁶ ABD AL-ḤALĪM 1991 a: PL.44.

<p>Accuracy</p>	<p>The words and phrases are accurately applied with no spelling errors, such as the names of the four caliphs of Islam in <i>al-Sulṭaniyah Dome</i>, the inner flanked walls in the Madrasah of Sultan Ḥasan; the singular words like «Muḥammad» «محمد» in the Mausoleum of Qalāwūn [FIGURE 6], Ḥānqāh of Baybars al-Ġāšinkīr¹³⁷, the Mosque of al-Mardānī [FIGURE 7], and the Mosque of Āq Sunqur [FIGURE 8]; the Šahhadah and the names of the four caliphs in the flanks of the walls of the portal in the Madrasah of Sultan Ḥasan [FIGURES 9 &10].</p>	<p>The square and rectangle writings in the late Mamluk period show some spelling mistakes, such as the small plaques inlaid with gold on the battle axe bearing the name of Sultan al-Nāšir Muḥammad son of Qāyṭbāy [FIGURES 4A, B&C]. Noticeably, some words were spelled wrongly, such as the <i>basmallā</i> بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ. The word بِسْمِ has its final <i>mīm</i> omitted. The word الرَّحْمٰنِ has its medial <i>mīm</i> and <i>nūn</i> omitted, and it is written with <i>alif</i> not as the Holy Qur'an. The word الرَّحِیْمِ also doesn't have its final <i>mīm</i>. The letter forms and the formation of some words are deformed, making them hardly readable. I presented a possible reading of the letters in the front small-incrusted panel of the axe [FIGURE 4D]. The reading of this panel could be عمر-وعثمان محمد- as in the table mentioned above. Some deformities could be seen, such as the medial <i>ḥa'</i> in the word محمد, which is shown as a straight line to fit some space in the panel. The conjunction <i>wāw</i> is shown attached to the word وعمر and عثمان, while the final <i>nūn</i> is shown on the opposite side of the panel. The words علي and ابو بكر are omitted from the text. This inscription proved that the artisan made some errors and mistakes to fit the available space for writing. On the other hand, the script might be applied by an artisan instead of a calligrapher, who was not professional in reading and writing the geometric Kufic writings.</p>
<p>Theory of filling spaces</p>	<p>Through observation, the words and phrases were written without filling the spaces by signs and marks or even decorative elements. To fill the spaces, the artisan sometimes repeated the words and the phrases, such as the word "Muḥammad" in the Mausoleum of Qalawūn</p>	<p>In the Benaki Museum's panel [FIGURE 5A&B], some considerable changes occurred in the forms and styles of the letters. Firstly, the appearance of marks on letters like the <i>sukūn</i> on the isolated <i>dāl</i> of اذْخُلُوْهَا in the form of a small square is miss-placed here and shown over the final <i>wāw</i>. The <i>fatha</i>, as a long vowel over the initial <i>ḥā'</i>, is also miss-placed above the initial <i>ḥā'</i>. The <i>damma</i> is</p>

¹³⁷ ' ABD AL-ḤALĪM 1991 a: PL.36.

	<p>[FIGURE 6], al-Mardānī, and Aq Sunqur, as well as the Ṣahhādah surrounding the drum of the dome of <i>al-Sultāniyah</i>, and the back of the pulpit of the mosque of Āq Sunqur [FIGURE 8]</p> <p>It is observed also that dots, marks and signs were not seen in the Bahrite Mamluk models.</p>	<p>seen like an overturned «L» shape over the final wāw. Nevertheless, there are originally two signs above the initial ḥā' and the medial lām in the Qur'an. The short vowel sign <i>kasrah</i> in the initial bā' in بِسْمِ اللَّهِ is represented in the form of a horizontal rectangle under the initial bā'. It is the same as the long vowel <i>fatha</i> above the medial sīn. The Nunation (three vowel diacritics) <i>tanwīn</i> under the final mīm is shown in the same form of two rectangular lines, with the second one miss-placed under the next word. The long sequenced vowel <i>madd</i> in the word آمِينَ is seen in the form of a long rectangle above the isolated <i>alif</i> and <i>mīm</i>. The short vowel <i>kasrah</i> takes the shape of a small horizontal bar under the initial <i>mīm</i>. The same is repeated two times under the medial <i>nūn</i>, and <i>yā'</i> and is miss-placed under the final <i>nūn</i>. The long vowel <i>fatha</i> appears above the final <i>nūn</i> taking the shape of a horizontal line. The same characteristics occurred in the wooden panel in the pulpit of the mosque of Abū-l-Ilā [FIGURES 3B] Secondly, it is clear that the dots and marks were added simply to fill the empty spaces in the composition, rather than being vowel marks, such as the dots that were added on the letters of the square Kufic panel in the tile of Ġaybī [FIGURES 2B&C]& [TABLE 8], the wooden slab on the top of the pulpit in the Mosque of Abū-l-Ilā at Būlāq [FIGURE 3B], and the wooden lattice window [FIGURE 5B] &[TABLE 8].</p>
<p>Content</p>	<p>In the Bahrite period, religious contents were observed, such as the word of the Prophet «Muḥammad» in the Mausoleum of Qalāwūn [FIGURE 6], al-Mardānī [FIGURE 7], Aq Sunqur [FIGURE 8]. The names of the rightly guided caliphs were seen in the <i>al-sultāniyah dome</i>, and the flanks of the portal of the Madrasah of Sultan Ḥasan [FIGURE 9]. The</p>	<p>The artifacts discussed in this study bear new phases of contents in the late Mamluk models. According to the researcher's analysis, it was only during the Circassian period that we could see the name of artisans written in square Kufic script. A good example is a ceramic tile bearing the name of Ibn Ġaibī al-Tawrīzī [FIGURES 2A&C]; a phenomenon that demonstrated a distinct development of the square writings of the late Mamluk period. Verses from the Qur'an are also found in the late</p>

	<p>Šahhādah is seen in the Mosque of al-Maridānī [FIGURE 7] and the entrance of the Madrasah of Sultan Ḥasan. [FIGURE 10].</p>	<p>Mamluk artifacts, as seen in the Mosque of al-Mu’ayyad and the wooden lattice window of Benaki Museum [FIGURE 5B]</p> <p>The Sufi words showing blessing and invocation could be attributed to the late Mamluk models of writing. They are mainly seen in a wooden panel inlaid with ivory on the top of the pulpit in the Mosque of Abū-l-‘Ilā at Būlāq [FIGURE 3B].</p> <p>The first possible reading of the second part of the text shows words that express blessings and sufi words derived from Qur’anic verses (؟) <i>وَسَلِّمُوا تَسْلِيمًا صدق الله العظيم يا قن(؟) من بركة حزن لقمان(؟) Salute him with all respect-God Almighty has spoken the truth. I bear certainty from the blessing of the sorrow of Luqman.</i> The other possible reading of the second part of the phrase could be (؟) <i>من نافل(؟) بركة حرب المعار(؟) who gained the blessing of the wars of (?).</i> In any case, the two possible readings should be taken into consideration. To sum up, these types of phrases could be considered Sufi or invocative words, which were unusual in the Mamluk or late Mamluk square Kufic models. Moreover, this panel was found on a minbar of a mosque related to Šayḥ Abū-l-‘Ilā who was a Sufi and a venerated man in the late Mamluk period¹³⁸.</p>
--	--	---

¹³⁸ For details, see note 32. As mentioned by al-Maqrīzī, the Mamluks always venerated the Sufis and the great imams of Islam. In 227AH, Šams al-Din Qarāsunqur built his grave adjoining the tombs of the Sufis in the necropolis of Bāb al-Naṣr. He constructed a *sabīl*, a mosque, and a small basin beside the grave al-Šufiyah. The emir Mas’ūd ibn Ḥutayr built a grave adjoining the tombs of Sufis. Sayf al-Din Kukāy and Ṭajār al-Dawādār did the same. Moreover, the emir Ṭaštumur al-Sāqī renewed the graves and built tombs adjoining the graves of Sufis. In the late Mamluk era, emir Yūnus al-Dawādār also renewed the grave of the Sufis, and emir Qijmās built another grave beside the tomb of Yūnus al-Dawādār. AL-MAQRĪZĪ 2003: vol.4, 918-920.

<p>Technique</p>	<p>Carving technique on stones can be shown on the external drum of <i>al-Sulṭāniyah dome</i>, showing the three-time repetitive word «Muḥammad» and the names of the four rightly-guided caliphs. Marble incrustation was applied to the majority of the early Mamluk examples as seen in the Mausoleum of Qalāwūn [FIGURE 6], the Mosque of al-Mardānī [FIGURE 7] the Mosque of Aq Sunqur [FIGURE 7], and the Madrasah of Sultan Ḥasan. [FIGURES 9&10]</p>	<p>For the first time, incrustation or inlay¹³⁹ on metalwork was applied in geometric writings aside from the marble incrustation process. The inlay process was applied on the battle axe [FIGURES 4A,B&C]. The square writings served an ornamental purpose as well, a phenomenon showing that the evolution of geometric scripts in the late Mamluk period was used for the first time to inlay the square writings on artifacts. Alternatively, one can assume that the art of incrustation in the late Mamluk period declined, especially from the time of Sultan al-Aṣraf Ṣābān to the end of the reign of al-Zāhir Barqūq¹⁴⁰. The economic situations was enhanced during the reign of Sultan Qāyṭbāy, especially during his financial reforms in the army and the currency, as well as his successful wars¹⁴¹ and ability to overcome many economic hardships. This development led to a revival in the arts, such as metalwork, manuscript illumination, and carpet weaving¹⁴². A decline began under the reign of al-Nāsir Muḥammad ibn Qāyṭbāy. During his time, chaos and disturbance spread in Egypt. Struggles took place between the Mamluks: <i>urbān</i> and <i>ḡulbān</i>. In Ṣāban 903AH/ March1497AD, the water of the river Nile decreased, causing famines and plague, which in turn increased prices¹⁴³. Despite these circumstances, the arts of inlaying remained prosperous in the late Mamluk period.</p>
-------------------------	--	---

[TABLE. 7]: Done by the Researcher








¹³⁹In Arabic, *takfīt* or *taṭ'īm* is a process of enriching a metal object by overlaying parts of its surface with patterns formed from metal wires or sheets different in composition and color from the ground material of the artifact. Although this craft is of considerable antiquity, it did not become popular in Islam until the middle of the twelfth century. BAER 1983: 4-5. The inlay technique was introduced into Egypt and Syria in the thirteenth century by a group of metalworkers bearing the nisba «al-Mawsili»; all trained in Mosul (northern Iraq) or in the Mosul style of inlay. WARD 2004: 59.

¹⁴⁰James.W. Allan noted that between 1360 and the accession of Barquq in 1382, the Mamluk metalworking industry suffered a decline in quantity, not quality. He also stated the writing of al-Maqrīzī, which said that the decline appeared in the Mamluk metalworking of this period. ALLAN 1984: 85-94.

¹⁴¹ IBN IYAS 1935: vol.3, 317-324; DAISUKE 2009: 27-51.

¹⁴² EL.BINDARI 2015: 71.

¹⁴³ IBN IYAS 1935: vol.3, 326-392.

<i>Fatha</i>	<i>ḍamma</i>	<i>kasrah</i>	<i>Sukūn</i>	<i>tanwīn</i>	<i>Šadda</i>	<i>madd</i>
						

[TABLE 8]:The form of the marks of geometric letters in the late Mamluk models. Done by the researcher

VI-CONCLUSION

Geometric Kufic script on late Mamluk artifacts underwent a new phase of development, demonstrating a wide range of characteristics. The analysis of the present study made the following conclusions:

- The style and shapes of the words and letters evolved on late Mamluk models, such as the geometric inscriptions in the tile of Ibn Ġaybī al-Tawrīzī [FIGURES 2A&B], showing a sentence with two separate words. This style of making square frames and applying square writing was mainly an Iranian effect that first occurred in the late Mamluk models of writing.
- The letter forms also evolved, particularly in the geometric inscriptions of the minbar of Abū-l-'Ilā [FIGURE 3B] when the final *tā'* in *برکت* could be written in two ways, either *برکة* or *برکت*, like that in the Holy Qur'an.
- On the wooden panel at the Benaki Museum, the calligrapher filled the spaces using marks and signs over letters and added dots [FIGURES 5A&B] [TABLE 8]. The same was applied to the wooden panel of the minbar of Abū-l-'Ilā [FIGURES 3B].
- The phrases' direction also evolved, sometimes radiating from the center towards the panel's corners, such as the marble slab at the Nāṣir Khalili collection in London. (FIGURES.1/A, 1/B).
- Spelling errors could be observed on geometric Kufic texts belonging to late Mamluk models, such as the small incusted band of the battle axe of al-Nāṣir Muḥammad ibn Qāyṭbāy [FIGURES 4D& 4F]. These errors indicate that the phrase was applied by a craftsman, not a calligrapher emphasizing a decorative scheme rather than an epigraphic context.
- New words were added to texts. Sufi phrases were added to religious contexts, such as on the wooden panel of the minbar of Abū-l-'Ilā [FIGURES 3A&B]. Names of the artisans also appeared on late Mamluk models (e.g., Ibn Ġaybī al-Tawrīzī) [FIGURE 2A-C]. Verses of the Qur'an were also added to the late Mamluk artifacts, as seen in the Mosque of al-Mu'ayyad and the wooden lattice window from Benaki Museum [FIGURES 5 A&B].

- It is possible to see how the geometric Kufic on late Mamluk models (e.g., a battle axe with the name of al-Nāṣir Muḥammad Ibn Qāyṭbāy [FIGURE 4A-C] that was applied by an inlay *takfīt* process for the first time, side by side to the marble incrustation and carving processes *ḥafr wa tanzīl*. Generally speaking, geometric Kufic calligraphy started to be used on late Mamluk arts and architectural panels.

VII. ACKNOWLEDGMENT

I wish to express my deepest thanks to the curators of the Museum of Islamic Art in Cairo for their great help and assistance. I also wish to express my thanks and gratitude to Greta Vasileiou, the head of the Islamic Antiquities Department at the Benaki Museum of Athena, for her generous assistance. I have also to express my deepest regards to Katherine Blanchard, the keeper of the Near East Collections at the University of Pennsylvania, and Alessandro Pezzati, the senior archivist in the Pennsylvania Museum, for helping me and responding to my inquiries. Lastly, I would like to express my deepest gratitude to the Southern Cairo's Architecture Office employees for their assistance and care.

BIBLIOGRAPHY

- 'ABD AL-ĀL. A.: «al-Nuqūš al-Kitābiyah al-Kūfiyah 'ala al-'Amā'ir al-Islāmīyah fi Miṣr min Bidāyat al-'Aṣr al-Ayyūbī wa ḥatta Nahāyat al-'Aṣr al-'Uṭmānī (567-1220AH/1171-1805AD), Dirāsah Āṭāriyah Fanniyah» =«The Kufic Inscriptions on Islamic Monuments in Egypt from the Beginning of the Ayyubid Period until the End of the Ottoman Period 567-1220AH/1171-1805AD, An Archaeological and Artistic Study», PhD Thesis, Faculty of Arts, Department of Islamic Archaeology, Suhāg University, 2010.
- 'ABD AL-ḤALĪM. S.: *al-Ḥaṭṭ al-Kūfi al-Handasī al-Muraba'*, ḥilya Mi'māriyah bi Munša'āt al-Mamālik fi-l-Qāhirah, =*The Geometric Quadrangular Kufic, An Archaeological Molding on the Mamluk Constructions of Cairo*, Alexandria (Mu'asassat Šabāb al-Ġāmi'ah) 1991.
- 'ABD AL-ḤALĪM. S.: «Adwā' 'alā al-Ḥaṭṭ al-Kūfi al-Handasī al-Muraba' wa Nuqūshuh bi ḡāmi' al-Mu'ayyad Šayḥ bi-l-Qāhirah» = «A Spot Light on the Geometric Quadrangular Kufic in the Mosque of al-Mu'ayyad Šayḥ in Cairo», *Periodical of the Faculty of Arts, Mansūrah University*, 1991, 3-93.
- 'ABD AL-RĀZIQ.A.: *al-Funūn al-Islāmīyah fi-l-'asrayin al-Ayyūbi wa-l-Mamlūkī* =*Islamic Arts in the Ayyubid and Mamluk Period*, Cairo (Dār al-Ḥarīrī lil ṭibā'ah) 2007.
- 'ABD AL-RĀZIQ.A.: *al-'Imārah al-Islāmīyah fi Miṣr Munḍu al-Faṭḥ al-'Arabī ḥata Nahāyat al-'Asr al-Mamlūkī* =*Islamic Architecture in Egypt from the Arab Conquest until the end of the Mamluk Era*, Cairo (Dār al-Fikr al-'Arabī) 2009.
- 'ABD AL-WAHAB Ḥ.: *Tariḥ al-Masāḡid al-Aṭāriyah* =*History of the Archaeological Mosques*, Cairo (Dār al-Kutub al-Miṣriyah) 1948.
- 'ABD AL-WAHAB Ḥ.: «Tawqī'āt al-Šunna' 'alā Aṭār Miṣr al-Islāmīyah» =«The Craftsmen's Signatures on the Monuments of Islamic Egypt», *BIE XXXVI L'Egypte*, 1953- 54, 533-558.
- ABŪ SEIF, D. B. : *Cairo of the Mamluks*, Cairo (The American University in Cairo Press) 2007.
- «al-Maridani», in: <http://www.islamic-art.org/PhotoArchive/DisplayImages.asp?photoid=972&qualityID=5>
Accessed on 20/4/2022
- ALLAN, J. W.: «Sha'ban, Barquq, and the Decline of the Mamluk Metalworking Industry » *Muqarnas: An Annual on Islamic Art and Architecture* 2, 1984, 85-94.
- ASHOUR.A.F. : «Islamic Architectural Heritage. Mashrabiya», *Islamic Heritage Architecture and Art* 2, WIT Transactions on The Built Environment, University of Sharjah, United Arab Emirates, vol. 177, 2018, 245-253.
- BADR. M.M.: «Aṭar al-Ḥaḍarah al-Sulḡūqīyah fi Duwal Šarq al-'ālam al-Islāmī 'alā-l-Ḥaḍaratayn al-Ayyūbiyah wa-l-mamlūkiyah» = «The Impact of the Seljuk Civilization in the Near East on the Ayyubid and Mamluk Civilizations», vol.2, Cairo (Zahrā' al-Šarq Press) 2002.
- BAER. E. : *Metalwork in Medieval Islamic Art*, New York (State University of New York Press) 1983.
- «Battle axe of a member of the Sultan's Guard», in: http://islamicart.museumwnf.org/database_item.php?id=object;EPM;at;Mus22;20;en
Accessed on 20/04/2022
- EL.BINDARI. A.: *Crowds and Sultan, Urban Protest in Late Medieval Egypt and Syria*, Cairo (The American University in Cairo Press) 2015.
- CRESWELL. K.A. C.: *Moslem Architecture of Egypt*, vol. 2, New York (Hacker Art Books) 1978.
- CLÉVENOT. D.: *Splendors of Islam*, New York (Vendome Press) 2000.
- DAISUKE. I.: «The Financial Reforms of Sultan Qāytbāy», *Mamluk Studies Review*, Middle East Documentation Center (MEDOC), The University of Chicago, vol.13, N°.1, 2009 : 27-50.
- GRASSI .V. : «The Never-Ending Story of The Chinese Influence on the Origin of Square Kufic Script», In *Orientalia Lovaniensia Analecta , Islam and Globalization, Historical and Contemporary Perspectives*,

Proceedings of the 25th Congress of L'Union Européenne des Arabisants et Islamisants, Leuven – Paris – Walpole, MA, 2013, 555-580.

ĞUM'AH. I. : *Dirāsah fi Taṭawur al-Kitābāt al-Kūfiyah 'ala al-Aḥğār fi al-Qurūn al-Ḥamsah al-ūla min al-Hiğrah* = *A Study on the Evolution of the Kufic Inscriptions on the Stones in the First Five Hijri Centuries*, Cairo (Dār al-Fikr al-'Arabī) 1969.

HAUTECOEUR. L, WIET. G. : *Les Mosquées du Caire*, 2vols, Paris (Librairie Ernest Leroux) 1932.

HERZ BEY. M. : *A Descriptive Catalogue of the Objects Exhibited in the National Museum of Arab Arts*, Cairo (National Printing Department)1907.

IBN IYĀS. M.A.: «*Badā'i' al-Zuhūr fi Waqā'i' al-Duhūr* = *The Wonders of the Flowers through the Events of Times*, Released by Paul Kahle, and Muḥammad Mustafa Ziyada, vol.3 Istanbul (Staatsdruckerei) 1936.

IBRĀHĪM. A, «*Waṭīqat al-Amīr Aḥūr Qarāquğā al-Ḥasanī*» = «*The Endowment Deed of Emir Aḥūr "Master of the Sultan's Horse's Stables" Qarāquğā al-Ḥasanī*», *Bulletin of the Faculty of Arts, Cairo University*, vol. XII, part II, Cairo, 1950, 200-210.

JENKINS. M. «*Mamluk Underglaze-Painted Pottery: Foundations for Future Study*» *Muqarnas* 2, 1984, 95–114.

LANE POOLE. S. : *The Art of the Saracens in Egypt*, London (Chapman and Hall. Ltd) 1886.

LEVENSON. J. A.(ed.): *Circa 1492: Art in the Age of Exploration*, Washington(Yale University Press, New Haven and London) 1991.

MAJEED T.: «*A Phenomenon of the Square Kufic Script: The Cases of Ilkhanid and Iṣfahān and the Baḥrī Mamluk Cairo*», PhD Thesis, Faculty of Oriental Studies University of Oxford, 2006.

MAJEED T.: «*Ma'qili Inscriptions on the Great Mosque of Mardin: Stylistic and Epigraphic Contexts*», in *The Writing on the Wall: Calligraphy in Islamic Architecture*, MOHAMMAD GHARIPOUR, IRVIN CEMIL SCHICK(eds.), Edinburgh (Edinburgh University Press) 2013, 363-378.

AL-MAQRĪZĪ. T.A.: *al-Mawa'iz wa-l-'Iṭibār fi Ḍikr al-Ḥiṭaṭ wa-l-Āṭār* = *Homilies, and Considerations through the Mentioning of Streets and Monuments*, Released by Ayman Fu'ād Sayid, vol.4, London, 2003.

MARCEL. M.J. : «*Notice sur Quelques Inscriptions Koufiques d'un Genre Singulier*», *Journal Asiatique*, Septembre, France, 1833, 227-232.

JENKINS.M:«*Mamluk Underglaze-Painted Pottery: Foundations for Future Study*» *Muqarnas* 2, 1984, 95-114.

MUNTASIR.D.M.: «*Monumental Quranic Inscriptions on Cairene Religious Monuments*», MA Thesis, The American University in Cairo, 2000.

OMAN. G.: «*IL "Cufico Quadrato": Tentativo di Definizione delle Tre Varieta Sinora Riscontrate*», *Quaderni di Studi Arabi, Istituto per l'Oriente C. A. Nallino*, vol.16, 1998,69-88.

RAMADAN. F.A.: *Ġāmi' al-Mu'ayyad Ṣayḥ* = *The Mosque of al-Mu'ayyad Ṣayḥ*, Alexandria (Mu'assasat Ṣabāb al-Ġāmi' ah lil tibā'ah) 1994.

«*Rectangular panel with coloured marble inlay around central square-kufic inscription*», in: <https://www.khalilicollections.org/collections/islamic-art/rectangular-panel-with-coloured-marble-inlay-around-central-square-kufic-inscription-mxd-100/> Accessed on 22/04/2022

ROGERS BEY (M.E.T) . : «*Mémoire sur eCertaines Inscriptions en Caractères Coufique Cares*», *BIE*, Deuxième Série, Le Caire, Séance de Décembre, 1881, 100-106.

al-Ṣa' rānī. A *al-Ṭabaqāt al-Kubra* = *The Great Classes*, vol.2, Egypt, N.D.

ṢĀFI'. A. S.: «*al-Ḥaṭṭ al-Kūfi al-Handasī 'ala al-'Amā'ir al-Dīniyah fi Irān munḍu Awāḥir 'Aṣr al-Dawlah al-Suljūqīyah ḥata Nahāyat 'Aṣr al-Dawlah al-Timūriyah= al-Ṣakl wa-l-Maḍmūn 485-912AH/1092-1506AD= The Geometric Kufic Script on the Religious Buildings of Iran from the End of the Seljuk Reign until the End of the Timurid Dynasty Forms and Contents 485-912AH/1092-1506AD*», MA Thesise, Faculty of Arts, Alexandria University, 2020.

THE GEOMETRIC KUFIC INSCRIPTIONS ON THE LATE MAMLUK ARCHITECTURE AND ARTIFACTS: A NEW
PERSPECTIVE THROUGH SOME ARTIFACTS

- SAKKAL.M.: «Mabādi' al-Ḥaṭṭ al-Kūfī al-Tarbī'ī» =The Principals of the Quadrangular Kufic, *Ḥurūf 'Arabiyah*, N°.13, 2004: 4-11
- SAKKAL.M.: «Square Kufic Calligraphy in Modern Art, Transmission and Transformation», PhD Thesis, University of Washington, 2010.
- SAKKAL.M.: «Square Kufic Tessellations», *ABGAD* 14/14, 2019,40-68.
- SALĀḤ AL-DĪN. W.A.: «The Marble Mihrābs under the Circassian Mamluks in Islamic Egypt», MA Thesis, Faculty of Arts, 'Ain Šams University, Cairo, 2007.
- SCHIMMEL. A.M. : *Calligraphy and Islamic Culture*, London (I.B.Tauris & Co. Ltd) 1990.
- AL-ŠĪḤAH.A.A.:«al-Ḥazzaf Ġaybī al-Tawrīzī al-Qarn 8-9AH/14-15AD, Iṭlālāh Ġadīdah fī Daw' Tawqī' Yunšar li Awal Marrah»«The Ceramist, Ġaybī al-Tawrīzī 8-9AH/14-15AD Centuries A New Perspective Through a First time Published Signature», *Adumatu* 27, January, 2013,63-67.
- TALĀAT. U. : «Some Aspects of the Artistic Relations Between Egypt and the Countries of the Silk Roads A Study on Pottery, Proceedings of the Nara Symposium For Digital Silk Roads», *National Institute of Informatics NII, Organized by UNESCO*, December 10-12, 2003, Nara Ken, New Public Hall, 185-193.
- VAN BERCHEM. MAX.: «*Materiaux Pour un Corpus inscriptionum Arabicarum*», Première Partie, Egypte, Paris (Ernest Leroux) 1894.
- WARD. R. : «Brass, Gold and Silver from Mamluk Egypt: Metal Vessels Made for Sultan Al-Nāšir Muḥammad». A Memorial Lecture for Mark Zebrowski, *Journal of the Royal Asiatic Society (JRAS)* 14/1, Cambridge University Press, 2004, 59-73.
- YŪSUF. A. A, «Ġaybī al-Tawrīzī» in *al-Qahirah, tārihuha, Atāriha, wa Funūnha = Ġaybī al-Tawrīzī, in Cairo, its History, Monuments and Arts*, Cairo, 1970.
- ZAMBAUR. E.V.: *al-Uṣrāt al-Ḥākimah fī al-Tārīḥ al-Islāmī =The Ruling Dynasties in Islamic History*, Bayrūt (Dār al-Rā'id al-'Arabī) 1980.

2023

DIAGNOSIS OF THE CURRENT STATE OF THE GRANITE COLUMNS REMNANTS AND SUGGESTING THE TREATMENT METHODS IN THE AREA OF MERIT AMUN, AKHMIM, EGYPT

Dr. Elashmawy Abd -Elkareem Ahmed

Conservation department, Faculty of Archaeology, South Valley Univ., Qena, Egypt,
elashmawyabdelkareem@yahoo.com

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Ahmed, Dr. Elashmawy Abd -Elkareem (2023) "DIAGNOSIS OF THE CURRENT STATE OF THE GRANITE COLUMNS REMNANTS AND SUGGESTING THE TREATMENT METHODS IN THE AREA OF MERIT AMUN, AKHMIM, EGYPT," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 10. Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/10>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in *Journal of the General Union of Arab Archaeologists* by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

**DIAGNOSIS OF THE CURRENT STATE OF THE GRANITE COLUMNS REMNANTS AND
SUGGESTING THE TREATMENT METHODS
[IN THE AREA OF MERIT AMUN, AKHMIM, EGYPT]**

BY

Elashmawy Abd-Elkareem

Assistant Professor at Department of Conservation, Faculty of Archaeology, South Valley University,
Egypt.

ABSTRACT

[AR] تشخيص الحالة الحالية لأعمدة الجرانيت المتبقية وطرق العلاج المقترحة في منطقة ميريت آمون ، أخميم ، مصر
تم استخدام الجرانيت في المسلات والمباني والتمائيل في مصر القديمة ، وتمت دراسة أعمدة الجرانيت باستخدام [PLM] و [XRD] و [XRF] و [SEM] ، وأظهرت نتائج الدراسة أن المياه الأرضية الممزوجة بمياه الصرف الصحي تسببت في تلف الجرانيت، ويعتمد الضرر أيضاً على قدرة المياه الأرضية على الارتفاع من خلال مسام وشقوق الجرانيت نتيجة عوامل التلف السابقة وعند الارتفاع يكون منسوب المياه الجوفية -0.5 م والنشاط الإشعاعي في الهواء والماء والتربة والصخور وأشعة الشمس في الموقع الأثري له دور مهم في التلف ، بالإضافة إلى النشاط الإشعاعي الناتج عن الاستخدامات في الحياة مما يزيد من تأثير النشاط الإشعاعي المؤثر على تلف الحبيبات المعدنية للجرانيت في الموقع ، والتي تؤدي إلى تسريع عمليات التلف ، كما تمت دراسة المواد الموصى بها والتي يمكن استخدامها لتقوية ومعالجة الجرانيت.

[EN] Granite was used in obelisks, buildings, and statues in ancient Egypt. Granite columns were studied using [PLM], [XRD], [XRF] and [SEM]. The results of the study showed that the ground water mixed with sewage water caused granite damage, which also depends on the ability of ground water to rise through the pores and cracks of the granite as a result of previous damage factors and rise the ground water level is -0.5 m. The radioactivity in the air, water, soil, rocks and sunlight at the archaeological site has an important role in the damage, in addition to the radioactivity resulting from the uses in life, which increases the effect of the radioactivity affecting the mineral grains of the granite at the study site, which leads to acceleration of deterioration processes. Additionally, the recommended materials that can be used to consolidate and treat granite were studied.

KEYWORDS: Granite, Merit Amun, columns, Radioactive, electrical methods, decay, treatment

I. INTRODUCTION

Granite, gabbro, diorite, syenite, diorite, and basalt are primary igneous rocks resulting of cool magma, and are classified according to their percentage of silica content. Gabbro and basalt are the largest known basal rocks. The grains of the Aswan granite are described as very coarse to coarse-grained; and the minerals of granite are quartz, microcline¹, biotite and oligoclase, as well as small proportions of hornblende and minor minerals, mostly apatite, sphene, zircon, and iron oxides. Granite is located in the Shallal area to the south of Aswan, and there are other quarries along the eastern bank of the Nile, between Aswan and Sohail Island².

The level of silicon dioxide content in igneous acidic rocks is around 65% to 75% in granite, in intermediate rocks it is in between 52% to 65%, whereas cyanite and diorite group, and base rock is 45% to 52%, as the gabbro group³.

The content of uranium helps in studying the geochemical behavior, yet it is almost impossible to do this in some cases, especially if the rocks are affected by infiltration. In a later stage of hydrothermal activity, some of the uranium will be removed by humidity, whereas some amount is removed through weathering due to the heterogeneous distribution of uranium in acidic rocks such as granite⁴.

Recently, attention has been paid to the level of radioactivity resulting from natural granite used in some structural elements, such as roofs and tiles⁵. Some rocks have a small percentage of radioactivity due to minerals that contain radioactive elements, such as uranium, thorium and potassium-40, and because granite contains some of these minerals, it gives a greater percentage of radioactivity compared to other rocks, as all granite minerals contain some of the radioactive minerals, for example, white or red feldspar contain potassium-40, biotite and black hornblende contain potassium-40, uranium and thorium with some small percentages such as zircon, and apatite on uranium and thorium⁶ [TABLE 1].

Radio-element	The Concentration 2.	The Radiation -type 3.	The Radiation- level. (Bq/kg of the rock)
Uelement	[1-10 p.p.m]	[α , β & γ]	[12.5 – 125]
Thelement	[5-30 p.p.m]	[α , β & γ]	[20-120]
40K1element	[4 % as K ₂ O]	[β & γ]	[100]

[TABLE 1]: The ratios of concentrations of radioactive elements and the different types and levels of radiation⁷.

¹JOHN 2017: 110.

² ABD-ELKAREEM et Al. 2017:1-19.

³ SHRIVASTAVA 2009: 68-84.

⁴ ABED et Al. 2022: 473.

⁵ KOBESSI 2008: 1279-88.

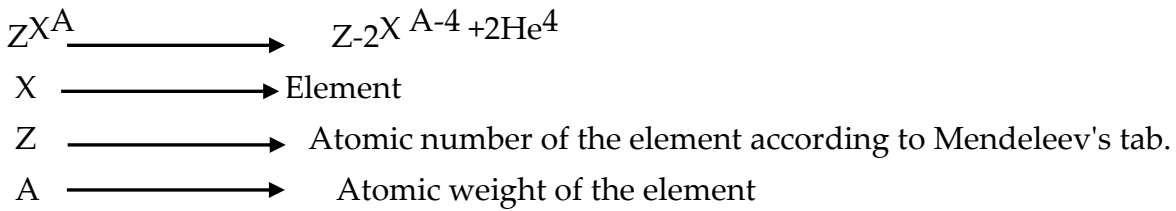
⁶ GAAFAR 2022: 120.

⁷ LANGMUIR 1995: 2.

Radiation energy transport as, particles or waves, and include many kinds such as infrared (IR), visible light (VL), ultraviolet (UV), and microwaves (MW). Granite was a stone of great importance in the past in Egypt, as it was used to decorate stone buildings, it was known as an archaeological granite located in Aswan governorate, southern Egypt⁸.

II. RADIOACTIVITY OF MINERALS

Many minerals can absorb radioactive isotopes from the surrounding environment⁹, resulting in a high level of the radioactivity of those rocks, and the presence of clay minerals and rocky clay increase radioactivity as a result of absorbing those radioactive elements¹⁰, and alpha decay can be represented schematically as follows¹¹.



Alpha particles are emitted from the nuclei of radioactive elements at different velocities and energies, where the range of alpha particles in air vary from (3 to 10 cm). In quartz, for example, it does not exceed 38.3 microns. The number of radio nuclides reduced is according to the following equation:

$$N = N_0 \exp(-\lambda t) \quad (1)$$

where N_0 is the initial numb. of the nuclei when $t = 0$, and N is the numb. of nuclei when t & (N/N_0) shown as a function of time, decay constant λ where the curve can be found according to $\tan \alpha = \lambda k$.

EQ. (1) can be used as a means of measuring the time that passes between the moment when the number of radioactive substances is N_0 and the moment when the number of radioactive substances is N , i.e. radioactivity provides a kind of time scale. According to EQ (1) and EQ (2),

$$1/\lambda = T/0.693 = 1.44T \quad (2)$$

The half-life of the natural radioactive elements of uranium is 4500 million years. As for radium, it is 1590 years, and protactinium is the time interval between states in which the number of radioactive nuclei is N_0 and N is: $t = (1/\lambda) \ln N_0/N = 1.44T \ln N_0/N$ (3) where N represents the number of cores that are currently unchanged, and eq. (3) gives the age of certain types of different radioactive nuclei. From a practical point of view, a different radiating time range is required for each application. The naturally occurring uranium that is a mixture between the two and its half-lives is 4,500 million and 9,000 million years old, respectively.

⁸ GINDY et al. 1998: 1–14; ABDELSALAM 2002: 119–136.

⁹ HAMILTON 1958: 697–698 .

¹⁰ VAKHNENKO et al. 2003 :247–254.

¹¹ AWADH 2020; OTSUKA et al. 2022: 2234.

Nuclear lead is the end product of a depleted uranium nucleus, and the use of the ratio between uranium and lead derived from it in natural uranium makes it easy to determine the period during which lead accumulated¹². Electrical resistance methods is the basic principle in the study of rocks by electrical methods by taking advantage of the relationship between their electromagnetic properties, mineral composition, moisture content, rock stress condition, and temperature. Electric and magnetic fields are also used to study the components of the earth, the history of its formation, in addition to studying the ways and stages of damage to archaeological stones¹³.

The different variables of electrical resistance methods find various applications in geophysics, where the resistance of rocks is measured with special potentiometers, and the study of resistance is by passing electric current through two electrodes, where the potential difference ΔU can be measured at any point on the line connecting the electrodes, and where the current I in the circuit is known, so the resistance of the rock can be calculated according to:

$$\rho = K \frac{\Delta U}{I}$$

Where K is a coefficient that depends on the location of the electrodes on the rock, and by gradually increasing the spacing between the electrodes passes through deeper layers.

Laboratory methods can be used to study rocks by electrical means, where the moisture content in rocks can be determined, and this is done by measuring the electrical conductivity coefficient of rock samples, which is an essential indicator of electrostatics¹⁴. The largest general gaps in the electrical properties of minerals and rocks lie in areas of soils containing humid acids, variable minerals, and hydrated minerals, such as clays¹⁵.

III. GRANITE DECAY COLUMN IN MERIT-AMUN REGION

Fragmentation observed in granite is the separation and cracking of layers or small portions of granite in the surface area resulting from the efflorescence of salts below the surface or as a result of melting or recrystallization. It is more fragmented than other stones or old stratified stones in its composition, and it is also considered one of the most important internal damages that occur as a result of the deposition of salts formed under or through the old surface layers as a result of the evaporation of moisture on the surface of the granite from which the columns were built. The source of the salts may be due to the dissolution of the salts or the use of chemical cleaners and processing materials, mortar, or air pollution in the area, where these salts lead to the dissolution of the granite components during exposure to rain or ground water absorption and rise of water in the granite components or through weak places, where the formation of salts and the crystallization process of salts lead to pressures under the surface of the granite, which

¹² RZHEVSKY et Al. 1971:397- 398.

¹³ CASSIDY 2009: 444.

¹⁴ RZHEVSKY et Al. 1971: 213-217.

¹⁵ OLHOEFT 1979 :286; SATHER 1990: 5; GLOVER 2015: 111.

subsequently leads to formation of small to large fractures¹⁶. Water is one of the most important elements that harm granite, as it affects its surface, especially those that include potassium feldspar. Granite when exposed to water turns into kaolinite (one of the clay minerals), this transformation leads to breaking the internal structure of the crystals releasing potassium and silica ion. When granite is exposed to water, this process takes a long time and eventually leads to granite damage, moreover heat accelerates this type of damage and granite is affected in the presence of environmental temperature and relative humidity quickly. Additionally the presence of iron elements can result in dirt which cause decay of granite and the presence of salts on the granite surface indicates the possibility of a decrease in salts under the granite surface.

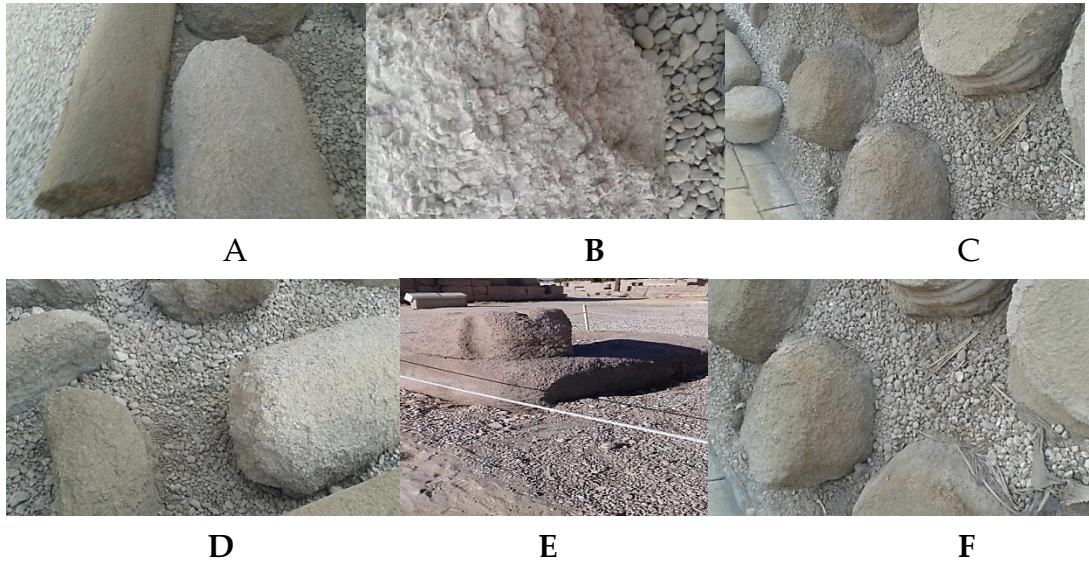
The application of poultices is one of the best scientific methods for removing salts, which comes in addition to preventing or reducing the various sources of moisture to which granite is exposed¹⁷. The radiation resistance and electrostatics of granite archaeological buildings and their contribution and role as causes of damage that affected the remaining columns of the foundations of the granite structures in the Merit Amun region [FIGURE 1] was studied. There granite was used in ancient Egypt to a large extent, especially in the modern state and its after math. The bases of the granite columns under study, had been exposed to sewage water, which affected the remains and bases of the granite columns, as a result of the lower level of the archaeological site's floor than the level of the surrounding land, especially the archaeological hill from the western side, and the presence of non-conforming sewage lines that increased the problem.



[FIGURE 1]: Merit Amun location (after) .©Google Earth. Accessed on 16/01/2021

¹⁶ DELGADO 2016: 13; SANJURJO-SÁNCHEZ et Al. 2016: 20.

¹⁷ BOSCH-ROIG et Al. 2019: 4227.



[FIGURE 2]:Damage of the granite surface: A). Remains of some granite columns, B). Exfoliation and inter granular disintegration of granite columns and their damage; C&D). Granular dissociation, E). weathering & kaolinization and F). exfoliation and scaling.

IV. MATERIALS AND METHODS

To determine the granite samples of non-destructive granite were taken from the falling decomposed granite under the columns of the granite bases which exposed to erosion and put them at plastic closed envelope and they were taken at morning of January month. These samples were studied petro graphically with polarizing microscope (PLM), and analyzed with XRF. With a survey of granite samples, mineral analyzes were performed using X-Ray Diffraction (XRD) at the Department of Physics, Assiut University, Egypt, and the diffraction data were analyzed. Scanning electron microscope (SEM) was used to study the decomposition, decay state of granite grains and the properties of granite exposed to deterioration.

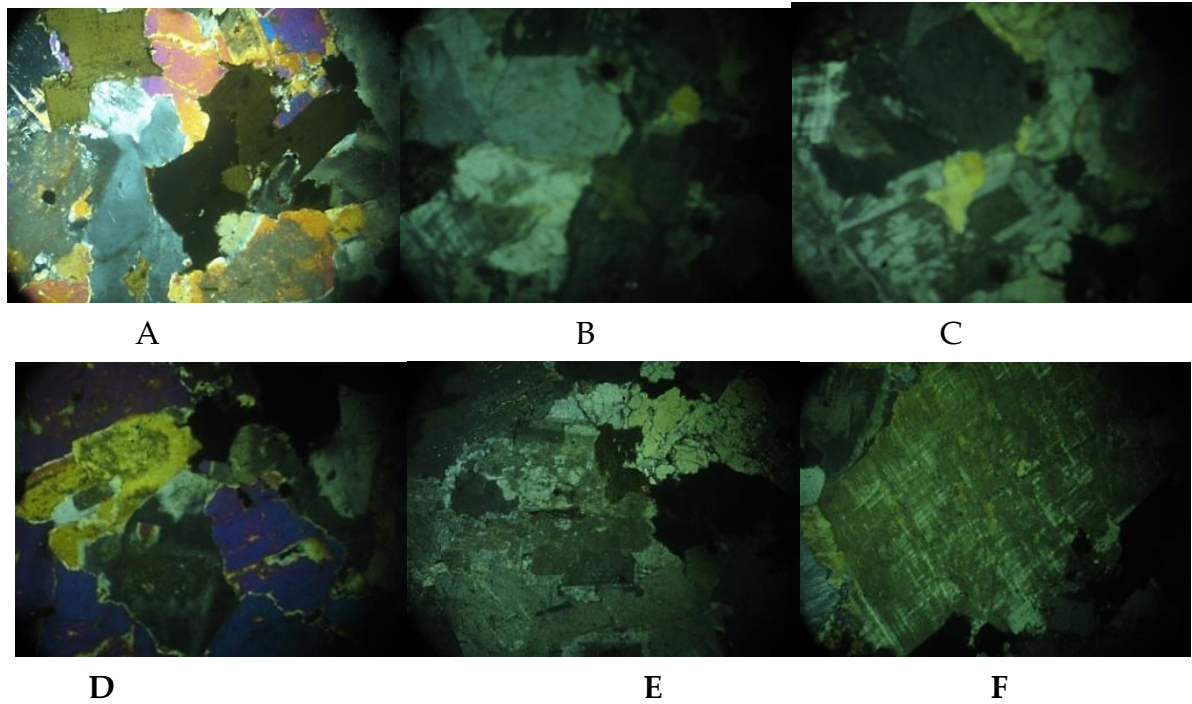
V. RESULTS

Petrographic study: Granite samples appear pink, coarse-grained and large, and a thin section of it showed that the minerals quartz and feldspar are the main component of granite such as (plagioclase, microcline, microcline pyrite), in addition to biotite and zircon sphene, as the representation of alkali feldspar by microcline pyrite. Pyrite orthoclase distinguishes microcline pyrite as a type of vein, and the incomplete fine line is characterized by a dense cross-twisting [FIGURE 3A], quartz crystals appear in [FIGURE 3B], orthoclase appears as a semi-surface crystal, and quartz appears in the form of single, rough and irregular crystals. The plagioclase also appears in the form of an oblong crystal with a semi- linear. The rock study showed that plagioclase and feldspar are followed by biotite, and these minerals are the primary minerals that are subject to damage and change. In the appearance of some dust and the foggy appearance of feldspar minerals along the levels of cleavage and the crystalline boundaries of its minerals, where the products of hornblende damage appeared such as the formation of hematite and iron oxides and hydrated iron, and they showed a red to brown color on the surface of the

granite stones exposed to damage, as the petrological study showed that the hematite mineral gave a cover of granite surface. Orthoclase is largely divided into many remaining dominants through a network of transverse cracks that are semi-parallel and accompanied by some irregular longitudinal cracks, and the change occurred in plagioclase as a result of the presence of some iron-rich compounds. The inner borders of the mineral grains were also irregular, in addition to the deterioration products. It is irregular in its distribution, because it penetrated the remaining depth along the different cracks of the plagioclase, and during the study of minerals the presence of broken pieces of feldspar grains, which have the same direction of cleavage were observed, and these fractures were formed by the next transition of cutting feldspar and as a result of this the long mineral fracture cut quartz grains and it caused damage to the feldspar, as the grains appeared slightly stained with iron oxides, and the color spots were from red to black in the form of a thin layer or the shape of a crust.

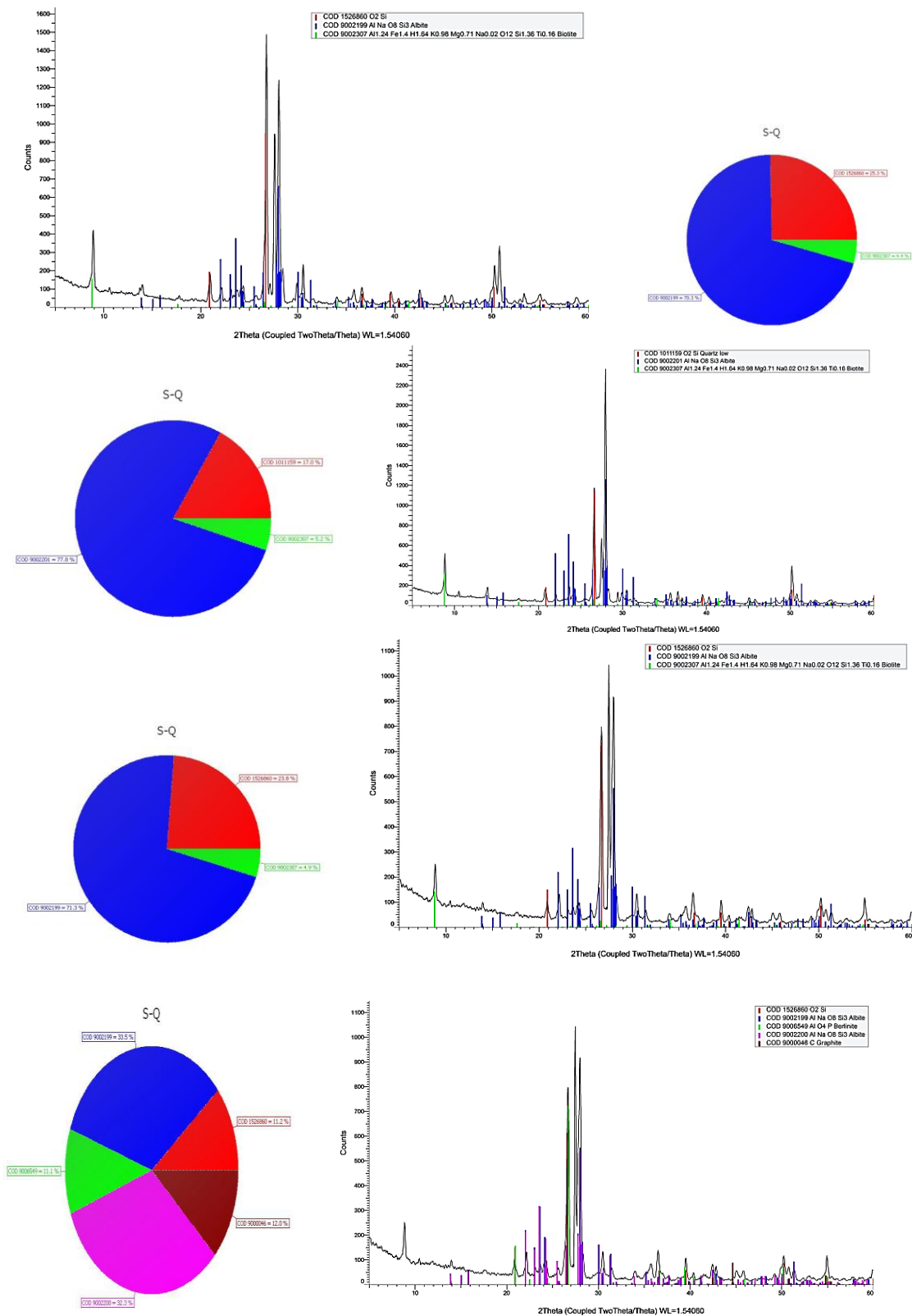
Some changes occurred in the plagioclase granules, and this is evident through the crack networks that are close together, in addition to the presence of some fractures in the pores resulting from the presence of clay minerals. The plagioclase also showed a somewhat dull gray color, and the plagioclase changed to kaolin. The granite contained both hornblende and biotite, and this led to an easy fracture with the occurrence of isolation of components that are less able to absorb water, and the fracture had a specific shape because the biotite crystals were replaced by kaolinite. This replacement resulted in a large increase in size, and this caused some continuous fractures in the shape.

Additionally, the network of fractures gave pores that contribute to the accumulation of some residues that result from the damage that occurred to crystallize from the solutions that were absorbed, where the damage resulted from weathering. Some biotite flakes in smectite mineral, and replacement processes took place along the circumference of the flakes, as it extended irregularly to a point in the direction of the depth of the mineral, and biotite is exposed to damage as one of the main sources of clay minerals that are present in the gaps and cracks between minerals, It was also observed that there were some gypsum stains as one of the products of damage as a result of the changes that occurred, and the transformation of biotite mineral to kaolin and iron oxides was one of the most important products of damage [FIGURE 3C]. This led to an increase in pressures due to the swelling of clay minerals [FIGURE 3D], which contributed to the distortion of all the materials resulting from biotite. The layers of red color formed by iron oxyhydroxides are also connected regularly to the internal parts of the minerals and are in the lenticular or planar form, where they are distributed irregularly around the pores and inside all the external pores, which are filled with iron products, are dark brown, and the thick layers consisting of kaolin are evenly distributed between the layers that are rich in iron, or by coating the grains with a thin layer, and this discoloration is due to the decomposition of minerals that contain iron oxides. Some of these fractures through the products of damage are seen in [FIGURE 3E & F].



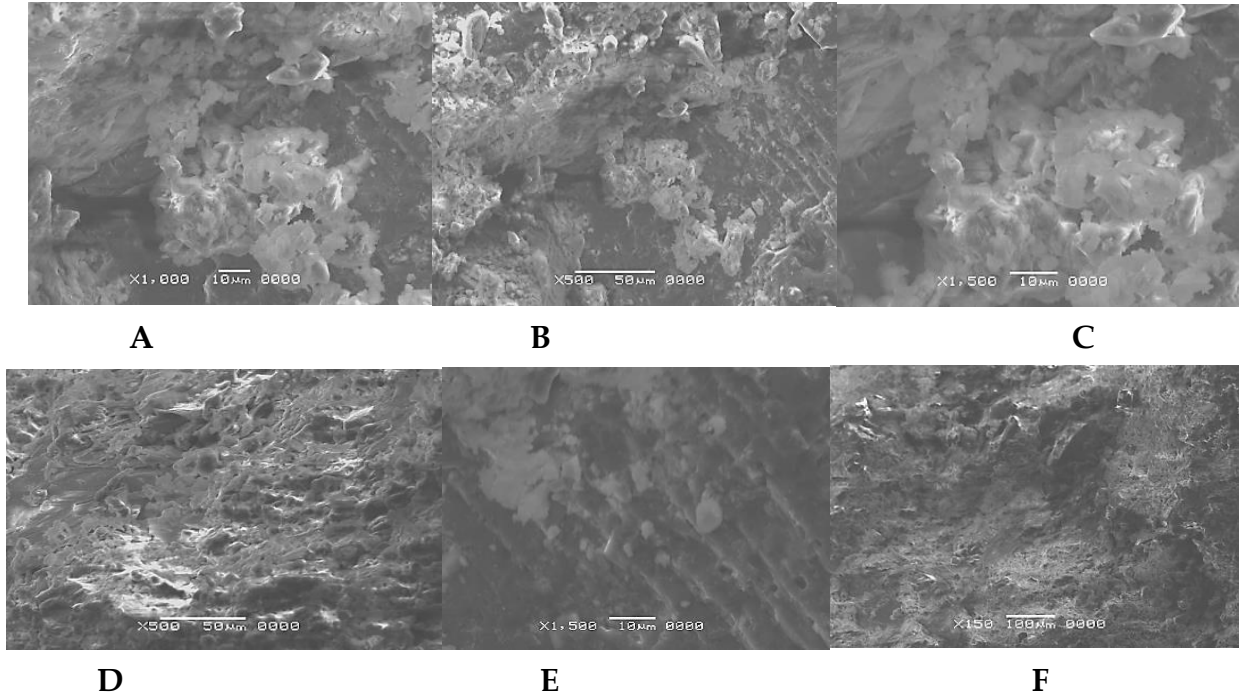
[FIGURE 3]: Petrographic study of granite sample by PLM, x. 40: A.) Granite samples appear pink, coarse-grained and large, quartz and feldspar are the main component of granite; B). quartz crystals appear; C). gypsum stains as one of the products of damage as a result of the changes that occurred, and the transformation of biotite mineral to kaolin; D). increase in pressures due to the swelling of clay minerals; E & F). Some of the fractures that are products of damage.

It is clear from the X-ray diffraction analyzes of the damaged granite samples that the main minerals include feldspar (microcline (52%), albite (17%), anorthite (1%), while quartz is up to (10%), mica (muscovite is about (5%), phlogobite is about (4%) in addition to the presence of minor elements representing biotite (0.4%), and the d-spacing figure for (001) reflects the types of basic minerals that make up the granite samples, and it gives reliable information about the degree of crystallization of the granite samples, especially around default values along the c-axis, and these samples consist of quartz, pyrethite, microcline, plagioclase and micro-biotite [FIGURE 4].



[FIGURE 4]: X-ray diffraction analyzes of granite sample.

SEM: The remains of granite columns at the Merit Amun site in Akhmim were severely affected because of their exposure to various weathering factors, including the rise in ground water levels, which resulted in a high proportion of relative humidity, which led to the occurrence of many aspects of damage, and some changes resulted as a result of granite damage operations. This is through the appearance of some forms of damage and some crusts and fine cracks in the mineral grains that make up the granite [FIGURE 5].

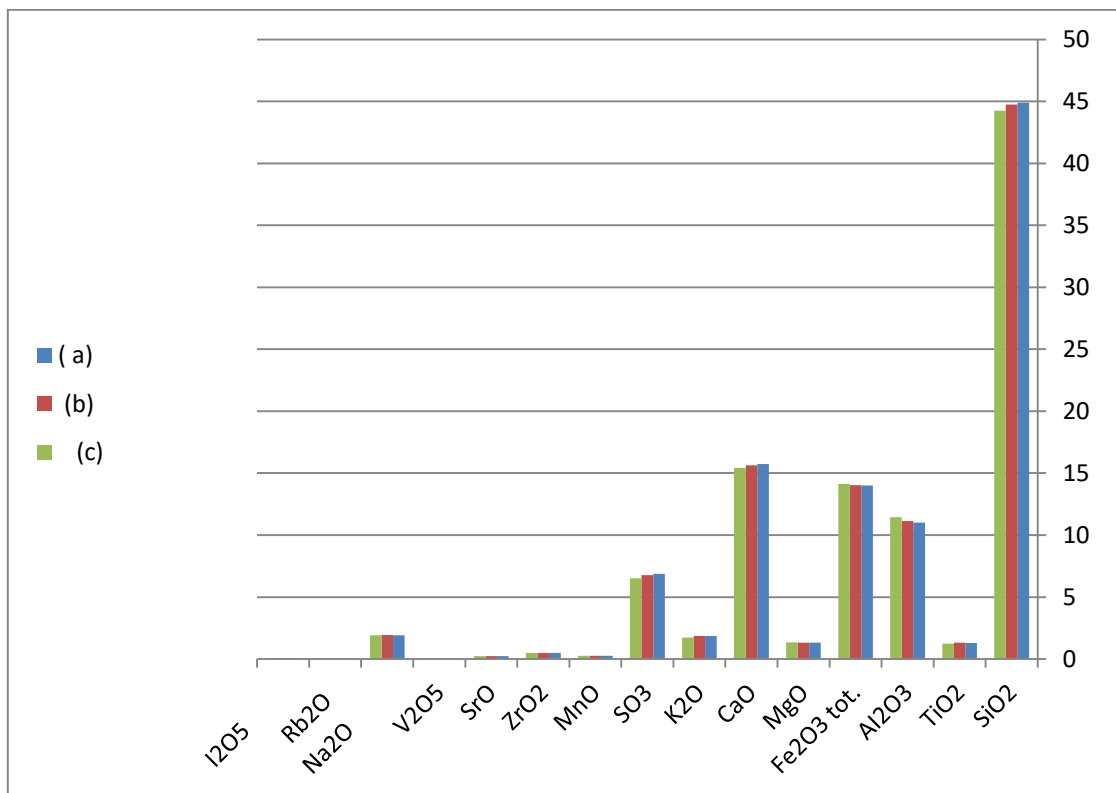


[FIGURE 5]: A, B, C, D, & F) SEM photomicrographs showing the crystals of granite and their damage features.

The study of the granite rocks in the study area showed that samples were collected from the Merit Amun area, and they are similar to the granite in Aswan [TABLE 2 & FIGURE 6], where it was found that the granite samples that were analyzed are close to the granite in Aswan, and the samples that were analyzed contain a high percentage of potassium and are similar to the huge Aswan granite [FIGURE 7].

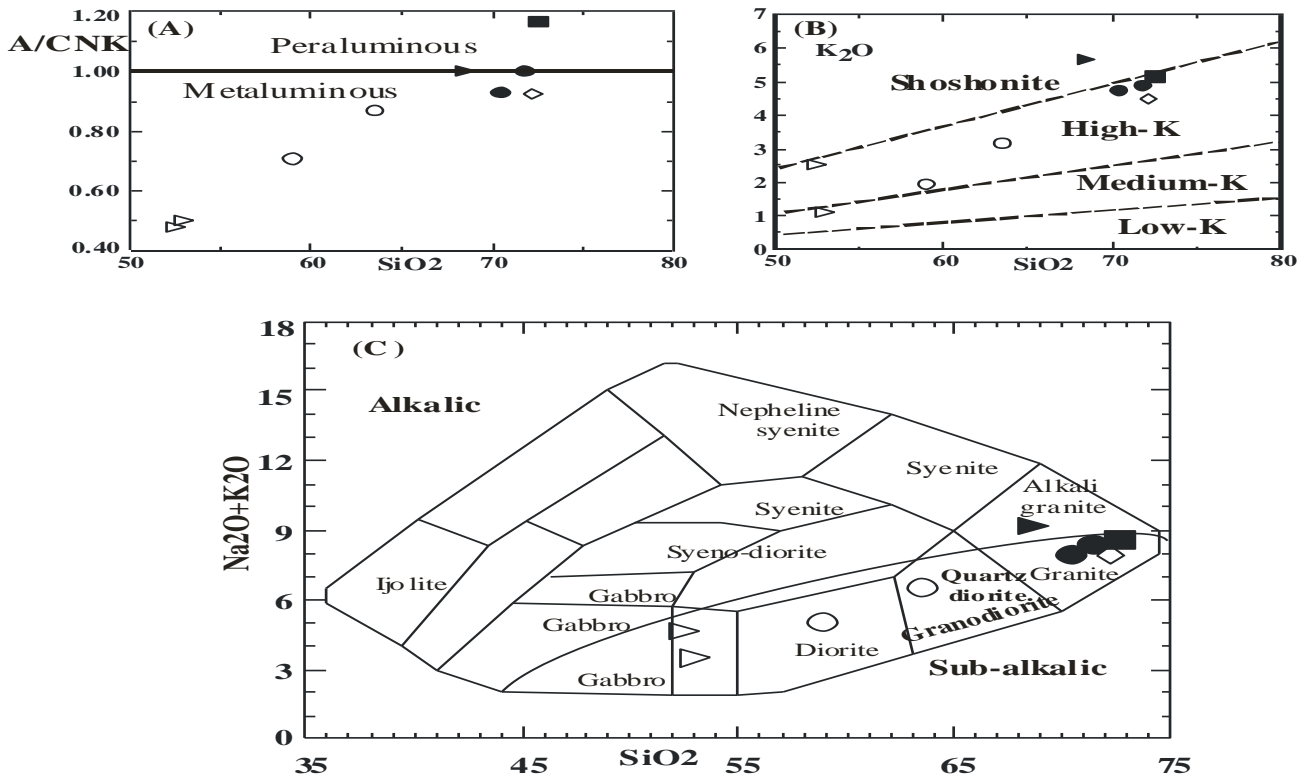
Main Constituents Wt%	(A)	(B)	(C)
SiO ₂	44.8868	44.7421	44.2506
TiO ₂	1.2861	1.3245	1.2463
Al ₂ O ₃	11.0043	11.1328	11.4561
Fe ₂ O ₃ tot.	14.0084	14.0216	14.1257
MgO	1.3076	1.3261	1.3571
CaO	15.7468	15.6253	15.4362
K ₂ O	1.8629	1.8724	1.7359
SO ₃	6.8778	6.7782	6.5232
MnO	0.2657	0.2564	0.2620
ZrO ₂	0.4919	0.4923	0.4935
SrO	0.2480	0.2473	0.2461
V ₂ O ₅	0.0216	0.0225	0.0218
Na ₂ O	1.9033	1.9447	1.9128
Rb ₂ O	0.0303	0.0335	0.0404
I ₂ O ₅	0.0475	0.0432	0.0461

[TABLE 2]: XRF analysis of the three granite samples.



[FIGURE 6]: Main Constituents Wt%.

DIAGNOSIS OF THE CURRENT STATE OF THE GRANITE COLUMNS REMNANTS AND SUGGESTING THE TREATMENT METHODS [IN THE AREA OF MERIT AMUN, AKHMIM, EGYPT]



[FIGURE7]: A). A/CNK vs. SiO₂/B. K₂O vs. SiO₂ (Pecerrillo and Taylor, 1976) & C). TAS Chart for Aswan Granites and Granite Pillar Remains in the Merit Amun Region¹⁸.

The degree of difference in the electromagnetic radiation (EMR) generation processes of wet and dry rocks can be attributed to the difference in the time of electrical relaxation which is proportional to the electrical resistance¹⁹, as the granite is characterized by the presence of low tensile strength between its grains, in addition to its large mineral particles, which produces electromagnetic radiation mainly as a result of tensile fracture. EMR Rocks contain two distinct forms of waves: continuous waves that have a small amplitude of low frequency and pulse waves that have a large amplitude of variable frequency. Significant effects on the electromagnetic radiation result in cracking mineral grains of granite²⁰, especially when granite rocks are exposed to infrared temperature, which is randomly distributed and is under the influence of external infrared convection, where energy accumulation occurs inside the granite, which eventually leads to its brittle collapse²¹.

EMR can use this technique as a suitable method for monitoring the deformation that occurs in granite as a result of its damage. This requires conducting many experimental studies, in addition to developing knowledge bases through the use of some mathematical and simulation-based techniques.

¹⁸ WILSON 1989: 514; EL-BIALY et Al. 2015: 1-29.

¹⁹YOSHIDA et Al. 2004: 1-11.

²⁰LIN et Al. 2021: 798-810.

²¹ PENG et Al. 2021: 713.

In terms of studying some prototypes or applications that could be suitable for the simulation process, which leads to further progress in studies of controlling the deformation caused by damage through the use of electromagnetic emissions that result from deformations in granite, which can be considered a preliminary indication of what is happening in the deformation²².

VI. DISCUSSION & SUGGESTED TREATMENT

The samples that were studied, examined and analyzed to assess the state of the bases of the granite columns in the archaeological area of Merit Amun, Akhmim, were found to be similar in their mineral components with the components of the granite minerals found in Aswan, and the geochemical tests of the granite samples of Merit Amun indicated that the granite formations agree with the rocky description of the Aswan granite, in A/CNK and K₂O versus SiO₂ clusters. The granite column base remnants of the structures found in the Akhmim archaeological area of Merit Amun contain aluminum (A/CNK <1) and as a high-type K very similar to the Aswan mega granite. Different techniques have been used to examine and analyze granite damage, such as polarizing microscopy, SEM, XRD, and X-ray fluorescence. Environmental factors affecting the granite stones in the region were also studied. They showed the disintegration of some of the grains and their splitting into plates and crusts that led to the damage of the granite. It also showed the loss of parts of the granite surface and its separation in the form of plates parallel to the outer surfaces, and hornblende and biotite minerals turned into iron oxides, in addition to the presence of some fine cracks within the different minerals, where the granite subject to damage, which resulted in the occurrence of some cracks related to fine networks, which led to an increase in the rates of damage in the granite, and the results of XRD indicated that there are various environmental damages, and this was confirmed by the study with scanning electron microscope of the granite samples that had been subjected to damage. The cracks resulted in an increase in the pores in the granite, as well as swelling and shrinkage of the clay minerals that resulted from the transformation of feldspar inside those fine cracks of the granite. The most appropriate methods of treating and maintaining the bases of the granite columns for the granite installations in the Merit Amun area were presented.

Detecting electromagnetic radiation is one of the modern methods that can be used to explore and study building materials, including granite, by studying the electromagnetic emissions that are produced when granite is exposed to external loads or damage. These laboratory studies or theoretical studies show that these emissions may be appropriate to monitor the beginning of the deformation of granite as a kind of initial warning of the occurrence of damage. Electromagnetic and radioactive emissions are also studied and explored through various chemical and mathematical equations to shed light on the main results and physical studies, so that the processes and applications of this technology can be beneficial in detecting the electromagnetic emission resulting from exposure. Granite is subjected to stresses and loads resulting from different types of damage.

In the proposed restoration work, dust was removed from granite surfaces by mechanical cleaning tools, such as a soft and coarse brush, or an air compressor.

²² SHARMA et Al. 2021: 4500–4551.

Chemical cleaning was also used through the use of distilled water, which is an effective solvent and can be used in more than one form by spraying. A type of neutral soap is added and used on small areas to prevent leakage into the granite so as not to cause damage as a result of the formation of salts. Dust, dirt and soot are removed and washed with distilled water added to neutral soap and ammonia in different proportions, and then the traces of dirt and remaining stains were cleaned using a diluted solution of freshly prepared 2% chloramines in water, followed by cleaning with water. Oil and grease stains were removed from the granite surface using a mixture of ammonia, benzene and alcohol in equal proportions. Stains were removed by washing with water, and stains caused by them were also removed. Microorganisms were removed using formaldehyde with 5% wash water and ammonia, and wild bee nests were removed using the appropriate tools or brush, followed by cleaning the remains with water, alcohol or water and ammonia. To remove salts, such as sulfate or carbonate salts, where calcium carbonate had been formed from various weathering agents, the surfaces of granite blocks were cleaned with a solution diluted with 5% hydrochloric acid, then the surface was cleaned using a soft brush. During this procedure the surfaces were moistened with hydrochloric solution until the reaction occurred using the least amount of acid. Work began with a small area, then moved to another area. This was followed by removing the calcium carbonate after wetting manually using a blunt scalpel or other suitable tools, and after calcium carbonate removal, the treated areas were washed well with distilled water to get rid of the effects of hydrochloric acid. Salts were detected using a silver nitrate solution, and sulfate salts were removed using 10% ammonium carbonate with water and the treated parts were washed thoroughly with water²³. By studying the height of the ground water levels and the aerial photography maps of the Merit Amun region, it was noted that it is located at a very low ground level (-9 m) than the levels of the surrounding areas, including popular dwellings, so it is a drainage area for ground water that is drained from the surrounding areas, especially the archaeological hill area located on the western side of the area. This area is at risk and the increased drainage of ground water from that area towards the study area is represented by several factors, including the presence of the archaeological hill at a level much higher than the level of the study area. Moreover, the site lacks proper sanitation standards, and the drinking water supply networks need renovation, and these reasons present a major challenge to the granite stones and the people responsible for maintenance. Therefore, the ground water level must be reduced by making productive wells in areas with lower levels that allow the areas to be safe from drainage and far from the archaeological site. It is also preferable to separate the archaeological area from ground water sources through the work of a surrounding trench. Drainage of the surrounding ground water away from the archaeological site is a necessity, and work must be done to improve and develop the drinking water and sewage network, after which the processes of granite stone blocks are strengthened using ParaloidB82 solution at a ratio of 3: 7% in a mixture of organic solvents consisting of acetone, toluene, benzene and ethyl alcohol in equal proportions.

²³ ÖZTÜRK 1992: 264.

VII. CONCLUSION

The mechanism of granite damage depends on the natural role of moisture and heat that causes physical and chemical phenomena, such as expansion, contraction and crystallization of dissolved salts in wet water. It is absorbed from the air by a type of salt or a mixture of salts known as the equilibrium moisture of this salt or mixture of salts, and the crystallization of halite on the surface of the granite may cause deformation and surface damage; which leads to cracking in the granite and perhaps some of its parts falling off. The deposition of oxidizing salts in the atmosphere and dissolution in rain water over the granite surfaces led to some types of damage and stress; causing chemical damage to the granite. These salts include sulfates and nitrates, in addition, some red blisters are produced, known as red weathering; which is caused by the washing of the alkali produced by the silica, and this phenomenon can be observed in some granite blocks that are constantly exposed to successive cycles of wetness and dehydration.

The effect of the mechanical properties of granite on the mechanism of electromagnetic radiation (EMR) in granite is one of the recent research topics in studying the mechanics of granite; and the mechanical properties of granite have obvious effects that are in the form of waves of electromagnetic radiation during granite damage. The current study provided a better understanding of the EMR mechanism of granite damage, the electrodynamics and radioactivity in the granite caused damage and accelerated the decay rates, which depend in the granite damage in the Merit Amun, Akhmim area on the ability of the ground water to rise, and the depth The study area, and the surface of the ground water level in the area, which affected the interconnection between the granite grains

From the above, we note the strength and hardness of granite that prompted the ancient Egyptians to use it in many aspects of life. However, the granite was subjected to complete collapse as it was found in the study area. The damage and human actions must also be taken into consideration when noticing any changes in the granite stone to stop the causes of damage to it; therefore, the preservation of the archaeological granite is necessary and important to preserve this cultural heritage.

BIBLIOGRAPHY

- ABD-ELKAREEM, E., ASRAN, M., & EL SHATER, A.: «Damage Blocks Granite of Philip Arrhidaeus Compartment and its Source and Treatment, Karnak, Egypt», *Egyptian Journal of Archaeological and Restoration Studies* 7/2, 2017,1-19.
- ABDELSALAM, M., LI_EGEOIS, J., & STERN, R.: «The Saharan Metacraton», *Journal of African Earth Sciences* 34, 2002, 119–136.
- AWADH, S. M.: *Geochemistry of Radioactive Isotopes*, In M. RENÉ, G. AIELLO, & G. E. BAHARIYA (eds.), *Geochemistry*. Intech Open. <https://doi.org/10.5772/intechopen.91616>
- BOSCH-ROIG P., ALLEGUE H, BOSCH I.:«Granite Pavement Nitrate Desalination: Traditional Methods vs. Biocleaning Methods», *Sustainability*11/15, 2019, 4227. <https://doi.org/10.3390/su11154227>
- BOWEN, N.: «The Later Stages of the Evolution of the Igneous Rocks», *The Journal of Geology* 23/8, 1915, 1-91.
- NIGEL J. CASSIDY: *Electrical and Magnetic Properties of Rocks, Soils and Fluids*, HARRY M. JOL (ed.), *Ground Penetrating Radar Theory and Applications*, Elsevier, 2009, 41-72, (<https://www.sciencedirect.com/science/article/pii/B9780444533487000028>)
- DELGADO, J., GUIMARÃES, A., DE FREITAS, V., IÑIGO ANTEPARA, VÁCLAV K. & ROBERT Č.: «Salt Damage and Rising Damp Treatment in Building Structures», *Advances in Materials Science and Engineering*, 2016,1-13, <https://doi.org/10.1155/2016/1280894>.
- EL-BIALY, M., MOHAMED, M.: «Spatial Association of Neoproterozoic Continental arc I-type and post-Collision A-type Granitoids in the Arabian–Nubian Shield: The Wadi Al-Baroud Older and Younger Granites, North Eastern Desert, Egypt», *Journal of African Earth Sciences* 103, 2015, 1-29, <https://doi.org/10.1016/j.jafrearsci.2014.11.013>
- FROST, B., BARNES, G., COLLINS, W., ARCULUS, R., ELLIS, D., & FROST, C.: «A Geochemical Classification for Granitic Rocks», *Journal of Petrology* 42/11, 2001, 2033–2048, <https://doi.org/10.1093/petrology/42.11.2033>
- COX, K.G., PRICE, N.B. & HARTE, B.: *An Introduction to the Practical Study of Crystals, Minerals, and Rocks*, New York (John Wiley & Sons) 1974.
- GINDY, A., & TAMISH, M.: «Petro Genetic Revision of the Basement Rocks in the Environs of Aswan, Southern Egypt», *Egyptian Journal of Geology* 42, 1998, 1–14.
- HAMILTON, E. :« Distribution of Radioactivity in Rocks and Minerals, and the Effect of Weathering on Determinations of Uranium», *Nature*, N^o. 181, 1958, 697–698.
- JOHN C., GARY S. & MARLINA E.: *Magmatic Enclaves in Granitic Rocks: Paragons or Parasites*, 19th EGU General Assembly, EGU2017, proceedings from the conference held 23-28 April, 2017 in Vienna, Austria.
- KOBEISSI, M.A. & SAMAD, OMAR & ZAHRAMAN, K & MILKY, S & BAHSOUN, FADIA & ABUMURAD, KHALID.: «Natural Radioactivity Measurements in Building Materials in Southern Lebanon», *Journal of environmental radioactivity* 99/8, 1279-1288, <https://doi.org/10.1016/j.jenvrad.2008.03.007>
- LANGMUIR, D.: *Granite & Radon - The Truth*, Oberlin (the Marble Institute of America) 1995.
- OLHOEFT, G.: *Electrical Properties of Rocks at Physical Properties of Rocks and Minerals*, New York (CRC Press) 1979, 286.
- OTSUKA, T., ABE, T., YOSHIDA, T & *et al*: « α -Clustering in Atomic Nuclei from first Principles with Statistical Learning and the Hoyle State Character» *Nature Communications* 13, 2022, 2234. <https://doi.org/10.1038/s41467-022-29582-0>
- ÖZTÜRK, I.: « Alkoxysilanes Consolidation of Stone and Earthen Building Materials», Ma Thesis, University of Pennsylvania, 1992.
- PECERILLO, A., & TAYLOR, S.:« Geochemistry of Eocene Calc-alkaline Volcanic Rocks from the Kastamonu Area, Northern Turkey», *Contributions to Mineralogy and Petrology*, N^o. 58, 1976, 63-81.
- PENG, Y., LIN, Q., HE, M., ZHU, C., ZHANG, H., & GUO, P.: «Experimental Study on Infrared Temperature Characteristics and Failure Modes of Marble with Prefabricated Holes under Uniaxial Compression », *Energies* 14/3, 2021, 713.

- SANJURJO-SÁNCHEZ, J., ALVES, C. & VIDAL-ROMANI, J.: «Assessing the Weathering of Granitic Stones on Historical Urban Buildings by Geochemical Indices», *Earth Sciences Research* 20/3, F1-F13, 2016, DOI: 10.15446/esrj.v20n3.49560
- SATHER, K.: «Granite Deterioration in the Graveyard of Saint James the Less, Philadelphia», MA Thesis, University of Pennsylvania, 1990.
- SHRIVASTAVA, J, P.: *Igneous rocks*, National Science Digital Library (CSIR), New Delhi (Council of Scientific and Industrial Research) 2009.
- SHARMA, S.K., CHAUHAN, V.S. & SINAPIUS, M.: «A Review on Deformation-induced Electromagnetic Radiation Detection: History and Current Status of the technique», *J Mater Sci* 56, 2021, 4500–4551, <https://doi.org/10.1007/s10853-020-05538-x>
- VAKHNENKO, V.O., NAGORNY, V.P., DENISYUK, I.I. et Al.: «Estimation of Rock Failure Zone under Confined Explosion», *Journal of Mining Science* 39, 2003, 247–254. <https://doi.org/10.1023/B:JOMI.0000013783.74470.72>
- WILSON, M.: *Igneous Petro genesis*, London (Unwin Hyman) 1989.
- Yoshida, S. & Ogawa, T.: « Electromagnetic Emissions from Dry and Wet Granite Associated with Acoustic Emissions», *Journal of Geophysical Research: Solid Earth* 109/B9, 2004, 1-11.
- LIN, P., WEI, P., WANG, C., KANG, S., & WANG, X.: «Effect of Rock Mechanical Properties on Electromagnetic Radiation Mechanism of Rock Fracturing», *Journal of Rock Mechanics and Geotechnical Engineering* 13/4, 2021, 798-810.

2023

PHYSIOCHEMICAL CHARACTERIZATION OF COPTIC JESUS CHRIST ICON, CHURCH OF SAINT MERCURIUS, EGYPT

Neven Kamal

Conservation Department, Fayoum University, Egypt, nkf00@fayoum.edu.eg

Shaaban Abdelaal

Professor at Faculty of Archaeology, Fayoum University, Egypt., smm00@fayoum.edu.egs

Emil HENIN

Head of Coptic Painting Conservation at Monasteries and Churches in Haret Zuweila, Cairo, Ministry of Tourism and Antiquities, Egypt., omel2010@yahoo.com

Follow this and additional works at: <https://digitalcommons.aaru.edu.jo/jguaa>



Part of the [Historic Preservation and Conservation Commons](#), [History Commons](#), and the [History of Art, Architecture, and Archaeology Commons](#)

Recommended Citation

Kamal, Neven; Abdelaal, Shaaban; and HENIN, Emil (2023) "PHYSIOCHEMICAL CHARACTERIZATION OF COPTIC JESUS CHRIST ICON, CHURCH OF SAINT MERCURIUS, EGYPT," *Journal of the General Union of Arab Archaeologists*: Vol. 8: Iss. 1, Article 11.

Available at: <https://digitalcommons.aaru.edu.jo/jguaa/vol8/iss1/11>

This Article is brought to you for free and open access by Arab Journals Platform. It has been accepted for inclusion in *Journal of the General Union of Arab Archaeologists* by an authorized editor. The journal is hosted on [Digital Commons](#), an Elsevier platform. For more information, please contact rakan@aarj.edu.jo, marah@aarj.edu.jo, u.murad@aarj.edu.jo. Published by Arab Journals Platform, 2021.

PHYSIOCHEMICAL CHARACTERIZATION OF COPTIC JESUS CHRIST ICON [CHURCH OF SAINT MERCURIUS, EGYPT]

BY

Neven Fahim, Shaaban Abdelaal & Emil Henin

Lecture at Faculty of Archaeology, the Conservation Department, Fayoum University, Egypt.

Professor at Faculty of Archaeology, Fayoum University, Egypt.

Head of Coptic Painting Conservation at Monasteries and Churches in Haret Zuweila, Cairo, Ministry of Tourism and Antiquities, Egypt.

ABSTRACT

[Ar] التوصيف الفيزيوكيميائي لأيقونة السيد المسيح ، كنيسة ابي سيفين ، جمهورية مصر العربية
قدم هذا البحث التوصيف الفيزيوكيميائي لأيقونة قبطية من القرن التاسع عشر من كنيسة القديس مرقوريوس حيث تمثل مثال فريد من هذه
الايقونات التي تعود الى العصر القبطي. ولكي يتحقق الغرض من الدراسة تم استخدام بعض الوسائل الفحص والتحليل لشرح وايضاح كل مظاهر
التلف مما يساعد في التوثيق الأثري للأيقونة، وقد يعطي ذلك تفسير عن ميكانيكية تلف الأيقونات الأثرية ، كما كشف الفحص البصري أن الأيقونة
القبطية تتكون من أربع طبقات: دعامة لوح خشبي ، وطبقة تحضير ، وطبقة طلاء ، وبقية طبقة الورنيش ، وقد عانت كل طبقة من ظروف البيئة
المحيطة، وظهر ذلك في العديد من علامات التلف. تم فحص وتحليل العينات المأخوذة من أماكن مختلفة عن طريق الفحص باستخدام الميكروسكوب
الإلكتروني الماسح المجهز بكاشف الأشعة السينية المشتمل للطاقة (EDS) والتحليل الطيفي بالأشعة تحت الحمراء فورير « FTIR » وحيود الأشعة
السينية « XRD ». أظهرت نتائج التحليل الطيفي بالأشعة فوق الحمراء للعينات الأثرية أن الطبقة الأرضية تتكون من الجبس والطباشير والغراء
الحيواني كمادة رابطة. كما أشارت أطيف « XRD » إلى مصادر الأصباغ المستخدمة في رسم الأيقونة. وتم تحديد المادة الملونة الحمراء من أحمر
الرصاص، وبالنسبة لمادة اللون الأزرق من الالترامارين ، و المادة الملونة البيضاء من الرصاص الأبيض ، والمادة الملونة البنية كانت من أكسيد الحديد،
بالإضافة إلى استخدام صفار البيض كمادة رابطة في طبقة الطلاء والورنيش المستخدم كان من راتنج الشيلاك. ثم تم الكشف عن حالة التدهور،
وفقاً لنتائج « SEM » ، والتي أظهرت بوضوح وجود بقع وسناج وشمع وتشققات وثقوب في الطبقة السفلية من الأيقونة، وتراكم الغبار وطبقات
الورنيش الداكنة على الطبقة العليا.

[EN] In this paper ,we present a physiochemical analysis of a Coptic icon from church of Saint Mercurius that back to the 19th century. Identified deterioration phenomena were illustrated using various examination and analysis tools in order to fulfill the study's objectives. So as to find an explanation for how ancient icons were damaged. The visual inspection revealed that the Coptic icon is made up of four layers: the wooden panel support, the preparation layer, the painting layer, and the remaining varnish layer. Each of these layers suffered from surrounding environment, appearing in various signs of damage in the visual assessment. Samples taken from different places were investigated and analyzed by using scanning electron microscope equipped with an energy dispersive X- ray detector (EDX), FTIR, and X- Ray diffraction. The results of FTIR analysis revealed that the ground layer consists of gypsum, chalk and animal glue. XRD spectra confirmed that the red pigment was red lead, blue pigment was ultramarine, white pigment was white lead, and brown pigment was iron oxide (burnt sienna), in addition to the use of the egg yolk as a binder in the painting layer and the varnish was shellac resin. The state of deterioration was detected, according to the SEM results, which show clearly the presence of stain, soot, wax, cracks and lacunae at the lower layer of the icon, and accumulation of dust and darkening of varnish layers on the upper layer.

KEYWORDS: Icon, St. Mercurius, SEM- EDX, FTIR, XRD, Coptic, church.

I. INTRODUCTION

Saint Mercurius was born to Christian parents during a time of intense persecution, he was an officer in the Mareusian army, and Saint Mercurius was titled «Abi Shefin» because he vanquished the entire Barbarian army with the sword given to him by the Lord's angel while serving as a commander in the Mareusian army. He also rejected the worship of other gods¹. Numerous churches across the entire nation bear the name of St. Mercurius, who is regarded as one of the most well-known martyrs in the history of the Coptic Church in Egypt's Orthodox churches². The church of St. Mercurius is situated in Tamouh, Giza, and its style components were influenced by the region's environment and climate³.

Art historians classify the Coptic period as a Coptic art produced by Egyptian Christians in the late Roman, early Byzantine, and early Arab eras⁴. Icon [ἱκονα] is a word that refers to a picture or a portrait. It included historical occurrences connected to Biblical history, saints, holy Christians, and figures from Christian theological conceptions⁵. They are usually placed in centers of worship such as monasteries and churches for the worshipers to honor them by touching or adoring gestures and are generally made out of painted wood⁶. Additionally, because it is holy and sanctifying, the icon plays a variety of roles in Christian worship and church⁷. Every conservator finds the archaeological studies of Coptic icons difficult since they are made up of numerous strata with various physical and chemical characteristics, conflicting behaviors, and environmental deterioration factors⁸.

The icon artwork can be damaged by a number of deterioration factors, including temperature, light, humidity, air pollution, and insects⁹. Therefore, to understand the technical process by which the artist created the icon¹⁰. It is required to examine and analyze the icon's constituent parts. Which serve as a reference for the researcher and conservator to determine the extent of damage, the way in which damage occurred, and the elements of icon layers. The technique for Coptic icons painting depends on painting on wooden panels made from one or several planks held together with wooden pegs and supported by wooden traverses, nailed on the reverse with iron nails¹¹. which is a well-known technique for Coptic icon painting. Support, ground, paint [pigment and binder] and varnish layers are the icon's fundamental layers.

Characterization of the icon materials gives us crucial knowledge about the condition of the icon and the impact of age and environmental factors.

¹ SHENOUDA 2019: 3.

² HENIN 2022: 128-143.

³ MORGAN 2016: 14-36.

⁴ MEDHAT et al 2015: 152.

⁵ SKALOVA & GABRA 2003: 124.

⁶ MALATY 1998: 1-10; PUICA 2006: 37-50

⁷ BALIGH & SHALABY 2014: 2; PRIESS 2019: 281.

⁸ ELSAYED 2019: 241.

⁹ YOUSRY et Al. 2015: 492; ISSA et Al. 2015: 72.

¹⁰ MAHMOUD 2018: 197.

¹¹ MOHAMED et Al. 2019: 4685.

There are many factors that make the process of identifying the icon layers difficult such as the use of small quantities and the lack of sample purity¹². The purpose of this study is to characterize the components of a Coptic icon painting that the conservator might use while choosing potential conservation methods.

II. MATERIAL AND METHOD

1. Sampling

Six samples from each of the four pigments: brown, red, blue, and white were taken, to determine the pigment and binder used in the icon. Samples were collected from the white ground. The previous samples were prepared before examination and analysis by visual examination, SEM, FTIR and XRD. In general Examination and analysis procedures should be done by non-invasive, non-destructive methods, because in most cases, only micro-samples [a milligram] are permitted for analysis¹³.

2. Visual Examination

To highlight the artwork and an icon's technical aspects and assess its degree of degradation, numerous photographs were taken of the object under study, to determine its state of damage. And the required restoration in order to keep it in a condition that matches the value and significance of such artifacts.

3. Scanning Electron Microscope [SEM] Equipped with [EDX]

Samples were examined by SEM [scanning electron microscope] using an EDX unit, to characterize the morphological appearance of the layers of the icon. And determine its chemical composition. The instrument was FEL QUANTA FEI Philips– Holland, 3D 200i, coupled with EDX unit Thermo Fisher path finder (conservation lab at the Grand Egyptian Museum in Giza, Egypt).

4. Fourier Transform Infrared Spectroscopy [FTIR]

The device, a Bruker optics model vertex 70 with a mid-infrared source, which has a crystal diamond and does not require sample preparation, measured the spectra of samples in the spectral rang of (4000-400 cm^{-1}). The results were compared to those from the standards data in the lab at the Grand Egyptian Museum in Giza, Egypt.

5. X-RAY Diffraction

XRD analysis was employed to determine the chemical components of the colored pigments (40kV, 30mA). Measurements were made in 25° with a 0.02° step (Projects Sector Ministry of Antiquities and Tourism, Cairo, Egypt). It was performed by a Philips X'Pert PW3195 Diffractometer, using Cu K α radiation (40kV, 30mA).

¹² ŞERIFAKIA et Al. 2009: 303.

¹³ BRANIA 2010: 1-39.

III. RESULTS AND DISCUSSION

1. Visual Examination

The icon has been fixed in the iconostasis's center. The icon was painted in the 19th century by the Jerusalem artist Hafez Shamndi¹⁴. And is composed of four layers (wooden support layer, ground layer, paint layer, and varnish layer). The varnish was applied in layers over the icon's surface. Traces of unprofessional restoration (over painting). There are also numerous losses in the preparation layer, paint layer, and gilding layer. in addition to strange dark spots covering the paint [FIGURE 1].



[FIGURE 1]: Overview of Jesus Christ icon, damage signs and missing parts all over the Coptic icon.

©Done by researchers

2. Scanning Electron Microscope [SEM] Equipped with [Edx]

The SEM photomicrograph and microanalysis data were used to evaluate the damage mechanism, which reflects the Coptic icon's surroundings. The micrograph photo revealed very brittle, cracked, cleaved outer layer contaminated with dirt, and a wooden inner layer, appearing to be in a good state [FIGURE 1]. SEM-EDX microanalysis of a few samples revealed that Mg was present in most cases. Which, refer to Kaolinite and Chlorite (natural clay compounds accumulated on the pigment samples)¹⁵.

The microanalysis of brown pigment indicated the presence of 3.96 % lead, 0.79 % aluminum, 0.84 % sodium and 0.69 % silica and 39% oxygen. Numerous researchers have demonstrated, that the color may be created by combining ochre yellow, blue ultramarine, and red lead [FIGURE 2] & [TABLE 1] Some studies suggested that brown pigment is frequently derived from iron oxide, also known as «burnt sienna»¹⁶. And the observation of unexpected little percentage of lead may be explained due to impurities from the priming layer which was mainly composed of anglesite (PbSO₄)¹⁷.

¹⁴ HENIN et Al. 2022: 133

¹⁵ BARTON & KARATHANASIS 2016: 187-192.

¹⁶ CLARK 2002: 7–20.

¹⁷ ŞERIFAKIA et Al. 2009: 303.

The red pigment spectrum revealed the presence of 4.95 % lead, 2.99 % sodium, 1.01% calcium, 1.89% aluminum, and 6.61% chlorine, which are refer red lead (II) oxide (Pb_3O_4) and some impurities [FIGURE 3]& [TABLE 2]. It is noticeable that the lead red was converted to black shades, as a result of to the conversion of red lead (Pb_3O_4) into (Pb_2O_3) by the effect of deterioration factors such as «thermal ageing»¹⁸, and the presence of chlorine salts oxide¹⁹. The use red lead dates back to the Roman era in the first century AD when it was utilized to paint linen shrouds for burial purposes²⁰. Additionally, a wide range of artworks, such as wall paintings, manuscript illuminations, and canvas paintings, were painted with it²¹.

Microanalysis of blue pigment revealed the presence of ultramarine blue pigment $(\text{Na,Ca})_8(\text{AlSiO}_4)_6(\text{SO}_4,\text{S,Cl})_2$, which is proven by the presence of 10.55% sodium, 29.32% calcium, 8.32% aluminum and 10.99% silica, [FIGURE 4] & [TABLE 3].

Ultramarine was the finest and most expensive blue that could be used by painters²². Lapis lazuli has been used as a source of Ultramarine blue pigment in artwork since at least 3000 BC. Paintings were enriched in their artistic value when ultramarine blue was existed on the artist's palette²³. It was determined via micrographs that several areas of the surface of the pigment sample had accumulated blackness, black soot, and wax. Interact in some way with an oil binder, which affects how its chemistry, According to [FIGURE 4]²⁴.

The white pigment in [FIGURE 5] & [TABLE 4] was composed of 53,74% Pb, 20.37 % C, 21.92% O, 1.71% Al and 2% Fe, which are refer to white basic lead carbonate $2\text{PbCO}_3 \cdot \text{Pb}(\text{OH})_2$. White lead is a naturally occurring mineral known by the name hydrocerussite²⁵. From antiquity until the 19th century, lead white manufacture remained mostly unchanged²⁶. On the surface of the white pigment, there were macro and micro cracks of different width and depth²⁷, Air pollution and the presence of hydrogen sulfate caused white lead pigment to turn into dark lead sulfate²⁸. In addition to superficial sandy deposits accompanied by loss of paint²⁹.

¹⁸ KUMAR et Al. 1986: 415–418.

¹⁹ ANGLOS 2001: 186-205.

²⁰ ABDEL-GHANI 2009: 355; WALTON & TRENTELMAN 2008: 845 – 860.

²¹ AZE et Al. 2008: 145–154.

²² LOTUT 2018: 1-18.

²³ ACETO et al 2013: 4184

²⁴ FRISON & BRUN 2016: 41-55.

²⁵ GRANT 2001: 4439- 4442.

²⁶ MAKSOUUD et Al. 2020: 102085

²⁷ LUSSIER & SMITH 2007: 41-53.

²⁸ GLIOZZO & IONESCU 2022:14-35.

²⁹ KARYDIS 2006: 1-24; BUDU 2018: 1-9.

**PHYSIOCHEMICAL CHARACTERIZATION OF COPTIC JESUS CHRIST ICON
[CHURCH OF SAINT MERCURIUS, EGYPT]**

Element	Wt%	At %
C k	51.51	61.80
O k	39.45	35.61
Na k	0.84	0.52
Al k	0.79	0.37
Si k	0.69	0.37
S L	0.81	0.37
Ca L	1.94	0.70
Pb M	3.96	0.28

[TABLE 1]: The SEM-EDX micro analysis of brown pigment from archaeological icon.

Element	Wt %	At %
C k	23.02	15.47
O k	63.70	57.01
Na k	2.99	2.33
Mg k	1.01	0.75
Al k	2.85	1.89
S k	2.24	3.51
Cl K	6.61	3.33
Ca k	1.89	4.23
Pb L	4.95	0.43
Fe L	1.37	0.44

[TABLE 2]: The SEM-Edx micro analysis of red pigment from archaeological icon.

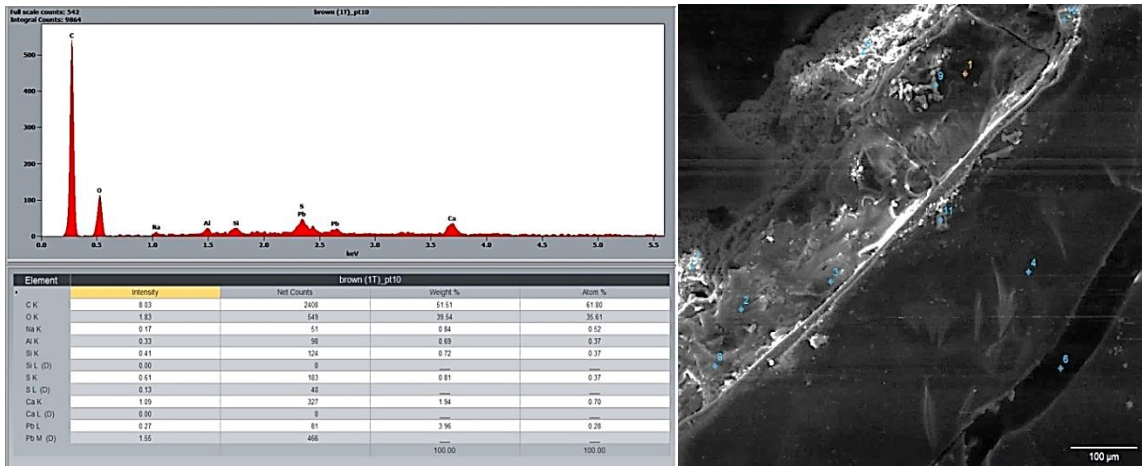
Element	Wt.%	At %
C k	29.32	39.76
O k	40.54	41.26
Na k	10.55	7.47
Al k	8.32	5.02
Si k	10.99	6.37
S L	0.28	0.12

[TABLE 3]: The SEM-EDX micro analysis of blue pigment from archaeological icon.

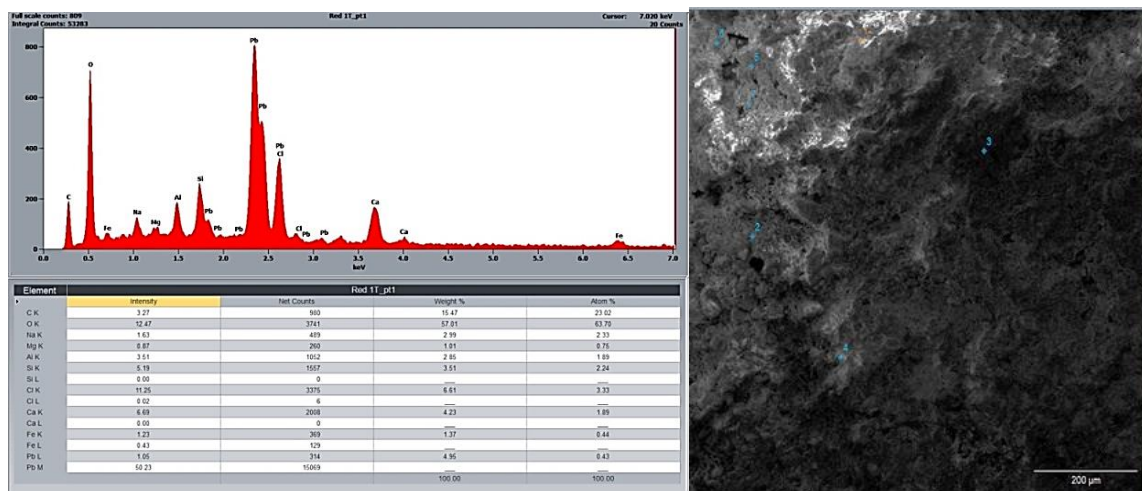
Element	Wt%	At %
C k	20.73	49.93
O k	21.92	39.64
Al k	1.90	2.04
Fe L	1.71	7.51
Pb L	53.74	0.09

[TABLE 4]: The SEM-EDX micro analysis of white pigment from archaeological icon

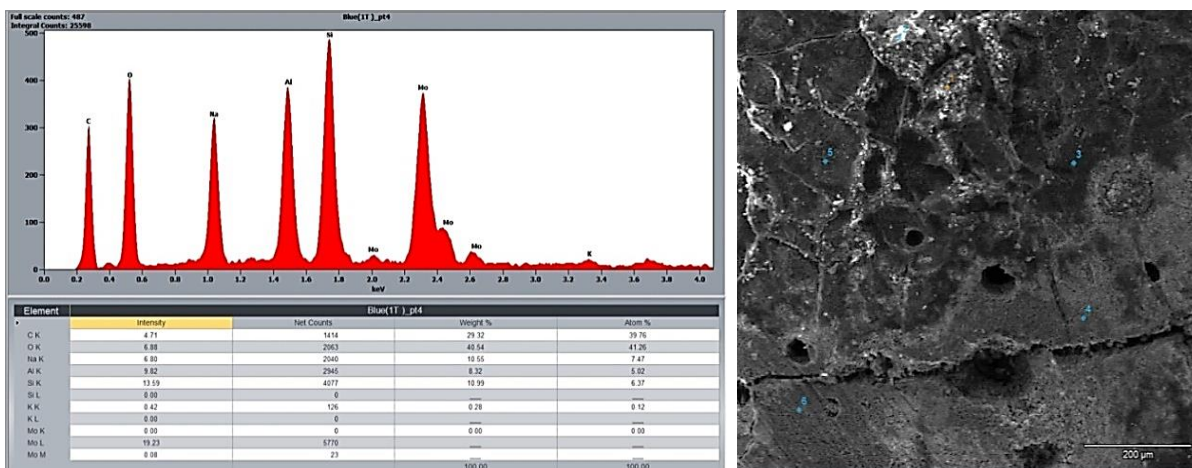
© All Tables done by the researchers



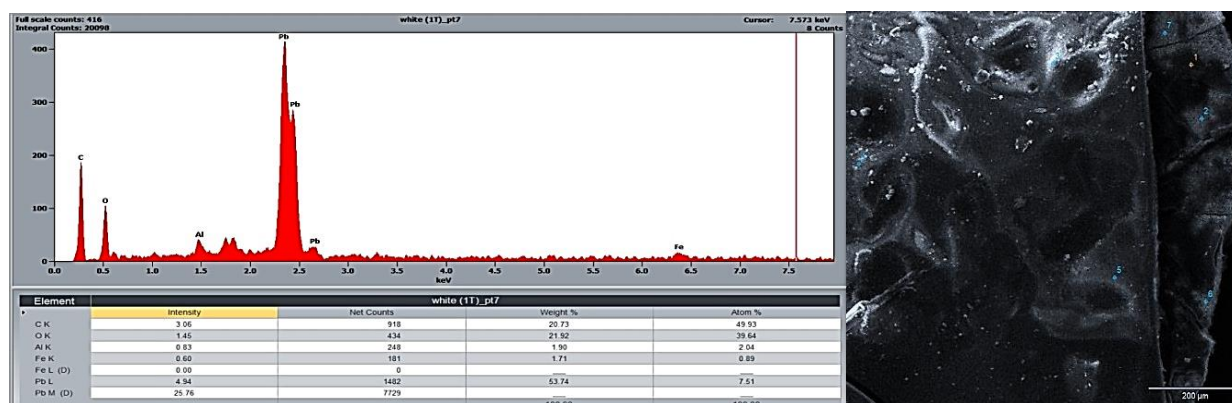
[FIGURE 2]: SEM- EDX results of brown sample indicate the presence of lead oxides (Pb_2O_3).



[FIGURE 3]: EDX micro-analysis results of red pigment indicate the presence of red lead oxides (Pb_3O_4).



[FIGURE 4]: SEM-EDX microanalysis of blue pigment indicate the presence of ultramarine $(Na, Ca)_8(Al, SiO_4)_6(SO_4, S, Cl)_2$.



[FIGURE 5]: SEM-EDX microanalysis results of white sample indicate the presence of basic lead carbonate $2PbCO_3 \cdot Pb(OH)_2$

3. FTIR Analysis

Infrared spectrometry is used for identification of coloring pigments, and binders. Yet there are difficulties, due to the identical chemical composition of many organic compounds, like glue, egg white and yolk, and comparable spectra in the IR range³⁰.

The spectrum of archaeological medium was compared with the proposed material's reference. The FTIR spectrum showed the presence of amide groups of proteins by observing the NH bending band (between $700-1500\text{ cm}^{-1}$) combined with the C=O bond at the band 1645 cm^{-1} , and CH₂ bond of the methylene group (1500 and 1700 cm^{-1}) and C=H methyl group band at the band 2920 cm^{-1} , This proved the use of egg yolk as a medium for pigments³¹ [FIGURE 6]. The band at 1171 cm^{-1} is suggested to be a characteristic sign of shellac resin³² [TABLE 5].

Calcium carbonate ($CaCO_3$) produced a strong signal, at the absorption band $1450-1400\text{ cm}^{-1}$, assigned to C=O stretch group, and gypsum ($CaSO_4 \cdot 2H_2O$) (calcium sulfate) gave a signal at absorption functional group at 983 cm^{-1} , which is assigned to (SO_4)³³.

Furthermore the presence of animal glue as a binder is highlighted by the strong absorption bands in the region of 3401 cm^{-1} , 2920 cm^{-1} , ascribed to amide I (C=O stretching) and amide II (C-N stretching and N-H bending), as well as the peaks connected to methylene groups at band 2929 and 2850 cm^{-1} [FIGURE 7].

Due to thermal ageing, calcium sulfate is thought to occur when preparation layers contain cracks and have missing pieces. The sulphation processes that cause the ground layer to deteriorate, due to the presence of sulphur dioxide (SO_2) gas acts as an oxidant and a catalyst, reacting with calcium carbonate to form calcium sulphate when there is a high relative humidity³⁴. The FTIR spectra of the Coptic icon's preparation layer showed that it is made of calcite, gypsum, and animal glue [TABLE 6].

³⁰ BERG et Al. 2002: 22-27.

³¹ VAHUR et Al. 2016: 3373-3379; KHASAWNEH & ELSEROGY 2019: 85-91.

³² DERRICK et Al. 1999: 190; GHANI 2015: 23 - 37.

³³ ANBALAGAN et Al. 2009: 226-230

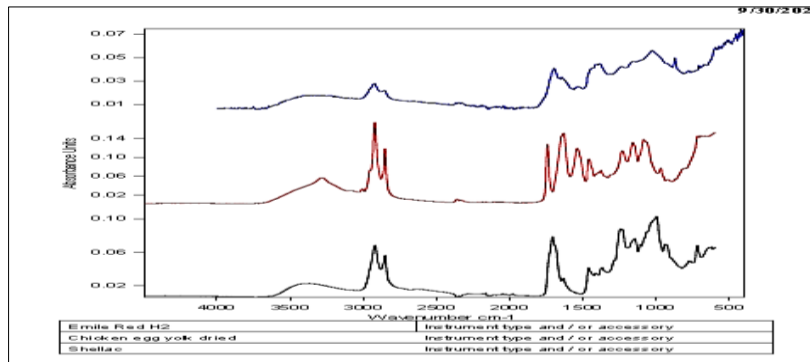
³⁴ PAVLIDOU et Al. 2006: 709-717

Functional group	Egg yolk	Shellac
-CH- stretch	2900cm ⁻¹	3100 cm ⁻¹
C=O stretch	1750cm ⁻¹	1650 cm ⁻¹
C-H bending	1380 cm ⁻¹	1480cm ⁻¹
C-O stretch	-	1171cm ⁻¹

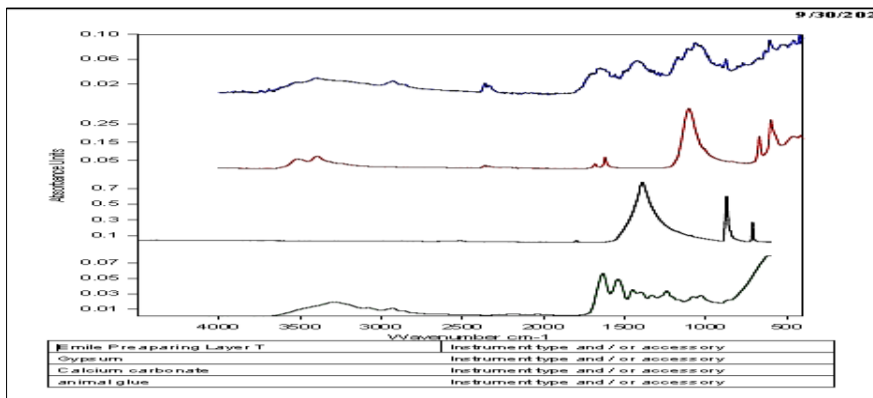
[TABLE 5]: FTIR spectra of a red pigment indicate the presence of egg yolk medium, and shellac varnish.

Functional group	Animal glue	Calcite	Gypsum
-CO- bending	-	875 cm ⁻¹	-
-SO ₄ - stretch	-	-	1140cm ⁻¹
S-O bending	-	-	669 cm ⁻¹
C=O stretch	1450 cm ⁻¹	1425 cm ⁻¹	-
-NH- stretch	3401 cm ⁻¹	-	-
-CH- Bending	2920 cm ⁻¹	-	-

[TABLE 6]: FTIR spectra of a ground layer and medium indicating the presence of gypsum, calcite and animal glue as a binder.



[FIGURE 6]: FTIR spectra of archaeological red sample which show egg yolk as a medium binder, shellac as a varnish.



[FIGURE 7]: FTIR spectra of ground layer sample indicate that it consists of gypsum, calcium carbonate, mixed with animal glue as a binder.

4. X-RAY Diffraction Analysis

Ground layer and pigmented samples were used to conduct this investigation; the outcomes of the XRD studied have demonstrated that the ground layer is composed entirely of calcite, gypsum, and animal glue as a binder³⁵. XRD pattern of a brown pigment reveals the presence of brown lead [FIGURE 8]³⁶. XRD spectrum of red pigment as seen in [FIGURE 9], shows that it consists of red lead. The use of ultramarine is seen in the XRD spectrum [FIGURE 10], refers to blue pigment, and the XRD spectra of white pigment showed, that it was composed of calcite [FIGURE 11]³⁷.

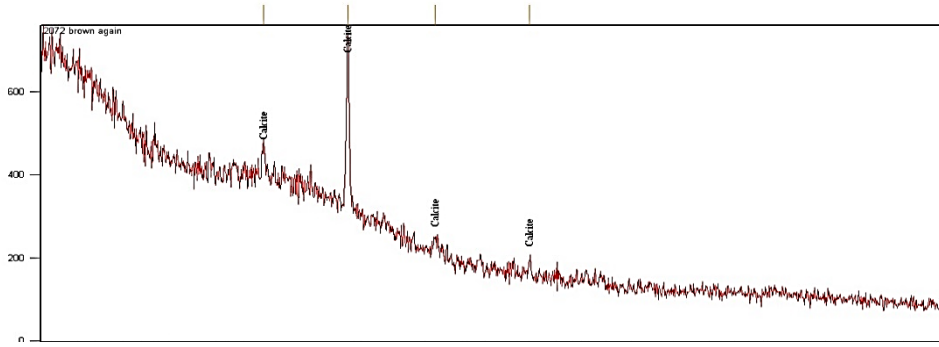
It is apparent that the preparation layers are abundant in calcite and quartz. The changes in temperature and relative humidity, mechanical stresses, and the physiochemical characteristics of the sample (mineral content) lead to the conversion of preparation layer components into anhydrite phase, which is weaker and brittle. It results in loss of the preparation layer components, contains large porous areas, flaking of the outer surface layer, and ultimately loss of the original painting structure. Dark areas and cracks can be noted on the surface³⁸.

³⁵ MEDHAT et Al. 2015: 151-161.

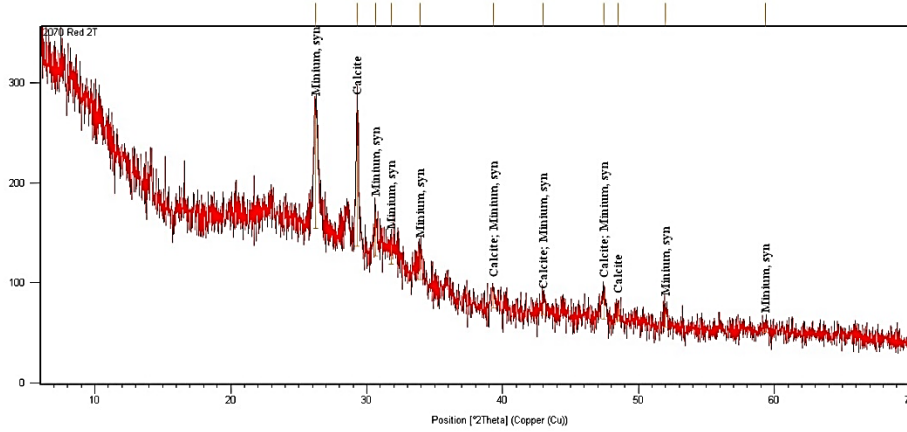
³⁶ HRADIL et Al. 2003: 223–236; HELWIG 2007: 38-109.

³⁷ BERNARD 1971: 33-121; MAHMOUD 2013: 82; GONZALEZ et Al. 2016: 43-49.

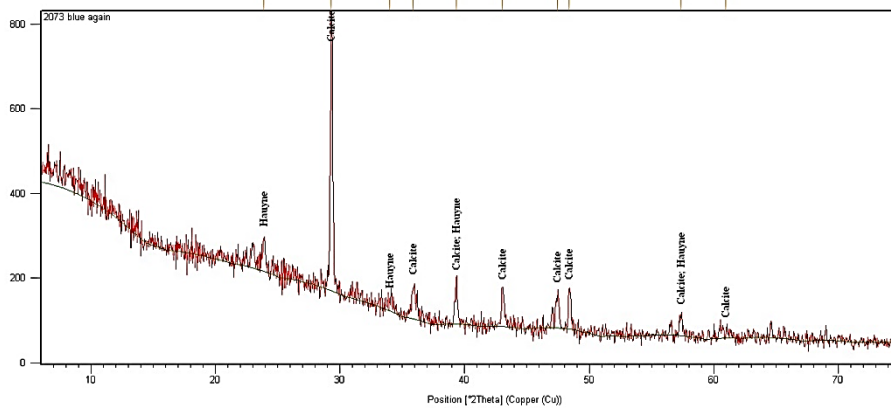
³⁸ SALLAM 2016: 493-500.



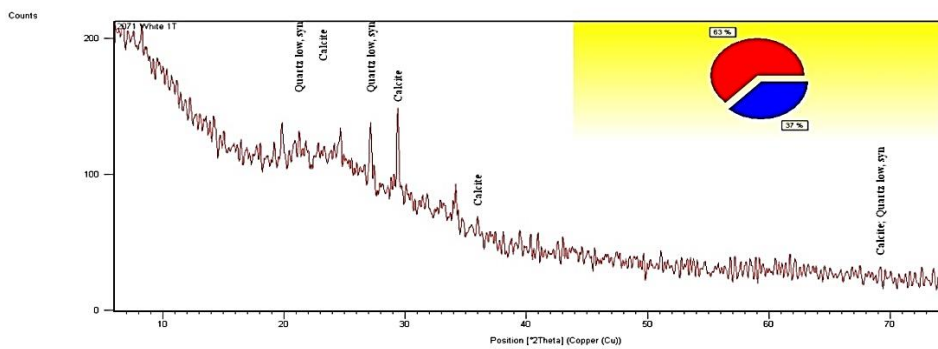
[FIGURE 8]: XRD results of brown pigment indicating the existence of calcite and iron oxide.



[FIGURE 9]: XRD results of red pigment indicating the existence of calcite and red lead.



[FIGURE 10]: XRD result of blue pigment indicated to the existence of calcite.



[FIGURE 11]: The spectra of archaeological white pigment, which prove the use of calcium carbonate, and in addition to quartz.

**PHYSIOCHEMICAL CHARACTERIZATION OF COPTIC JESUS CHRIST ICON
[CHURCH OF SAINT MERCURIUS, EGYPT]**

Visible	Ref. Code	Score	Compound Name	Displacement [°2Th.]	Scale Factor	Chemical Formula
*	01-072-1937	34	Calcite	-0.100	0.728	CaCO ₃
*	00-041-1493	23	Iron oxide	-0.139	0.654	Fe ₂ O ₃

[TABLE 7]: Results of XRD spectra of brown pigment.

Visible	Ref. Code	Score	Compound Name	Displacement [°2Th.]	Scale Factor	Chemical Formula
*	01-072-1937	34	Calcite	-0.100	0.728	CaCO ₃
*	00-041-1493	23	red lead	-0.139	0.654	Pb ₃ O ₄

[TABLE 8]: Results of XRD spectra of red pigment.

Visible	Ref. Code	Score	Compound Name	Displacement [°2Th.]	Scale Factor	Chemical Formula
*	01-072-1937	58	Calcite	0.000	0.941	CaCO ₃
*	00-020-1087	16	ultramarine	0.000	0.126	Na ₆₋₈ Al ₆ Si ₆ O ₂₄ S ₄

[TABLE 9]: XRD analysis of blue pigment ,which revealed the presence of calcite in the ground layer and ultramarine pigment.

Visible	Ref. Code	Score	Compound Name	Displacement [°2Th.]	Scale Factor	Chemical Formula
*	01-086-2334	17	Calcite	0.000	1.001	CaCO ₃
*	01-083-2472	19	Quartz low, syn	0.000	0.559	SiO ₂

[TABLE 10]: XRD analysis of white pigment.

IV. CONCLUSION

The physical and chemical analysis of a holy Jesus icon was described in this work. The icon is a part of the collection of Coptic icons, that can be found in the main sanctuary of the Mercurius church in Giza. Four pigments were found to have been employed to decorate the Coptic icon. SEM-Edx, FTIR, and XRD techniques were used for analysis.

SEM-EDX and XRD microanalysis results reveal that the brown color is made up of iron oxides, while the red, blue and white pigments are made up of red lead, ultramarine, and calcite, respectively.

SEM images revealed numerous deterioration features on the painted icon's surface, including fractures, flaking, blackness, and accumulating layers of soot and dust. According to the XRD analyses, the preparation layers contain gypsum and calcite [calcium carbonate] [calcium sulphate]. According to FTIR spectra, the preparation layer is made up of calcite, gypsum, and animal glue, and the medium used is egg yolk. The analysis of the coloring pigments revealed the existence of several minerals, which may have been the primary factor in the archaeological icon's ability to absorb water and exert pressure on its exterior layer³⁹.

³⁹ ALI & YOUSSEF 2020: 37-52

BIBLIOGRAPHY

- ABDEL GHANI, H.: «A Multi-instrument Investigation of Pigments, Binders and Varnishes from Egyptian Paintings (AD 1300-1900): Molecular and Elemental Analysis Using Raman, GC-MS and SEM-EDX Techniques», PhD Thesis, chapter 12, University of Bradford, 2009.
- ACETO, M., AGOSTINO, A., FENOGLIO, G. & MARCELLO, P.: «Non-invasive Differentiation between Natural and Synthetic Ultramarine Blue Pigments by means of 250–900 nm FORS Analysis», *Analytical Methods* 5/16, 2013, 4184-4189, DOI: 10.1039/c3ay40583d
- ALI, M. & YOUSSEF, M.: «An Analytical Study of a Mural with Colorful Geometric Decoration, Coptic museum, Cairo, Egypt: a case study», *Scientific Culture* 6/3, 2020, 37-52.
- ANBALAGAN, G. et al: «Infrared, Optical Absorption, and EPR Spectroscopic Studies on Natural Gypsum», *Vibrational Spectroscopy* 50/2, 2009, 226-230.
- ANGLOS, D.: «Laser-Induced Break-down Spectroscopy in Art and Archaeology», *Applied Spectroscopy* 55/6, 2001, 186-205.
- AZE, S. VALLET, M. DETALLS, V. GRAUBY, O & BARONNETA.: «Chromatic Alterations of Red Lead Pigments in Artworks: A Review», *Phase Transitions* 81/2-3, 145-154, 2008, DOI: 10.1080/01411590701514326
- BALIGH, R. & SHALABY, M.: «A Comparison between Coptic Icons in Christian Churches and the Icons of the Monastery of St. Catherine in Sinai », *Bulletin of the Center Papyrological Studies* 31/1, 2014, 1-27, DOI: 10.21608/bcps.2014.24309
- BERG, K. J. et al.: «Darkening and Surface Degradation in 19th- and early 20th Century Paintings—an Analytical Study», In book: *ICOM Committee for Conservation 13th Triennial Meeting*, 2002, 22-28.
- BERNARD, K.: «X-Ray Diffraction and the Composition of Lead White», *Studies in the History of Art* 4, 1971-1972, 121–133. <https://www.jstor.org/stable/42617728>
- BRANIA, A.: «Characterization of the Mamluk Painting Materials in Cairo, Egypt: El-Ashraf Bersbay Madrasa (826 A.H/ 1423 A.D) A case study», *Mağallāʾ Al-Itihād Al-ʾām Lil Aṭārīyīn Al-ʾarab* 11, 2010, 1-39, DOI: 10.21608/jguuaa.2000.2747
- BUDU, A.: «The Deterioration and Degradation of Icons with Revetments. Case Studies », Conference: *Sustainable Preservation of Cultural Heritage Collections*, Romania, 2018, 1-9.
- CLARK, R.: «Pigment Identification by Spectroscopic Means: an Arts/science interface», *Comptes Rendus Chimie* 5/1, 2002, 7–20, [https://doi.org/10.1016/S1631-0748\(02\)01341-3](https://doi.org/10.1016/S1631-0748(02)01341-3)
- CHITALE, A.: «Production & Characterization of Brown Coloured Pigment from *Trichoderma Viride*», *Electronic Journal of Environmental, Agricultural and Food Chemistry* 11/5, 2012, 529-537.
- DERRICK, M. R., STULIK, D., LANDRY, J. M.: *Infrared Spectroscopy in Conservation Science*, Los Angeles (The Getty Conservation Institute) 1999.
- ELSAYED, Y.: «Conservation of a Historic Panel Oil-painting Coated with an Ancient Varnish Layer », *Shedet* 6, 2019, 238-256, DOI: 10.21608/shedet.006.14
- ELSEROGY, A. MAHMOUD, G. & ALAWNEH, F.: «The Conservation of the Byzantine Icon from Georgios Church, Jordan », *Annales d'Universite 'Valahia' Targoviste*, Section d'Archeologie et d'Histoire, vol. Tome XX, 2018, 53-69.
- FRISON, G., & BRUN, G.: «Lapis Lazuli, Lazurite, Ultramarine 'Blue', and the Colour Term 'Azure' up to the 13th Century », *Journal of the International Color Association* 16, 2016, 41-55.
- GHANI, M.: «Dating a Coptic Icon of Anonymous Painter by Spectroscopic Study of Pigment Palette», *Mediterranean Archaeology and Archaeometry* 15/1, 2015, 1-16, DOI: 10.5281/zenodo.15002.
- GLIOZZO, E., IONESCU, C.: «Pigments—Lead-based Whites, Reds, Yellows and Oranges and their Alteration Phases», *Archaeological and Anthropological Sciences* 14, 2022, 14-35.
- GONZALEZ, V., CALLIGARO, T., WALLEZ, G., EVENO, M. & TOUSSAINT, K.: «Composition and Microstructure of the Lead White Pigment in Masters Paintings using HR Synchrotron XRD», *Microchemical Journal* 125, 2016, 43-49.
- GRANT, R.: *Lead Production*, in *Encyclopedia of Materials: Science and Technology*, 2001, 4439-4442.
- HAMED, S., Ali, M., El Hadidi, N.: «Using SEM in Monitoring Changes in Archaeological Wood: A review», *Current Microscopy Contributions to Advances in Science and Technology*: A. MÉNDEZ-VILAS (ed.), 2012, 1077-1085.

- HELMI, F. M. & ATTIA, M. A.: «Non-Destructive Study of an Oil Painting from 19th Century Egypt »,vol.1, In: 3rd international conference on non-destructive Testing, Micro Analytical Methods and Environment Evaluation for Study and Conservation of Works of Art, Instituto Centrale del Restauro, Roma, 1992, 738.
- HELWIG, K.: *Iron Oxide Pigments*, BERRIE, B. H. (ed.), *Artists' Pigments, A Handbook of Their History and Characteristics*, vol. 4, Washington (National Gallery of Art) 2007.
- HENIN, E., ABDELAAL, S., FAHIM, N., & ELMALEK, W.: «Conservation and Preservation of Jesus Christ Icon Dating Back to 19th Century at Saint Mercurius Monastery at Tamouh, Giza, Egypt», *International Journal of Advance studies in World archaeology* 5/1, 2022, 128–143, DOI: 10.21608/ijaswa.2022.230400
- HRADIL, D., GRYGAR, T., HRADILOVA, J. & BEZDICKA, P.: «Clay and Iron Oxide Pigments in the History of Painting», *Applied Clay Science* 22/5, 2003, 223–236, [https://doi.org/10.1016/S0169-1317\(03\)00076-0](https://doi.org/10.1016/S0169-1317(03)00076-0).
- ISSA, Y.M., ABDEL-MAKSOU, G. & MAGDY, M.: «Analytical Study of Saint Gregory Nazianzen Icon, Old Cairo, Egypt», *Journal of Molecular Structure* 1100, 2015, 70-79, <https://doi.org/10.1016/j.molstruc.2015.07.004>
- KARYDIS, C.: «The Fabric Support in Portable Icons Deterioration, Documentation & Conservation», *International Meeting, Athens* 12, 2006, 1-24.
- KENDIX, ELSEBETH L., SILVIA PRATI, EDITH JOSEPH, GIORGIA SCIUTTO & ROCCO MAZZEO: «ATR and Transmission Analysis of Pigments by Means of Far Infrared Spectroscopy» *Analytical and Bioanalytical Chemistry* 394/4, 2009, 1023-1032.
- KHASAWNEH, S. ELSEROGY, A.: «Conservation and Restoration of Church Icon from Baptism Museum, Jordan, Case Study» *Mediterranean Archaeology and Archaeometry* 19/1, 2019, 85-91.
- KUMAR, U. SHARON, M. JAWALEKAR, S.: «Characterization of Pb3O4 Films by Electrochemical Techniques», *Bulletin of Materials Science* 8/3, 1986, 415–418.
- LOTUT, Z.: «Blue in Eighteenth-Century England: Pigments and Usages», *La Couleur* 75, 2018, 1-18, <https://doi.org/10.4000/1718.1214>
- LUSSIER, S. & SMITH, D.: «A Review of the Phenomenon of Lead White Darkening and its Conversion Treatment», *Studies in Conservation* 52, 2007, 41-53.
- MAHMOUD, H.: «Analytical Study of Coptic Wall Paintings in Egypt, El-Bagawat Necropolis, Kharga Oasis: A Case Study» *Periodico di Mineralogia* 82/1, 2013, 25-40, DOI: 10.2451/2013PM0002.
- MAHMOUD, M.: «Using Examination and Analysis Methods to Determine the aspects of Deterioration for Oil Painting (A Case Study) », *International Journal of Multidisciplinary Studies in Architecture and Cultural Heritage* 1/1, 2018, 197 – 221.
- MAKSOU, G., IBRAHIM, M., ISSA, Y. & MAGDY, M.: «Investigation of Painting Technique of Coptic Icon by Integrated Analytical Methods: Imaging, Spectroscopic and Chemometric Methods», *Journal of Archaeological Science: Reports* 29, 2020, 102085, <https://doi.org/10.1016/j.jasrep.2019.102085>
- Malaty, T.: *the Coptic Iconography, Introduction to the Coptic Orthodox Church*, 1998, 10, 1-10, https://ukmidcopts.org/kotob/Fr%20Tadros%20Malaty/12-3_Coptic_Iconography.pdf
Accessed on 30/06/2022
- MEDHAT, A. ALI, M. & ABDEL-GHANI, M.: «Analytical Investigation on a Coptic Wooden Icon from the 18th Century Using SEM-EDX Microscopy and FTIR Spectroscopy», *Mediterranean Archaeology and Archaeometry* 15/1, 2015, 151-161, DOI: 10.5281/zenodo.15048.
- MORGAN, S.: «Shaker's Typological Classification of Coptic Orthodox Church Design An Application on Historic Coptic Churches of Old Cairo and Fustat», *Engineering Research Journal* 151, 2016, A14-A36.
- MORKOS, M.: «Factors and Signs of the Damage of Coptic Icons and Suggestion for Treatment: Application on a Chosen Model», 1st International Conference of Coptic Studies at Bibliotheca Alexandrina, Entitled: *Life in Egypt during the Coptic period Towns and Villages, Laymen and Clergy, Bishops and Dioceses*, 2010.
- PAVLIDOU, E. ARAPI, M. et Al.: «Onoufrios, the Famous XVI's Century Iconographer, Creator of the «Berati School»: Studying the Technique and Materials used in Wall Paintings of inscribed Churches», *Applied Physics A* 83/4, 2006, 709-717.
- PRIESS, M., CHAILLOT, C.: «The Role of Images and the Veneration of Icons in the Oriental Orthodox Churches: Syrian Orthodox, Armenian, Coptic and Ethiopian Traditions, Aethiopia», *International Journal of Ethiopian and Eritrean Studies* 22, 2019, 280–281.
- PUICĂ, I.: «Biblical Elements in Coptic Icon», *European Journal of Science and Theology* 2/2, 2004, 37-50.

**PHYSIOCHEMICAL CHARACTERIZATION OF COPTIC JESUS CHRIST ICON
[CHURCH OF SAINT MERCURIUS, EGYPT]**

- REFAAT.A , ATTA.D , OSMAN.O , MAHMOUD.A, EL-KOHADARY.S , MALEK.W, FERRETTI.M , ELHAES.M & IBRAHIM.M.: «Analytical and Computational Study of Three Coptic Icons in Saint Mercurius Monastery, Egypt», *Bio interface Research in Applied Chemistry* 9/6, 2019, 4685 - 4698
- SALLAM, A. ZHAO, Y. HASSAN, M. TOPRAK, M. MUHAMMED, M. & UHEID A ,A.: «Studies on the Deterioration of Coptic Mural Painting in the Monastery of Martyrs and the Luxor Temple», *International Journal of Conservation Science* 7/2 ,2016, 493-500.
- ŞERIFAKIA, K. BÖKEA, H. YALÇINB, S. & IPEKOĞLU, B.: «Characterization of Materials Used in the Execution of Historic Oil Paintings by XRD, SEM-EDS, TGA and LIBS Analysis», *Materials Characterization* 60/4, 2009,303.
- SKALOVA, Z. & GABRA, G.: *Icons of the Nile Valley*, Giza (Egypt. Internat. Publ) 2003.
- VAHUR, S. et Al.:« ATR-FTIR Spectral Collection of Conservation Materials in the Extended Region of 4000-80 cm⁻¹», *Bio Analysis Chemistry Journal* 408, 2016, 3373-3379.
- WALTON, M. & TRENTELMAN, K.: «Romano-Egyptian Red Lead Pigment: A Subsidiary Commodity of Spanish Silver Mining and Refinement », *Archaeometry* 51/5, 2008, 845–860.
- YOUSRY, M ., ABDEL-MAKSoud.G.& MAGDY, M.: «Study of the Effect of Environmental Conditions on the Red Color of Saint Yehnes Cama Icon, Mallawi, Egypt», *International Journal of Research in Pharmacy and Chemistry, IJRPC*, 5/3, 2015, 491-497.