

ko-ro-no-we-sa



**Proceedings
of the 15th international colloquium
on Mycenaean studies**

SEPTEMBER 2021

Edited by

John Bennet, Artemis Karnava and Torsten Meißner

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KO-RO-NO-WE-SA
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on Mycenaean studies
SEPTEMBER 2021

KO-RO-NO-WE-SA
Πρακτικά του 15ου διεθνούς συνεδρίου μυκηναϊκών σπουδών
Σεπτέμβριος 2021

Edited by

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FACULTY OF PHILOSOPHY, UNIVERSITY OF CRETE
RETHYMNON

ΦΙΛΟΣΟΦΙΚΗ ΣΧΟΛΗ, ΠΑΝΕΠΙΣΤΗΜΙΟ ΚΡΗΤΗΣ
ΡΕΘΥΜΝΟ

2024

Cover: Linear B tablet **PY Ta 711** with the word *ko-ro-no-we-sa* (image: Courtesy of The Pylos Tablets Digital Project, Palace of Nestor Excavations, The Department of Classics, University of Cincinnati)

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Abbreviations

I. Mycenaological colloquia

- Études Mycéniennes* 1956 = LEJEUNE, M. (ed.) 1956 *Études Mycéniennes. Actes du Colloque international sur les textes mycéniens, Gif-sur-Yvette, 3-7 avril 1956.*
- Mycenaean Studies* 1961 = BENNETT, E. L., JR. (ed.) 1964 *Mycenaean Studies. Proceedings of the Third International Colloquium for Mycenaean Studies held at 'Wingspread', 4-8 September 1961.*
- Cambridge Colloquium* 1965 = PALMER, L. R. & CHADWICK, J. (eds) 1966 *Proceedings of the Cambridge Colloquium on Mycenaean Studies, 7-12 April 1965.*
- Acta Mycenaea* 1970 = RUIPÉREZ, M. S. (ed.) 1972 *Acta Mycenaea. Actes du cinquième Colloque international des études mycéniennes, Salamanca, 30 mars-3 avril 1970, Minos 11-12, 1970-1971.*
- Colloquium Mycenaicum* 1975 = RISCH, E. & MÜHLESTEIN, H. (eds) 1979 *Colloquium Mycenaicum. Actes du sixième colloque international sur les textes mycéniens et égéens tenu à Chaumont sur Neuchâtel, 7-13 septembre 1975.*
- Res Mycenaee* 1981 = HEUBECK, A. & NEUMANN, G. (eds) 1983 *Res Mycenaee. Akten des VII. Internationalen Mykenologischen Colloquiums, Nürnberg, 6.-10. April 1981.*
- Tractata Mycenaea* 1985 = ILIEVSKI, P. HR. & CREPAJAC, L. (eds) 1987 *Tractata Mycenaea. Proceedings of the Eighth International Colloquium of Mycenaean Studies, Ohrid 15-20 September 1985.*
- Mykenaiika* 1990 = OLIVIER, J.-P. (ed.) 1992 *Mykenaiika. Actes du IXe Colloque international sur les textes mycéniens et égéens organisé par le Centre de l'Antiquité Grecque et Romaine de la Fondation Hellénique des Recherches Scientifiques et l'École Française d'Athènes, Athènes, 2-6 octobre 1990, BCH-Suppl. 25.*
- Floreat* 1995 = DEGER-JALKOTZY, S., HILLER, S. & PANAGL, O. (eds) 1999 *Floreat Studia Mycenaea. Akten des X. Internationalen Mykenolo-*

gischen Kolloquiums in Salzburg vom 1.-5. Mai 1995, Österreichische Akademie der Wissenschaften, Philosophisch-historische Klasse, Denkschriften 274.

Austin Colloquium 2000 = Proceedings of the 11th Mycenological Colloquium, Austin, 7-13 May 2000, Unpublished.

Colloquium Romanum 2006 = SACCONI, A., DEL FREO, M., GODART, L. & NEGRI, M. (eds) 2008 Colloquium Romanum. Atti del XII colloquio internazionale di Micenologia, Roma, 20-25 febbraio 2006, Pasiphae 1.

Études Mycéniennes 2010 = CARLIER, P., DE LAMBERTERIE, CH., EGETMEYER, M., GUILLEUX, N., ROUGEMONT, F. & ZURBACH, J. (eds) 2012 Études mycéniennes 2010. Actes du XIIIe colloque international sur les textes égéens, Sèvres, Paris, Nanterre, 20-23 septembre 2010, Biblioteca di Pasiphae 10.

Aegean Scripts 2015 = NOSCH, M.-L. & LANDENIUS ENEGREN, H. (eds) 2017 Aegean Scripts. Proceedings of the 14th International Colloquium on Mycenaean Studies, Copenhagen, 2-5 September 2015, Incunabula Graeca 105.

II. Text editions and new texts

The documents referred to throughout the papers of the volume come from the following editions and are marked in **bold**:

ARN = GODART, L. & SACCONI, A. 2019-2020 *Les archives du roi Nestor. Corpus des inscriptions en linéaire B de Pylos*, Pasiphae 13-14.

CHIC = OLIVIER, J.-P. & GODART, L. 1996 *Corpus Hieroglyphicarum Inscriptionum Cretae*, Études Crétoises 31.

CIV = SACCONI, A. 1974 *Corpus delle iscrizioni vascolari in lineare B*, Incunabula Graeca 57.

CIV-Suppl = GODART, L. & SACCONI, A. 2017 *Supplemento al corpus delle iscrizioni vascolari in lineare B*, Biblioteca di Pasiphae 11.

CoMIK I-IV = CHADWICK, J., GODART, L., KILLEN, J. T., OLIVIER, J.-P., SACCONI, A. & SAKELLARAKIS, I. A. 1986-1998 *Corpus of Mycenaean inscriptions from Knossos I-IV*, Incunabula Graeca 88.

CMS I-XIII = MATZ, F., BIESANTZ, H., PINI, I. & MÜLLER, W. (eds) 1964-2009 *Corpus der minoischen und mykenischen Siegel I-XIII*.

Docs¹ = VENTRIS, M. & CHADWICK, J. 1956 *Documents in Mycenaean Greek*.

Docs² = VENTRIS, M. & CHADWICK, J. 1973 *Documents in Mycenaean Greek*, 2nd ed.

- FdC I = ARAVANTINOS, V. L., GODART, L. & SACCONI, A. 2001 *Thèbes. Fouilles de la Cadmée, I. Les tablettes en linéaire B de la Odos Pelopidou. Édition et commentaire*, Biblioteca di Pasiphae 1.
- FdC III = ARAVANTINOS, V. L., GODART, L. & SACCONI, A. 2002 *Thèbes. Fouilles de la Cadmée, III. Corpus des documents d'archives en linéaire B de Thèbes (1-433)*, Biblioteca di Pasiphae 3.
- FdC IV = ARAVANTINOS, V. L., DEL FREO, M., GODART, L. & SACCONI, A. 2005 *Thèbes. Fouilles de la Cadmée, IV. Les textes de Thèbes (1-433). Translittération et tableaux des scribes*, Biblioteca di Pasiphae 4.
- GORILA I-V = GODART, L. & OLIVIER, J.-P. 1976-1985 *Recueil des inscriptions en linéaire A I-V*, Études Crétoises 21.
- HoChyMin = OLIVIER, J.-P., avec la collaboration de VANDENABEELE, F. 2007 *Édition holistique des textes chypro-minoens*, Biblioteca di Pasiphae 6.
- ICS = MASSON, O. 1983 *Les inscriptions chypriotes syllabiques. Recueil critique commenté*, 2nd ed., Études Chypriotes 1.
- IG XV 1,1 = KARNAVA, A. & PERNA, M., adiuante EGETMEYER, M. 2020 *Inscriptiones Graecae. Volumen XV. Inscriptiones Cyprae. Pars I. Inscriptiones Cyprae Syllabicae. Fasciculus I. Inscriptiones Amathuntis, Curii, Marii*.
- KT⁵ = KILLEN, J. T. & OLIVIER, J.-P. 1989 *The Knossos tablets. Fifth edition. A transliteration*, Minos-Suppl. 11.
- KT⁶ = MELENA, J. L., in collaboration with FIRTH, R. J. 2019 *The Knossos Tablets. Sixth Edition. A Transliteration*.
- MT IV = OLIVIER, J.-P. 1969 *The Mycenae tablets IV. A revised transliteration*.
- PTT² = OLIVIER, J.-P. & DEL FREO, M. 2020 *The Pylos Tablets Transcribed. Deuxième édition*.
- PT³ = MELENA, J. L., with the collaboration of FIRTH, R. J. 2021 *The Pylos Tablets. Third Edition in Transliteration*. Anejos de Veleia, Series Maior 14.
- Rapport 1991-1995 = OLIVIER, J.-P. 1999 Rapport 1991-1995 sur les textes en écriture hiéroglyphique crétoise, en linéaire A et en linéaire B. In *Floreat* 1995, 419-435.
- Rapport 1996-2000 = OLIVIER, J.-P. 2009 Rapport 1996-2000 sur les textes en écriture hiéroglyphique crétoise, en linéaire A et en linéaire B, *Pasiphae* 3, 187-197.
- Rapport 2001-2005 = DEL FREO, M. 2008 Rapport 2001-2005 sur les textes en écriture hiéroglyphique crétoise, en linéaire A et en linéaire B. In *Colloquium Romanum* 2006, 199-222.

- Rapport* 2006-2010 = DEL FREO, M. 2012 Rapport 2006-2010 sur les textes en écriture hiéroglyphique crétoise, en linéaire A et en linéaire B. In *Études mycéniennes* 2010, 3-21.
- Rapport* 2011-2015 = DEL FREO, M. 2017 Rapport 2011-2015 sur les textes en écriture hiéroglyphique crétoise, en linéaire A et en linéaire B. In *Aegean Scripts* 2015, 3-30.
- Report* 2011-2015 = EGETMEYER, M., KARNAVA, A., LANDENIUS ENEGREN, H. & PERNA, M. 2017 2011-2015 report on the Cypriot syllabic inscriptions. In *Aegean Scripts* 2015, 31-44.
- TITHEMY = MELENA, J. L. & OLIVIER, J.-P. 1991 TITHEMY. *The tablets and nodules in Linear B from Tiryns, Thebes and Mycenae. A revised transliteration*, Minos-Suppl. 12.

III. Grammars, dictionaries and handbooks

- CÉG = BLANC, A., DE LAMBERTERIE, CH. & PERPILLOU, J.-L. (eds) 2000-2020 Chronique d'étymologie grecque 5-18, *RPhil*.
- Companion* 1-3 = DUHOUX, Y. & MORPURGO DAVIES, A. (eds) 2008-2014 *Companion to Linear B. Mycenaean Greek texts and their world* 1-3.
- DELG = CHANTRAINE, P. 2009 *Dictionnaire étymologique de la langue grecque*, 2nd ed.
- DGE = RODRÍGUEZ ADRADOS, F. 1980- *Diccionario griego-español*.
- DMic I-II = AURA JORRO, F. 1985/1993 *DGE Anejo I-II. Diccionario griego-micénico* I-II.
- DMicSupl = AURA JORRO, F. BERNABÉ, A., LUJÁN, E. R., PIQUERO RODRÍGUEZ, J. & VARIAS GARCÍA, C. 2020 *Diccionario griego-español. Anejo VII. Suplemento al Diccionario Micénico*.
- EDG = BEEKES, R. S. P. 2010 *Etymological dictionary of Greek*.
- GEW = FRISK, H. 1954-1972 *Griechisches etymologisches Wörterbuch*.
- LGM = PIQUERO RODRÍGUEZ, J. 2019 *El léxico del griego micénico. Étude et mise à jour de la bibliographie*, *Études anciennes* 73.
- LGPN I-V = 1987-2018 *A Lexicon of Greek Personal Names*.
- LSJ⁹ = LIDDELL, H. G., SCOTT, R., JONES, H. S. & MACKENZIE, R., 1996 *Greek-English Lexicon*.
- Manuale* = DEL FREO, M. & PERNA, M. (eds) 2016 *Manuale di epigrafia micenea. Introduzione allo studio dei testi in Lineare B*.
- MGL = MORPURGO DAVIES, A. 1963 *Mycenaeae Graecitatis Lexicon*, *In-cunabula Graeca* 3.
- SEG = *Supplementum Epigraphicum Graecum*

IV. Journals

Journal abbreviations can be found in the *American Journal of Archaeology* (AJA: <https://www.ajaonline.org/submissions/journals-series>), except for:

ABSA = Annual of the British School at Athens

CCÉC = Cahiers du Centre d'Études Chypriotes

SMEA NS = Studi Micenei ed Egeo-Anatolici - New Series

V. Electronic resources

Cretan Hieroglyphic inscriptions, YOUNGER = <http://people.ku.edu/~jyounger/Hiero>

Linear A inscriptions, YOUNGER = <http://people.ku.edu/~jyounger/LinearA/>

Linear A inscriptions, SigLA = <https://sigla.phis.me>

Linear B, CaLiBRA - Cambridge Linear B Research Archive = <http://calibra.classics.cam.ac.uk>

Linear B, DĀMOS - Database of Mycenaean at Oslo = <https://damos.hf.uio.no>

Linear B, LiBER - Linear B Electronic Resources = <https://liber.cnr.it>

Index of DMic = <https://www.cervantesvirtual.com/bib/portal/diccionario-miceno/>

CoPY, JUDSON, A. P. 2020 *Concordance to Pylos scribal attributions* = <https://hcommons.org/docs/judson-copy/>

Seals and sealings, CMS - Arachne = <https://arachne.uni-koeln.de/arachne/>

LGPN = *The Lexicon of Greek Personal Names*: <https://www.lgpn.ox.ac.uk>

Portal of ancient texts, mostly papyrology, Trismegistos = <https://www.trismegistos.org/>

EpiDoc alignment to the Wingspread convention (work in progress)

<https://epidoc.stoa.org/gl/latest/app-epi-mycenaean.html>

VI. Text conventions

Cretan Hieroglyphic (after CHIC)

Document numbers: #315

Signs: 001-096

Doubtful recognitions of signs: 001-096

Linear A (after GORILA)

Document numbers: **PH 28**

Signs: AB 01-AB 87, A 100/102-191, A 301-371, A 400^{VAS}-418^{VAS}, A 501-664, A 701-743

Doubtful recognitions of signs: A 301+A 303

Signs tentatively transcribed: SE-TO-I-JA

Linear B (after the various corpora)

Document numbers: **KN F(1) 1**

Syllabic signs: *ti-ri-po-de*

Undeciphered signs: *75

Doubtful readings of signs: pø

Deciphered logograms/ideograms: LANA

Acronymic logograms/ideograms: TU-RO

Undeciphered logograms/ideograms: *201^{VAS}

Cypro-Minoan (after HoChyMin)

Document numbers: **##001-##217**

Cypriot syllabic (after ICS and IG XV 1,1)

Document numbers: **ICS 1-464**; IG XV 1, 229

Preface

Copenhagen, September 2015: the *Comité international permanent des études mycéniennes* (CIPEM) accepts John Bennet's proposal to host the 15th Colloquium on Mycenaean Studies in September 2020, in Athens, based at the British School at Athens (BSA), thus returning the meeting to Greece for the first time since 1990, while also retaining a British connection for the first time since 1963. Torsten Meißner and Artemis Karnava generously agree subsequently to assist with organisation and publication of the colloquium and its proceedings.

March 2020: the world is struck by the Covid-19 pandemic, severely affecting travel and forcing a significant proportion of the world's population into some form of lockdown. Given the lack of certainty about how the situation would develop for the rest of the year, the organisers, with the support of CIPEM, reluctantly and with great disappointment postpone the colloquium for one year, to September 2021. However, despite the successful introduction of vaccines early in 2021, the situation remained uncertain, particularly given the international nature of our field that would require many to travel (some over considerable distances) in order to participate in person. And in the meantime, in addition to health concerns, international air and train travel routes had been severely curtailed, making an in-person *rencontre* practically impossible to hold. Accordingly the difficult decision was eventually taken not to hold the colloquium in person, nor to attempt a wholly virtual meeting, given time differences and the impersonal nature of the on-screen interactions that we were all experiencing in our daily routine.

Instead, the colloquium's necessary business (committee meetings, etc.) was carried out virtually on the days originally scheduled for the physical meeting. As a public-facing bonus, colleagues working on new finds from Knossos on Crete and Ayios Vasileios in Laconia presented these in on-line keynote lectures attended by large audiences. The organisers also undertook to publish all papers originally accepted for the collo-

quium, together with written versions of the keynote lectures, as the proceedings of ‘the colloquium that never was’, its title (*parce-qu’il est permis de rire entre les mycéenologues*) *ko-ro-no-we-sa* (cf. **PY Ta 711.2**). Thanks to Artemis Karnava, and with financial assistance generously made available by the Cambridge Faculty of Classics, the volume you have in your hand – or perhaps are reading on-screen – has been published in the *Αριάδνη* series of the Faculty of Philosophy of the University of Crete.

As editors and organisers, we were gratified to note a good number of early- and mid-career scholars among those contributing to this volume, and even more early-career scholars and students had expressed an interest in attending the meeting itself, leaving the editors in no doubt that interest in Mycenaean, and indeed Aegean studies more widely, is unbroken and continues to attract the intellectual attention of rising academics in a large number of disciplines. It is also pleasing to note the creation of a new CIPeM sub-committee on digital approaches, first proposed in Rome in 2006 and long overdue, plus a general eagerness among sub-committee members to continue their work in the years between colloquia. We wish them well in those endeavours.

The ‘colloquium that never was’ proceedings volume contains 33 contributions that have been divided into five sections: the two keynote lectures that include important new material, for which we are indebted to the respective excavation directors and their teams (KANTA *et al.*; VASIOLOGAMVROU *et al.*); a lengthy section with reports, project and database descriptions as well as archival discoveries (DEL FREO; EGETMEYER; PERNA; AURORA; FLOUDA & NOTTI; GRECO; PIQUERO RODRÍGUEZ; ARAVANTINOS & MARAVELIAS; KARNAVA); a section on the texts, their historical, social and palaeographic information (ALONSO MORENO; FIRTH; GODART & SACCONI; KILLEN; NIKOLOUDIS; NOSCH; ROUGEMONT & VITA; SALGARIELLA & JUDSON; WEILHARTNER); a section on the linguistic aspects of the texts (BERNABÉ; DŽUKESKA; GARCÍA RAMÓN; JIMÉNEZ DELGADO; PALAIMA; PIERINI; THOMPSON; VARIAS GARCÍA); and, finally, a section on scripts and archaeology, into the latter of which creep in papers also outside this section (CIVITILLO; DAVIS *et al.*; HRUBY & NAKASSIS; MOUTHUY). The volume concludes, as every Mycenological volume, with the Minutes of the CIPeM meeting, and the Committee Resolutions (*Comité des signes; Comité des instruments de travail; digital approaches to Aegean scripts*).

We list here some of the signs of times evident in this collection of papers:

- Project descriptions and the explanations of methodology, as well as reports of all kinds, take up considerable space in humanities conferences nowadays, and have also made a dynamic entry here. It is the case that a number of early- and even mid-career scholars without permanent employment are constrained to produce academic work within the frame of time-limited projects, and the projects become the employer and the *raison d'être* of research initiatives and goals. They therefore take on a life of their own. Only recently has research in the Aegean scripts benefitted from two large European ERC grants (not present in this volume: CREWS, <https://crewsproject.wordpress.com/>, now succeeded by VIEWS, <https://viewsproject.wordpress.com/2022/12/22/when-ideas-of-writing-spread/> based in Cambridge; INSCRIBE, <https://site.unibo.it/inscribe/en> based in Bologna), breaking with the 'traditional', Mycenaean solitary investigation, or its collaborative spirit on account of the publication of new texts. The new projects have a hierarchical structure, whereby the Principal Investigator (PI) sets the research agenda for the whole group of researchers, selected by them in the first place. Primary material, its discovery or study, is not within the permitted scopes of these projects, but they rather focus on the *grandes synthèses*, the secondary handling and further elaboration of published material.
- Digital approaches have been narrowing in on epigraphy for some time now, but they appear to have claimed more vital space in the frame of this colloquium. Epigraphy is the oldest discipline among those studying the ancient world, and ways of handling and presenting inscriptions have been pondered upon and offered at least since the time of Ciriaco d'Ancona. But despite its age, epigraphy proved equally non-resistant to the digital sirens of the 21st century. However, digital editions of texts are not only merely another form of accessing our material, but they seem to have a transformative quality in terms of the methodologies we use and our very research possibilities and agendas.
- The pool of countries and nationalities involved in Linear B and related scripts maintains its Babel-esque character, but also shows signs of regression. Mycenaean was, from the start, an international enterprise and it largely remains so. The countries represented in the colloquium are in the European continent (Greece; Italy; Spain; France; UK; Austria; Belgium; Denmark; Norway; North Macedonia), along

with the US and Australia. Individual scholars' institutional affiliations do not always match their countries of origin (we have, for instance, two German participants who are active in the UK and France), which makes up for interesting intellectual combinations and realities. One cannot help but notice the near-absence of a new generation of scholars in various countries of Eastern Europe, and – surprisingly – Germany, where Classical studies enjoy a long tradition. Nevertheless, the field continues to be inhabited by a majority of researchers (primarily philologists or linguists) whose main research output centres, in fact, around the Linear B texts. It is additionally interesting to see how participants combine Mycenology with their (other) research interests, namely archaeology and historical linguistics.

- This colloquium – odd due to circumstances of the global pandemic – marks some more 'revolutionary' occasions. A colloquium that was attended, until recently, by invitation only, saw a number of near-unsolicited participants. Invitees responded to the organising-and-now-editorial committee's targeted call for papers (CfP) by also involving their project partners, and there was a general opening towards more archaeological approaches, given that the materiality of inscription substrates has become of paramount importance to the discipline of epigraphy. This response on the part of the invitees seemed uncoordinated and spontaneous, so we did not consider it appropriate to attempt to stem the tide. The previous colloquium in 2015 in Copenhagen had announced a completely open CfP. This may be an appropriate time to examine and perhaps adapt the traditional structure and workings of CIPeM so as to ensure that it continues to act as a unifying force for Aegean studies while retaining its affiliation with UNESCO.

And on that final note: as part of CIPeM's business in September 2021, it was agreed that the next colloquium would be held in 2025 in Madrid, jointly organised by CIPeM's new Secretary General, Carlos Varias García, together with Eugenio Luján and Alberto Bernabé. As organisers and editors of the 15th colloquium, we wish them a smoother ride than we experienced – good luck/καλή επιτυχία!

John Bennet (Athens/Sheffield) – Artemis Karnava (Rethymno) –
Torsten Meißner (Cambridge)

December 2022,
the year that marks 70 years since the decipherment of Linear B

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Finally we thank all contributors for their patience as the colloquium was first postponed, then cancelled, for working with us to meet the word-limits necessary in such a large volume, and for responding constructively to feedback offered to improve their contributions. We hope the results meet with their approval.

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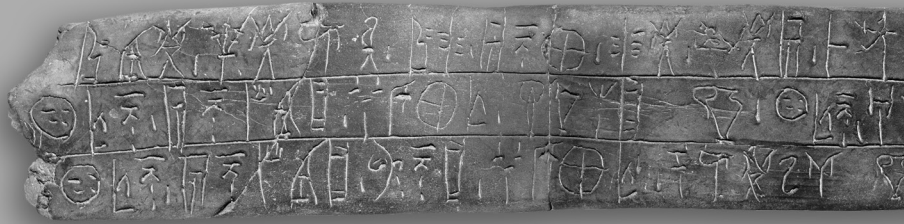
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Keynote lectures
-
new discoveries



**An archaeological and epigraphical overview
of some inscriptions found in the Cult Center
of the city of Knossos (Anetaki plot)**

**Athanasia Kanta, Dimitri Nakassis,
Thomas G. Palaima, Massimo Perna**

The archaeological evidence
*By A. Kanta**

In an important study Peter Day and David Wilson¹ consider Knossos as a place of memory where the character of habitation is connected with diachronic religious cult. The excavations of the Anetaki plot confirmed this character. The religious center of the city of Knossos was uncovered in this plot, characterized exactly by diachronic cult from the Protopalatial period to the 2nd century AD and beyond.²

The excavation started as a rescue dig on a plot in the modern upper village of Knossos (Fig. 1). Under this village extends part of the ancient city of Knossos, which has been inhabited continuously until today. Nearby is the well-known palace of Knossos.

A few aspects of the excavation are presented here, as they are part of a wider frame of cultic character also involving the inscribed objects

* This excavation and the study of the material, which still continues, would not have been possible without the very generous backing of the Institute for Aegean Prehistory. I am very grateful to Dr. Malcolm Wiener, founder of INSTAP, Professor Phillip Betancourt, Executive Director of INSTAP, and Dr. Tom Brogan, director of the INSTAP Study Center in Crete, for their unflinching and continuous support during the years of the work at Knossos. I am also grateful to the director of the Heraklion Ephorate Dr. Vasso Sythiakaki, and section leader Ioanna Serpetsidaki, for their help and support, also, to the conservators of the Heraklion Ephorate, the guard Stavros Amanakis, and the Anetaki excavation and study team of our archaeologists and technicians.

¹ DAY & WILSON 2002.

² KANTA 2018, 250-264, 334-340.

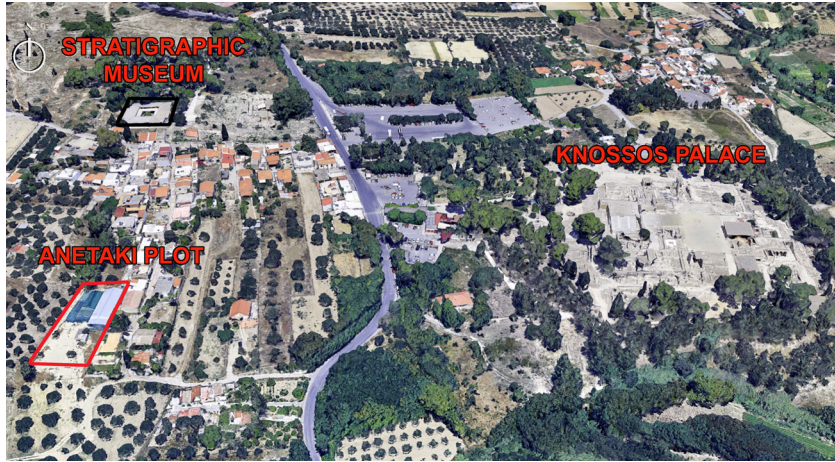


Fig. 1. Palace of Knossos and the surrounding area.
Location of Anetaki plot (adjusted from Google Maps).

presented here. The excavation started in 2011 and 2012, and continued from 2013 onwards until 2017. 525sq.m have been excavated so far, to the bedrock, at a greatest depth of 8m. Next to this plot, the BSA excavated part of a Greek sanctuary in 1974 and called it the Glaucos sanctuary.³ The stratigraphy of the plot is very complicated and fragmented because of robbed walls, pits and wells cut into previous strata.

In the northern part of the Anetaki plot a Roman *temenos* wall with two viewing steps (Fig. 2, B), an arrangement known from various Greek temples, was found.⁴

The *temenos* contained a double temple dedicated to Artemis and Zeus. The northern temple had a bench for placement of sculpture and an *eschara*. The discovered sculpture and figures were of high quality. Under the floors of the Roman temples there mainly were Hellenistic walls of structures which seem to be dedicated to cult.

A unique Bronze Age shrine with cult arrangements and objects *in situ* was placed underneath the Roman temple (Fig. 2, A). We named it the Fetish Shrine, in analogy to the Fetish Shrine excavated by Sir Arthur Evans in the Little Palace. Underneath the Fetish Shrine there was a

³ CALLAGHAN 1978.

⁴ KANTA 2018, 252-253; 2020.

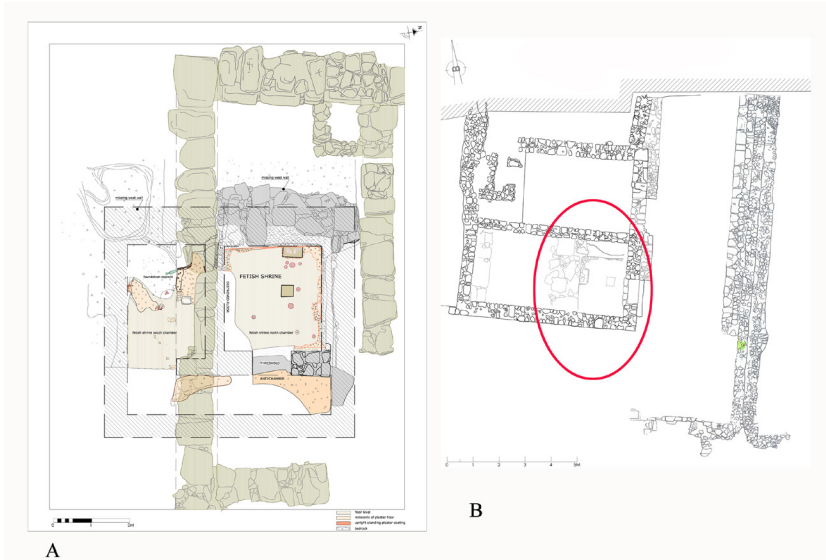


Fig. 2. A. Location of the Fetish Shrine over Neopalatial Room 1, B. The double Roman temple and *temenos* wall. The North Cella of Fetish Shrine is visible (Excavator's archive).

large Neopalatial building of a cultic character. In one of its rooms, after its destruction and abandonment, the Fetish Shrine was built. It was a three-room shrine consisting of two inter-communicating rooms with a common antechamber. For building material they re-used stones from the Neopalatial building.

The Anetaki site was full of sacred repositories and foundation deposits. Some belong to the Protopalatial period (1800-1700 BC). Over the bedrock, a Neopalatial building (1700-1450 BC), of a character unique to date, has come to light (Fig. 3). The main walls of this building are built with ashlar masonry bearing a great number of mason's marks. It is clear from the way some walls are built that the building material is second-hand. In other words, building material from an earlier building of Protopalatial date (1800-1700 BC) has been used. Several important elements of this early building have been found. They are all related to cult, and show Protopalatial building activity in this area. The diachronic, religious use of this site begins with these. They are the following:

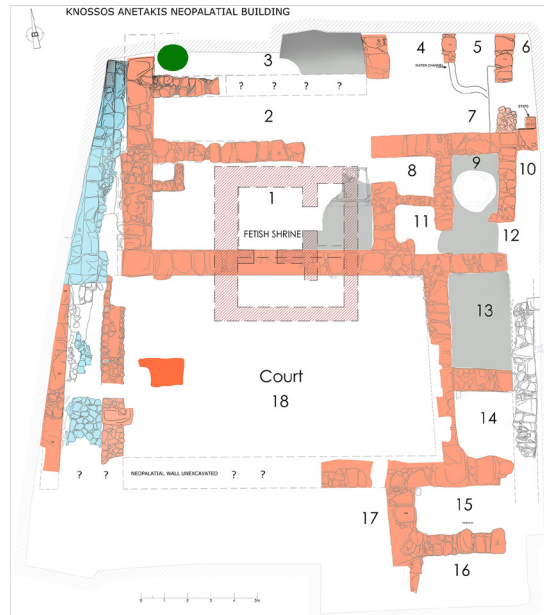


Fig. 3. Neopalatial building (1700-1450 BC) ground plan. Grey areas: burnt destruction. Green dot: Foundation Deposit of Room. Walls with hatched lines: Fetish Shrine (Excavator's archive).

1. A cist under Neopalatial Room 1.
2. A cistern dug out of the soft bedrock in the NE part of the plot.
3. A repository under the floor of Neopalatial Room 14.

From the Neopalatial building, which replaced the Protopalatial one, 18 spaces have been excavated so far. The finds clearly show that this building also had a cult use.

From the spaces of the Neopalatial building, relevant to this paper is Room 1, which contained the Ivory Repository (Fig. 4).

This is a semi-subterranean, long room, 3.70 by 9.50m in dimensions, which communicated with spaces 7 and 8. It is built against the slope of the hill, which have a west-to-east downward slope. Its entrances to both Rooms 7 and 8 have been destroyed by later pits. However, its floor clearly went over a Protopalatial cist. Room 1 and the Protopalatial cist under it have not been completely excavated, because the north *cella* of

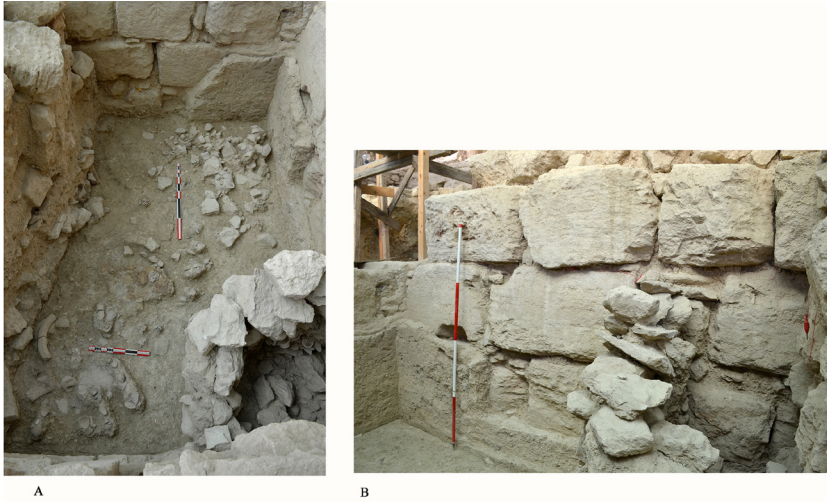


Fig. 4. Neopalatial building, Room 1: A. Floor deposit and repository, B. Ashlar wall and repository wall against it (Excavator's archive).

the Fetish Shrine was fitted into them. In the southeast corner of Room 1 was a burnt layer full of small vases: miniature jugs, cups, conical cups and braziers. The western part of the Room, which was not affected by the construction of the Fetish Shrine, had some important finds, which show the character of the destroyed first floor of this building.

Two large fragments of gypsum slabs belonged to the dado of the walls. There were also fragments of wall paintings, unfortunately in a fragmentary state. They were white, black, blue, red and yellowish in colour. They were found together with fragments of charcoal, probably belonging to the superstructure of the walls and ceiling. Some vases were found on the floor or just above it. Fallen from the floor above, was a painted pithos decorated with relief ornamental bands.

In the North-West corner of Room 1 was a repository (Fig. 5), which started as a pit cut into the soft bedrock (0.50-0.60m. depth) and was built up with flimsy walls, partly against the N and W walls of the room. It had the following dimensions: preserved height 1.60-1.70m.; interior dimensions 1.10 by 0.80m.; exterior dimensions 1.50 by 1.20m. One of the most important testimonials of the Minoan script, Linear A, came to light in this repository, in a fragmentary condition (Fig. 6, A). It is a religious object made out of elephant ivory and probably meant for display

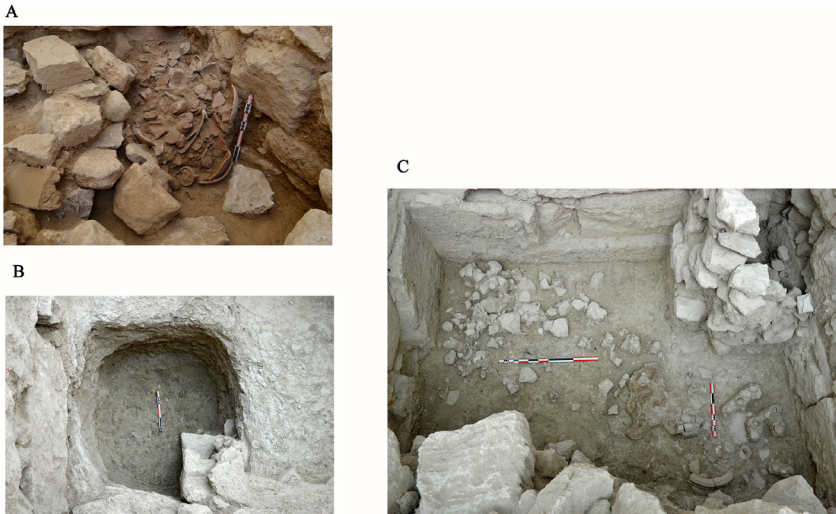


Fig. 5. The Ivory Repository: A. Mass of pottery inside. B. Pit dug out of bedrock. C. Repository wall and floor of Room 1 with destruction deposit (Excavator's archive).

only, because it is now, as it also was originally, fragile in nature (Fig. 6, B). It consists of a circle of ivory open on one side. A handle was fitted into this opening. When it was displayed, it was held from this handle, which has a typical handle shape, widening towards the top. This object and its handle were found in the same layer of the narrow repository.

When the inscribed ivory object was mended, it became clear that in the middle of it there was a component of perishable material, which was kept in place by rods, also of perishable material, inserted into holes bored into the ivory circle. All sides of the ivory circle and the handle were covered by writing in the Linear A script. I have provisionally called this object 'a religious scepter,' to emphasize its cultic character and the fact that it was held by its handle.

The Linear A writing incised on the soft ivory has a calligraphic character not found on the clay Linear A tablets.

Although this object is so far unique, it seems to be depicted on various glyptic objects, e.g. on a roughly contemporary gold ring found in the Griffin Warrior Tomb from Pylos.⁵ On this ring the Goddess is holding an object which has been interpreted by the excavators as a mirror.

⁵ DAVIS & STOCKER 2016, 85, no. 4, 627-655.



Fig. 6. The Ivory Repository: A. The ivory scepter during excavation.
B. The ivory scepter after mending (Excavator's archive).

However, it clearly has a circular component in its middle which cannot be part of a mirror, as Bronze Age mirrors are made of a highly polished bronze disk without a circular component in their middle.

Together with the 'scepter,' an intriguing faience object, roughly of similar dimensions, was found. It was also circular with a hole in the middle. Its preservation does not allow us to know if it was comparable in shape to the ivory 'scepter.' Unfortunately, it is only partly preserved. A spectacular object, also found in the same repository, is a bowl of banded marble, grey and white in colour, made in two separate pieces. Its shape is unique so far in the bibliography. The Ivory Repository, apart from pottery, also contained six bronze hinges and an offertory bronze blade. The hinges may have belonged to a wooden box or a writing tablet.

The pottery of the repository is in the process of mending and publication.⁶ The complete vases, at present, suggest an early Neopalatial character. When the mending, processing and study of the material are completed, we will have a clear idea of when the repository started being used and for how long.

⁶ KANTA forthcoming.

*The Linear A inscriptions on the Ivory Ring (KN Zg 57)
and on the ivory handle (KN Zg 58)
by D. Nakassis, T. G. Palaima & M. Perna***

The Linear A inscription on the Ivory Ring (KN Zg 57)

As we have seen, Athanasia Kanta considers the two ivory objects as forming part of a scepter or a religious instrument, and defines the two parts that compose it as a 'ring' and 'handle.' We will use the same words to mention the supports of the two different inscriptions.

The Ring and the handle do not fit together perfectly, because small pieces of ivory from the Ring are missing (c. 0.7cm). The Ring is made from a 'slice' of an elephant tusk (Fig. 7).

The outer diameter measures c. 13.5 to 14cm (5.4-5.6in), and the inner diameter between c. 10 and 10.3cm. (4-4.1in). The Ring, like the tusk from which it was cut, is not exactly circular, but a little bit elliptical.

The height of the 'exterior' face of the Ring (Face C) is c. 1.2cm (roughly ½ inch), and the height of the 'interior' face (Face D) is 1.8cm (roughly ¾ inch). This difference in height between the internal and external thickness of the Ring creates a slope on the upper face (Face A). By contrast, the lower or bottom face (Face B) is flat.

Two holes of c. 1cm in diameter cross the Ring from side to side, and two hollows, which do not completely perforate the outer surface of the Ring (Face C), are disposed along an axis that is perpendicular to the axis of the two holes.

There are many depictions of objects that resemble our so far unique ivory object, especially on some well-known seals. In the scene on the ring seal CMS XI, 030 (Fig. 8), for example, there is a circular object with a handle, which has a spherical element that appears to be in its center. It is held by a seated female. But also a Cretan Hieroglyphic nodule from

**We would like to underline the great importance of the work done by the restorers Kathy Hall, Erasmia Arvaniti, Georgia Pachaki, Manolis Chatzimanolis, and Alekos Nikakis. These skilled technicians devoted their full skills to reconstructing these documents starting from dozens of fragments. We are indebted to D. Nakassis, Ph. Sapirstein and A. Greco for providing us with images that have been crucial for our detailed study and presentation of the inscriptions and for our understanding of the skill of the hand that created these masterpieces. Tom Palaima, Dimitri Nakassis and Massimo Perna are extremely grateful to Athanasia Kanta for having entrusted them with the epigraphic publication of these documents, which are destined to write a new chapter in the history of Minoan writing systems. Our great thanks to Malcolm Wiener for his personal interest in seeing to the scientific publication of these great discoveries.



Fig. 7. The Ivory Ring and the ivory handle (Photo Ph. Sapirstein).

Knossos seems to show a ring (with a handle) that has a spherical element in the center (Fig. 9).

The presence of the two holes and two hollows on our Ring led us to think that a small object could be held in suspension in the center of the Ring. It could be a small object supported by one continuous cylindrical support (or two half supports meeting at the object) that fit into the two holes. To prevent the inevitable tilting that might happen if the object were suspended along only one axis, the object may have been fixed along a perpendicular axis in the same way with one continuous cylindrical support (or, again, two half supports), which was fitted into the two hollows that do not perforate the outer surface of the Ring.

The Ring has a long inscription in Linear A,⁷ clearly carved on three of its faces, and probably on all four. These are the top face (Face A), the bottom (Face B), the external face (Face C), and the internal face (Face D) that preserves almost no original ‘surface.’

We start with Face A, the top face. The figures incised into the ivory are placed into separate spaces, marked to the left and to the right by incised vertical lines; above and below, the space is limited by the natural upper and lower edges of the particular faces. Influenced by the visual effects of these segments, especially when the incised images are true-to-life, we call each of such demarcated spaces a *metope*. On the left half of Face A, when the Ring is oriented with the gap in the Ring downward roughly at 6 o'clock on old circular time pieces, there is a series of 12 quadruped animals, each in its own *metope*. These animal *metopes* take up almost precisely half of the available space on Face A. The iconography of the animals will be discussed in the forthcoming, final publi-



Fig. 8. Detail of the cast of the ring seal CMS XI, 030.

⁷ Henceforth, all Linear A documents and sign numbers refer to the editions of *GORILA I-V*.

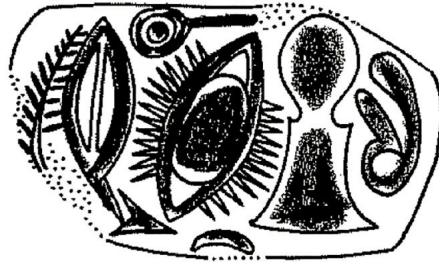
cation.⁸ All the animals are oriented facing to the left.

Face A on its right half, moving clockwise from 12 o'clock to six o'clock, contains 16 whole or partially preserved signs, each in a *metope*. Considering the space available, at least two other signs may have been incised. At least 18 signs, therefore, were originally present. The only sign that can give us an indication for the direction of the writing is the 'rhyton' (Linear A sign A 664), which in its only attestation in Linear A on tablet PH 8a.3, is oriented facing to the right.

As we have seen with the animals, the Linear A signs are 'framed' on all four faces, in rectangular *metopes* formed by two vertical lines and by the upper and lower edges of the Ring, according to a practice that closely resembles the inscription on the outer faceted surface of the stone libation table from Iouktas (IO Za 2). The arrangement of the signs with this circular pattern leads us to think the two painted inscriptions inside cups from Knossos (KN Zc 6; KN Zc 7) and of the ring of Mavro Spelio (KN Zf 13). We would also compare the inscription on the Phaistos Disk, where the groups of signs, albeit stamped, are, as in this case, contained in *metopes*. This arrangement of the signs with *metopes* is also found on many seals and sealings in Cretan Hieroglyphic script.⁹

Stylistically, the signs of our inscription remind us of the Linear A inscriptions not only of Knossos and Iouktas, but also of Phaistos. In particular, from a paleographic point of view, some of the signs look similar to those engraved on metal objects like the silver pin from Knossos (KN Zf 31). See, for example, the signs AB 60 (RA), AB 28 (I), AB 24 (NE) and AB 09 (SE).

The signs are engraved and carved with the same technique and accuracy as most of the Cretan Hieroglyphic inscriptions on seals. But few Linear A inscriptions, even those that are very accurate, like the inscrip-



CHIC #145 / CMS II,8,78

Fig. 9. Drawing of nodule #145 (CHIC, 196).

⁸ KANTA forthcoming.

⁹ Henceforth, all references to Cretan Hieroglyphic documents and signs refer to CHIC.

tions on dedicatory libation tables or on precious metals, have signs that are so ‘lifelike,’ artistic, and close to three-dimensional.

On the right half of Face A, at least ten vases are engraved. They are carved in an extremely iconographic manner. Some vases have a syllabic sign, placed above in ligature, emerging upward from the mouths of the vases. In all likelihood, each sign in ligature (VAS+PA, VAS+RU, etc.) provides further details about each vase or its contents. It is probably not a coincidence, in fact, that the signs for the rhyton and the tripod are the two vase signs on the Ring that do not have an associated syllabogram.

If the syllabograms were used here to specify the types of vases, they would be absent from these two vases, the identities of which are conspicuous from the unmistakable shapes of the ideograms (see HT 31). Six vases recorded on the Ring share an identical typology, that of an amphora.

Until now, our only examples of non-linearized Linear A occur infrequently on clay tablets, nodules, roundels, and vases; or, as we have seen, more frequently when carved on metal objects or on libation tables. By contrast, the signs of Cretan Hieroglyphic are very iconographic/calligraphic, especially those incised on seals. Linear A, with some very rare exceptions, was not used on seals. Here, for the first time, we are dealing with a Linear A inscription incised predominantly in a calligraphic style. This is a key new feature, important for ongoing palaeographical studies.

As mentioned above, 12 animals are also contained each one in its own *metope*. Although we are not in the presence of a familiar type of Linear A inscription *stricto sensu*, these images of animals convey an aesthetic and even ‘ideational’ meaning, e.g. as in the Parthenon friezes, which tell their story in images. Their numbers and species might relate to animals that would be sacrificed in ritual feasting. Likewise for the vessels that occupy the right half of Face A: tripods, rhyta and amphorae have clear ritual functions. As we have mentioned above, Face A also has evidence for 17 other extant signs, simple or in ligature, and there is room for two more signs.

In this inscription, and in particular in Face A, the iconography and the writing are part of the same message and of the same narration. This feature is unique to date for Linear A inscriptions.

We could conclude that the aim of the creator of Face A was to record, with pure iconography, the animals and then, in their most realis-

tic forms, using the repertory of Linear A logograms, the vases, the textiles and the hides with the help of what would seem to be acrophonic signs that were considered indispensable for identifying the particular varieties, treatments or contents of these entries. The iconography and the writing are integrated together into the same 'message,' the same narrative. It may describe the components of a ceremony or religious festival, or, as with Hittite records that prescribe what should be done in particular rituals, serve here as a kind of mnemonic text.

So again, taken together in this way, we have a superbly executed 'record' of all the elements necessary for a ritual feasting ceremony, with well-known counterparts in the Linear B tablets. Here, however, we have a counterpart of the 'ingredients' in this communal ritual ceremony also attested in a Linear A tablet, as will be discussed in our final publication.¹⁰

Face B, the bottom face, is flat and has a Linear A inscription with groups of signs, but also single syllabograms and logograms. Also on Face B, groups of signs and individual signs are contained in *metopes*. As we have just seen, we have no such phonetic sign groups on Face A. The text of face B has many *lacunae* (missing signs) due to the damage to the surface layer of the ivory or even deeper. The direction of reading the inscription would seem to be left-to-right, judging by the orientation of AB 81 (KU), AB 40 (WI) and AB 60 (RA) signs. Since a good part of the text is eroded, it is not possible to establish the beginning of the inscription.

The text of Face B presents six groups of signs that are well-preserved and perfectly recognizable, followed by three ideograms/logograms. The three ideograms/logograms in Linear B have the value GRA, probably FAR and OLIV. Each occupies its own *metope*. Again, there are no accompanying numbers or fractional signs.

Face C, the external face on the outer circumference of the Ring, contains a Linear A inscription composed of groups of signs and individual or ligatured signs that, also on this face, are contained within *metopes*. At least 40% of Face C has extensive surface damage leaving no traces of signs. We can recognize at least nine groups of signs and five logograms for different types of textiles differing from each other by the number of fringes. One textile sign is ligatured with the sign AB 77 (KA)

¹⁰ KANTA forthcoming.

inside it. The direction of writing is from left-to-right, as is made clear by the orientation of some signs, such as AB 60 (RA), AB 01 (TA), AB 81 (KU), etc.

Face D, the inner face of the Ring, is extremely damaged. It seems to show almost exclusively a long sequence of about nine signs for animal hide, none entirely preserved, each in a *metope*. In one case, there is a trace of a sign that seems to be ligatured with the hide ideogram (AB 180). The ligatured sign can be restored as the upper curved portion of syllabogram AB 77 (KA), AB 78 (QE), or AB 70 (KO). The best parallel for the form of the hide ideogram is found in the Phaistos Linear A tablets.

In total there are approximately 84 signs completely or partially preserved, and 35 in small traces or probably present in the space available. The total number then is about 119 signs.

We are dealing, therefore, with the longest known Linear A inscription. It is considerably longer than the opisthographic Linear A tablet **HT 123**, which has 105 signs. But more than 40% of the signs on **HT 123** are routine numerals and marks of separation. By eliminating these, only some 60 phonetic or logographic/ideographic signs are left. By significant contrast, our inscription contains no numerals at all on any of its faces. As such, it aligns itself with stone libation vessels and divorces itself from accounting records. The use of the *metope* feature on the Ring eliminates the need for marks of separation, commonly known as 'word-dividers.' Finally, we must stress that there are few parallels of the sign-groups on the Ring with sign-groups on extant Linear A texts.

The Linear A inscription on the ivory handle (KN Zg 58)

The inscription on the ivory handle (Fig. 7) is the first Linear A economic document coming from a cult building and the second within the Minoan cultural sphere, considering the small fragment of the *lame à deux faces* in the Cretan Hieroglyphic script from the sanctuary of Kato Syme Viannou as the other example.¹¹

The handle has a quadrangular section and measures c. 13cm in length, and has a maximum thickness of 1.6cm. The signs measure between 0.5 and 0.9cm, so they are smaller than those of the Ring.

We decided to consider the Ring and the handle as separate carriers of inscriptions and to study the two independently for several reasons.

¹¹ LEBESSI *et al.* 1995.

First of all, the inscription on the handle is an accounting text, as determined by the presence of numerical and fractional signs. By contrast, the text on the Ring, although it shows animals, agricultural products, and man-made objects and materials indicated by single logograms, it does not testify to any quantities indicated by numerals or fractions. Secondly, the ductus of the writing on the handle is different from that on the Ring. If we concentrate on the signs that occur more than once on the Ring, namely signs AB 08 (A), AB 81 (KU), AB 07 (DI) and AB 77 (KA), we can see that on the Ring they are incised always in the same way and in a very calligraphic manner. On the contrary, on the handle the shape of the sign AB 08 (A) is linearized and the shape of the sign AB 77 (KA) has a different orientation of the internal strokes. Third, the same two signs AB 08 (A) and AB 77 (KA) appear ligatured on the Ring and on the handle, but on the Ring the sign AB 08 is above AB 77, but on the handle the sign AB 08 is below AB 77. In other words, these elements of the inscribed texts seem to demonstrate the presence of two different hands of the scribe/incisor.

On Face α of the handle, two probable vases, each ligatured with a phonetic sign, are recorded followed by a sign for ten. After these appears a probable new sign in the Linear A sign repertory. This sign is followed by two signs attested in the Hieroglyphic script: *180 and *181. These two signs are very rare, and this document demonstrates that they were also used in Linear A. On Face β of the handle, at the right end, a sequence of four signs is recorded. Only the first sign is doubtful, because it is very damaged. On the left half of this face there is likely a sign for an animal hide that recalls the same sign in the Phaistos tablets, and also the signs incised on the internal Face D of the Ivory Ring. On Face γ signs for a boar and probably a pig are recorded, but without numerals. On Face δ two vases, with a sign above in ligature, are followed by units, and also by fractions.

This sequence of fractions is a most important aspect of this document. Six different signs for fractions are recorded in sequence. This might provide us with the relative values of these fractions (although not the absolute values). The significant news is that this sequence of fractions provides us with a different sequence of values than those suggested until now.¹² This is a discovery of great importance considering

¹² More recently, see also CORAZZA *et al.* 2021, with lengthy bibliography on the topic.

how many papers have been dedicated to the fractional system of Linear A.

This succinct presentation of the new inscriptions in this article can only give an idea of the new information that these two documents provide for scholars of Cretan scripts. The publication of the volume¹³ dedicated to the archaeological context based on the associated material remains and to these extraordinary Linear A documents will furnish fuller details and describe more thoroughly the historical and cultural framework for interpreting these exceptional finds.

¹³ KANTA forthcoming.

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An assemblage of Linear B administrative documents from Ayios Vasileios, Laconia: preliminary report on the study of the documents in their archaeological context

**Adamantia Vasilogamvrou, John Bennet, Angeliki Karagianni,
Vassilis Petrakis, Nektarios Karadimas, Eleftheria Kardamaki**

*The site and its importance**

The site of Ayios Vasileios lies on the mid-west edge of the narrow plain crossed longitudinally by the Eurotas river, the diachronic heartland of human habitation in Laconia. So named after a late Byzantine chapel, the site is located on a low hill, part of a ridge extending either side of the

* The content of this presentation stems from mutually interactive work among the authors, who wish to express our collective gratitude to the Ephorate of Antiquities of Laconia and its Director, Evangelia Pantou, for their superb accommodation of the conservation and study of this important material at their headquarters in Sparta, which is still ongoing. Dr Maria Tsouli, Aphroditi Maltezou, Leonidas Souhleris, Giorgos Tsiaggouris and Evangelia Maniati contributed to the collegial friendly atmosphere of all our study sessions. The excavation and study of the material presented here is part of the Ayios Vasileios Archaeological Project conducted since 2010 under the auspices of the Athens Archaeological Society and directed by Adamantia Vasilogamvrou. Work at Ayios Vasileios has been made possible through the support of the Institute for Aegean Prehistory, the J. M. Kaplan Fund, the Amoddo Foundation, the Groningen Institute of Archaeology, the Mediterranean Archaeological Trust, the Global Heritage Fund, the Psychia Foundation and the Hellenic Foundation for Research and Innovation. We are grateful to our hosts (and now editors) for their invitation to present this material at the plenary session of the 15th Mycenaean Colloquium. The original oral presentation took place in an exclusively online mode, when other options were deemed untenable. For valuable discussions before and for feedback during and after the presentation, authors are grateful to Emilia Banou, Bill Cavanagh, Mary Dabney, Wieke de Neef, Oliver Dickinson, José Melena, Torsten Meißner, José Luis García Ramón, Louis Godart, Anna Judson, Reinhard Jung, Angeliki Karathanou, Dora Kondyli, Joseph Maran, Barbara Montecchi, Tom Palaima, Anna Sacconi, Joseph Shaw, Trevor Van Damme, Aleydis van de Moortel, Carlos Varias García, Corien Wiersma and Sofia Voutsaki. Throughout the text, references to the Pylos documents follow *PT*³. In cases where the different editions of the Pylos texts give a different numbering of the 'scribe' to which a document is assigned, all numbers will be given separated by a slash (e.g. Hand 1/601).

Sparta-Gytheion road at its junction, about 12 km south of Sparta, with the road leading to the modern village of Xirokambi. Ayios Vasileios had already been known from surface finds since the late 1950s, which, augmented by later survey work, had already suggested its placement amongst the most important Late Helladic sites in Laconia (Fig. 1a).¹

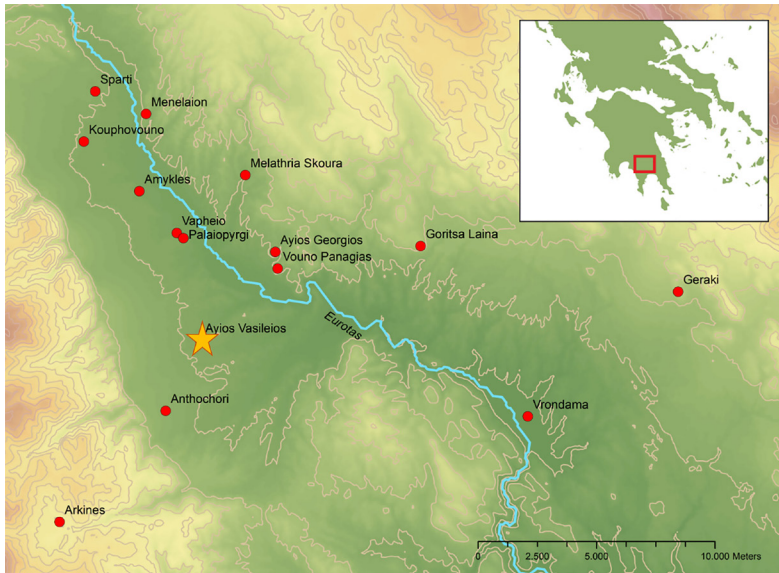


Fig. 1a. Map of the Eurotas valley, Laconia, Greece; the star marks the location of the site of Ayios Vasileios (Map by Dr Wieke de Neef, with added annotation by V. Petrakis).

The discovery, however, of fragments of Linear B inscriptions on the surface of the site in 2008 took a part of the scholarly community by surprise.² This was in part justified, as such finds are quite rare.³ Ayios Vasileios, with no less than five (**AV Rb 1**; **X 2**; **Lg 3**; **X 7**; **Ds 113**) sur-

¹ WATERHOUSE & HOPE SIMPSON 1960, 79-81, Fig. 5, Pl. 17; BANOU 2006, 135-141 with references. Ayios Vasileios is officially registered as an archaeological site since 1966 (administrative proclamation is included in the Official Gazette of that year: ΦΕΚ 429 Β' /8-7-1966), along with a series of well-known sites in Laconia, including, among others: Vapheio, Amyklaion, Menelaion, Ayios Stephanos, PalaioPyrgi. Emilia Banou, commenting on the size and strategic location of the site before the discovery of Linear B documents in 2008, had already placed Ayios Vasileios “στην πρώτη θέση μεταξύ των μυκηναϊκών οικισμών της κοιλάδας του Ευρώτα” (BANOU 2006, 138).

² For an account of the first discoveries of Linear B documents at Ayios Vasileios see ARAVANTINOS & VASIOLOGAMVROU 2012.

³ A clay ‘label’ from the area of the ‘Little Palace’ at Knossos (**KN Wb 8711**), the first tablet found at Mycenae (**MY X 1**) in the area of the Petsas House and one fragment from Pylos (**PY Ua 1413**) were the few similar cases.

face finds (fragments of tablets), either accidental or from non-systematic survey, raised very high expectations.⁴ Perhaps more impressive than the number of surface finds is the diversity of their subject-matters: *e-pi-zo-ta* probably /epí-dʹōsta(i)/ ‘[items made] to be worn in girts/ belts’, plausibly implicit of weapons, either swords or daggers (AV Rb 1 r. and v.),⁵ textiles (AV Lg 3), *tu-we-a₂* /thúweha/ (perhaps a generic term for aromatic substances on AV X 4.2),⁶ as well as sheep on AV Ds 113 (a surface fragment found in 2016).

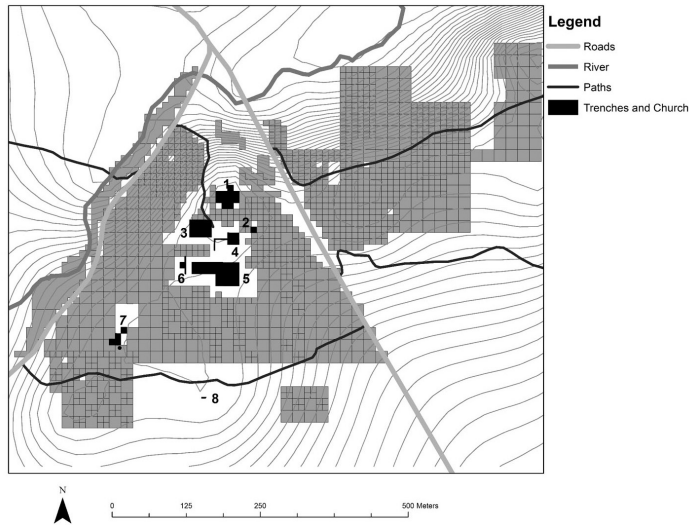


Fig. 1b. Schematic map of the hill range of Ayios Vasileios with location of church and excavation trenches. 1. North Cemetery; 2. Building B; 3. Chapel; 4. Building A; 5. Building ‘Δ-E’ [the ‘stoai’ and ‘court’ complex]; 6. Test Trench III with fresco deposit; 7. Chamber Tomb and test trenches; 8. Quarry. Areas surveyed are indicated in grey (images after VOUTSAKI *et al.* 2019, 69, 73, Figs. 2-3; schematic map by Corien Wiersma; images courtesy of Sophia Voutsaki, Corien Wiersma and Wieke de Neef).

⁴ On AV Rb 1, X 2 and Lg 3 see ARAVANTINOS & VASILOGAMVROU 2012, 43, 45-51. AV X 7 is reported in VASILOGAMVROU 2015b, 108 with n.12. AV X 4 and Kb 5 were not surface finds proper, as they had been found within an extensive but partially disturbed Mycenaean layer (ARAVANTINOS & VASILOGAMVROU 2012, 43-44).

⁵ The implication that *e-pi-zo-ta* refers to weapons is projected here from the occurrence of the term on records of short swords or daggers from Knossos (KN Ra(2) 984.2 referring to the obscure term *zo-wa*) and not on definitive evidence from AV Rb 1.

⁶ On the basis of the sign-groups *tu-we-a₂* and *ri-za* attested on AV X 4.2 and .3 respectively and paralleled only on the Pylos Un series (*tu-we-a*: PY Un(1) 267.3; *wi-ri-za -if* related to *ri-za*: Un(1) 249.2), the reclassification of this document as UI is proposed here. Of course, the classification X is not inappropriate, as the fragment did not yield any commodity sign (‘ideogram’) (cf. ARAVANTINOS & VASILOGAMVROU 2012, 52, n. 42).

Expectations were entirely fulfilled. Preliminary work was swiftly undertaken and a project comprising systematic survey and excavation on various areas within the site has been underway since 2010 under the auspices of the Athens Archaeological Society and with the efficient collaboration of the Ephorate of Antiquities of Laconia,⁷ revealing amongst other significant finds an early Mycenaean burial ground (North Cemetery) and a remarkable building complex (Building A) (Fig. 1b, nos. 1, 4). The assemblage herein presented was found within the excavated part of a large architectural complex (provisionally named ‘Δ-E’ in preliminary reports) built around an open area (‘court’) of remarkable proportions (see the next section for a more detailed description) (Fig. 1b, no. 5). Due to the occurrence of façades with colonnades, the buildings to the west and south of the Ayios Vasileios have been tentatively termed ‘stoai.’ The assemblage of Linear B documents that this presentation reports on was found in the debris of the so-called ‘West Stoa.’

Viewed in conjunction, the scale and the apparent monumentality of the architectural setting and the occurrence of such administrative *instrumenta*, the most reliable witnesses to the existence of a functional literate administrative centre at Ayios Vasileios, along with the monumental scale of the architectural complex that has been revealed during the last decade, convincingly suggest the palatial status of the site.⁸

The material reported herein has confirmed the importance of the early finds. More than that, the meticulous recording of the excavation and the study of the assemblage in its archaeological context has underpinned an interdisciplinary, holistic approach to the assemblage of administrative documents, the ἀπαρχή of which is offered here.

The archaeological context: the ‘West Stoa’, the location and chronology of the assemblage of administrative documents

On the southern slopes of the hill of Ayios Vasileios, excavation brought to light the remains of structures unique in the Greek mainland of the Late Bronze Age (Fig. 2). The so-called West Stoa and South Stoa framed a large open area or ‘court,’ the east and north limits of which have not

⁷ VASILOGAMVROU 2015a; 2015b; 2018 [report on the 2014-2016 seasons]; 2020; 2022 [report on 2021 season]; VOUTSAKI *et al.* 2019 (survey).

⁸ A proper assessment of the regional significance of the site within our knowledge of Late Helladic Laconia would be both premature and beyond the scope of the present paper.



Fig. 2. State plan of the 'West Stoa' at the end of the excavation in 2021 (plan by Amalia Konidi).

yet been identified. The *excavated* lengths of the West and South Stoi are 18m and 25m respectively. Based on the extent of the excavated architectural remains and assuming that the 'court' was rectangular, the complex may have covered a *minimum* area of 559sq.m. Of this, 416sq.m seem to be occupied by the 'court,' which is considerably larger than the 'courts' located before the entrances to the palatial so-called 'megara' at Mycenae, Tiryns and Pylos.⁹

Each stoa was supported by a long continuous exterior wall and by a colonnade of alternating pillars and columns along the façade towards the 'court,' creating a roofed but open corridor of c. 5.5m in width. Both stoi had an upper storey, the floor of which was coated with coarse lime plaster, c. 0.01-0.03m thick. The latter was often found in contact with a red layer of varying thickness (0.20-0.30m), which was the substrate of the storey's floor (conventionally called *dorosis*).

The overall characteristics of the stoi and in particular the alternating pillars and columns are paralleled in Crete, particularly in the Stoa dell'Agora at Ayia Triada dated to LM IIIA2 (late 14th century BC).¹⁰ A plaster band of semi-circular section and c. 0.20m wide runs along the 'court'-facing edge of the pillar and column colonnade. This is a feature without exact parallels elsewhere. At Kommos, a plaster band was also used along the lower parts of the North Stoa colonnade of Building AA, probably to keep rainwater out.¹¹ The same purpose may have been served by the plaster band at Ayios Vasileios.¹²

Pits had been dug into the debris of both stoi during the Byzantine period, cutting through the successive stratigraphic units. In the case of the 'West Stoa,' some of these pits even penetrated the ground floor, thus allowing Mycenaean pottery to be collected from the sides of the pits beneath the ground-floor level of the stoa. The latest pottery found under the floor belongs to the Early LH IIIA2 period, which effectively dates the construction of the stoi to this sub-phase.¹³

⁹ For discussion of such open spaces within Late Helladic palatial complexes see CAVANAGH 2001.

¹⁰ D'AGATA 2005; LA ROSA 1997; PRIVITERA 2015, Fig. 3; see VASILOGAMVROU *et al.* 2021, 342-358, for the discussion of parallels and construction techniques of the stoi and the 'court.'

¹¹ SHAW & SHAW 2006, 28, pl. 1.57. Cf. VASILOGAMVROU *et al.* 2021, 358.

¹² We are grateful to Joseph Shaw and Joseph Maran for discussion of this feature.

¹³ VASILOGAMVROU *et al.* 2021, 350-352.

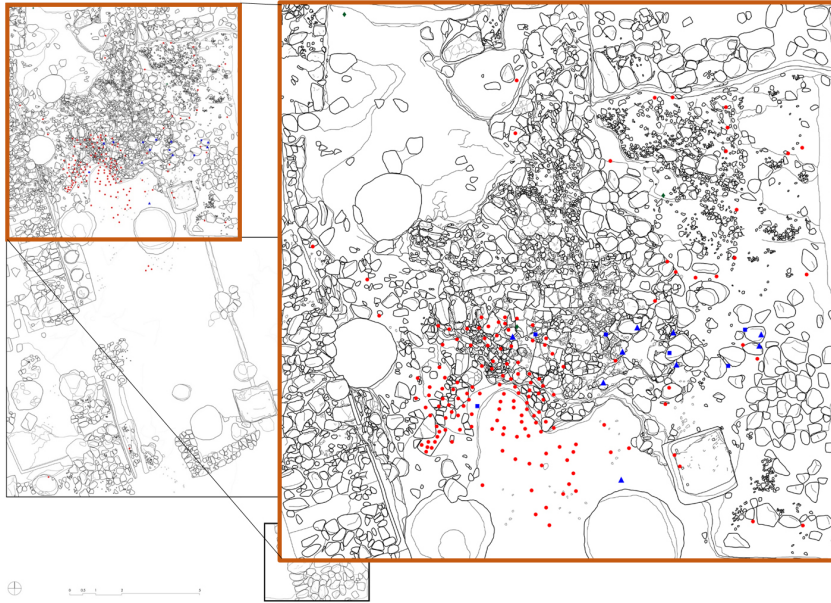


Fig. 3. State plan of the 'West Stoa', showing the distribution of fragments of clay administrative documents enlargement. Circles <●> indicate tablet fragments; triangles <▲> indicate string-nodules; lozenges <◆> indicate labels (plan by Amalia Konidi, with annotations by Nektarios Karadimas).

The area of the 'West Stoa' has yielded one of the most significant discoveries made so far at Ayios Vasileios: an assemblage of clay administrative documents, including tablets of various types bearing Linear B inscriptions, string nodules (some of them also inscribed in Linear B), as well as clay 'labels' that according to the stratigraphic evidence were all originally located in the upper storey of the northernmost excavated part of the 'West Stoa' (Fig. 3). Together with these documents, the upper storey also accommodated a few storage vessels, as indicated by numerous fragments of storage vessels retrieved from the debris. The dense concentration of clay tablets, nodules and 'labels' suggests that the entire assemblage would have been located in a relatively restricted area in the upper floor, whence they probably fell.

The end of the life of the building was as impressive as its construction. The stoa were destroyed during an intense fire which in many cases led to the vitrification of the coarse lime plaster coating of the ground floor. The intensity of the fire is evident in the fused and charred

material found scattered throughout the area, but also in the deformation of some pottery vessels that were either in situ on the ground floor or among the debris of the upper storey of the 'West Stoa'. These conditions also led to the firing of the clay documents, thus preserving this significant assemblage.

Besides being a formidable ally, the destruction has also inflicted an only partly repairable damage to the study of the assemblage. During the collapse of the upper floor, which might have been a single or successive episodes during the conflagration, the invaluable links that might have been indicated by the original arrangement of the documents were lost. It is thus highly unfortunate that the find-spots of each fragment, meticulously recorded during excavation, are of little or no help in reconstructing groupings or 'sets' of documents. Whatever arrangement there was on the upper floor became a seemingly confused mass amidst the debris fallen on the ground floor.¹⁴



Fig. 4. Tablet fragment found attached to a piece of coarse lime plaster fallen from the upper storey of the 'West Stoa' (photo by Nektarios Karadimas).

¹⁴ Although the attempt to reconstruct some of the original 'sets' of documents has been and will be continuous until (and considerably after) the publication of the assemblage -currently at an advanced stage of preparation- we are under no illusion as to the difficulties involved. For the moment, although we have advanced the attribution of certain documents to common series indicated by the well-known two-letter prefixes, taking into account features such as subject-matter, document type and format, we are still some way from identifying coherent sets in the sense

These stratigraphic circumstances are best demonstrated by the find spots of the Linear B tablets. A number of fragments of Linear B tablets were found in contact with fragments of the coarse lime plaster of the collapsed floor of the upper storey (Fig. 4). However, other fragments were found in the red layer (*dorosis*). The vertical of joined fragments recovered from varying depths and layers was also observed. We have the notable case of tablet **AV UI 10** (discussed further below): its ten joined fragments were found across various layers, a vertical distance of 0.59m through the mass of debris. Although rather extreme, the distribution of the various joining components of **AV UI 10** is not an isolated case. Such joins are strongly suggestive both of the unity of the Linear B assemblage and the intensity of the collapse during the conflagration that abruptly ended the life of the building complex.

The detailed study of the various stratigraphic units was important for understanding the pottery from the red substrate (*dorosis*), that associated with the ground floor and the first floor of the 'West Stoa' and the in situ material from the ground floor. The red substrate included ceramic material dating from LH I to LH IIIB but most of the material belongs to LH IIIA2, which is identified as the construction phase of the building. The LH IIIB pottery derived from the upper storey and penetrated the lower red layer of the *dorosis*, when the West Stoa collapsed.¹⁵ This is well indicated by the coated floor of the upper storey: although in some cases the coarse lime plaster coating of the upper floor fell in an almost horizontal position on top of the red layer of the *dorosis*, its fragments were more frequently found fallen in a vertical position and scattered in the red layer.

As a result of the collapse, many of the Linear B documents were found in association with pottery from this red layer, and this had led to the original hypothesis that the Linear B assemblage may have also been dated to LH IIIA2.¹⁶ The pottery associated with the destruction of the building and the assemblage of administrative documents include intact or well preserved vessels from the ground floor or the upper storey of the structure, such as shallow angular bowls, carinated kylikes and a few painted dippers. This material is dated to the middle of LH IIIB, in the

of records "intended by their writers to be read as single document" (CHADWICK 1968, 12).

¹⁵ VASILOGAMVROU *et al.* 2022.

¹⁶ See KARDAMAKI 2017, 110-114, for discussion; VASILOGAMVROU 2015a, 74; 2015b, 108 (citing a date towards the end of LH IIIA2/ beginning of LH IIIB).

mid-13th century BC.¹⁷ Hence, the evidence currently available suggests that the destruction of the complex took place earlier than the final destructions of the Mycenaean palaces in mainland Greece that are placed in the early part of the 12th century BC. It is hoped that future excavations may bring to light new evidence that will confirm or refine the date of this final destruction and, therefore, the assemblage of administrative documents presented here.

The epigraphic material: an outline of the main features of the assemblage of Linear B documents

A note on the classificatory prefixes

The site prefix used here (AV) replaces the one previously used (HV). A full outline of the description of the documents grouped together under the same single or two-letter prefix must be reserved for the final publication and *editio princeps* of the documents. As classification might be subject to some modification during final study of the documents, the classification of the documents in this paper must be considered provisional. As two-letter prefixes are by definition a finite category, in order to avoid any overlap, the editors note, in advance of the forthcoming final publication of the documents, that the following series prefixes have been used for the Ayios Vasileios documents: **Ah, At, Cd, Cs, Ds, Gb, Gd, Gs, Kb, Lg, Lo, Md, Oc, Ok, Or, Os, Ot, Rb, Tb, Ul, Wi** (labels), **Wq** (inscribed string-nodules with seal-impressions) and the commonly used **X** (unclassified tablets). Further subdivisions may follow future 'hand' identifications and a forthcoming, full palaeographic study.

Quantification, document typology and materiality

The excavation of the 'West Stoa' has so far yielded 204 components (intact inscribed documents or fragments of inscribed documents), each with its individual inventory number and pertinent excavation information.¹⁸

¹⁷ KARADIMAS *et al.* 2022; KARDAMAKI forthcoming; KARDAMAKI *et al.* forthcoming; VASILOGAMVROU *et al.* 2022.

¹⁸ With the completion of the preliminary sorting of the material, following the conclusion of the 2021 season, the inventory of Linear B documents from Ayios Vasileios reached the number 217. From this we exclude seven items that were either surface finds (1-3, 7, 113), or found in locations other than the assemblage presented herein (4-5). We have also naturally excluded an additional six items that proved not to be fragments of tablets at all and whose respective inventory numbers have been deleted.

Based on joins hitherto achieved, a long and arduous task in which we were greatly assisted by our able conservator Vicky Katsichti, we have been able to reconstruct so far 105 tablets, nine inscribed regular string-nodes (out of a total of 19 sealings of various types identified so far) and three clay labels, a total of 117 inscribed documents from the assemblage that fell along with the debris from the upper storey of the 'West Stoa.' While the excavation of the current assemblage was completed in September 2021, it is important to bear in mind that these numbers are as yet neither minimum nor maximum figures. Small modifications may still be accommodated: the progress of the study of the excavated material may, on the one hand, yield a few more fragments, while, on the other hand, new joins or quasi-joins might still be achieved. In any case, these figures suffice to place Ayios Vasileios second among Peloponnesian and fourth among Aegean sites in terms of the quantity of Linear B documents.¹⁹ Of course, it must be noted that such numbers mostly reflect the post-palatial 'afterlife' of palatial sites, the taphonomy of the assemblages and the pace and extent of the excavation, leaving aside more complex factors, such as the existence of duplicate records (the latter being exemplified in the Pylos landholding records).

As noted above, all three basic types of Linear B administrative documents are well represented in the Ayios Vasileios assemblage. Typologically, no significant differences with the administrative apparatus known from late 13th/early 12th century deposits, such as those from Mycenae, Thebes or Pylos, are observed.²⁰

Tablets of various formats, both elongated and 'page-shaped,'²¹ are dominant. These are typically carefully made of consistent and well-kneaded clay with inclusions, their writing surfaces proper (the *recto* surfaces) flattened appropriately and covered with a thin film of finer clay forming the smooth writing surface.²² In most cases, only the *recto* is found inscribed; writing on both the *recto* and *verso* surfaces so far occurs on only two tablets, while a single example (AV UI 121) preserves an inscription on the *latus inferius*.

¹⁹ DEL FREO 2016, 180-181, Table 1.

²⁰ For recent detailed discussions of the form and functions of Linear B document types, see DEL FREO 2016; PALAIMA 2011, 100-112.

²¹ We acknowledge here that the any division between 'page-shaped' and elongated formats, while heuristically useful, oversimplifies our data and conceals the considerable diversity of formats and proportions among Linear B tablets.

²² We might tentatively consider the writing surfaces as 'self-slipped', a term referring to the effect of a slurry of clay that covered the surface because of wetting during the tablet's manufacture.

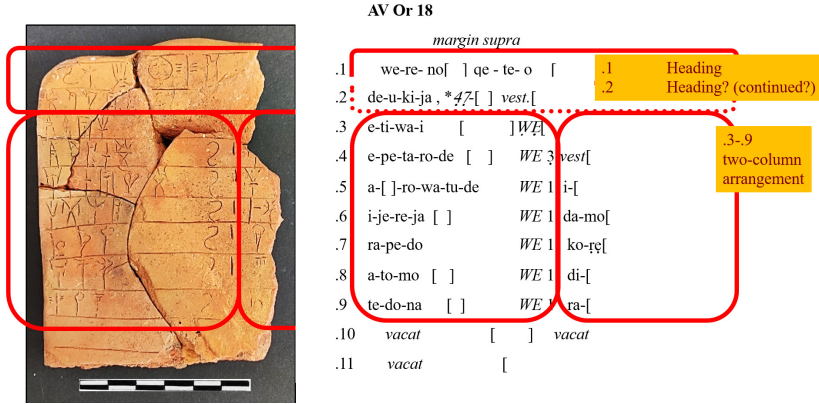


Fig. 5. Tablet AV Or 18, showing features of text structure and format (photo by Vicky Katsichti; transliteration and further annotations by Vassilis Petrakis).

Detailed observations on the form of tablets as artefacts has highlighted the considerable care devoted to their manufacture.²³ Although probably regularly recycled, and certainly often corrected (or edited/ updated?), inscriptions are always highly legible, formatted for easy and direct extraction of complex information. A good example of such attentive care is tablet AV Or 18 (Fig. 5), the two-column arrangement of which follows what appears to be a full-line (or perhaps two-lined) heading. This format is paralleled in other cases (e.g. PY Jn[1] 829). The tablet in question can be considered indicative of the attention invested in both the production of the material-carrier of the text (the clay tablet) and in laying out the textual information on it.²⁴

Detailed observations have showed that AV Or 18 was made by the 'portrait' folding in two of a thick (c. 0.01m) sheet of clay and the laborious flattening of its recto face by applying hand pressure on its verso, leaving strong papillary and finger impressions during the process (Fig. 6a). Its *latus superius* was then carefully rounded and then slightly flattened, while the *latus sinistrum* has an almost flat surface (Figs. 6b-c). The *latus sinistrum* also preserves a clear print from the left thumb of the 'scribe',²⁵ probably impressed while he was holding the tablet for writing (Fig. 6b).

²³ For a general account, see KARAGIANNI 2015, 48-50; PALAIMA 2011, 105-106.

²⁴ KARAGIANNI forthcoming.

²⁵ The terms 'scribe' and 'writer' are used interchangeably in the present text; we acknowledge that there is no positive evidence for any *emic* conceptualization of the literary agents in the Mycenaean world as a distinct group comparable to the scribes in Egypt or Mesopotamia.

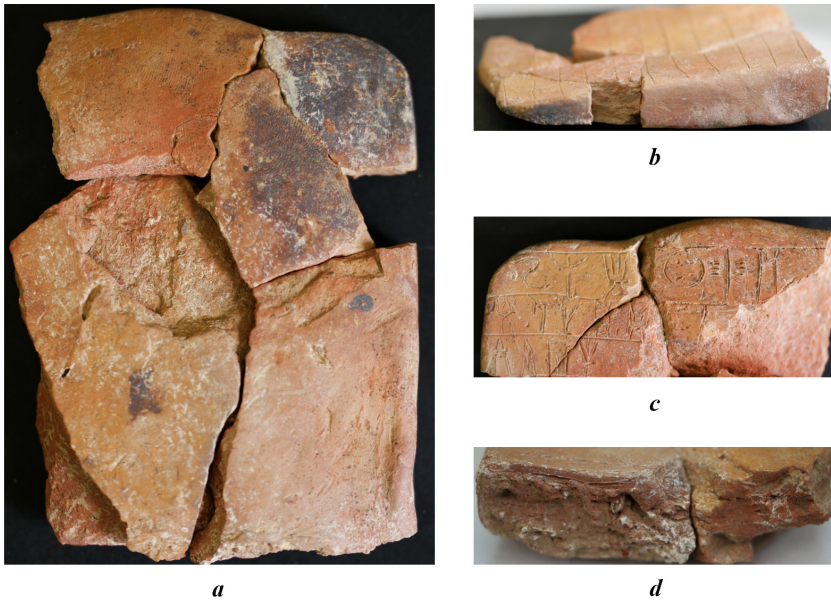


Fig. 6. Tablet AV Or 18. (a) *Verso* surface showing strong papillary lines and finger impressions; (b) *latus sinistrum* showing thumb impressions; (c) upper part of tablet showing the rounded *latus superius* and the ruling of the *recto* surface, leaving a margin *supra*; (d) evidence for deliberate cutting at the bottom of the tablet (photos and arrangement of images by Angeliki Karagianni).

It is possible to identify successive ‘episodes’ in the formatting of this clay document. One of the first steps may have been the ruling of the whole *recto*, with lines spaced at c. 0.01m. Noticeably, the top ruling does not have a ‘functional’ use, but was probably intended to ‘isolate’ the curving edge of the tablet, therefore creating an uninscribed margin²⁶ and defining the part of the surface that would be intended for writing for the visual convenience of the ‘scribe’ (Fig. 6c). Then the administratively meaningful information was inscribed in an equally tidy manner: the first one or two lines receive the heading, written with relatively large signs that occupy the full width of the row and define the nature and overall context of the record. Then, the individual entries were inserted on the rest of the lines in a consistent column-like vertical alignment of the ‘phonographic slot’ to the left part of the document and the ‘non-phonographic’ (or, in the opinion of one of us, sematographic)²⁷ part (the one

²⁶ For a discussion of the feature and its conventional notation, see *PT*³, lii–liiii.

²⁷ PETRAKIS 2017, 148–151, 158–162.

with ‘ideograms’²⁸ for commodities, metrograms or arithmograms) to the right.²⁹ It is interesting to note the slightly deeper *ductus* of arithmograms (signs for numerals), perhaps intended to make them stand out ‘at a glance’, a mode potentially equivalent to our printed bold typeface. After finishing the text (which the shallowness of the *ductus* of the last entries shows that it took place within a few hours, as the clay had perhaps become more dry) and leaving the last line empty, the excess clay at the bottom of the tablet was cut off (Fig. 6d).³⁰ Traces of erasures³¹ and re-writing of text (perhaps marks of corrections or editing) can be identified possibly by re-wetting locally the clay and using a blunt instrument on **AV Or 18.1**, or a fingertip on .6 to erase an extra arithmogram.

In Ayios Vasileios, as elsewhere in the Mycenaean palatial world, the anonymous ‘tablet-writers’ -either literate officials themselves or their trustworthy literate helpers- invested such care in the making and formatting of tablets, that we may be even better placed in accepting that the tablets were themselves the main sources of information for any further check or consultation: practically speaking, the ‘final’ documents.³²

Inscribed string-nodules or *Schnurplombe*, classified in Ayios Vasileios as **Wq**, are lumps of clay made around a knotted string, the gable-shaped ridge of which is owed to the manner of receiving the impression of a sealstone or signet-ring on one side. As reported above, these inscribed nodules constitute almost the half of all sealings found so far in Ayios Vasileios. They did not seal anything; rather, they were sealed hanging documents with an apparent labelling function.³³ As the

²⁸ For ease of reference, the term ‘ideogram,’ still defensible (THOMPSON 2012) will be used throughout this paper. However, see PETRAKIS 2017, 148-151, 158-162 on pertinent problems.

²⁹ For the consistency and significance of this ‘slot’-structure in Linear B writing, see KARAGIANNI 2015, 53; PETRAKIS 2017, 127-129, with Fig. 1, 163.

³⁰ The practice of cutting the remaining part of the tablets is not uncommon in Pylos and Knossos (even excluding the Knossian simili-joins, for which see DRIESSEN 1987; 2000, 48-49) and its relative scarcity elsewhere may be accidental. On the cutting of tablets by Pylos Hand 1/601, see PALAIMA 1988, 51-52, Fig. 7; 2011, 84; TOMAS 2013.

³¹ PALAIMA 2011, 67-71; PAPE *et al.* 2014 demonstrate, through an experimental approach to erasures on clay and à propos a discussion on the Knossos **DI(1)** tablets, how the *potential* of corrections and revisions long after the initial inscription introduces a much more dynamic perspective in the maintenance and use of such written records.

³² BENNET 2001, 27-33.

³³ PANAGIOTOPOULOS 2014. A reconstruction drawing of the making of an inscribed string-nodule drawn by Melena is reproduced in PALAIMA 2011, 109, Fig. 12.45.

exemplary study of the Thebes nodules has shown,³⁴ the information on these documents was further processed by ‘tablet-writers’ and their content, undoubtedly supplemented by a variety of para-textual sources (including presumably oral information) was the basis for (at least some) of the tablets. At Ayios Vasileios, we have identified certain thematic correspondences between nodules and tablets that might suggest a similar ‘centripetal’ flow of information processing here: these include aromatic substances, such as *ka-na-ko* /knākos/ (cf. κνήκος) ‘safflower’ or adjectival /knākós/ (cf. κνηκός) ‘pale yellow, tawny < of safflower colour’, *ko-ri-ja-da-na* /koriađna/ cf. κορίανδρον, κορίαννον ‘coriander’ or the rather obscure *i-re-we*, as well as LANA ‘wool’ (see below, also noted with plus-signs on Table 1). The technical term *qe-te-o* /kweitehos, -on/(?) ‘due to be paid’ *vel sim.* also appears both on tablets, as well as on nodules.³⁵

Last, but hardly least, are the so-called labels (classified in Ayios Vasileios as **Wi**), small pieces of clay attached to baskets that contained tablets³⁶ or wicker-trays in which tablets were placed, as José Melena recently suggested.³⁷ Labels were previously known from Knossos and Pylos and their presence might indicate active processing of administrative information of either outgoing or incoming documents in the upper floor of the ‘West Stoa.’ It is often difficult to specify the relationship of labels to specific tablets, although there are some notable exceptions from Pylos.³⁸ In Ayios Vasileios, pertinent information is to date obscure and we have not yet been able to pinpoint such relationships with certainty.

³⁴ PITEROS *et al.* 1990.

³⁵ On its occurrence on nodules, see VASILOGAMVROU *et al.* forthcoming; on the term, see also THOMPSON, this volume.

³⁶ The placement of tablets in baskets, presumably for transportation within the complex, is indicated by certain wicker imprints and the deformation occasionally observed. Presently, this is best exemplified in the elongated Pylos **Sh** tablets recording armour (PALAIMA 1996a; 1996b).

³⁷ PALAIMA 2011, 107-110, Figs. 12.44A-12.44B; *PT*³, xliii-xliv, lxxi.

³⁸ Succinctly summarised by PALAIMA 2011, 109-110. Perhaps the best known case is the association between **PY Wa(3) 732** and the **Sh** armour tablets assigned to Hand 5/605 and found in the same find-spot in Room 7 of the Pylian ‘Archives Complex.’

The signary: new (and quasi-new) non-phonographic signs

New non-phonographic signs for recorded commodities, which can still be called ‘ideograms’,³⁹ have been identified on the documents of the assemblage. [*235] was already known to be an iconic (or pictorial) grapheme, whose form is a simple line drawing of a standing double axe (Figs. 7a-b).⁴⁰ Both its occurrences as an isolated (i.e. not part of a sign-group) sign accompanied by arithmograms (AV Tb⁴¹ 6.2; Tb 12.A) lend support to its interpretation as a commodity sign rendering the artefact ‘double axe’.⁴² On AV Tb 12.A, [*235] is preceded by a new ligature *212^{VAS}+PE (Fig. 7c); *212^{VAS}, already known either plain or ligatured with U,⁴³ now joins those vessel ideograms that are ligatured with more than one sign, thus questioning the simple assertion that the phonographic ligature abbreviates the name of the vessel.⁴⁴ Of course, it remains possible that the same vessel shape was known under different names at Knossos and Ayios Vasileios. Placed on the left of *212^{VAS}+PE, *140 AES ‘copper/bronze’ has a known modificatory function, indicating the material of the vessel (Fig. 7c).⁴⁵

Other documents have given us a quasi-new sign, for which the numbering [*270] has been temporarily reserved (Figs. 7d-g).⁴⁶ The sign is presented here as quasi-new, because, although formally hitherto unknown, it is probably related to the hitherto uniquely Pylian *157 (Fig. 7h), which may be identified with one of its ligatures. Although the WI-shaped ele-

³⁹ PETRAKIS 2017, 159; THOMPSON 2012.

⁴⁰ MELENA 2014, 150; VASILOGAMVROU 2015a, 74. The number was assigned already by Melena, and its transliteration in brackets [] indicates that the number is reserved (rather than formally assigned) by the Signary Committee at the 14th Mycenological Colloquium in Copenhagen in September 2015 (BENDALL *et al.* 2017, 836).

⁴¹ Its previous published classification as **Rb** (MELENA 2014, 150) is here revised.

⁴² MELENA 2014, 150, proposed the Latin transliteration SEC < *securis* ‘axe’. As Latin *securis* does not specify the form of the artefact, it is proposed that only the numerical indication is maintained, in order to avoid any confusion with *232 (PY Ta 716.1), also an axe, but *clearly* of a different type, cf. also PALAIMA & BLACKWELL 2020, 78-79.

⁴³ *212^{VAS} occurs plain at Knossos and once at Pylos (PY Tn 996.2) and ligatured with U only at Knossos, cf. VANDENABEELE & OLIVIER 1979, 190-194, Fig. 122, Pls. CV-CVI.

⁴⁴ For a general discussion on this specific matter see PETRAKIS 2022a, 176-180.

⁴⁵ Cf. KN K(1) 740.1, .2 referring to *214^{VAS}+DI and *255 respectively; KN Ws 8497.α referring to *246; PY Tn 996.3 referring to *205^{VAS}. A similar function is also known for *141 AUR ‘gold’.

⁴⁶ This numbering is in accordance to the resolutions of the Signary Committee in Copenhagen (BENDALL *et al.* 2017, 836-837). The *reserved* (as indicated by brackets) number is not yet officially assigned at the time of the latest revision of this text (May 2022).



Fig. 7. New non-phonographic signs identified on Linear B tablets from Ayios Vasileios. (a) [*235] on AV Tb 6.2; (b) [*235] on AV Tb 12.A; (c) AES *212^{VAS} +PE on AV Tb 12.A; (d)-(g) [*270] and ligatured variants: (d) [*270] on AV UI 121.2; (e) [*270]+WI+ on AV UI 98.1; (f) [*270]+WI+MA on AV UI 10.1; (g) [*270]+WI+MA on AV UI 10.2; (h) drawing of Pyliaian *157 as executed by Hand 1/601 (not in scale with other images) (photos and arrangement of images by Vassilis Petrakis; drawing of *157 after palaeographic table in Palaima 1988, 230).

ment on *157 has long been recognized,⁴⁷ the sign has so far been treated in transliterations as a single grapheme, rather than a ligature.⁴⁸ The Ayios Vasileios attestations support the identification of a plain [*270] occurring on AV UI 121.2 (Fig. 7d) and a ligatured form analyzable as [*270]+WI+MA or [*270]+WIMA (Figs. 7e-g), attested on AV UI 10.1, .2 and possibly also on AV UI 98.1.⁴⁹ The form of this ligature, that of a

⁴⁷ *157 has been amusingly described as “an infinity sign surmounted by *wi*” (SHELMERDINE 1985, 18).

⁴⁸ An exception is Melena’s note of its alternative possible interpretations as a monogram *WEWI* or as a ligature insightfully described as “iconic matrix+*WT*” (MELENA 2014, 142). A monogrammatic interpretation of *157 was unlikely from the outset, as it would involve an unparalleled 90° rotation of <*we*> (cf. PETRAKIS 2017, 145, n. 25), but the new evidence from Ayios Vasileios demonstrated that Melena’s second proposal was sound, even though the ‘iconic’ character of the ‘base’ still eludes us.

⁴⁹ It is important to note that the sign on AV UI 98.1 (Fig. 7e) is transliterated as [*270]+WI+ with possible vestiges of a second ligatured sign on the right that *may* be MA. In this paper, the conventional transliterations [*270a] and [*270b] for the possible variants presented in the oral lecture are replaced by transliterations of the same sign forms as ligatures ([*270]+WI+ and [*270]+WI+MA respectively).

non-phonographic sign ligatured with two syllabograms, is quite rare.⁵⁰ The similarity of the 'base' elements (the elegant execution of the one in *157 by Pylos Hand 1/601 notwithstanding) and the occurrence of a *WI* shaped element in the ligatured variants strongly suggests that Pylian *157 (Fig. 7h) is to be grouped together with the variant forms of [*270]. Morphological similarity is, of course, merely indicative, but we may note the occurrence of *157 in contexts remarkably similar to those of [*270]+*WI*+*MA*: notably, their concurrence with *i-re-we* AROM on PY Un(1) 616 and AV UI 10.2 and the concurrence of *157 with *KAPO* on PY Un(1) 267, Un(1) 616 and perhaps Un(1) 249 alongside the concurrence of [*270]+*WI*+*MA* with *ka-po* AROM on AV UI 10.1.⁵¹

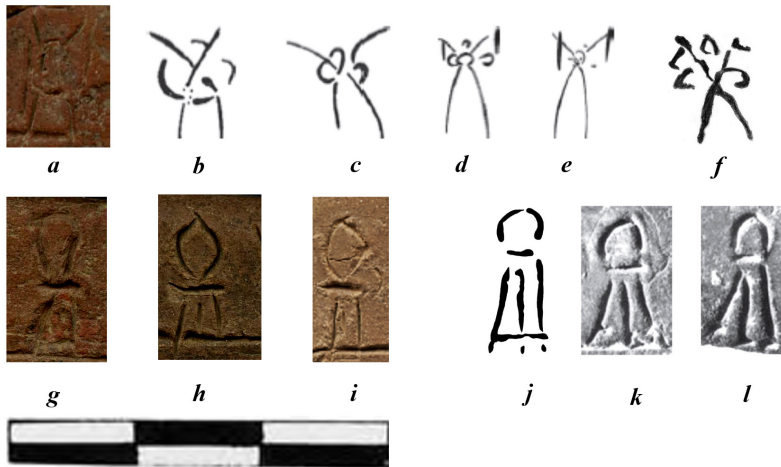


Fig. 8. Untransliterated syllabograms identified on Linear B tablets from Ayios Vasileios. (a) *47 on AV Or 18.2; (b)-(e) drawings of *47 from Knossos (KN Fp(1) 1.9; V(3) 503.2; Fh 393; and Fh 351 respectively); (f) *47 from Mycenae (MY Go 610.1); (g)-(i) three examples of *19 from Ayios Vasileios, on (g) AV Tb 6.1; (h) AV UI 76.1; and (i) AV Gd 146.1; (j)-(l): examples of *19 from Pylos by Hand 3/603, on (j) PY An(5) 427.3; (k) PY Vn 10.2; and (l) PY Vn 10.5 (photos and arrangement of images of AV signs by Vassilis Petrakis; drawings of KN signs after CoMIK, courtesy of Jean-Pierre Olivier and Louis Godart; drawing of *47 on MY Go 610.1 and images of *19 from Pylos after Judson 2020, 137, Fig. 3.12 and 157, Fig. 4.8 left, courtesy of Anna Judson).

⁵⁰ A parallel might be *172+*KE*+*RQ*₂ (alternative reading: *172+*KE*+*RQ*) on KN Gg 746. *172 is also a good parallel for the pattern of attestations of [*270], as it occurs as plain *172 on KN Gg 701 and as *172+*KE* on KN Gg 436.

⁵¹ At the time of the latest revision of this text (May 2022), no final decision has been reached on the transliteration of [*270] and *157. Considering the identification of the 'base elements' and the occurrence of the plain form only at Ayios Vasileios (Fig. 7d), two options are available: (i) that *157 is suppressed and be transliterated as [*270]+*WI*; (ii) that, in correction of the Salamanca convention (MELENA 2014, 18, Fig. 17.6), *157 is officially adopted as the transliteration of the 'base element' alone and that the signs are transliterated as *157 (AV; plain), *157+*WI* (PY; lig-

The signary: untransliterated syllabograms

Ayios Vasileios has also yielded important attestations of two untransliterated syllabograms. This heterogeneous group of signs, whose values remain elusive because of their scarce attestations, has recently been studied by Anna Judson.⁵² Syllabogram *47, mainly Knossian (Figs. 8b-e) but already known on the Greek mainland from an uncertain occurrence on a tablet from Mycenae (Fig. 8f),⁵³ appears now on tablet **AV Or 18.2**. Although the sign-group is incomplete, *47 is found in initial position, as most of its known attestations.⁵⁴ Sign *19⁵⁵ also appears three times in sign-groups on documents from Ayios Vasileios:]*pi*-*19-*ta* [⁵⁶ from the fragmentary **AV Tb 6.1** and *a*-*19-*ni-jo* on **AV Gd 76.1** and **Gd 146.1** where it probably refers to personnel (see below). Its form is paralleled by examples of *19 assigned to Hand 3/603 at Pylos (Figs. 8j-l).

Particularly important was the identification of the phonographic use of sign *33 <*ra*₃> on two nodules (**AV Wq 179.γ1**; **Wq 180.γ1**) in the sequence *e-ra*₃-*wo* /*élaiwon*/ ‘olive oil’ (see below). The use pattern of this grapheme had already been remarkable: it occurred exclusively as *144 <CROC> a commodity ‘ideogram’ for saffron at Knossos, with its phonographic use to render /*rai*/ or /*lai*/ attested only at Pylos. The evidence from Ayios Vasileios demonstrates that such a use was not exclusively Pylian, but, at least, south Peloponnesian.⁵⁷

ature) and *157+*WI*+*MA* (**AV**; ligature). Deciding on this issue exceeds our ‘jurisdiction’ as editors of the Ayios Vasileios documents and needs to be reached through the Signary Committee and approved by CIPEM.

⁵² JUDSON 2020.

⁵³ JUDSON 2020, 135-138, where she favoured the positive identification of the sign on **MY Go 610.1** as *47, and had already cited the occurrence of *47 from Ayios Vasileios, reported at the 14th Mycenaological Colloquium in Copenhagen in September 2015.

⁵⁴ Let us note that its sole attestation on the Greek mainland, in the sign group *me-ta*-*47-*wa* on **MY Go 610.1**, although formally in middle position, might also be conceived as initial if the sign-group is a compound with preposition *me-ta*- /*meta*-. Admittedly, evidence for /**47-wV*/ is presently quite ambiguous to say the least: we are limited to the fragmentary]*47-*we*[on **KN Fh 9076**, if not]*je-we*[, and]*a*-*47-*wi*[, but only if *a*- represents a prothetic element.

⁵⁵ JUDSON 2020, 155-161.

⁵⁶ The form is very likely a verbal adjective (possibly substantivised) and the reconstruction *e-]**pi*-*19-*ta* [(a term known from **PY Vn 10.2**, .5 and **TH Wu 430.α**) is, of course, possible. Although initially attractive, we here concede with Judson that *e-pi-zo-ta* (its attestation on **AV Rb 1** notwithstanding) may be unrelated to *e-pi*-*19-*ta* (JUDSON 2020, 159-160).

⁵⁷ In acknowledgement of the potential complexity of the situation, we hesitate to consider the phonographic use of that sign as a ‘mainland’ feature (although this may well turn out to be the case, cf. PETRAKIS 2022b, 409). It would be premature (and also perhaps immature) to argue, on the basis of the comparatively earlier attestation of *ra*₃ at Ayios Vasileios, that its phonographic adoption took place there. On *ra*₃, see JUDSON 2020, 49-51; PALAIMA 2020.

Writing at Ayios Vasileios and in other administrative centres

A proper assessment of the palaeography of the Ayios Vasileios documents is still in preparation. However, in closing the report on the signs used at Ayios Vasileios, it is perhaps important to reflect soberly on the significance of the parallels noted above. On the basis of the similarities in the form of *19, the occurrence of [*270] and its relationship to *157 or the use of *ra*₃, one might be justified in considering a ‘special’ relationship between Ayios Vasileios and Pylos, or shared graphic traits between the two sites, with geographical proximity generating the impression of a regional ‘tradition’ consisting of similarities or convergences. While it might suffice here to note that such assessments should be based only on the full conspectus of all aspects of writing and its use in administrative practice, it might be argued that the evidence from Ayios Vasileios already contributes towards exposing the fragility of such hypotheses.

To the degree that it shares elements with Pylos, Ayios Vasileios may offer a highly sought corrective image that exposes how elements that we used to consider as Pylian were not exclusively so, challenging the quantitative dominance of the Pylian material over whatever can be considered as ‘mainland’ Linear B. From this perspective, the contribution of Ayios Vasileios to any comprehensive assessment of the place of each site in the palaeographic landscape of the Mycenaean palatial world will surely be very important. On the other hand, we cannot afford to downplay those elements that we used to consider Knossian, such as the use of the tripod vase ideogram *207^{VAS} (AV Kb 5; cf. KN K(1) 740.4; K 8244).⁵⁸ The use of *207^{VAS} or *47 are not by definition ‘Knossianising’ features, just as a hitherto Pylian feature is not necessarily a reliable index of affiliation with the Pylian administration. All such characterisations can be applied only with great caution and in full acknowledgement of their etic nature.

We may, in fact, legitimately wonder whether it will ever be possible to identify ‘special’ relationships between specific palatial centres on the basis of such traits or features. The question itself might be misplaced. The very modifications that are deemed necessary because of the contribution of a limited amount of material, such as that surveyed in this section, is perhaps suggestive of the insufficiency of our data. The nexus

⁵⁸ The attestation of such ‘iconic’ or ‘pictorial’ commodity signs (or indeed most commodity ‘ideograms’) on more than one site is not frequent. See the assessment in PETRAKIS 2017, 140-146, Table 2.

of relationships among polities might have been more complex, fluctuating or -just as likely- not reflected directly on supposedly ‘measurable’ features like the similarity between palaeographic variants.⁵⁹ What remains important is to resist the temptation, all too powerful in Aegean prehistory, to ‘join the dots’, assuming overconfidently that what we know is already a most significant and representative sample of what had been.

Recorded (and unrecorded) commodities and topics

As with all Linear B clay documents, the *raison d'être* of the Ayios Vasileios records is the management of a range of topics that were of interest to the palatial administration. The documents recovered from the excavation of the ‘West Stoa’ yielded a variety of topics, confirming the diversity of the subject-matters attested on the early surface finds (see above). Table 1 outlines the commodities identified on the tablets and inscribed nodules recovered from the ‘West Stoa’ assemblage.⁶⁰ Both presences and absences are important in assessing this evidence. Recorded topics include human personnel, livestock, aromatic substances and spices, animal products, wool and textiles, as well as other artefacts, such as double axes and metal vessels. These topics, duly listed in Table 1, give us a snapshot, an image potentially representative of the broader -but always eclectic as to the overall economy- interests of a palatial administration. In terms of quality, diversity is remarkable. When one considers the number of references and the quantities recorded along with, an emphasis on aromatics can be discerned. However, there may be two reasons why quantities should be viewed with caution in any such study:

- Considering the fragmentary state of our material, one should generally refrain from making arguments from absent evidence. It is noted that more than half of the 106 tablets so far reconstructed do not bear a commodity ‘ideogram’ or other clear indication of their subject matter. These are classified with the prefix X, and are naturally

⁵⁹ For some thoughts on the matter à propos an examination of the fragmentary evidence for Linear B writing predating LH IIIB on the Greek mainland, see PETRAKIS 2022b, 419-420.

⁶⁰ The evidence from surface finds is here omitted, as their association with the excavated assemblage from the ‘West Stoa’ is not known.

CATEGORY	‘IDEOGRAM’	COMMODITY NAME/ MODIFICATORY TECHNICAL TERM
Personnel	VIR	]-we-te-e ⁶¹ a-pe-o-te
	VIR	
	MUL	
Livestock	OVIS	
	CAP ^f	
	SUS ^m	
	BOS ^m ; BOS ^f	
Aromatic substances and spices		tu-we-a ₂ ^{SF}
	AROM (plain)	ka-po
	AROM	i-re-we+
	AROM	ko-ri-ja-da-na+
		ku-pa-ro
	[*270] and ligature(s)	
Animal products	*190	a ₃ -zo, o-wi-jo, or unmodified wi-ri-na
Olive oil		i-je-ro e-ra ₃ -wo
Wool, textiles	LANA+	ka-na-ko+
		ka-na-ko ki-to-si i-je-ro-i
		ka-na-ko+
	*146 TELA+PA ^{+SF}	
Artefacts		e-pi-zo-ta ^{SF}
	*207 ^{VAS OF}	
	*212 ^{VAS+PE}	
	[*235] *246 or *208 ^{VAS}	

Table 1. Commodities recorded on the administrative documents from the West Stoa of Ayios Vasileios, Laconia. Modificatory terms in the same entry as ‘ideograms’ indicate modification of the pertinent ‘ideogram’ on at least one instance. Plus signs <+> indicate occurrence of the respective term on both tablets and inscribed string-nodes. Doubtful readings and documents still under conservation at the time of writing (May 2022) have been omitted. Evidence from finds not associated with the ‘West Stoa’ has been incorporated with the following special abbreviations: ^{OF} occurrence of a commodity hitherto exclusively on a document found in a location not associated with the ‘West Stoa’; ^{SF} occurrence of a commodity hitherto exclusively on (at least one) s(urface) F(ind); ^{+SF} occurrence of a commodity also on (at least one) s(urface) F(ind).

⁶¹ For proposed reconstructions see discussion in n. 74-75.

omitted from Table 1, which is therefore only representative of those documents that preserve such information.

- The presence of totalling records (of which **AV UI 10** is an explicit example, see below) makes the overlap of quantities likely. The possibility of having the same quantity recorded as a separate entry and as part of a totalling entry would generate an oversized and highly misleading figure.

It is with such cautionary notes in mind that we should explore what might be missing from the documents preserved for us. So far, we have no records of basic agricultural staple products (e.g. cereals, figs, wine or olive oil)⁶² of any kind, including rations, which we know was a basic provision from the palace to its personnel, in the context of work projects, as well as other activities or festivities. We also lack references to feasting provisions, where meat (chiefly from sacrificed animals) was consumed alongside a variety of foodstuff, a practice well documented on tablets from Pylos and Knossos as well as nodules from Thebes.⁶³ Similarly, we do not have taxation records, as well as relevant records of fiscal/tax capacity, as the landholding records of Pylos probably were. Besides references to aromatic substances, we have so far no other references to industrial activities, a hint –no more and no less than that– that the apparent overrepresentation of such substances might be significant. This issue may have a bearing on our assessment of the nature and function of the ‘West Stoa’ assemblage and will be revisited at the end of this contribution.

The aforementioned emphasis on aromatics is exemplified by certain important documents. Let us first focus on **AV UI 10** (Fig. 9), a large elongated tablet that testifies to the grand scale of the production and processing of aromatic substances and especially of the commodity rendered by ideogram *190. The text of this remarkable document, also discussed above à propos the distribution of its components and the occurrence of [*270]+*WI+MA* on it, is currently transliterated as follows:

⁶² Two references to olive oil (phonographic, not employing the ‘ideogram’ *OLE*) on nodules **AV Wq 179** and **180** are a special case, see below.

⁶³ For a survey of textual evidence on Mycenaean sacrificial banquets see PALAIMA 2004.

AV UI 10

- .1 ku-su-[vest.]14 *146 114 ka-po AROM 2 T 2 [*270]+WI+MA 45
 .2 a₃-zo *190 2900 o-wi-jo *190 570 ne-[] *190 140 i-re-we AROM 5 [*270]+WI+MA 20

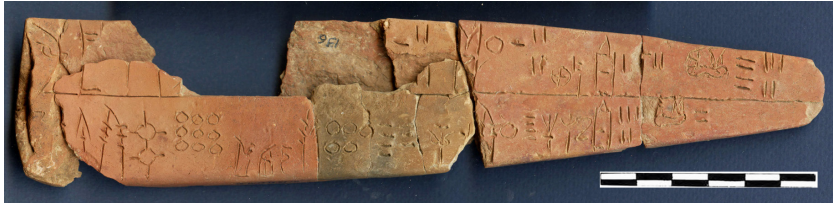


Fig. 9. AV UI 10 (photo by Vassilis Petrakis).

It is noted that the reconstruction of the first sign-group on .1 as *ku-su-*[*to-ro-qa* is compatible with the preserved vestigia to the right of *ku-su-*], as well as quite attractive and plausible. *ku-su-to-ro-qa* /ksúnstrokwḥā/ ‘collection, gathering’ (cf. Att.-Ion. συστροφή) appears to precede totals elsewhere,⁶⁴ and its likely reconstruction here indicates that **AV UI 10** is a totalling document, as further supported by the considerable quantities (including the number ‘2900’ for a quantity of *190, the largest quantity identified so far). On two separate entries of this document, the generic ‘ideogram’ AROM is modified as *ka-po* (.1) and as *i-re-we* (.2).

Such modifying function of *ka-po* suggests a return to Anna Sacconi’s earlier association of *ka-po* and the monogram *KAPO* with /kárphos/ ‘dried substance’, perhaps some dried aromatic plant, such as the bark of the cinnamon (although not necessarily this particular commodity).⁶⁵ The use of aromatic wood might be hinted at by the term *tu-wo* /thúwon/ (cf. θύων) that appears as a specific aromatic commodity on **PY Un 219.1** and *ka-po* or *KAPO* might indicate similar commodities. The term *i-re-we* is considerably more difficult to reconstruct, although its identification

⁶⁴ An employment of *ku-su-to-ro-qa* that seems similar to the one we suggest for **AV UI 10** is to be found on **PY Ed 411**. For an analysis of *ku-su-to-ro-qa* as indicating ‘ENSEMBLES’ (distinct from ‘SOMMES’ of individual entries) see DUHOUX 2013, 56-59, 60-66 (for the *somme/ensemble* distinction, see DUHOUX 2013, 53-54). Duhoux has convincingly argued that the three occurrences of *ku-su-to-ro-qa* in other positions preceding or following *to-so* (**KN Bg 817**, **PY Ed 847.2** –where the erasure [[*ku-su-qa*]] occurs, **Er 880.8**) are due to mistakes on the part of the ‘tablet-writer’ (DUHOUX 2013, 56-57, 62).

⁶⁵ SACCONI 1972. Greek *kárphos* was a non-technical term for any dried small plant part, such as a twig, without necessary reference to a specific species. See in particular the mention of *kárpea* in Hdt 3.111: ὄρνιθας δὲ λέγουσι μεγάλας φορέειν ταῦτα τὰ κάρπεα τὰ ἡμεῖς ἀπὸ Φοινίκων μαθόντες κινάμωμον καλέομεν.

as an aromatic substance is secured by its already known occurrence as modifying *AROM* on **PY Un(1) 616.7**,⁶⁶ as well as from two nodules from Ayios Vasileios, where *i-re-we* appears in a position interchangeable to *ko-ri-ja-da-na* /koriadna/ ‘coriander’ (**AV Wq 179.β1** ~ **AV Wq 180.β1**).

The clues offered by **AV UI 10** and a few other documents from the ‘West Stoa’ assemblage are also of great help in the identification of the commodity represented by the ‘ideogram’ *190. At Ayios Vasileios, *190 is counted, as is the usual case in other attestations of the ‘ideogram’ at Mycenae, Thebes or Knossos.⁶⁷

The adjectives *a₃-zo* /aid²os/ < */aígyos/ ‘from goat/goatish’ and *o-wi-jo* /owios/ ‘from sheep/sheepish’ that occur on **AV UI 10.2** are quite transparent and occur once more on two other records of *190 from Ayios Vasileios (**AV Gb 83** and **AV Gb 124** respectively).⁶⁸ They demonstrate beyond reasonable doubt that, as many scholars had suspected before, *190 is an animal product.⁶⁹ From the outset, the likelihood that it denotes cheese has been quite strong and is certainly strengthened by the non-use of *190 at Pylos where the *TURO₂* monogram is used.⁷⁰ The only potential obstacle is the context in which such large quantities of *190 appear on **AV UI 10**: this document otherwise records substanc-

⁶⁶ The reading *i-re-we* is considered secure in *PT*³, 205-206. The attractive –but admittedly quite conjectural– association with the *Iris* plant known from its employment in perfume production as well as medicine (cf. the later adjective /írinos/ used to indicate ointments, such as the ἴρινον μύρον in *Hp.Mul.* 235 or *Thphr.HP.* 9.9.2) was originally put forward, but must be abandoned if the suggested original form /wírís/, based on an inscription from Aetolia (SCHWYZER 1960, 199, nr. 380) and on metrical evidence from Homer (CHANTRAINE 1948, 152) can be considered projectable onto the Bronze Age. Melena (pers.com.) has ingeniously proposed an association with /ílús/ ‘sediment,’ used in certain contexts to indicate wine dregs (*Arist. GA* 753a24; *Hp. Mul.* 1.66), an interpretation that would find a context interchangeable with *ka-po* as */kárphos/ ‘dried substance’ on **AV UI 10** (see above).

⁶⁷ However, in one case at Ayios Vasileios, we might have a possible measurement in v (solid/ liquid capacity metrogram) units. The reading is not yet certain, but it reminds us of the puzzling attestations of *190 measured in s (liquid capacity metrogram) units on **MY Go 610** from the ‘House of Sphinxes’ at Mycenae.

⁶⁸ During the first presentation of **AV UI 10** during the 14th Mycenological Colloquium at Copenhagen in September 2015, John Killen, to everyone’s applause, had predicted the reconstruction *a₃-zo* at the beginning of .2 before the actual join was achieved, based on the known adjective *a₃-za* /aidzā/ < */aígyā/ ‘goatish’ modifying *di-pte-ra* on **PY Ub(1) 1318.7**. The join that produced this reconstruction was achieved by our conservator Vicky Katsichti, without awareness and potential ‘contamination’ from Killen’s observation.

⁶⁹ On *190 see KILLEN 1992, 366-367 à propos the evidence from the Thebes **Wu** nodules. A more comprehensive assessment of the literature will be included in the forthcoming publication of the Ayios Vasileios documents.

⁷⁰ VARIAS GARCÍA 2017, 386.

es associated with perfume production. Although we should note that the latter is based on inference from the occurrence of *AROM*, *KAPO* (if the same as *ka-po*) and *i-re-we* on Pylos, and while a rather culinary use of them at Ayios Vasileios cannot be excluded, the alternative proposal may be offered here that *190 may render animal fat, used as a base for many unguents in antiquity. Such an interpretation might perhaps better accommodate the large quantities recorded in proportion to the aromatic substances proper (if they are admitted as such).⁷¹

The discussion over the interpretation of *190 is perhaps symptomatic of our difficulty to discern the context of **AV UI 10** as either culinary or aromatic and of how to perceive a possibly less strict division between them. For the time being, it is perhaps preferable that both interpretation modes -cheese and fat, culinary and aromatic- are left open.

We reported above on [*270], its variants and its association with Pylian *157 (Figs. 7d-h). In the context of its occurrence on **AV UI 10**, it is pertinent to note here that the syllabograms *WI* and *MA* that are ligatured to it might be acrophonic abbreviations of terms such as *wi-ri-za* /wrídʹā/ ‘root’ and */mallós/ or */málluks/ ‘wool’.⁷² Support for this hypothesis may be provided by the occurrence of *wi-ri-za* and *LANA* on **PY Un(1) 249** in the company of *157 and *KAPO* (the latter rendered as a monogram). *LANA* (possibly as a source of lanolin),⁷³ *157 and *KAPO* occur again in the list of aromatic substances on **PY Un(1) 267**. Another link between wool and perfume production may be found at Ayios Vasileios, where a record of *i-re-we* *AROM* occurs on the same document (**AV UI 80**) as an identifiable *vestigium* of *LANA*.

A number of documents are of interest exactly because they lack close parallels from other palatial sites. A small group of elongated tablets (classified as **Gd**) appear to record aromatic substances deploying the *AROM* ‘ideogram’ alongside male personnel (the latter indicated by

⁷¹ One difficulty may be that the animal species most explicitly mentioned as fattened in Mycenaean documents, pig, does not appear to be associated with *190 on **AV UI 10** or any other document, as José Melena shrewdly objected (pers. com.). However, if the modification of animals as *si-a-ro* /síhalos/ (cf. later Greek σίαλος) or its abbreviation *SI* ligatured to livestock ‘ideograms’ is any indicative, fattening was not restricted to pigs, but was applied at least to cattle too, as the *sus+SI* (e.g. on **PY Cn(2) 608** and other Pylian ‘banquet’ records) and *bos+SI* (on **PY Cn 418**) ligatures indicate. For a thorough discussion of σίαλος pertinent to this point see MEISNER 2019.

⁷² On the etymology of Greek πίζα see VINE 1999; on */mallós/ or */málluks/ as possible Minoan loan-words associated with the original monogram that may have been the ancestor of the Linear B wool ‘ideogram’ *LANA*, see PETRAKIS 2012, 529-531.

⁷³ MAZOW 2014.

the VIR ‘ideogram’ on two occasions). Despite the lack of clear *comparanda*, it would not be far-fetched to speculate that the men recorded were employed in the perfume industry.⁷⁴

The term *a-pe-o-te* that occurs in some of these documents is interpreted as /apéhontes/ ‘absent,’ modifying (some of) the men recorded in these documents, while a rather straightforward interpretation would be that they record absent or missing personnel.⁷⁵

Geographical and temporal references

The ‘West Stoa’ assemblage of tablets has yielded little evidence of historically attested toponyms. Two possible references may be mentioned here. On the one hand, we may have the term *e-ti-wa-i* on AV Or 18.3 (Fig. 5), which may well be a locative of a place-name,⁷⁶ if we are not

⁷⁴ A more comprehensive treatment of these documents, most of them in the process of reconstruction, must be reserved for the final publication. So far, among the sign-groups associated with the personnel entries, the incomplete sequence]-*we-te-e*, a clear dual form of an *s*-stem modifying two men (VIR 2) on AV Gd 146.2 has attracted attention. During the oral presentation, Petrakis proposed to read the sign as]*tu-* with a reconstructed **tu-we-te-e* rendering the dual /*thuwéstehe*/ nominative dual of an unattested *s*-stem appellative /*thuwestés*/ ‘he who deals with /*thúweha*’. Petrakis’ proposal aimed at compatibility with the occurrence of an unmodified AROM entry following the VIR entry on AV Gd 146.2. That said, the *vestigia* of the sign to the left may also (and perhaps better) indicate]*za-*, although a sequence]*za-we-te-e* in adjectival function faces certain important difficulties: first, it would be an unparalleled formation, although not an impossible one (cf. the derivative forms in -*ivos*, such as *τητινός*/ *σατινός* < *τήτες*/ *σάτες*); moreover, the meaning ‘this year’s’ is already covered in Mycenaean Greek by a different adjectival formation, namely *za-we-te-ro/-ra* (*za-we-]te-ra* on KN Ga 461.a;] *za-we-te-ra* Ga(1) 518.a; also the uncertain reading *za-we-te-ro* KN Gg 5637.2). Such a designation might be indicative of yearly *rotation* of personnel (‘this year’s men’ perhaps), making it possible that this is the form abbreviated as *za* referring to women (KN Ak(2) 616.1; 9001.1). We are grateful to Torsten Meißner and José Melena for discussions on these issues, and we hope that further study of these documents or a future join might illuminate them.

⁷⁵ It is difficult to resist the temptation to consider a possible causal relationship between *a-pe-o-te* on AV Gd 146.1 and the possible]*za-we-te-e* on AV Gd 146.2, as indicating ‘absent, missing’ and ‘this year’s’ (in the sense of newly recruited?) personnel respectively. Alternatively (but not totally incompatible with the previous interpretation), we may refer to the recent discussion of the same term on PY An(4) 724 by Del Frio, according to which the term is semantically linked to the verbal form *a-pe-e-ke* ‘he let go’ and refers to personnel absent due to a specific obligation imposed to them by the central administration (DEL FRIEO 2002-2003). If this were the meaning of *a-pe-o-te* on these Ayios Vasileios records, then these men are not ‘absent’ or ‘missing’ from the perfume industry, but may be indicated as ‘let go’ of other obligation to work there. It is not clear to what extent such a reinterpretation might be projected to other occurrences of similarly ‘absent’ men or women (DMic I, 86-87, s.v.]*a-pe-e-si*[).

⁷⁶ Not necessarily related to the sign-group *e-ti-wa-i*[(alternative reading: *e-ti-wa-no*[) on PY Wr 1359.β, *e-ti-wa* on KN Fs 9.1 or the forms *e-ti-wa-jo* (PY Va 15 verso) and *e-ti-wa-ja* (KN Od 681.a; Ap 639.8).

carried away by Ἡτία· δῆμος Λακωνικῆς (Stephani Byzantii H27). *e-ti-wa-i* occurs in the same position as other sign-groups on **AV Or 18.4-.5** ending in *-de*, which might be the allative suffix (Fig. 5). The second example is the term *me-sa-pi-jo* that appears on the fragmentary tablet **AV X 111**.⁷⁷ The term may well be an ethnic adjective, bringing to mind the place-name Μεσσαπέαι, glossed by Stephanus Byzantius as a χωρίον Λακωνικῆς (Stephani Byzantii M159).⁷⁸

Leaving the axis of space, we move to other component of the continuum, the axis of time. It is broadly known that Linear B documents were temporary records, regularly recycled and had a rather narrow -by our standards- time reference, restricted to the current administrative year and flanked by occasional references to the previous and following year.⁷⁹ The -unfortunately fragmentary- tablet **AV U1 80**, preserving records of LANA ‘wool’ and the aromatic *i-re-we* AROM has given us the first explicit temporal reference extending beyond that frame: the occurrence of the adjective *po-ro-pe-ru-si-nwa* /properusinwá/ ‘(referring to) the year before the last year’, hitherto not known before the 4th century BC (Thphr. HP 3.12.4 referring to καρπός) and apparently referring to the transaction involving the quantity of wool that follows it. Through this transparent adjective, we gain an important backwards extension of the temporal ‘catchment’ of Mycenaean administrations not previously documented.

Religious and official titles

Religious affairs have been of prime concern to the Mycenaean palatial administrations, to the extent that, as in most pre-modern political economies, religion was intertwined with other aspects of economy and politics.⁸⁰ The ‘West Stoa’ assemblage yielded evidence for such

⁷⁷ This tablet, as others that lack any ‘ideogram,’ has been temporarily classified as X. Its possible reclassification, based on similarities with the Gd tablets, and progress in our understanding of the nature of these documents will be further assessed in the final publication of the assemblage.

⁷⁸ On Messapeai and the problem of the location of the shrine of Zeus Messapeus, see CATLING & SHIPLEY 1989; HOPE SIMPSON 2009, 327-331, although, of course, it remains uncertain whether this should have a bearing on the location of the LBA toponym, which might be *me-sa-po* or **me-sa-pa*. We may also mention here a few terms that appear with endings that might be productive suffixes in *-a-jo* and *-i-jo*: *a-^{*}19-ni-jo*, *ko-ri-te-wi-jo*, *o-to-wa-jo*. As these terms appear in contexts of personnel entries, including some of the aforementioned Gd tablets, it is not unlikely that they are derivative ethnic adjectives, although we have yet no attestation of the corresponding toponyms.

⁷⁹ Cf. also BENNET 2001, 29-30, Fig. 1; KARAGIANNI 2018; 2021.

⁸⁰ BENDALL 2007 for a recent overview of the textual evidence.

interlocking of religion and politics. Inscribed string-nodule AV Wq 117.β (Fig. 10) bears the sign-group *wa-na-ko-to*, the genitive singular /wánaktos/,⁸¹ an explicit reference to the wánaks ‘lord,’ a central power figure in Mycenaean palatial society that functioned as a conceptual bridge between human mortal and divine metaphysical sovereignty and kingship. It is not impossible here that the genitive is possessive and might be semantically equivalent to the adjective /wanákteros/ ‘pertaining to the wanax.’ Unfortunately, further understanding of the inscription is limited by the lack of any other text on this nodule.



Fig. 10. AV Wq 117.β
(photo by Vassilis Petrakis).

AV Or 18 (Fig. 5) further illuminates the religious-political continuum. Its heading informs us that the tablet records *we-re-no* (.1), which may be interpreted as the genitive singular /wrēnós/ ‘of/from young sheep/lamb,’ possibly semantically equivalent to the adjective *we-re-ne-ja* (PY Ub(1) 1318.7) and, like it, referring to skins or hides of such animals, or a hitherto unattested derivative of the

same meaning.⁸² This is apparently the term abbreviated as *WE* in the individual entries (.3-.9). The verbal adjective *qe-te-o* (a type of /kweitehos/) is generally accepted to indicate a type of payment obligation.⁸³

⁸¹ The canonical spelling <ko-to> for /-ktos/ is in fact scarcely attested in spellings of that title: throughout the Mycenaean world, ‘writers’ on tablets and stirrup jars tend to render the consonant clusters /kto/ and /kte/ in the *wa-na-ka* spellings not with the anticipated <ko-to> and <ke-te>, but as <ka-to> and <ka-te>, hence *wa-na-ka-to*, *wa-na-ka-te* and *wa-na-ka-te-ro*, employing a persistent and arbitrary orthographic vowel <a> (the spelling *wa-na-ka-to* occurs on PY La(1) 622 verso .1). This remarkable spelling pattern appears so far restricted to *wa-na-ka* and its derivatives and appears to be an orthographic cliché, of very broad attestation, occurring at Knossos, Pylos, Thebes and on the Cretan inscribed stirrup jars (PETRAKIS 2016). ‘Canonical’ spellings have been so far erratically found: besides AV Wq 117.β, we had two examples of the dative singular /wanaktei/ as *wa-na-ke-te* from Pylos and Thebes (PY Fr(5) 1215.; TH X 105.1). For a full conspectus of all attestations and their geographical distribution, see PETRAKIS 2016, 68-71, Table 1, Fig. 1. Nodules, however, as documents peripheral to the ‘core’ administrative action of palatial ‘tablet-writers’ could, as Palaima has discussed, bear non-canonical features (PETRAKIS 2016, 407-408 citing a now revised chronology of the West Stoa assemblage; on the peripherality of nodules from a palaeographic perspective, see PALAIMA 2000).

⁸² For proto-Greek *ῥῆν, see MEIER-BRÜGGER 1990. /wrēnós/ could modify a noun (standing for ‘hide’) on the missing part of .1 on the right, unless the latter was implicit. The term may alternatively be a noun, perhaps an *o*-stem */wrēnos/ with the meaning of ‘sheepskin’ (cf. the diminutive ἀρνίον).

⁸³ DMic II, 201-202, s.v. *qe-te-jo*; also THOMPSON, this volume.

The term occurs also on nodules from Thebes⁸⁴ and Ayios Vasileios.⁸⁵ The occurrence of the term on such documents, ‘incoming’ to the palatial administration, might suggest the centripetal flow of both information and the obligated payment.⁸⁶

On **AV Or 18.6**, *i-je-re-ja* (apparently the ‘recipient’ in the dative case, /hiéreiai/) occurs alongside fragmentary sign-groups which might be titles of local or regional officials. *a-to-mo* /arthmós/ (**AV Or 18.8**) is clear,⁸⁷ and the possibly incomplete sign-groups *da-mo*[or *ko-re*](**AV Or 18.6**, .7) might be reconstructed as well-known titles (*da-mo-ko-ro* and *ko-re-te* respectively). Of course, it is acknowledged that such reconstructions might seem too conjectural at the moment.

Aromatics and possible pigments are mentioned in relation to two kinds of ‘sacred’ commodities. On nodule **AV Wq 175.β1-β2-γ**, continued through two facets of the document, we have *ka-na-ko i-je-ro-i ki-to-si* /knákos hieroíhi khitónsi/. The dative plural indicates the purpose of /knákos/ ‘safflower’ (cf. κνήκος), apparently here indicating the well-known colouring agent employed in textile manufacture, which is intended ‘for sacred garments.’ On two other nodules (**AV Wq 179; 180**) in the company of *qe-te-o*, two different aromatics (*i-re-we* and *ko-ri-ja-da-na*) are sent as part of an obligatory payment (*qe-te-o*), intended *i-je-ro e-ra₃-wo* /hierōi elaiwōi/ ‘for sacred oil,’ without any further details with regard to its processing. The precise meaning of *i-je-ro* here remains, however, frustratingly uncertain. It is therefore difficult to know whether this is intended as an offering, as perfumed oil on the Pylos **Fr** tablets appears to be, or whether the oil itself is intended to be employed in ritual action, such as an act of anointment. Of course, these options are not mutually exclusive. If *i-je-ro* is implicit of an act of offering or dedication, then it might be relevant to note that both perfumed oil and garments are attested in this use.⁸⁸

⁸⁴ PITEROS *et al.* 1990, 152-153; cf. also HUTTON 1990-1991; SACCONI 2005.

⁸⁵ **AV Wq 179.β2; 180.β2; 182.γ**. On these documents, see VASILOGAMVROU *et al.* forthcoming.

⁸⁶ This is strengthened by the association of *qe-te-a₂* with the allative *te-qa-de* on the Thebes **Wu** nodules. Such concurrence is not identified in Ayios Vasileios. The diversity of allative types on **AV Or 18** may suggest a more complex pattern in the direction of such payments (perhaps originally received under *qe-te-o* payment conditions).

⁸⁷ *DMic* I, 120, s.v. *a-to-mo*.

⁸⁸ BENDALL 2007, 95-140, 228-241. The term *i-je-ro* appears in olive oil records at Knossos (**KN Fh 5467.b; Fp(2) 363.2**), although its function as a modifier of the commodity is not explicit.

Economic and technical vocabulary

Perhaps unsurprisingly, the familiar technical vocabulary of Mycenaean palatial management appears to have been used as anticipated, despite the non-occurrence of certain terms (whose absence cannot be presently assessed). Besides the aforementioned *qe-te-o*, references to debts owed to the centre using the term *o-pe-ro /óphelos/*, the well-known members of the /dídōmi/ lexical group, like the perfect participle *de-do-me-na /dedoména/* ‘those that have been given/ delivered’, the term *do-so-mo /dosmós/*, usually interpreted as indicating a religious offering to a deity, and its derivative *do-si-mi-ja* (either feminine /dosmiā/ or neuter /dósmia/) suggest that Ayios Vasileios had fully endorsed the practices of transaction and book-keeping that we are familiar with from other palatial centres.⁸⁹ Of interest is also another occurrence, on AV UI 121.2, of the verbal phrase *jo-de-ka-sa-to /jo-déksato/* (3rd person passive aorist of /dékhomai/) ‘what has been accepted/ received’, suggestive perhaps of a receipt of commodities.⁹⁰

Concluding: do we have an ‘archive?’

Our brief survey of the assemblage recovered from the fallen debris of the so-called ‘West Stoa’ has been based, understandably, on texts safely reconstructed to date. Although the progress in reconstruction and interpretation of the documents will undoubtedly bring about modifications to what has been presented, it is only fair that we already address a truly central question: is this assemblage, the ‘central archive’ or ‘central document deposit’ of Ayios Vasileios? This final section of our presentation does not provide a definitive answer, but rather ponders on the term ‘archive’ (ἄρχεῖο) that has been used more or less conventionally to refer to this assemblage in preliminary reports and presentations.⁹¹ The question is not whether the ‘West Stoa’ assemblage constitutes an

⁸⁹ Understandably, a full documentation of such terms (which would be relatively premature) could not be accommodated in either the oral presentation or its written version.

⁹⁰ As AV UI 121 is currently under reconstruction, a full transliteration is omitted. For the same reason, it would be premature to comment on this occurrence of *jo-* within the discussion of the pertinent evidence for *o- /jo-* (PROBERT 2008; THOMPSON 2002-2003).

⁹¹ E.g. KARDAMAKI 2017, 73, 113-114; VASILOGAMVROU 2015b, 107-109; VASILOGAMVROU *et al.* 2021, 344.

‘archival’ administrative assemblage,⁹² but of its role, central or specialized/ peripheral in the Ayios Vasileios administration.

The dense concentration of documents of many types and of many topics (Table 1) might seem, at first sight, to support this identification. However, identifying an ‘archive’ should be, first and foremost, a matter of qualitative, rather than quantitative assessment. We may not be able to deduce this directly from the number of documents or topics represented, although these are important aspects too. In this regard, it is important to note, on the one hand, that the occurrence of labels at Ayios Vasileios is quite significant. Despite their small number (three identified so far), their presence shows that written information was in the process of being classified, stored and/or processed in the upper floor of the so-called ‘West Stoa’ at the time of its destruction.⁹³ This is further supported by the occurrence of inscribed string-nodules concerned with certain commodities also recurring on the tablets.⁹⁴ We should, on the other hand, not lose sight of the many and important *lacunae* in our list of topics (Table 1), with important commodities and realms of economic activity missing from the documents so far recovered, difficult as it is to assess the significance of such negative evidence. The ultimate question is whether the identified emphasis on perfume or spices in our extant assemblage may be indicative of its ‘specialized’ character. To this, we give a tentative, affirmative answer.

The temptation is admittedly great, standing before a substantial archaeological find, to overestimate its significance. It is not uncommon, even for the most cautious and conscientious scholar, to assume that what was to be found, has actually been found, and that a neat and comprehensive narrative on the basis of the evidence we have at hand can now be produced. We badly want to ‘join the dots;’ but we cannot afford

⁹² Following FISSORE 1994, 344-345, and PALAIMA 2003, 170, we may easily adopt the term ‘archive’ for any ancient “pre-set system of rationalized conservation according to rules which permit the later use of documents for [an] administration’s internal needs, but not necessarily with a view to permanent conservation,” and also keep in mind that some ancient archival practices are directed mainly at “the problem of administrative control, with its specific requirements and regular rhythms of use and discard.”

⁹³ It seems that their presence is indicative of such action, but not necessarily of the overall function of the assemblage. The concentration of most labels in the ‘Archives Complex’ is evident at Pylos. However, exceptions occur, such as **PY Wa 1576** from Room 23. The evidence at Knossos is more ambiguous and quite different from that at Pylos.

⁹⁴ VASILOGAMVROU *et al.* forthcoming.

to pretend that there are things we do not know, and things that have yet to be found, as we should not be under any delusion on the preliminary character of the evidence presented in this paper. As the study of the administrative documents in their archaeological context progresses, we are bound to raise new questions and re-shape those already set, often in a Sisyphean fashion. The distribution of surface finds at Ayios Vasileios, even allowing for the effect of intense ploughing, and the thematic emphasis of the 'West Stoa' assemblage, to the extent that this is currently known, allows us to anticipate the discovery of further such assemblages of inscriptions in other parts of the site.⁹⁵

⁹⁵ With regard to the existence of a 'central archive' at Ayios Vasileios, or the possible identification of the 'West Stoa' assemblage as one, we should remain open to the possibility that something similar to the Pylian 'Archives Complex,' a find still unique in the Aegean, may not be found.

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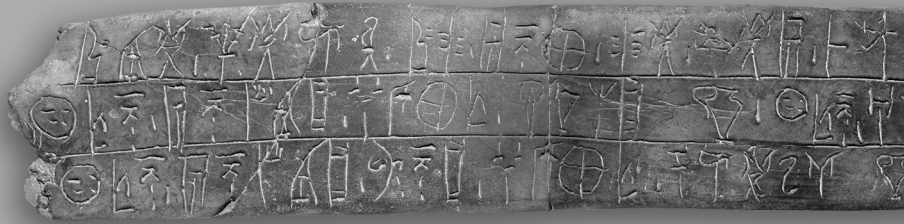
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**Reports, projects, databases
and
archival material**

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Rapport 2016-2021 sur les textes en écriture hiéroglyphique crétoise, en linéaire A et en linéaire B*

Maurizio Del Freo

À Jean-Pierre Olivier

1. Écriture hiéroglyphique crétoise

1.1. Éditions et ressources en ligne

Depuis 2005 existe un site web sur l'hiéroglyphique crétois géré par John Younger. Le site, mis à jour le 3 août 2017, contient les textes publiés dans le *CHIC* ainsi que les inscriptions publiées après 1996. Les textes sont transcrits, transnumérés et normalisés comme dans le *CHIC*. Vient ensuite des commentaires, des comparaisons et des possibilités alternatives de normalisation proposées par l'auteur.¹

1.2. Trouvailles récentes (et moins récentes)

1.2.1. CRÈTE

1.2.1.1. Knossos

– **KN S (4/4) 01** (Ephorie des Antiquités de Heraklion, n. inv. Δ 3702): sceau à quatre faces en pâte de verre ou en stéatite trouvé en août 2016 par Athanasia Kanta à Bougada Metochi (terrain Anetaki) dans une

* Je remercie L. M. Bendall, J. Bennet, K. Christakis, A. Greco, E. Hallager, A. P. Judson, A. Kanta, A. Karnava, C. Knappett, O. Krzyszkowska, J. L. Melena, D. Nakassis, Th. G. Palaima, M. Perna, V. P. Petrakis, M. Pomadère, F. Rougemont, E. Sapouna-Sakellarakis, I. Tzachili, A. Tzigounaki et J. Zurbach, qui m'ont fourni l'aide et les informations nécessaires pour rédiger ce rapport. Naturellement toute erreur ou omission relève de ma seule responsabilité.

¹ Cretan Hieroglyphic inscriptions, YOUNGER: <http://people.ku.edu/~jyounger/Hiero> [consulté le 30 septembre 2021].

pièce (Room 3) d'un édifice néopalatial à fonction religieuse.² *L'editio princeps*, par Athanasia Kanta, Tom Palaima et Massimo Perna, a été publiée dans *Kadmos* en 2022.³ La face α du sceau, légèrement convexe, est divisée en deux registres par une ligne horizontale et porte la 'formule d'Archanès' 042-019 | 019-095-052. La face γ , opposée à α et également convexe, est subdivisée par deux lignes orthogonales en quatre carrés, dont chacun contient un signe isolé: deux signes correspondent à 042 et 010; les deux autres, qui sont dépourvus de correspondants en hiéroglyphique, ressemblent à AB 77 et AB 41.⁴ Tous les signes sont 'en ligature' avec ceux qui semblent être des motifs décoratifs: 010 avec une série de points disposés le long d'une ligne courbe, les trois autres avec un élément végétal semblable à une feuille de palmier. Les faces β et δ , étroites et plates, sont à leur tour subdivisées par des lignes horizontales en plusieurs carrés (trois en β et deux en δ), contenant chacun un signe isolé. Sur la face β sont présents trois klastogrammes: 302 (Δ), 308 (ϱ) et 309 (λ); sur la face δ sont incisés deux signes, classifiés dans le *CHIC* comme logogrammes: *181 et une variante de *164 / *165 qui ressemble à AB 180. Des combinaisons analogues de signes se retrouvent sur les sceaux #206, #291, #292 et #315. Sur le prisme protopalatial #292 de Gouves la 'formule d'Archanès' (faces α et γ) est associée aux klastogrammes 302 (Δ), 307 (Σ), 308 (ϱ) et 309 (λ) (faces β et δ), isolés à l'intérieur de carrés délimités par des lignes horizontales; sur le 'cushion seal' #206 et sur le prisme à quatre faces #291, tous deux d'époque protopalatiale, les klastogrammes 302 (Δ), 307 (Σ), 308 (ϱ) et 309 (λ) sont associés à des logogrammes isolés, situés eux aussi à l'intérieur de carrés: *155 et *157 (#291) et respectivement *155 et *156 (#206); sur le sceau prépalatial #315 d'Archanès, enfin, la 'formule d'Archanès' (faces I et H) est associée à des signes isolés qui ressemblent à *181 (face D)⁵ et 010 (face L).

Le sceau est ici classifié comme 'hiéroglyphique' suivant la suggestion des auteurs de *l'editio princeps*. La nature de la 'formule d'Archanès,'

² Cf. KANTA 2019, 255, cat. no. 305.

³ KANTA *et al.* 2022.

⁴ Le signe similaire à AB 77 peut être comparé aussi avec le symbole en forme de roue associé à la partie initiale de la 'formule d'Archanès' sur l'empreinte du sceau hiéroglyphique #135 de la rondelle {Wc 1} de Samothrace.

⁵ Non signalé dans le *CHIC*.

toutefois, est discutée. Bien que la tendance soit à l'attribuer à l'écriture hiéroglyphique crétoise (comme dans le *CHIC*), Louis Godart et, plus récemment, Maria Anastasiadou, en se fondant sur la comparaison de 042-019 | 019-095-052 avec la séquence AB 08-31-31-60-13, fréquemment attestée sur les tables à libation, ont développé une série d'arguments en faveur de son attribution au linéaire A.⁶ Ces arguments, relatifs à la paléographie des signes et à la matérialité des supports d'écriture, ne semblent pas décisifs. Le nouveau sceau, toutefois, présente certains éléments compatibles avec cette hypothèse. Des quatre signes isolés sur la face γ , deux, comme on l'a dit, sont similaires à AB 77 et AB 41, tandis que les deux autres correspondent aux signes hiéroglyphiques 042 et 010. Le signe 042, toutefois, est homomorphe de AB 08,⁷ tandis que 010, pour lequel les auteurs du *CHIC* n'indiquent pas de correspondants,⁸ peut être comparé avec les variantes plus anciennes (MM II) du signe AB 53.⁹ Trois (sinon quatre) signes de la face γ sembleraient donc correspondre à des signes du linéaire A. Quant aux klastatogrammes de la face β , 309 (γ) correspond au klastatogramme A 703 (D), tandis que 302 (Δ) et 308 (ρ) sont semblables, si on les fait pivoter de 180°, à A 704 (E) et A 712 (γ), tous déjà attestés au MM II.¹⁰ De même pour les logogrammes de la face δ , enfin, il est possible d'indiquer des correspondants en linéaire A: *181, tourné à 180°, est similaire à AB 38, dont l'usage logographique est attesté à Knossos au MM III,¹¹ tandis que, comme on l'a déjà souligné, le signe qui ressemble à *164/*165 a un correspondant quasiment identique en AB 180.¹² Il s'agit toutefois d'indices indirects,

⁶ ANASTASIADOU 2016; GODART 1999.

⁷ Surtout par rapport aux variantes 'calligraphiques' des tables à libation: cf. e.g. **IO Za 2a.1**.

⁸ Cf. *CHIC*, 19.

⁹ Cf. surtout **PH 6.1.2.3.4**, 7a.2 et 28a.3.

¹⁰ Cf. **PH 3a.2.3**, 7b.3, 9a. Comme l'observe ANASTASIADOU 2016, 178, de possibles signes de fractions sont présents aussi sur un sceau amygdaloïde (*CMS II 3*, no. 23) de Knossos. Le sceau n'est publié ni dans *GORILA*, où il est considéré comme un possible sceau hiéroglyphique (cf. *GORILA IV*, xxi *sub* [BRICE 1961] V 12), ni dans le *CHIC*.

¹¹ Cf. **KN 1a.2**, b.2. En théorie, *181 pourrait aussi être un antécédent de B *190 (cf. le parallèle avec B *134 [maintenant identifié comme variante de B *190] suggéré par YOUNGER 1988, 79-80).

¹² Il est important de noter que *164 et *165 sont attestés sur la barre à trois faces #048 du Hieroglyphic Deposit de Knossos (MM II ou III), qui, dans le *CHIC*, 18, 99, est considéré comme un possible texte en linéaire A, et que AB 180 est attesté comme logogramme sur les tablettes en linéaire A **MA 4[[b]]** et 6b.d du Dépôt hiéroglyphique de Malia (MM III), où sont présents en outre A 602 et A 603, ligatures similaires aux logogrammes *164 et *165.

difficiles à évaluer,¹³ surtout dans le cas des signes ‘en ligature’ de la face γ .¹⁴ L’appartenance de la ‘formule d’Archanès’ à l’écriture hiéroglyphique crétoise ou au linéaire A reste donc problématique, surtout à cause de l’absence de comparaisons convaincantes pour le signe 095.¹⁵

1.2.1.2. *Malia*

Les deux inscriptions hiéroglyphiques du Bâtiment Pi, **MA/V Yb 04** (fragment de vase avec trois signes incisés avant cuisson) et **MA/V S (1/3) 02** (prisme à trois faces avec une face inscrite),¹⁶ seront bientôt publiées.¹⁷

1.2.1.3. *Pétras*

Les trois sceaux **PE S (2/3) 01** (P.TSK12/1249), **PE S (1/3) 01** (P.TSK13/1485) et **PE S (1/3) 02** (P.TSK14/2604), trouvés entre 2012 et 2014 par Metaxia Tsipopoulou dans les House Tombs de la colline de Képhala,¹⁸ ont été publiés par Olga Krzyszkowska.¹⁹ Les descriptions des sceaux et les transcriptions des séquences hiéroglyphiques sont celles annoncées dans le *Rapport* déjà mentionné.

– **PE S (1/1) 02** (PTSK15.2079): inédit. Sceau à base ovale en cornaline rose-orangée appartenant à la catégorie des ‘foliate back seals,’ trouvé

¹³ A ces indices on peut ajouter que le signe de fraction 307 (Σ), attesté sur les sceaux avec la ‘formule d’Archanès’ #206, #291 et #292, déjà cités comme *comparanda* du nouveau sceau, correspond au klasmatogramme A 702 (B) du linéaire A et que les logogrammes *155, *156 et *157, présents en #206 et #291, correspondent aux logogrammes AB 30, AB 131a et AB 123 du linéaire A.

¹⁴ Ces signes n’étaient peut-être que des symboles. La ligature de la double hache avec le ‘motif décoratif’ en forme de feuille de palmier, toutefois, rappelle beaucoup la ligature incisée sur le *nodulus SA We 4* (AB 08+04 selon Olivier dans le *Rapport* 2001-2005, 208-209). Il est vrai que dans l’écriture hiéroglyphique crétoise les ligatures présentent souvent un élément végétal (cf. les signes 003, 055, *151, *161, *162, *163 et *170). Mais il est également vrai qu’elles sont rares. En outre, la présence d’un klasmatogramme exclusivement attesté en linéaire A sur le *nodulus SA We 3* (A 708) suggère que *We 4* porte également une inscription en linéaire A.

¹⁵ FERRARA *et al.* 2021, 10-11, sans exclure une possible analogie formelle avec AB 10, identifie 095 comme variante sans tête du signe en forme d’oiseau attesté en #314.δ *al.* (dans le *CHIC* ce signe est considéré comme un élément décoratif); GODART 1999, 300, propose de comparer 095 avec AB 60 (comparaison admise, entre autres, aussi par ANASTASIADOU 2016, 177); PERNA 2019, 53, y reconnaît le profil d’un visage humain (peut-être équivalent graphique de AB 60); SOLDANI 2012, 210, propose une comparaison avec AB 13.

¹⁶ Déjà signalées dans le *Rapport* 2006-2010, 5-6, et dans le *Rapport* 2011-2015, 6.

¹⁷ Dans le *BCH* par Maia Pomadère, Artemis Karnava et Maria Anastasiadou (POMADÈRE, communication personnelle).

¹⁸ Mentionnés dans le *Rapport* 2011-2015, 8.

¹⁹ KRZYSZKOWSKA 2017, 149-151, Figs. 5-6.

par Tsipopoulou pendant l'été 2015 dans le cimetière protopalatial de Pétras. La face ovale est divisée en deux par trois lignes horizontales. Dans la moitié supérieure est incisée la séquence 047-070 >< déjà attestée sur la face β du prisme à quatre faces en stéatite #286, qui provient peut-être de Malia (CMS III 1, no. 235). Le sceau sera publié, comme les précédents, par Krzyszkowska.²⁰

– **PE I (1/3) 01**: empreinte d'un probable prisme à trois faces en stéatite, apposée sur la base d'une anse d'une 'oval-mouthed amphora' (EMP 152), trouvée en 1989 par Tsipopoulou dans un contexte MM IIA dans l'Area Φ de la House I.1 de Pétras. Publiée de manière préliminaire²¹ et déjà signalée,²² elle a été récemment publiée avec un commentaire détaillé.²³ L'inscription se compose de deux signes lisibles comme 036-092,²⁴ séquence déjà attestée sur six sceaux (à trois ou quatre faces) et sur une empreinte de sceau.²⁵ L'inscription est d'une importance particulière aussi bien pour la chronologie que pour la typologie. En effet, la datation au MM IIA en fait l'inscription hiéroglyphique la plus ancienne de Pétras (l'archive hiéroglyphique remonte à la fin du MM IIB) et une des plus anciennes dans l'absolu. Il s'agit, en outre, d'une des rares empreintes de sceau hiéroglyphique sur vase, une typologie qui n'est attestée avec certitude que dans cinq cas à Malia et à Pyrgos.²⁶ La classification **PE I (1/3) 01**, attribuée à l'empreinte par Jean-Pierre Olivier, suit les règles du *CHIC* et reflète la typologie du sceau.²⁷ Comme on l'a déjà rappelé,²⁸ dans l'édition de l'archive hiéroglyphique de Pétras, Erik Hallager préfère ne pas utiliser les préfixes typologiques du *CHIC*. Pour cette raison, dans le cas des empreintes de sceaux il utilise les éti-

²⁰ KRZYSZKOWSKA 2017, 154.

²¹ CMS VS.1B, no. 329.

²² Rapport 1991-1995, 420.

²³ KRZYSZKOWSKA 2016, 125-128, Pl. 28.

²⁴ Comme l'a observé Krzyszkowska, le signe 092 présente deux traits obliques accessoires à fonction décorative comme dans #258. β . L'inscription est déjà mentionnée avec cette transcription aussi bien dans le Rapport 1991-1995, 420, que dans KARNAVA 2000, 22. L'hypothèse de MONTECCHI 2020, 55, selon laquelle il s'agirait d'une simple imitation d'inscription hiéroglyphique, est peu convaincante.

²⁵ Cf. #131 (Malia, Quartier Mu), #229. α (Malia, Képhala), #263. α , #265. γ (Kastelli), #267. β (Cythère), #288. δ (Malia, Maison E), #299. γ .

²⁶ Selon KRZYSZKOWSKA 2016, 128, ce type d'empreinte était probablement occasionnel et constituait peut-être une alternative aux marques de potiers.

²⁷ *CHIC*, 10-11; Rapport 1991-1995, 420.

²⁸ Rapport 2006-2010, 4.

quettes génériques PE I 01 – 06. Dans la discussion, toutefois, il propose une identification typologique des sceaux qui sont à l'origine des empreintes.²⁹ Par conséquent, les empreintes PE I 01 – 06 peuvent être reclassifiées comme suit:

- PE I 01 (empreinte de prisme à trois faces): **PE I (1/3) 02**
 PE I 02 (empreinte de prisme à quatre faces): **PE I (1/4) 01**
 PE I 03 (empreinte de prisme à quatre faces): **PE I (1/4) 02**
 PE I 04 (empreinte de prisme à quatre faces): **PE I (1/4) 03**
 PE I 05 (empreinte de prisme à quatre faces): **PE I (1/4) 04**
 PE I 06 (empreinte de sceau non déterminable): **PE I (1/?) 01.**

1.2.1.4. *Pyrgos*

Dans un article récent, Silvia Ferrara, Judith Weingarten et Gerald Cadogan ont republié les inscriptions hiéroglyphiques de Pyrgos (sceaux #282 et #309 et empreintes #133, #175 et **PYR I (1/1) 02**) avec des notes sur leurs contextes respectifs.³⁰ À l'exception de quelques détails, les transcriptions proposées correspondent à celles du *CHIC*.³¹ Dans le cas de #309, c'est l'hypothèse de Anna Margherita Jasink qui est reprise, selon laquelle le signe du chat entre 044 et 005 ne serait pas 'décoratif', mais appartiendrait de plein droit au répertoire des signes hiéroglyphiques.³² – **PYR Yb 01 (?)** (MSKN MP/71/79): fragment de vase avec deux signes incisés avant cuisson, trouvé en 1971 dans le secteur sud-ouest du site en association avec de la céramique MR I et un possible fragment de tasse MM. Déjà attribué au linéaire A et classifié comme **PYR Zb 5**,³³ le fragment est publié comme possible inscription hiéroglyphique.³⁴ Pour l'attribution à l'écriture hiéroglyphique, les auteurs se fondent sur l'ori-

²⁹ TSIPOPOULOU & HALLAGER 2010, 198, 203-205, Pl. 1.

³⁰ FERRARA *et al.* 2016. Sur **PYR I (1/1) 02** (= #133bis), cf. *Rapport* 2001-2005, 200.

³¹ L'ordre des faces du prisme #309 est différent de celui du *CHIC* puisque les auteurs n'appliquent pas la règle de rotation décrite à la page 62 du *corpus*. En #175 et #282, à •-•-019-• >< et 008-019-036 >< sont préférées respectivement les lectures •-•-019-005 et 008-011-SM 37.

³² Cela fait qu'à 044-005 les auteurs préfèrent la transcription «044-cat-005». Sur le même sceau sont aussi transcrites les quatre lignes parallèles après 042 dans l'hypothèse qu'il s'agirait de stikogrammes ou de séparateurs: «042 |||| 040-053-041».

³³ *Rapport* 1991-1995, 428-429.

³⁴ FERRARA *et al.* 2016, 87-88, 94-95, Fig. 7 (lieux de trouvaille indiqué dans la Fig. 1, point 6). Les éditeurs ne suggèrent pas de classification mais on peut proposer **PYR Yb 01 (?)**.

gine protopalatale possible de l'objet et sur l'analyse paléographique des signes.³⁵ Sur la base de l'analyse paléographique, la lecture]025-056[est considérée comme plus convaincante que]AB 04-57[à la fois parce que le premier signe a les traits latéraux obliques typiques de 025 et parce que la partie conservée du second signe ne présente pas le second trait horizontal typique de AB 57, tandis qu'elle est compatible avec 056. Bien que le premier argument ne soit pas dirimant, puisqu'il existe de nombreux exemples de AB 04 identiques à 025, la deuxième observation est certainement correcte.³⁶ Les seules comparaisons possibles pour le second signe semblent en fait être celles avec l'hiéroglyphique: avec 056, comme le suggèrent les auteurs, et avec 019.³⁷ En outre, le trait oblique sous la haste verticale du premier signe, que les éditeurs ne mentionnent pas et qui n'apparaît jamais dans 025, permet d'établir une comparaison avec 027 et, en particulier, avec la variante attestée en #319, un couvercle de pithos du Quartier Mu de Malia (= MA/M Yb 04). Par conséquent au moins quatre lectures semblent possibles:]025-056[,]025-019[,]027-056[et]027-019[(toutes ><). Si on prend en compte le fait que les auteurs du *CHIC* ont longtemps considéré l'inscription comme hiéroglyphique³⁸ – même s'ils l'ont finalement exclue du *corpus* – et que son attribution au linéaire A a été faite par Olivier «sans trop de conviction»,³⁹ son attribution à l'écriture hiéroglyphique ne semble pas inappropriée.

1.2.1.5. *Symi (Viannou)*

Récemment, Darren Hopkins a proposé d'apporter une modification à la transcription de la lame à deux faces **SY Hf 01**.⁴⁰ Dans l'*editio princeps* Olivier, en se fondant sur le parallèle avec la barre de Malia #118, propose la lecture]*171 ρ | *159 ρ.⁴¹ Dans le cas de *159, toutefois, il

³⁵ En ce qui concerne le fragment de tasse MM, toutefois, aucun détail n'est fourni.

³⁶ Le parallèle possible de la séquence 025-056-005 de **PE Hh 016.d**, cité par les auteurs est moins important. Dans la barre de Pétras, en effet, 056 est seulement une lecture possible (cf. la photographie dans TSIPOPOULOU & HALLAGER 2010, 70). Il existe du reste un parallèle possible aussi pour une éventuelle lecture]AB 04-57[: cf. AB 04-57-27 en **HT 117a.5**.

³⁷ Cf. e.g. #038.a, #093.b.

³⁸ Cf. *Rapport* 1991-1995, 429.

³⁹ *Rapport* 1991-1995, 429 (l'attribution au linéaire A est également considérée comme douteuse par DEL FREO & ZURBACH 2011, 92).

⁴⁰ HOPKINS 2018, 15-17.

⁴¹ LEBESSI *et al.* 1995.

souligne qu'il s'agit plus de «proximity» que de «formal similarity». La proposition de Hopkins consiste à lire 020 au lieu de *159. Même sans prendre en considération les difficultés paléographiques inhérentes à cette lecture, le fait que dans les documents hiéroglyphiques connus à ce jour le syllabogramme 020 ne soit jamais attesté comme logogramme rend cette proposition plutôt improbable.

1.2.1.6. *Zakros*

Un des deux vases de Chamaizi (**ZA Yb 01** et **02**) signalés par Olivier,⁴² a été publié en photo par Maria Platonos-Giota et Kalliopi Christofi.⁴³ Le vase provient du site de Kalyvomouri (situé au sud-ouest du palais de Zakros à l'entrée de la Vallée des Morts) et est datable du MM IB-IIA. L'inscription est incisée avant cuisson sur la panse du vase et constituée de trois signes.

1.2.1.7. *Zominthos*

– **ZO Hi 01 (?)**: fragment de document d'archive, identifié en 2019 parmi les tessons de la fouille effectuée en 2013 dans le secteur sud-ouest de la Pièce 28 du site de Zominthos (zone 28a).⁴⁴ Le contexte de la trouvaille, comme le précise Efi Sapouna-Sakellaraki, est antérieure au dalage néopalatial de la Pièce 28. Si on se fonde sur la photographie publiée, le document semble cassé en bas et peut-être aussi à droite. Il est donc possible qu'il ait eu à l'origine des dimensions supérieures à celles qu'il a aujourd'hui (4,25 × 1,8 × 0,8 cm). Par ses dimensions et sa forme, le support présente des analogies non seulement avec les tablettes et les 'lames à deux faces' en hiéroglyphique de Knossos, Malia et Phaistos,⁴⁵ mais aussi avec certaines tablettes en linéaire A provenant de ces mêmes sites et datables entre MM II et MM III.⁴⁶ Les 'lames à deux faces,' toute-

⁴² *Rapport* 1996-2000, 188.

⁴³ PLATONOS-GIOTA & CHRISTOFI 2020, 612, 673, Pl. 129ζ.

⁴⁴ PETRAKOS 2020, 56-57; SAPOUNA-SAKELLARAKI 2020, 320-323, Fig. 17, Pls. 21-22.

⁴⁵ Tablettes: #068 (Knossos, Hieroglyphic Deposit), #119, #120 (Malia, Dépôt hiéroglyphique), #122 (Phaistos, fragment erratique); lames à deux faces: #085-094 (Malia, Quartier Mu), #105-110 (Malia, Dépôt hiéroglyphique). Comme l'a observé KARNAVA 2000, 148-149, les lames à deux faces fragmentaires #105 et #108 pourraient être en réalité des tablettes. De l'aveu même des auteurs du *CHIC*, 18, 123, 183, les tablettes hiéroglyphiques #068 de Knossos et #122 de Phaistos pourraient également être en linéaire A (#068 plus que #122).

⁴⁶ Cf. **KN 22** (trouvée par Emmett Bennett Jr. au Musée d'Herakleion parmi les tablettes en linéaire B); **MA 4, 6 et 9** (Malia, Dépôt hiéroglyphique); **PH 9, 10, 12-17, 22, 26** (Phaistos, Vano 25) **25** (Phaistos, entre le Vano LIII et le Vano LV).

fois, ont une extrémité plus effilée, un trou de suspension et des inscriptions qui commencent aussitôt après le trou. Puisque le document de Zominthos ne présente aucune de ces caractéristiques, il semble possible de le classer comme tablette. Le *recto* présente un logogramme en forme de trépied, suivi d'un chiffre lisible comme 217 ou 218. Le *verso* et le *latus superius*, en revanche, sont anépigraphes.⁴⁷ Le signe du trépied est attesté aussi bien en linéaire A qu'en linéaire B.⁴⁸ Celui de Zominthos ressemble au logogramme A 409^{VAS}, variante sans anses attestée à La Canée, mais est dépourvu du trait horizontal supérieur, toujours présent aussi bien en linéaire A qu'en linéaire B. A ce propos on peut observer que l'absence du trait horizontal supérieur sur les signes en forme de vases (syllabogrammes et logogrammes) est une caractéristique typique de l'écriture hiéroglyphique.⁴⁹ Le chiffre 217 ou 218 est noté au moyen de deux cercles accolés, suivis par un point et situés au dessus de 7 ou 8 traits verticaux. L'usage des cercles pour les centaines, des points pour les dizaines et des traits verticaux pour les unités est attesté dans les textes hiéroglyphiques du Dépôt hiéroglyphique de Malia et dans les plus anciens textes en linéaire A de Phaistos (Vano 25), Malia (Dépôt hiéroglyphique) et Knossos (Temple Repositories).⁵⁰ On peut enfin noter que des documents contenant seulement ou principalement des séquences formulaires du type 'logogramme + chiffre' existent aussi bien en hiéroglyphique qu'en linéaire A.⁵¹ Dans l'ensemble, donc, ni les caractéristiques du support ni celles de l'inscription ne semblent décisives pour une attribution du document à l'hiéroglyphique ou au linéaire A. Toutefois, la forme du logogramme suggère qu'il pourrait s'agir de hiéroglyphique, d'où la proposition de classification du document comme **ZO Hi 01**.⁵²

⁴⁷ Les tablettes en hiéroglyphique et en linéaire A citées ici comme *comparanda* sont pour la plupart opisthographes et, parfois, pleurographes. Parmi les rares textes qui font exception se détachent les tablettes #068 et #122.

⁴⁸ A 408^{VAS}, A 409^{VAS}, A 410^{VAS}, A 411^{VAS}, B *201^{VAS}.

⁴⁹ Cf. les syllabogrammes 053, 054 et 055 et les logogrammes *160, *161, *162 (CHIC, 409-410, 425).

⁵⁰ Dans les documents du Hieroglyphic Deposit de Knossos, dans ceux du Quartier Mu de Malia et dans ceux de Pétras le signe pour les centaines a la forme d'un long trait plus ou moins vertical. Dans des conditions normales, aussi bien en hiéroglyphique qu'en linéaire A les arithmogrames sont disposés en séquences linéaires et les dispositions similaires à celle du texte de Zominthos sont dues à un manque d'espace (cf. e.g. #118.c).

⁵¹ Cf. #068, #118, #122 (mais #068 et #122 pourraient être en linéaire A) et respectivement MA 4 et MA 6.

⁵² Dans ce cas, on peut observer que la forme des arithmogrames du texte de Zominthos ne trouve d'équivalent que dans les textes hiéroglyphiques du MM III de Malia.

1.2.2. ÎLES

Nihil.

1.2.3. CONTINENT

Nihil.

1.2.4. ASIE MINEURE

Nihil.

1.2.5. MONDE EXTRA ÉGÉEN

Nihil.

1.2.6. MUSÉES

1.2.6.1. *British Museum (Royaume-Uni)*

– **CR (?) S (1/1) 07** (British Museum GR/R 1947.0926.13): Petschaft fragmentaire en chlorite, datable sur des critères stylistiques au MM II.⁵³ Aussi bien Anastasiadou⁵⁴ que Perna⁵⁵ ont récemment repris en considération l'objet, reconnaissant sur la base du Petschaft la séquence initiale de la 'formule d'Archanès'. Toutefois, tandis que Perna dans son édition propose la transcription 042-019 comme dans les sceaux portant la 'formule d'Archanès' publiés dans le *CHIC*, Anastasiadou, considérant que la 'formule' avait été inscrite en linéaire A, propose la lecture AB 08-31. Sur la question de l'attribution de la 'formule d'Archanès' à l'héroglyphique ou au linéaire A, cf. *supra* 1.2.1.1.

2. Linéaire A

2.1. Éditions et ressources en ligne

2.1.1. Le Supplément à GORILA

La préparation du supplément à *GORILA* par Maurizio Del Freo et Julien Zurbach a connu des retards, en partie à cause de la pandémie. Le

⁵³ CMS VII, no. 31.

⁵⁴ ANASTASIADOU 2016, 178-179.

⁵⁵ PERNA 2019.

travail éditorial est désormais dans ses phases finales et sera vraisemblablement remis à l'éditeur en 2023.

2.1.2. *Les marques de maçons de Knossos*

Dans le courant de l'année 2020 l'Ecole britannique d'Athènes a publié dans ses *Suppléments* la monographie de Sinclair Hood sur les marques de maçons de Knossos.⁵⁶ L'ouvrage, en deux volumes, constitue le couronnement des recherches de l'auteur sur ce sujet et a pu voir le jour grâce à la contribution éditoriale de Lisa Bendall. On le signale ici, parce que les marques de maçons sont systématiquement comparées aux signes du linéaire A, ainsi qu'aux autres systèmes d'écritures en usage dans le monde égéen. La monographie, outre qu'elle présente un catalogue détaillé des marques de maçons de la région de Knossos (environ 1.600), en discute la typologie, la chronologie, les caractéristiques matérielles et les fonctions possibles. L'ouvrage est complété par une synthèse relative aux autres marques de maçons de Crète et du monde égéen et par une comparaison avec les autres systèmes de marquage en usage en Méditerranée et au Proche-Orient.

2.1.3. *SigLA – The Signs of Linear A: a palaeographical database*

Depuis juin 2020 le site web *SigLA*, élaboré par Ester Salgarella (St John's College, Cambridge) et Simon Castellan (Inria, Univ. Rennes, CNRS, IRISA) est en ligne.⁵⁷ Le projet, qui vise à créer une base de données de tous les documents en linéaire A, se concentre sur la paléographie des textes. Les inscriptions ont été redessinées par Salgarella sur la base de *GORILA* et des *editio princeps* successives et traitées avec un logiciel d'édition graphique permettant l'ajout de métadonnées. La base de données, qui contient actuellement une partie importante des documents d'archives en linéaire A et peut être interrogée de différentes manières, permet en particulier de reconstituer de manière automatique les tableaux paléographiques de chaque signe à l'image des microfiches de *GORILA*.⁵⁸

⁵⁶ Hood 2020.

⁵⁷ SigLA: <https://sigla.phis.me> [consulté le 30 septembre 2021].

⁵⁸ Curieusement, les microfiches de *GORILA* ne sont pas mentionnées par les auteurs dans leur introduction.

2.2. *Trouvailles récentes (et moins récentes)*

2.2.1. CRÈTE

2.2.1.1. *Kalo Khoraphi*

– **KKH Zb 1** (Musée de Rethymnon, inv. Π 36184): signe isolé, incisé après cuisson sur la base d'une 'conical cup' trouvée en 2014 par Anastasia Tzigounaki dans la fouille de Kalo Khoraphi, site minoen de la côte Nord de la Crète, à l'est de Bali. Comme l'indiquent Tzigounaki et Artemis Karnava dans leur publication,⁵⁹ la tasse est tombée de l'étage supérieur dans le corridor 4 avec d'autres 'conical cups' et différentes céramiques du MM III-MR I. Le signe, lisible sans trop de difficulté comme **AB 67**, est attesté également en position isolée sur la paroi externe de la tasse **KE Zb 3**, où il est incisé avant cuisson. Comme le soulignent à juste titre Tzigounaki et Karnava, une inscription en linéaire A comparable avec celle de Kalo Khoraphi du fait qu'elle est incisée sous la base d'un vase après cuisson est **MI Zb 1** (**AB 67-26**). A Kalo Khoraphi on a mis au jour aussi d'autres témoignages d'usage de l'écriture sur des matériaux du MM III-MR I. Parmi ceux-ci, on note un signe du Chypro-Minoen I incisé avant cuisson sur un peson discoïde en argile de type crétois.

2.2.1.2. *Knossos*

– **KN Zb 36a-d**: les inscriptions **KN Zb <36>** (**AB 131a**) et **Zb <37>** (**AB 131a**) publiées dans *GORILA IV* sur la base des dessins de Arthur Evans reproduits dans le recueil de William Brice,⁶⁰ ont été identifiées par Anton Boskamp entre 1991 et 1992 sur le cinquième pithos à partir de l'angle nord-ouest du Western Magazine IX.⁶¹ Sur le même pithos, Boskamp a aussi repéré un troisième **AB 131a**, qu'il propose d'identifier avec un autre numéro de Brice,⁶² correspondant à **KN Zb <38>** de *GORILA IV*. Cela reste toutefois incertain, puisque les deux premiers sont assignés par Brice au Magazine IX, tandis que le troisième est associé, de manière générique, aux «Palace Magazines». Par la suite, Kostis Chris-

⁵⁹ TZIGOUNAKI & KARNAVA 2020, 321, Fig. 5.

⁶⁰ BRICE 1961, 15, no. II 6ii, Pl. XXIII.

⁶¹ BOSKAMP 1996, 107 (KN 068), Pl. 25b. Selon BOSKAMP 1996, 105-108, le logogramme du vin serait incisé aussi sur les pithoi KN 060, KN 070 (Magazine IX) et KN 084 (Magazine XI). Les tracés reproduits par l'auteur suscitent toutefois des doutes. Sur tous ces signes, cf. HALLAGER 2002, 64.

⁶² BRICE 1961, 15, no. II 6iii.

takis, en réexaminant le pithos, a identifié un quatrième AB 131a qui avait échappé à l'attention de Boskamp.⁶³ Comme l'a observé récemment Richard Firth, puisque **Zb** <36> et **Zb** <37> sont situés sur le même vase, il est opportun de transformer <36> en **36a** et <37> en **36b**.⁶⁴ Par conséquent, les deux signes repérés par Boskamp et Christakis devront recevoir les numéros **36c** et **36d**. Il convient de souligner que, tandis que Brice date le pithos du MR I, Christakis dans son commentaire l'assigne au MR IIIA. Etant donné que A 131a et VIN sont homomorphes, il n'est pas exclu, donc, qu'il puisse s'agir d'une inscription en linéaire B.⁶⁵

– **KN Zg 57** (Ephorie des Antiquités de Heraklion, Δ 3460, Δ 3458): inédit. Anneau en ivoire de section quadrangulaire avec des séquences syllabiques et des logogrammes du linéaire A incisés sur les quatre côtés.⁶⁶ Il a été découvert en 2016 par Athanasia Kanta à Bougada Metochi (terrain Anetaki) dans une pièce (Room 1) d'un édifice néopalatial à fonction religieuse.⁶⁷ L'objet, qui a un diamètre d'environ 13,7 cm et présente des trous opposés, probablement destinés à tenir en place un objet circulaire aujourd'hui perdu, a été mis au jour en morceaux dans un dépôt votif dans l'angle nord-ouest de la pièce en question. L'anneau a été trouvé en association avec une barre en ivoire de section quadrangulaire, portant elle aussi des signes du linéaire A (cf. *infra* **KN Zg 58**). Les séquences et les logogrammes de l'anneau sont incisés à l'intérieur de carrés séparés par des lignes verticales. Les signes ont une forme calligraphique et rappellent ceux des tables à libation, mais avec un style 'naturaliste' plus prononcé, qui ne trouve d'équivalent que dans les inscriptions hiéroglyphiques sur sceaux. L'*editio princeps* de l'inscription est préparée par Kanta, Dimitri Nakassis, Palaima et Perna.

– **KN Zg 58** (Ephorie des Antiquités de Heraklion, Δ 3460, Δ 3458): inédit. Barre en ivoire de section quadrangulaire légèrement effilée, avec des signes du linéaire A incisés sur les quatre côtés et sur l'une des extrémités. Trouvée en 2016 par Kanta dans le dépôt votif dont provient l'anneau en ivoire **Zg 57** (cf. *supra*), elle mesure 13,2 cm.⁶⁸ Selon Kanta, il est possible que la barre ait été insérée dans l'anneau de manière à

⁶³ CHRISTAKIS 2005, 60.

⁶⁴ FIRTH 2016, 247. Pour un cas analogue, cf. **HT Zb 158a** et **158b**.

⁶⁵ Les inscriptions en linéaire B incisées sur vases sont toutefois rarissimes (cf. **KH Z 16** et **DI Z 1**).

⁶⁶ KANTA 2019, 250, 252, cat. no. 280; KANTA *et al.*, dans ce volume.

⁶⁷ Il s'agit du même édifice dont provient le sceau **KN S (4/4) 01**: cf. *supra* 1.2.1.1.

⁶⁸ KANTA 2019, 250, 252, cat. no. 280; KANTA *et al.*, dans ce volume.

former un manche et que l'ensemble ait constitué une sorte de 'sceptre' comparable aux symboles religieux représentés sur les sarcophages d'Episkopi et de Tanagra.⁶⁹ Comme pour l'anneau, l'*editio princeps* est préparée par Kanta, Nakassis, Palaima et Perna.

2.2.1.3. *Kommos*

Alessandro Greco m'a gentiment informé qu'au cours de l'été 2019 un touriste a remis à la maison de la Mission italienne de Phaistos un fragment de vase inscrit, trouvé par hasard sur le parking du site archéologique de Kommos. L'objet a été immédiatement remis à l'Ephorie des antiquités de Herakleion. L'inscription, qui pourrait être en linéaire A, présente trois lignes délimitées par deux lignes guides parallèles: la première est anépigraphe, la seconde contient une séquence de trois signes, la troisième présente des signes fragmentaires.

2.2.1.4. *La Canée*

Selon Hallager le premier signe à gauche sur la rondelle **KH Wc 2123** serait un nouveau signe du linéaire A à numéroté A 373.⁷⁰ La question a été discutée lors de la réunion du Comité des signes de ce Colloque.⁷¹ L'avis de Del Freo et Zurbach est qu'il pourrait s'agir d'une simple variante du logogramme du trépiéd.

La rondelle **KH Wc 2124**, trouvée par Maria Andreadaki-Vlazaki sur le terrain Katré 1 en 2007, et les trois tablettes **KH 102**, **104** et **105**, mises au jour par Hallager dans la fouille de la Plateia Haghia Aikaterini et de la Parodos Kanevaro adjacente entre 2010 et 2014, déjà mentionnées dans les précédents *Rapports*,⁷² ont été publiées conjointement par les deux découvreurs en 2018.

– **KH Wc 2124** (ME 117):⁷³ la rondelle, qui porte sur le bord 15 empreintes de sceau,⁷⁴ a été trouvée dans le secteur nord-ouest d'une cour qui, au MR IIIB1 était le lieu de sacrifices, et précisément dans un remblai dont provient aussi la tablette fragmentaire **KH 101**. Le signe incisé

⁶⁹ KANTA 2019, 252-253, Figs. 19-20.

⁷⁰ Cf. ANDREADAKI-VLAZAKI & HALLAGER 2007, 13, Fig. 5 (voir aussi *Rapport* 2006-2010, 8).

⁷¹ Voir les «Resolutions of the Comité des signes» dans ce volume.

⁷² **KH Wc 2124**: *Rapport* 2006-2010, 8; **KH 102**, **104** et **105**: *Rapport* 2006-2010, 9, et *Rapport* 2011-2015, 12.

⁷³ ANDREADAKI-VLAZAKI & HALLAGER 2018, 37-39, Fig. 4.

⁷⁴ KH 13 = CMS V, no. 236.

sur le *recto* n'est pas AB 54,⁷⁵ mais une variante de AB 61 dépourvue du trait courbe interne. Comme l'observent les auteurs de la publication, le signe AB 61 est attesté sur le *recto* de 11 autres rondelles de La Canée, dont dix portent l'empreinte du sceau KH 13. Ce dernier, en outre, est attesté sur un total de 20 rondelles, outre Wc 2124. Puisque 15 de celles-ci proviennent de la fouille du terrain Katré 10, dont le matériel est datable avec certitude du MR IB, la même datation peut s'étendre aussi à la rondelle Wc 2124.⁷⁶

– **KH 102** (GSDE 10-TC 011):⁷⁷ fragment de tablette repéré parmi les tessons de la couche de destruction MR IIIB1 de l'Area M (section sud) du Building 2 de la Plateia Haghia Aikaterini (fouille de 2010). Il s'agit du même contexte mélangé, avec présence sporadique de céramique plus ancienne, dans lequel a été trouvée en 2005 la tablette **KH 100**. Les deux signes fragmentaires sur le *recto* sont lisibles comme AB 08-73[ou AB 08-65], deux séquences rarement attestées.

– **KH 104** (GSDE 14-TC 008):⁷⁸ fragment de tablette repéré parmi les tessons du dépôt d'époque géométrique situé au dessus de la Room B de l'édifice MR IIIC de la Parodos Kanevaro (fouille de 2014). Dans le dépôt en question ont été trouvés aussi des fragments sporadiques de céramique MR IB. Le fragment présente une partie du *recto* et du bord gauche de la tablette. Sur le *recto* sont conservées deux lignes d'écriture et des traces d'une troisième. La surface du *verso* est perdue. Le fragment enregistre des quantités fractionnelles (A 707) de céréales (AB 120), précédées de séquences syllabiques, dont l'une (AB 01-27) est attestée aussi à Haghia Triada (e.g. **HT 7a.4**). A la ligne .2 Hallager propose de reconnaître la nouvelle ligature AB 120+26. Ayant pu examiner personnellement le fragment, mon impression et celle de Zurbach est que le trait curvilinéaire interprété comme AB 26 n'est autre que le trait horizontal supérieur du logogramme AB 120, dont la courbure est semblable à celle du logogramme AB 120 de la ligne .1.

⁷⁵ Contrairement à ce qui a été écrit dans le *Rapport 2006-2010*, 8 sur la base des informations disponibles dans EVELY *et al.* 2007-2008, 112.

⁷⁶ A la suite de Wc 2124, les auteurs publient comme {Wc 2126} une possible rondelle anépigraphie trouvée dans la Parodos Kanevaro en 2014 (Building 2, Room B) (ANDREADAKI-VLAZAKI & HALLAGER 2018, 39-40, Fig. 5). Pour combler le trou dans la numérotation, Hallager (*per litteras* 06/08/21) suggère de renuméroter {KH Wc 1025} (HALLAGER 1996, v.2, 156) comme {KH Wc 2125}.

⁷⁷ ANDREADAKI-VLAZAKI & HALLAGER 2018, 33-34, Fig. 1.

⁷⁸ ANDREADAKI-VLAZAKI & HALLAGER 2018, 34-36, Fig. 2 (photo en couleur dans HALLAGER & ANDREADAKI-VLAZAKI 2017, 283, Fig. 4).

– **KH 105** (GSDE 14-TC 038):⁷⁹ petit fragment de tablette trouvé dans les tessons d'un dépôt scellé MR IIIB2 au sud de la Room C, dans la zone de la cour située entre le Building 1 et le Building 2 à l'intérieur de la Parodos Kanevaro (fouille de 2014). La partie conservée, qui correspond à l'angle inférieur gauche de la tablette, contient une séquence de trois signes en partie fragmentaires, que les éditeurs proposent de lire comme AB 45-67-37[.

– **KH Zc 106** (?) (74-P 0206): tasse miniature fragmentaire, peinte en sombre sur clair, probablement d'origine knossienne, trouvée en 1974 dans la zone de la Plateia Haghia Aikaterini dans un contexte (7/8-Pit A) datable avec certitude du MR IIIA1. Hallager, reprenant une observation de Birgitta Hallager, selon qui les tracés sur la paroi externe de la tasse ne peuvent être des motifs décoratifs, a proposé récemment d'y reconnaître une inscription en linéaire A.⁸⁰ Selon Hallager, il est possible de distinguer deux séquences de syllabogrammes à l'intérieur de deux registres, l'une relativement sûre dans le registre supérieur (AB 73-60-61-[] et l'autre incertaine dans le registre inférieur (AB 55-[•]-70-55-[]). Comme alternative à AB 61 et AB 70 Hallager suggère respectivement AB 37 et AB 17. Le mauvais état de conservation de la peinture et les difficultés de 'lecture' qui en découlent incitent à considérer cette hypothèse avec prudence. Toutefois, puisque deux signes consécutifs du registre supérieur, AB 73 et AB 60, semblent correspondre à des variantes sinistroverses de signes du linéaire A et puisque le second est assez similaire au signe AB 60 de l'inscription sinistroverse de Poros Herakleiou **PO Zg 1**, elle aussi datable du MR IIIA1, il est possible qu'on ait affaire à une rare inscription peinte en linéaire A.⁸¹ S'il en est ainsi, comme le souligne Hallager, la tasse de la Canée, étant probablement d'origine knossienne, viendrait confirmer la continuité dans l'usage du linéaire A dans la région de Knossos même après les destructions du MR IB.⁸²

⁷⁹ ANDREADAKI-VLAZAKI & HALLAGER 2018, 36-37, Fig. 3 (photo en couleur dans HALLAGER & ANDREADAKI-VLAZAKI 2017, 284, Fig. 8).

⁸⁰ HALLAGER 2016, 290-293, Fig. 81.

⁸¹ Les inscriptions peintes en linéaire A sont rares, mais couvrent une étendue chronologique très vaste: **ARKH Zc 8** (MM II), **KN Zc 6**, **KN Zc 7** (MM III-MR I), **PK Zc 13** (MR I), **PE Zc 4** (MR I), **SKO Zc 1** (MR I [deux fragments]), **PO Zg 1** (MR IIIA1).

⁸² Dans ce cas, étant donné les deux signes sinistroverses et le parallèle avec **PO Zg 1**, il n'est pas impossible que l'inscription entière ait été sinistroverse.

2.2.1.5. Palaikastro

Récemment, Darren Hopkins a proposé de modifier la transcription de **PK Zb 25**.⁸³ Dans leur *editio princeps*, Ilse Schoep et Jan Driessen transcrivent la séquence comme AB 73-01-60 (*hapax*).⁸⁴ La lecture alternative suggérée par Hopkins est AB 73-01-51 (*hapax*). Si la lecture de Schoep et Driessen est rendue incertaine par l'absence du trait inférieur typique de AB 60, celle de Hopkins est rendue problématique par l'absence du trait horizontal supérieur typique de AB 51. La nouvelle lecture semble donc au moins aussi difficile que la précédente.

– **PK Za 27**: le fragment de table à libation inscrite trouvé près du sanctuaire de sommet de Petsophas⁸⁵ a été publié par Carl Knappett, Del Freo et Zurbach.⁸⁶

– **PK Za 28**: fragment de table à libation inscrite, trouvé en surface près du sanctuaire de sommet de Petsophas en juin 2016. L'inscription, qui est la treizième de ce type trouvée à Petsophas, est lisible comme]-AB 29-27 , •[. La séquence]-AB 29-27 est probablement la partie finale de AB 57-06-67-04-04-51-29-27 ou de AB 57-07-67-04-04-51-29-27[, séquences attestées respectivement sur la table à libation **PK Za 8a** (provenant d'une petite caverne à la base de la pente nord de Petsophas) et **PK Za 15** (provenant du sanctuaire). Le signe situé après le diviseur est fragmentaire et de lecture difficile. L'inscription a été publiée par Del Freo, Knappett et Zurbach.⁸⁷

2.2.1.6. Pétras

Le fragment de tablette classifié comme **PE <6>**⁸⁸ a été retrouvé en 2017 dans les magasins du Musée de Siteia par Del Freo et Zurbach et peut donc être reclassifié comme **PE 6**.

2.2.1.7. Phaistos

Pendant l'été 2017, dans une fouille conduite par la mission italienne à Hagia Photini, a été trouvé un fragment de vase (inv. SAIA F8308) avec

⁸³ HOPKINS 2018, 18-20.

⁸⁴ SCHOEP & DRIESSEN 2002-2003.

⁸⁵ Rapport 2011-2015, 13.

⁸⁶ KNAPPETT *et al.* 2017, 73-82, Fig. 1.

⁸⁷ DEL FREO *et al.* 2022.

⁸⁸ Rapport 2011-2015, 13.

deux séquences de deux signes chacune, incisées après cuisson, l'une sur la paroi et l'autre sur la lèvre. Selon Greco, qui est chargé de la publication, les caractéristiques du vase font penser à une forme protopalatiale, tandis que les signes, de lecture difficile, seraient rapportables au linéaire A.

–Toujours en 2017, un deuxième fragment de vase avec des signes incisés après cuisson a été trouvé dans un sondage stratigraphique exécuté par la mission italienne à *Chalara*. Le fragment, publié par Greco,⁸⁹ a été mis au jour dans une fosse d'époque archaïque contenant la déposition rituelle d'un ovicapridé. Selon Greco l'analyse céramologique suggère une datation au MR III. En raison de l'inscription, toutefois, l'auteur suggère de dater le fragment de la phase néopalatiale. Les signes présentent des formes idiosyncratiques difficiles à interpréter, sauf le second à gauche, qui pourrait être un AB 58. Parmi les différentes hypothèses de lecture, Greco donne la préférence à AB 39-58 A 301+A 303 (ou en alternative AB 21^f+A 303). Quand le tracé est clair, toutefois, AB 39 est toujours fermé en bas et, quand il a un trait horizontal supérieur, ce dernier est toujours traversé par le trait vertical central. Si l'on renonce à AB 39, il est toutefois difficile d'indiquer des alternatives plausibles. Deux possibilités théoriques, qui ne sont pas particulièrement attractives, sont une forme 'carrée' et simplifiée de AB 22 ou une forme 'verticale' de AB 81 (mais, dans ce dernier cas, le trait vertical devrait croiser le trait horizontal). Quant aux ligatures A 301+A 303 et AB 21^f+A 303, le fait qu'elles ne soient attestées nulle part ailleurs suscite la perplexité. Selon Godart, cité par l'auteur, on aurait affaire à AB 21^f 20 (ou 30), c'est-à-dire un logogramme suivi d'un chiffre. Dans ce cas, le tesson contiendrait une annotation de type économique (20 ou 30 moutons) et serait un *ostrakon*.

2.2.1.8. *Zominthos*

Une table à libation en pierre en forme de 'pyramide' inversée à trois 'gradins,' trouvée en 2013 par Sapouna-Sakellaraki dans la Pièce 53 du Bâtiment central de *Zominthos* dans un contexte MM III-MR I, porte des signes incisés.⁹⁰ Les signes sont au nombre de 14 au total: trois sur la face A (un sur chaque gradin), cinq sur la face B (trois sur le gra-

⁸⁹ GRECO 2022.

⁹⁰ Cf. *Rapport* 2011-2015, 15; SAPOUNA-SAKELLARAKI 2015, 282-283, Fig. 15, Pl. 167.

din supérieur et un sur chacun des deux autres gradins); cinq sur la face Γ (disposés comme sur la face B) et un sur la face Δ (sur le gradin supérieur). A ces signes s'ajoutent, sur le gradin intermédiaire de la face Δ , deux groupes de trois lignes verticales parallèles. Certains signes sont théoriquement identifiables avec des syllabogrammes du linéaire A: AB 04, AB 77 et AB 02 (?) (face A), AB 44 et AB 02 (face B), AB 02, AB 28, AB 44 et AB 86 (?) (face Γ). Dans certains cas, toutefois, leur orientation et leur tracé sont anormaux (AB 04 tourné de 90°, AB 44 dépourvu de l'un des traits inférieurs, etc.). Les deux 'séquences' des faces B et Γ , en outre, sont constituées – dans un cas entièrement – de signes identiques ou quasi identiques. L'hypothèse selon laquelle les signes isolés et les séquences seraient liés de manière à former une inscription en linéaire A paraît donc très improbable. Inversement, il est possible que les signes aient appartenu au système des marques de maçons. Tous, en fait, à l'exception d'un, trouvent des correspondants dans les types identifiés par Hood.⁹¹ S'il en est ainsi, le fait qu'ils sont présents sur une table à libation et que celle-ci provient d'une pièce où ont été trouvés aussi des objets cultuels, dont deux doubles haches en bronze, tend à renforcer l'hypothèse selon laquelle la fonction des marques de maçon serait de type religieux.⁹²

2.2.2. ÎLES

2.2.2.1. Théra

– **THE Zb 14** (ÉfA, n. inv. V 15): l'*editio princeps* du *graffito* sur la lampe d'Akrotiri,⁹³ a été publiée en 2016.⁹⁴ Tzachili identifie comme lieu de trouvaille possible de la lampe soit la zone située entre la Xesté 2 et le Complexe Delta soit celle du Secteur Beta. L'inscription est numérotée

⁹¹ Cf. HOOD 2020, v. I, 5-38. Face A: 4d «branch with four or more sprays each side», 6a «simple cross»; face B: 5b «star with seven rays» (deux), 5a «star with eight rays», 6a «simple cross» (deux); face Γ : 6a «simple cross», 12a (iv) «trident: standard form with shaft» (deux), 5a «star with eight rays», 19 «open square»; face Δ : 9b «double Axe: without shaft», 12d «trident reduced to three parallel lines» (deux). L'unique signe qui ne rentre pas dans ceux énumérés par Hood est celui en forme de croix inscrite dans un cercle (similaire à AB 77). Ce signe, toutefois, était utilisé dans des systèmes de marquage, comme le démontrent les marques de potier de Malia (cf. e.g. *Mu* I, 109, 159-160).

⁹² Cf. HOOD 2020, v. I, 81-91 et, en particulier, la présence de deux marques de maçons sur un autel en pierre de Malia (cf. BÉQUIGNON 1929, 523, Fig. 11).

⁹³ Edition annoncée dans le *Rapport* 2006-2010, 12-13.

⁹⁴ TZACHILI & KARNAVA 2016.

par les éditeurs comme **Zb 15**, mais il vaut mieux de la classer comme **Zb 14**.⁹⁵ Sur la lecture possible AB 09-A 332 2 continuent à peser les doutes déjà exprimés.⁹⁶

– **THE Zg 15 (?)**: peson en argile de type discoïde avec des signes incisés avant cuisson, trouvé en 2001 dans le Pillar Pit 66P dans un contexte Cycladique Moyen correspondant aux premières phases du MM III. Karnava, qui a publié l'inscription, propose la lecture AB 164a-53-01 (*hapax*).⁹⁷ Comme il paraît évident d'après l'argile, et comme il est typique de la plupart des pesons discoïdes d'Akrotiri, l'objet a été importé, vraisemblablement de Crète. Bien que les difficultés de lecture laissent subsister quelques doutes, il est possible que l'on soit en présence de la plus ancienne inscription en linéaire A de Théra.⁹⁸ Comme l'a souligné Karnava, la nouvelle inscription, en tant qu'objet importé, ne démontre pas que le linéaire A ait déjà été en usage à Théra au MM III, bien que, si l'on prend en considération les documents de Kéa, cela soit assez probable.

– **THE Zg 16**: inédit. Fragment de triton en faïence avec inscription peinte, trouvé en 2019 par Christos Doulas dans la Pièce 1 de la Maison aux Banquettes, immédiatement au sud de la Xesté 3. Le matériel trouvé en association, comme celui de la Pièce 2 contigüe, indique clairement que l'édifice avait une fonction liée au culte.⁹⁹ L'inscription, tracée sur le bord du vase, est lisible sur la photographie comme]AB 78, AB 28-67-26-78. Il est quasiment certain que]AB 78 constitue la fin d'une autre séquence syllabique. Le deuxième signe de la séquence est suivi par une petite lacune et est de lecture incertaine. Si une partie du signe a disparu dans la lacune, comme cela semble probable à en juger par la distance avec AB 26, la lecture la plus vraisemblable est AB 67.

⁹⁵ Les raisons pour lesquelles cette numérotation, suggérée dans le *Rapport* 2006-2010, est préférable sont exposées dans le *Rapport* 2001-2005, 210. La numérotation suggérée dans le *Rapport* 2001-2005 dépend essentiellement du fait que le fragment n. inv. 1262 de la Pièce Δ3, déjà exclu par les auteurs de *GORILA* (IV, xxi sub TE Z 4), est difficile à classer comme inscription en raison du second signe, dépourvu de parallèles évidents en linéaire A. Récemment, Erika Notti a suggéré d'identifier le signe avec AB 41, parce que «in perfect lighting conditions this sign clearly shows a trident shape, whose middle horizontal traits appear still visible, particularly the one on the left» (NOTTI 2018, 306 n. 5). Ayant pu examiner et photographier personnellement l'objet, je pense, avec Zurbach, que le minuscule trait horizontal visible est difficilement compatible avec cette hypothèse de lecture.

⁹⁶ *Rapport* 2006-2010, 12-13.

⁹⁷ KARNAVA 2019.

⁹⁸ On aurait donc affaire au premier exemple d'inscription en linéaire A sur un peson en argile.

⁹⁹ DOULAS 2020, 287-300, Fig. 9; PETRAKOS 2020, 52-55.

Alternativement, on peut penser à AB 81. Dans les deux cas la séquence est un *hapax*. Pour le digramme AB 28-67, cf. **HT 25a.5** AB 28-67-60; pour AB 28-81, cf. e.g. **HT 90.1** AB 28-81-53-06. L'inscription sera publiée par Artémis Karnava.

2.2.3. CONTINENT

Nihil.

2.2.4. ASIE MINEURE

Nihil.

2.2.5. MONDE EXTRA ÉGÉEN

Nihil.

2.2.6. MUSÉES

2.2.6.1. Musée de Rethymnon (Crète)

Tzachili et Kostas Georgakopoulos ont publié de manière préliminaire quelques inscriptions possibles du sanctuaire de Vrysinas trouvées dans le matériel provenant des fouilles de 1972-73 de Costis Davaras et conservé au Musée de Rethymnon. Aucun des objets n'est datable stratigraphiquement.

– Base fragmentaire de tasse (n. inv. Π 24906) avec un ou deux signes incisés sur la surface externe, peut-être avant cuisson.¹⁰⁰ Il s'agit de l'inscription possible déjà mentionnée dans un *Rapport* précédent et classifiée de manière provisoire comme **VRY Zb 2 (?)**.¹⁰¹ Dans le *Rapport* était proposée la lecture]AB 73[. Les auteurs suggèrent]AB 34-31[ou alternativement]AB 11-31[. La position du ou des signes n'est pas dépourvue de parallèles dans le *corpus* du linéaire A (cf. **KKH Zb 1 supra** 2.2.1.1 et **MI Zb 1**).

– Fragment de *kyathos* (n. inv. Π 24605) de dimensions moyennes avec deux signes incisés.¹⁰² Les auteurs, sans exclure entièrement que l'inscription soit en hiéroglyphique crétois (]093-025[), proposent la lecture]AB 37-04[ou alternativement]AB 10-04[(avec AB 10 sinistro-

¹⁰⁰ TZACHILI & GEORGAKOPOULOS 2015, 294-295, Fig. 8.

¹⁰¹ *Rapport* 2001-2005, 207.

¹⁰² TZACHILI & GEORGAKOPOULOS 2015, 293-294, Fig. 6.

verse). Le premier signe est fragmentaire et d'autres lectures ne sont pas exclues. L'inscription peut être classifiée de manière provisoire comme **VRY Zb 3 (?)**.

– Fragment de table à libation en pierre [n. inv. Λ 4098] avec un signe incisé et des traces possibles d'un second signe à gauche de la cassure.¹⁰³ Les auteurs proposent la lecture AB 10-•[. Le signe qui subsiste a une forme dépourvue de parallèles dans le *corpus* du linéaire A. Toutefois, il présente une vague ressemblance avec les variantes du signe AB 10 attestées sur les tables à libation du Mont Iouktas (cf. **IO Za 2b.2** et **Za 6**). L'inscription peut être classifiée de manière provisoire comme **VRY Za 4 (?)**.

2.2.6.2. Musée de Siteia (Crète)

Deux raccords ont été récemment effectués sur les tablettes de Zakros **ZA 11** et **ZA 13** grâce à des fragments retrouvés parmi les tessons des fouilles des années '60. Ils seront publiés par Vassilis Petrakis dans le contexte de la publication détaillée de la Pièce XVI du palais mise en chantier par Lefteris Platon et ses collaborateurs.¹⁰⁴

3. Linéaire B

3.1. Ressources en ligne

3.1.1. CaLiBRA - Cambridge Linear B Research Archive

Depuis 2016 est en ligne le site web *CaLiBRA*, développé par Rupert Thompson, Anna Judson et Torsten Meißner dans le cadre des activités du *Mycenaean Epigraphy Group* de l'Université de Cambridge.¹⁰⁵ Le site contient la base de données complète des photographies des tablettes de Pylos prises en 1969 par Émile Séraphis et actuellement déposées à l'Université de Cincinnati. Les photographies peuvent être cherchées par préfixe de tablette, scribe ou planche photographique. La base de données permet de mettre en relation les fragments raccordés après 1969.

¹⁰³ TZACHILI & GEORGAKOPOULOS 2015, 295, Fig. 9.

¹⁰⁴ PETRAKIS, communication personnelle.

¹⁰⁵ *CaLiBRA*: <http://calibra.classics.cam.ac.uk> [consulté le 30 septembre 2021].

3.1.2. DĀMOS – Database of Mycenaean at Oslo

Le site web DĀMOS¹⁰⁶ a été progressivement mis à jour et présente systématiquement les liens avec les images des textes publiées sur d'autres sites comme *LiBER*, *CaLiBRA* et *The pa-i-to epigraphic project*.¹⁰⁷

3.1.3. *LiBER* – Linear B Electronic Resources

Le site web *LiBER*¹⁰⁸ a été complètement rénové et depuis mars 2021 est consultable à une nouvelle adresse.¹⁰⁹ La base de données contient maintenant tous les textes en linéaire B de Knossos, Mycènes, Tirynthe et Midéa. Grâce à une autorisation spéciale accordée par le Ministère Grec de la Culture sont disponibles en ligne les photos de tous les documents. En plus de présenter toutes les occurrences d'un élément textuel donné ('basic search'), le moteur de recherche offre désormais la possibilité d'effectuer des interrogations plus complexes, relatives à deux éléments ou plus présents sur la même ligne ('contiguities') ou dans le même texte ('co-occurrences'). Il existe en outre une fonction de recherche de toutes les données textuelles directement ou indirectement associées à un élément donné ('associations'): par ex. tous les mots, logogrammes ou chiffres directement ou indirectement associés avec *ko-no-so*. Cette dernière fonction présente les données par ordre de fréquence.

3.1.4. *The pa-i-to epigraphic project*

Depuis 2021 est en ligne le site web *The pa-i-to epigraphic project*, développé conjointement par Greco (Sapienza, Université de Rome), Georgia Flouda (Musée archéologique d'Herakleion) et Erika Notti (Université IULM, Milan).¹¹⁰ Le site vise à offrir une nouvelle édition critique des tablettes en linéaire B de Knossos contenant le toponyme *pa-i-to* et ses dérivés. Les textes sont documentés numériquement au moyen de photographies RTI et de scans en 3D. L'un des objectifs principaux du projet est la mise au point d'une méthode objective d'analyse paléographique des textes.¹¹¹

¹⁰⁶ Cf. *Rapport* 2011-2015, 18.

¹⁰⁷ DĀMOS: <https://damos.hf.uio.no> [consulté le 30 septembre 2021].

¹⁰⁸ Cf. *Rapport* 2011-2015, 18-19.

¹⁰⁹ *LiBER*: <https://liber.cnr.it> [consulté le 30 septembre 2021].

¹¹⁰ *The pa-i-to epigraphic project*: <https://www.paitoproject.it/> [consulté le 30 septembre 2021].

¹¹¹ Cf. FLOUDA & GRECO 2021; FLOUDA *et al.* 2021; GRECO & FLOUDA 2017. Parmi les résultats

3.1.5. *The Pylos Tablets Digital Project*

L'état d'avancement du projet de numérisation des archives en linéaire B de Pylos, commencé en 2013 et dirigé par Nakassis et Kevin Pluta,¹¹² est illustré dans une page web dédiée de l'Université du Colorado à Boulder.¹¹³ Outre l'usage du RTI et du scannage en 3D, le projet prévoit la réalisation de facsimilés des textes et l'analyse de l'argile aussi bien au niveau macroscopique qu'au moyen de techniques XRF.

3.2. *Éditions*

Dans le domaine du linéaire B, les dernières années ont vu la publication d'un nombre considérable de nouvelles éditions des textes de Knossos et de Pylos, ainsi que d'un supplément au *corpus* des inscriptions sur vases.

3.2.1. *Knossos*

3.2.1.1. *KT⁶ – The Knossos Tablets. Sixth Edition*

En 2019 est parue la sixième édition des tablettes de Knossos en transcription réalisée par José Melena avec la collaboration de Firth.¹¹⁴ Elle remplace après trente ans *KT⁵* de 1989, et met à jour de manière importante le contenu de *CoMIK*, paru entre 1986 et 1998.¹¹⁵ L'ouvrage est l'aboutissement final d'un travail long et complexe de reconstruction des textes, de révision des lieux de trouvaille et d'identification des mains de scribes, fondé sur les contributions de différents spécialistes, comme Godart, John Killen et Olivier, et sur une série importante de travaux publiés par Melena et Firth entre 1998 et 2016.¹¹⁶ Ces travaux

préliminaires du projet il faut signaler la correction de *mi-sa-ra-jo* en *mi-sa-ra-šo* en F(2) 841.4 (GRECO & FLOUDA 2017, 152) et de *ma-qe* en *ma-ka* en F(1) 51 v.2 (FLOUDA & GRECO 2021, 157-159).

¹¹² Cf. NAKASSIS & PLUTA 2017.

¹¹³ <https://www.colorado.edu/faculty/nakassis/research/pylos-digital-tablets-project> [consulté le 30 septembre 2021].

¹¹⁴ *KT⁶* (publié par l'INSTAP Academic Press).

¹¹⁵ *KT⁶* contient de nouvelles lectures, de nouveaux raccords et de nouvelles classifications (comme indiqué à la page xxii de l'introduction, de nouvelles séries ont été créées, pour l'essentiel à partir de 'set' précédents; certains 'set' ont été supprimés, tandis que d'autres ont été ajoutés; la série G a été fondue dans la série F; enfin la série Xg a été créée pour les textes du Little Palace et de l'Unexplored Mansion).

¹¹⁶ Cf. en particulier, pour les lieux de trouvaille, FIRTH 2000-2001; pour les scribes, FIRTH & MELENA 2016a; 2016b; 2016c. Pour l'essentiel, les travaux sur les scribes mettent à jour le chapitre 2 de OLIVIER 1967, avec des observations contenues dans d'autres publications, à partir de DRIESSEN

préliminaires peuvent utilement être consultés pour comprendre les raisons qui motivent les changements de *KT*⁶, bien que parfois le contenu de *KT*⁶ diffère de celui des travaux préparatoires. Étant donné sa complexité et sa richesse, le volume contient inévitablement un certain nombre d'incohérences,¹¹⁷ d'oublis et d'erreurs matérielles.¹¹⁸ Il représente toutefois un progrès très important dans la présentation systématique des données archéologiques, épigraphiques, paléographiques et pincologiques relatives aux archives de Knossos.

3.2.2. *Pylos*

3.2.2.1. *ARN – Les Archives du Roi Nestor. Corpus des inscriptions en linéaire B de Pylos*

En 2020 a vu le jour un *corpus* des textes en linéaire B de Pylos. Le résultat du travail, auquel ont contribué au fil du temps, Godart, Olivier, Del Freo et Anna Sacconi, est sorti dans *Pasiphae* sous la forme de deux volumes signés par Godart et Sacconi. Dans son introduction Godart écrit que, face au refus répété d'Olivier et Del Freo de signer l'ouvrage (mars 2019), il a décidé de le publier seul avec Sacconi.¹¹⁹ On ne peut que regretter cet usage non autorisé du travail de deux collègues.

ARN contient tous les documents en linéaire B de Pylos publiés jusqu'en 2017. À la différence des autres *corpora* (de Knossos, Mycènes et Thèbes), toutefois, les textes n'y sont pas rangés par ordre de numéro, mais regroupés en séries (vol. I: **Aa-Fr**; vol. II: **Gn-Xn**). Pour chaque texte est fournie une photographie et un facsimilé, généralement à l'échelle 1:1. Les photographies en couleur et les facsimilés, d'une qualité exceptionnelle, sont dus respectivement aux compétences de Kostas Xenikakis et au talent de Godart. En ce qui concerne les facsimilés, leur réalisation a suivi un protocole strict et le résultat final est dû aussi aux corrections et aux suggestions d'Olivier. En raison de leur origine commune, *ARN* présente de nombreuses ressemblances avec *PTT*² (voir

2000. Les propositions nouvelles de Firth et Melena se fondent sur les photographies de *CoMIK* et attendent d'être vérifiées sur les documents originaux. Parmi les nouveautés se distinguent en particulier les regroupements paléographiques 124α-μ de la Room of the Chariot Tablets et les nouveaux scribes secondaires 226-234.

¹¹⁷ Cf. le compte rendu de JUDSON 2020.

¹¹⁸ Je remercie chaleureusement José Melena, qui a patiemment discuté avec moi un certain nombre de questions et a accepté les corrections insérées dans *LiBER*.

¹¹⁹ *ARN* I, xxvi.

3.2.2.2). Il s'en éloigne, toutefois, dans un certain nombre de lectures et de notes critiques des apparats. Les divergences principales sont liées aux mains de scribes. Les scribes 1-4, 6, 11-15, 21-26, 31-34, 41-43, 45 et 91 identifiés par Palaima sont renumérotés comme 601-604 etc., tandis que sont identifiés 13 nouveaux scribes, 651-663, pour lesquels sont fournis des tableaux paléographiques. Le scribe 44, en revanche, est supprimé. Dans de nombreux cas, les attributions des textes aux mains de scribes diffèrent de celles suggérées par Bennett et Palaima.¹²⁰ Dans une monographie publiée en 2021 Godart a approfondi l'analyse des scribes développée dans *ARN*¹²¹ et a apporté des modifications supplémentaires aux attributions des textes. Dans cette même monographie il a aussi repris la thèse, déjà soutenue dans *ARN*, selon laquelle les archives de Pylos appartiendraient, non pas, comme le soutenait Carl Blegen, à l'HR IIIB2/C, mais à l'HR IIIA2/B1.¹²²

3.2.2.2. *PTT² – The Pylos Tablets Transcribed. Deuxième édition*

En 2020 est également parue la deuxième édition de *The Pylos Tablets Transcribed*, éditée par Olivier et Del Freo.¹²³ La nouvelle édition contient les nouveaux textes, les nouvelles lectures et les nouveaux raccords publiés au fil du temps par Melena et d'autres auteurs entre 1992 et 2017.¹²⁴ Les nouveautés, réexaminées de manière critique sur les photos disponibles et sur les documents originaux, avec l'aide d'une version préliminaire de *PoN IV*, ont été pour une part acceptées et pour une autre rejetées. Les transcriptions et les apparats critiques rendent compte de ce processus. Les lieux de trouvaille suivent la révision publiée par Firth.¹²⁵ Essentiellement, les transcriptions et les apparats critiques publiés dans *PTT²* sont ceux qui ont été partagés par Olivier et Del Freo avec les auteurs d'*ARN* en septembre 2018, ce qui explique les similari-

¹²⁰ Par ex. la tablette **Tn 316** (ex H44) est attribuée aux scribes 626 (r.1-5) et 663 (r.10 et v.), qui sont considérés comme responsables, le premier, de la série **Sa** (à l'exception de **Sa 22**) et des étiquettes **Wa 1148** et **1271** (?), le second, de **An 39** (r.7-11 et v.), **An 594** (deuxième vir aux lignes .1 et .2 et tous les x) et **An 724** (deuxième vir à la ligne .4 ?).

¹²¹ GODART 2021. Les nouvelles analyses paléographiques amènent Godart à supprimer trois scribes (615, 633 et 659, fondus respectivement avec 614, 623 et 634) et à en créer trois autres (664, 665 et 666).

¹²² Cf. *ARN I*, xvii-xix, et GODART 2021, 97-103. Voir cependant DAVIS *et al.*, dans ce volume.

¹²³ *PTT²* (publié à Padoue par la *Libreriauniversitaria.it*).

¹²⁴ Pour une liste complète des publications, cf. *PTT²*, xv-xvi.

¹²⁵ FIRTH 2017.

tés entre *ARN* et *PTT*². Après les divergences survenues en mars 2019 (voir 3.2.2.1), Olivier et Del Freo ont décidé de poursuivre et publier indépendamment le résultat de leur travail commun, ce qui explique les divergences entre *ARN* et *PTT*². Ces dernières consistent en une série de modifications et de corrections apportées aux transcriptions et aux apparats, dans la révision des mains de scribes, réalisée par Olivier, et dans la préparation des concordances et des plans indiquant les lieux de trouvaille, réalisés par Del Freo. Les nouveaux scribes introduits par Olivier (qui a préféré exclure de l'édition les 'classes' et les 'styli' de Bennett) sont: 5, 7, 8, 9A, 9B, 10, 16, 17, 18, 19, 20, 27, 28, 29, 44A, 44B, 46 et 47.¹²⁶ Le travail, terminé en décembre 2019 et supervisé jusqu'à la fin par Olivier, est parti à l'impression en janvier 2020 quelques jours avant sa disparition.

3.2.2.3. *PT*³ – *The Pylos Tablets. Third Edition*

La parution d'*ARN* et de *PTT*² en 2020 a amené Melena à publier en 2021 en collaboration avec Firth la troisième édition des tablettes de Pylos en transcription.¹²⁷ L'édition contient le texte revu et mis à jour de la dernière version de *PoN* IV, qui sort ainsi des limbes de la littérature grise.¹²⁸ Dans son avant-propos, Melena reconstruit les étapes qui ont mené à *PoN* IV et indique que le texte du manuscrit est pour l'essentiel le résultat de la révision effectuée conjointement avec Olivier sur les textes originaux conservés à Athènes. Après cela, il se plaint qu'*ARN* et *PTT*² auraient fait un usage abusif de ce matériel et en auraient copié le contenu. Le fait est que, pour les raccords, *ARN* et *PTT*² se réfèrent explicitement aux articles de Melena parus entre 1992 et 2003 (ensuite incorporés dans *PoN* IV),¹²⁹ en choisissant dans certains cas des solutions différentes; pour les lieux de trouvaille, ils citent la révision publiée par Firth en 2017; tandis que, pour les mains de scribes, ils se fondent

¹²⁶ Cf. *PTT*², 369-377. Voir aussi la «Concordance générale», où les attributions suggérées par Olivier sont comparées aussi bien avec celles de *PTT* II qu'avec celles de PALAIMA 1988. D'une manière générale, Olivier a opté pour une approche de type conservateur, renonçant ainsi à la renumérotation des scribes à partir de 601, qu'il avait précédemment suggérée dans OLIVIER 2012, 116 n. 17, et insérant ses nouveaux numéros dans la numérotation existante.

¹²⁷ L'ouvrage est paru comme *Anejo* 14 de *Veleia, Revista de prehistoria, historia antigua, arqueología y filología clásicas*.

¹²⁸ Le texte de *PoN* IV est disponible depuis longtemps sur *Academia.edu*.

¹²⁹ Les raccords effectués par Melena concernent environ 20% des documents de Pylos, dans certains cas avec des conséquences considérables pour les textes.

sur des analyses indépendantes. En ce qui concerne enfin les appareils critiques, *ARN* et *PTT*² se fondent sur *PTT* I (œuvre de Bennett et Olivier) et sur *PoN* IV (lui-même largement basé sur *PTT* I), souvent en proposant d'autres hypothèses. Les transcriptions des textes, enfin, reflètent, comme il est normal, les opinions personnelles des auteurs, forgées au moyen de l'examen des photographies ainsi que sur leurs autopsies respectives des documents originaux.

Les nouveautés principales de *PT*³ par rapport à *PoN* IV concernent les attributions des textes aux mains de scribes et la classification des documents. Pour les scribes, à quelques exceptions près, *PT*³ suit la numérotation de *PTT*² et, de manière éclectique, les attributions suggérées par *PTT*², *ARN* et GODART 2021.¹³⁰ Melena considère ces attributions comme provisoires et laisse le dernier mot à la contribution que Palaima publiera dans la version finale de *PoN* IV.¹³¹ En ce qui concerne la classification des documents, *PT*³ subdivise les séries en 'set'. Les 'set' proposés par *PT*³, toutefois, se fondent plus sur le contenu et les formules des textes que sur les scribes et les lieux de trouvaille comme à Knossos. Ce choix est en partie compréhensible, puisque la structure administrative de Pylos est différente et plus centralisée que celle de Knossos. Cependant, puisque l'identification des scribes est fondamentale pour l'identification des 'set',¹³² il eût peut-être été opportun d'attendre la publication définitive de *PoN* IV pour les introduire.

3.2.3. *TITHEMY*²

Une nouvelle édition en transcription des textes en linéaire B de Tirynthe, Thèbes et Mycènes, avec l'adjonction de ceux de Dimini, Iklaina, Midéa et Volos (*TITHEMY*²) a été mise en chantier par Melena et devrait bientôt voir le jour sous la forme d'un *Suplemento de Minos*.¹³³

¹³⁰ *PT*³, en plus du scribe 10 (différent du scribe 10 de *PTT*²), se distingue par la création des scribes 30, 47, 48 et 49.

¹³¹ Depuis, JUDSON a réalisé une très utile concordance (*CoPY*: Concordance to Pylos scribal attributions), qui permet de comparer entre eux *ARN*, GODART 2021, PALAIMA 1988, *PTT*² et *PT*³. La concordance est accessible à l'adresse suivante: <https://hcommons.org/docs/judson-copy/> [consultée le 30 septembre 2021].

¹³² Cf. CHADWICK 1968, 14 et *KT*⁴, ix.

¹³³ MELENA, communication personnelle.

3.2.4. CIV-Suppl. – *Supplemento al corpus delle iscrizioni vascolari in lineare B*

Le supplément au *corpus* des inscriptions en linéaire B sur vases, annoncé à l'occasion du Colloque de Rome, puis de celui de Sèvres, a été publié par Godart et Sacconi en 2017.¹³⁴ Le volume contient 48 inscriptions (ou inscriptions possibles), toutes déjà publiées, provenant de 11 sites différents.¹³⁵ Dans l'introduction du volume sont mentionnées aussi un certain nombre d'inscriptions inédites, non incluses dans le supplément.¹³⁶ Photographies en couleur et dessins (ces derniers souvent de qualité inférieure à ceux du *corpus*) sont dus respectivement à Kostas Xenikakis et Renate Sponer. Les transcriptions correspondent pour l'essentiel à celles des *editio princeps*. Quand elles s'en distinguent, les lectures alternatives ne sont pas toujours indiquées dans les appareils ni, par conséquent, dans les index. La nouveauté principale du livre consiste en une tentative pour identifier les scribes responsables des inscriptions aussi bien du *corpus* que du supplément. En se fondant sur le tracé des signes, le contenu et le format des textes, les auteurs identifient 21 mains de scribes, qu'ils numérotent de 501 à 520 (avec l'ajout de 502 *bis*, considéré comme 'copiste' du scribe 502).¹³⁷ Comme le note Judson dans son compte rendu du volume,¹³⁸ certains regroupements semblent en contradiction avec ceux suggérés par l'analyse pétrographique des vases, qui par ailleurs ne sont pas mentionnés dans le livre. Il semble donc préférable, pour différentes raisons, d'adopter une certaine prudence dans l'utilisation de ces attributions.¹³⁹

¹³⁴ CIV-Suppl.

¹³⁵ Six sur le continent (Mycènes, Midéa, Tirynthe, Gla, Thèbes, Dimini) et cinq en Crète (Armeni, La Canée, Knossos, Malia, Prinias).

¹³⁶ Il s'agit de MY Z 719-725, TH Z 982, KN Z 1718, MA Z 3-4 et SID Z 1: cf. *Rapport* 2001-2005, 219 (MY Z 719-724), *Rapport* 2011-2015, 21-22, 24-26 (MY Z 725; KN Z 1718; MA Z 3-4; SID Z 1) et le présent rapport *sub* 3.3.3.3 (TH Z 982). Il manque aussi l'inscription possible KH Z 45, bien qu'elle ait déjà été publiée dans HALLAGER 2011, 419, Pl. 276. Comme l'observent les auteurs, l'utilisation de l'abréviation MA pour Malia contraint à modifier en MAM celle de Mamelouko.

¹³⁷ Les identifications et regroupements sont légèrement différents de ceux suggérés par SACCONI 2012. Les tableaux des scribes s'appuient sur les facsimilés. Les tableaux des signes, eux, sont seulement approximatifs (cf. e.g. le signe *jo* de MY Z 718 à la page 26 et les reproductions du même signe aux pages 199 et 208).

¹³⁸ Dans *Bryn Mawr Classical Review* 2018.10.41 (<https://bmcbr.brynmawr.edu/2018/2018.10.41/>).

¹³⁹ Du reste, comme le rappelle A. SACCONI dans CIV, 15: «Nel caso delle iscrizioni vascolari in lineare B, per nessun sito si possiedono sufficienti elementi di raffronto che permettano di stabilire con certezza se uno stesso individuo abbia dipinto due o più iscrizioni». De manière analogue, Olivier dans le *Rapport* 1996-2000, 195 n. 58, observe que: «lorsqu'il ne s'agit plus de scribes mais

3.3. *Trouvailles récentes (et moins récentes)*

3.3.1. CRÈTE

Nihil.

3.3.2. ÎLES

Nihil.

3.3.3. CONTINENT

3.3.3.1. *Haghios Vasileios*

Entre 2016 et 2021 le secteur de la *stoa* occidentale où ont été trouvés les restes d'une archive de documents en linéaire B a continué à livrer de nouveaux textes.¹⁴⁰ Pendant l'année 2016, en outre, deux nouvelles tablettes ont été trouvées en surface. En se fondant sur ce qui a été communiqué par Petrakis dans deux conférences en ligne données en 2021,¹⁴¹ le total des textes d'Haghios Vasileios se monte actuellement à 115 tablettes, 9 nodules et 3 étiquettes.

3.3.3.2. *Pylos*

– **PY Ua 1586** (NSF1220): fragment de tablette de format feuille de palmier trouvé par Jack Davis et Sharon Stocker en 2017 durant le nettoyage de la tranchée WK1 ouverte par William Kittredge en 1962 dans la zone située au nord-ouest du Main Building.¹⁴² Selon les éditeurs, Judson, John Bennet, Davis et Stocker, le contexte de trouvaille ne permet pas une datation précise. La transcription proposée est:

.a]*86 *166[
 .b]ko-u-ta-pø[
 ↓
 v.]-to-[•][

de 'peintres en lettres', *tot capita, tot census*».

¹⁴⁰ Voir les rapports de fouille dans VASILOGAMVROU 2018, 155-165; 2020, 119-121; VASILOGAMVROU *et al.*, dans ce volume.

¹⁴¹ Conférences organisées respectivement par la Société archéologique grecque le 16 juin 2021 et par les éditeurs de ce colloque le 21 septembre 2021 (pour la deuxième, voir VASILOGAMVROU *et al.*, dans ce volume).

¹⁴² JUDSON *et al.* 2019, 113-118, Figs. 2-3.

Pour]*86, les auteurs suggèrent la restitution μ -*ra*]-*86 (toponyme attesté en **Na 466**, [1039] et [1086]); pour le *verso*, ils n'excluent pas la lecture]-*to* EQY[. Pour cette raison, tout en relevant quelques analogies possibles avec la série **La**, ils optent pour une classification **Ua** (texte de contenu mixte). Si l'on considère la présence simultanée de *166 et de EQY, toutefois, une classification **S-** pourrait ne pas être inappropriée.¹⁴³

– **PY X 1587** (NSF1755): tablette de format feuille de palmier trouvée par Davis et Stocker en 2017 dans le terrain Tsakonas, à 100 mètres environ au nord-est du palais et dans un niveau superficiel caractérisé principalement par de la céramique HR IIIA1-C. La tablette, publiée avec la précédente,¹⁴⁴ est complète, mais apparemment anormale, dans la mesure où l'unique ligne d'écriture, lisible comme *a-ke-re* et théoriquement interprétable comme */ageireil*, ne présente ni logogramme ni chiffre. Un chiffre, toutefois, pourrait avoir disparu dans la petite lacune située en haut à droite, après *-re*. Pour cette raison aussi, une classification **Xa**, comme suggéré dans *PT*³, ne semblerait pas hors de propos.¹⁴⁵

– Un fragment d'argile (NSF3095), trouvé en 2018 dans un niveau de surface au sud de la Tholos IV et publié avec les deux tablettes précédentes, présente des signes incisés non identifiés. Comme le soulignent les auteurs, il s'agit probablement d'un objet d'époque post-palatiale cuit intentionnellement.¹⁴⁶

3.3.3.3. Thèbes

- **TH Z 847**: la jarre à étrier **Z 847** de Thèbes,¹⁴⁷ a été republiée en 2016 par Godart et Sacconi.¹⁴⁸ Dans l'article, la lecture précédente *e-[•]-ra* est modifiée en *e-*83-ra*. Cette proposition avait déjà été avancée¹⁴⁹ et jugée peu convaincante.¹⁵⁰
- **TH Z 982**: fragment de vase (probablement une jarre à étrier) avec inscription peinte sur l'épaule, découvert par Vassilis Aravantinos en

¹⁴³ EQU et *166 sont attestés ensemble aussi en **KN Sc(1) 225** et **Sc(2) 5141**.

¹⁴⁴ JUDSON *et al.* 2019, 118-120, Figs. 4-5.

¹⁴⁵ A moins de formuler l'hypothèse d'une lecture *a-ke RE* (cf., pour *RE*, **MY Ui 651**; *PT*³ propose la lecture *po--re*).

¹⁴⁶ JUDSON *et al.* 2019, 120-122, Figs. 6-7.

¹⁴⁷ *CIV*, 129, Pl. XXIX.

¹⁴⁸ GODART & SACCONI 2016.

¹⁴⁹ SACCONI 2012, 127.

¹⁵⁰ JUDSON 2013, 80-81.

2014 dans la Pièce aux Pithoi II sur le terrain situé aux numéros 27-29 de la Odos Antigonis. L'inscription, datée de l'HR IIIB, est publiée par son découvreur avec Ioannis Fappas, Godart et Sacconi.¹⁵¹ La lecture (*Jne-do-u-re*) et l'interprétation (anthroponyme possible), suggérées dans un *Rapport* précédent,¹⁵² sont confirmées.

3.3.4. ASIE MINEURE

Nihil.

3.3.5. MONDE EXTRA ÉGÉEN

3.3.5.1. Bernstorf (Allemagne)

Sur l'authenticité du sceau inscrit **BE Zg 1 (?)**,¹⁵³ ainsi que sur celle des autres objets d'ambre et d'or provenant du site de Bernstorf, ont été soulevés au cours des années de nombreux doutes, surtout en raison des circonstances peu claires de la trouvaille.¹⁵⁴ Les résultats des analyses scientifiques auxquelles ont ensuite été soumises les trouvailles confirment et, si c'est possible, aggravent ces doutes.¹⁵⁵ Il semble donc qu'il faille exclure **BE Zg 1 (?)** du *corpus* des inscriptions en linéaire B.

¹⁵¹ ARAVANTINOS *et al.* 2018.

¹⁵² *Rapport* 2011-2015, 25.

¹⁵³ Cf. *Rapport* 2001-2005, 222: «il est clair qu'ici, plus encore que dans d'autres cas, le point d'interrogation est de rigueur».

¹⁵⁴ Sur le sceau, cf. OLIVIER 2010, 292 n. 20.

¹⁵⁵ Cf. récemment JUNG 2017, PERNICKA 2017; 2018. Les doutes portent notamment sur la pureté de l'or (99,99%), excessive pour des objets datant de l'âge du bronze, sur l'origine récente et superficielle de la gangue de terre qui entourait le sceau (datation au C-14, résidus végétaux non carbonisés, etc.) et sur la fluorescence bleuâtre observée à l'intérieur des incisions faites dans l'ambre (typique d'incisions récentes).

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2016-2020 report on the Cypriot syllabic inscriptions

Markus Egetmeyer

This report continues the one drafted for the 14th colloquium on Mycenaean studies, held in 2015 in Copenhagen.¹ It thus covers the subsequent five years: 2016-2020. A complete bibliography on Cypriot syllabic inscriptions and the history of their scripts and languages can be found in the annual 'Epigraphische Mitteilungen' by the present author in the journal *Kadmos*. For the present report, the *Kadmos* volumes nos. 55 to 59 are relevant. Here, only publications of new inscriptions and republication of known ones are mentioned.

Inscriptions in the Cypro-Minoan syllabary

Cyprus, Paphos

Markus Egetmeyer publishes a further inscription on a metallic bowl,² a characteristic type of inscription rooted in Bronze Age society, but which continues into the first millennium BC by switching to the Greek language. The importance of the new example consists in the fact that it is an inscription in Cypro-Minoan script and language from the same place and date as the Opheltas inscription, the first one in Greek in our documentation. The implications of this situation and this new inscription are further discussed by Egetmeyer.³

¹ Report 2011-2015.

² EGETMEYER 2016.

³ EGETMEYER 2017a.

Syria, Ugarit (near modern Latakia)

The two short inscriptions from Ugarit published by Jean-Pierre Olivier were already known.⁴ The first one was provisionally included by Olivier in his collection of Cypro-Minoan inscriptions as ##210. RASH Aéti 001, the existence of the second one is only mentioned as ##211. RASH Aéti 002.⁵

Israel, Ashkelon (southern Canaan, modern Southern district)

Giancarlo Tomezzoli and Reinhardt Stein present a republication of an inscription found far more to the south on the Levantine coast.⁶ It would be written in a late variant of the Cypro-Minoan script used by 'Philistines.' The inscription is dated to the 11th century BC and this scenario was already proposed in the *editio princeps*. The hypothesis of the existence of a Cypro-Minoan inscription in Ashkelon, one of the cities of the Philistine pentapolis in Canaan, is as such acceptable, the reading and linguistic interpretation by the authors, however, not at all. Thus, as for the script: *non liquet*.

Crete, Kalo Chorafi (Καλό Χωράφι, West Crete, northern coast)

Among the Cretan epigraphical material of the village of Kalo Chorafi in the municipality of Mylopotamos (Μυλοπόταμος), published by Anastasia Tzigounaki and Artemis Karnava,⁷ there is one inscription (no. 6) with a pre-firing Cypro-Minoan sign. The object is a loom weight, probably of Cretan origin. The date proposed is MM III–LM I, corresponding to 1700–1500 BC. Even if it is just a single script mark, the date makes it stand out, because it thus belongs to the earliest phase of the Cypro-Minoan script and testifies to the contact between Cyprus and Crete during this period. The whole problem of the synchronism of the different chronologies in the Eastern Mediterranean is discussed anew by Manfred Bietak,⁸ who firmly argues against the long chronology, thus arriving at generally later dates: the eruption of the Thera volcano is dated at 1525 BC.⁹

⁴ OLIVIER 2016.

⁵ *HoChyMin*.

⁶ TOMEZZOLI & STEIN 2016.

⁷ TZIGOUNAKI & KARNAVA 2020.

⁸ BIETAK 2021.

⁹ BIETAK 2021, 312.

Cypro-Greek inscriptions

Separately to the report of the previous 14th colloquium on Mycenaean studies, the forthcoming first part of a corpus of the inscriptions in the Cypro-Greek syllabary was announced by Egetmeyer, Karnava, Landenius Enegren and Perna.¹⁰ This first part is now published as *IG XV 1, 1*, which contains inscriptions for three of the Cypriot city states (Amathus, Kourion and Marion), a complete collection of the inscriptions with a certain amount of improved readings and some new material. This cannot all be indicated here in detail, but one major improvement is to be mentioned: a thorough presentation of the Cypriot inscribed coins can be found for the city states of Amathus and Marion. This was only possible thanks to collaboration with the numismatist Evangeline Markou.

Cyprus, Amathus

All articles mentioned in the following are subsidiary work to the corpus. The most important one is by Perna.¹¹ It is a completely new edition, based on autopsy in the Louvre, of the long and difficult-to-read Eteocypriot inscription included as *ICS 194* and *ICS 195* in Olivier Masson's edition.¹² These difficulties explain the high number of improved readings. The resulting reading of the inscription can be found at a glance on page 220.

The work for the corpus is further reflected in the general overview by Karnava¹³ and in the article on coins by Markou.¹⁴ A short new inscription is presented by Yiannis Violaris and Elisavet Stefani,¹⁵ which is now *IG XV 1, 49*.

Kition

Olivier publishes a very short inscription of the period Cypro-Geometric III.¹⁶ For this reason alone the inscription is important, because this

¹⁰ EGETMEYER *et al.* 2017.

¹¹ PERNA 2019.

¹² MASSON 1983.

¹³ KARNAVA 2019.

¹⁴ MARKOU 2019.

¹⁵ VIOLARIS & STEFANI 2017, 233-235.

¹⁶ OLIVIER 2015.

period is very poorly documented by syllabic inscriptions. Indeed, the inscription seems also to be important for our understanding of the history of the Cypriot syllabary, namely the split-off of the common syllabary from the Paphian syllabary. This is probably implicitly meant in Olivier's commentary, but is only explicitly formulated by Egetmeyer.¹⁷

Kourion

Cf. the above indicated volume *IG XV 1, 1*.

Marion

Cf. the above indicated volume *IG XV 1, 1*.

Paphos

- Palaepaphos: Agnieszka Halczuk and Cheyenne Peverelli give a detailed presentation of the very short inscriptions on Attic ceramics.¹⁸
- Palaepaphos-Kouklia: Maria Iacovou and Karnava present an important administrative document from the 4th-3rd century BC, because such inscriptions are not well represented in the Cypriot syllabic corpus.¹⁹
- Palaepaphos-Rantidi: Karnava can be considered as a preparatory work for the second fascicle of the corpus in *Inscriptiones Graecae*.²⁰ The same author can thus now offer a complete and convincing reading of the dedication 'Rantidi 1'²¹ at the frontier between the city states of Paphos and Kourion.²²
- Site unknown, but probably from Paphos: an addition to the few inscribed weights from Cyprus is published by Egetmeyer.²³ The use of the Paphian variant of the syllabary on this new weight allows to place this object among the Paphian ones.
- New Paphos: in their treatment of the sanctuary of Apollo, Claire Balandier and Yannick Vernet also offer photos concerning the syl-

¹⁷ EGETMEYER 2017a, 193-194.

¹⁸ HALCZUK & PEVERELLI 2019.

¹⁹ IACOVOU & KARNAVA 2020.

²⁰ KARNAVA 2018.

²¹ MITFORD & MASSON 1983, 34-35, no. 1, Pl. 9.

²² KARNAVA 2020.

²³ EGETMEYER 2017b.

labic dedications **ICS 2** und **ICS 3** to Apollo.²⁴ The reading and interpretation of the first line of these inscriptions is, however, outdated in two places.

Cyprus, various locations

Anne Destrooper-Georgiades treats coins from various places in Cyprus belonging to the collection of the American geologist Charles Godfrey Gunther (*1880-†1929), who worked for the Cyprus Mining Corporation.²⁵

Cyprus, unknown provenance

Dimitrios A. Iosephides presents a manufacturer inscription on a small clay figure of a bull. This piece would need a re-examination.²⁶

Turkey, Cilicia Pedias, Misis (Μοψουεστία/Mopsuestia)

Anna Lucia d'Agata, Valentina Cannavò, Perna, and Daniele Putorti add a very short inscription to the very few syllabic inscriptions from this region, which nevertheless stresses the well-known presence of Cypriots there.²⁷

Israel, Tel Dor (southern Phoenicia, modern Haifa district)

Whereas the above mentioned inscription from Ashkelon belongs to the context of the end of the Bronze Age and the presence of the Sea Peoples in Philistia, an inscription from the first millennium comes from Phoenicia, more to the north and opposite Cyprus. The inscription in the Paphian variant of the syllabary is on a bone fragment and presents a dedication of the 5th-4th century BC. It was published by Masson,²⁸ but its reading and interpretation are not entirely clear. Furthermore, it seems that the inscription has been added to a pre-existing iconography on the bone. This iconography is the object of two articles: Caroline Sauvage supposes that the object is of Cypriot origin and represents a cultic

²⁴ BALANDIER & VERNET 2017.

²⁵ DESTROOPER-GEORGIADES 2017.

²⁶ IOSEPHIDES 2019.

²⁷ D'AGATA *et al.* 2020.

²⁸ MASSON 1994.

scene depicting the protection of navigation,²⁹ whereas Silvia Schroer considers the representation of the ship as part of a funeral ceremony.³⁰

Sardinia, Antas (near the village of Fluminimaggiore, province of South Sardinia)

The publication of the following inscription by Perna and Raimondo Zucca³¹ had already been announced by Egetmeyer, Karnava, Landenius Enegren and Perna.³² The inscribed object is a precious one, a large (hat)pin in bronze. The inscription is very short, of the ‘1+1’ — here: ‘1+2’ — type. The signs incised are the ones with a very simple structure and do not allow to decide whether the inscription is in the Cypro-Minoan or in the Cypro-Greek syllabary. The decision to opt for the latter is motivated by the archaeological context which indicates a date of 850-800 BC. The inscription thus belongs to the Cypro-Geometric III period (900-750 BC), from which we have very few inscriptions. The relations between Cyprus and Sardinia are well known and a recent, yet somewhat sceptical study, can be found in Anthony Russell and Bernard Knapp.³³

Italy (continental), Tarquinia (Etruria, modern province of Viterbo, region of Lazio)

Giulio Facchetti presents an anchor of about 550 BC, incised with three signs.³⁴ These could, indeed, be Cypriot syllabic signs, even if the signs incised are again of very simple structure, like the ones of the preceding inscription from Sardinia. As the signs are not incised in a line, the reading order is not sure and the meaning of the sequence remains unclear, even if the author makes some proposals.

Concluding

As a result, one can indicate that after decades of announcements by various authors of the intent to publish a corpus of inscriptions written

²⁹ SAUVAGE 2015.

³⁰ SCHROER 2016.

³¹ PERNA & ZUCCA 2018.

³² *Report* 2011-2015, 35.

³³ RUSSELL & KNAPP 2017.

³⁴ FACCHETTI 2015; FACCHETTI, 43-44, in BAGNASCO GIANNI *et al.* 2016.

in the Cypro-Greek syllabary, a first volume of such a corpus is now published. This allows us to expect that the complete corpus will finally be available in future years. The second volume will be only on Paphos, the city state with the most abundant documentation. This second volume presents itself as an easy task compared to the third one, which should include the 'rest', all other places in Cyprus and all inscribed objects found abroad (outside Cyprus). Due to the dispersal of the material, this volume will be the most difficult one to bring into fruition, and it is not yet clear whether a fourth volume will be needed. For Cypro-Minoan, there are two recent collections of inscriptions by Olivier and by Silvia Ferrara, but neither of them is a corpus, hence the recent initiative by Perna.³⁵

It may further be mentioned that for the period under review Paphos once again offers more material than other places: inscriptions from its administration, a stone from a sanctuary indicating a frontier and a weight mentioning possibly a king, in any case an affluent person. Still on Cyprus itself, the new edition of the long inscription in the 'indigenous' Cypriot language obliges us to revise the (very few) things we know about this Cypro-Minoan and Eteocypriot tradition.

More remarkable still is, however, something else: concerning the geographical distribution, it can be said that a large amount of new material was found in places outside Cyprus, and almost all these inscriptions come from coastal places or from near the coast (Fig. 1). For the Cypro-Minoan syllabary, these are Ugarit and Ashkelon on the Levantine coast and Kalo Chorafi on the Cretan coast; for the Cypro-Greek syllabary, these are Misis/Mopsuestia near the Cilician coast, Tel Dor on the Levantine coast, Antas, near the coast of south-western Sardinia, Tarquinia on the Tyrrhenian coast. All these regions outside Cyprus are well known for their close contact with Cyprus, perhaps apart from Etruria, which would be a welcome addition. The older inscription from Sardinia, in any case, belongs to the wider context of the Sea Peoples complex, for which the existence of a connection from (Etruria)/Sardinia to the Near East via Cyprus remains a serious possibility.³⁶

³⁵ PERNA, this volume.

³⁶ JUNG 2017; 2018.

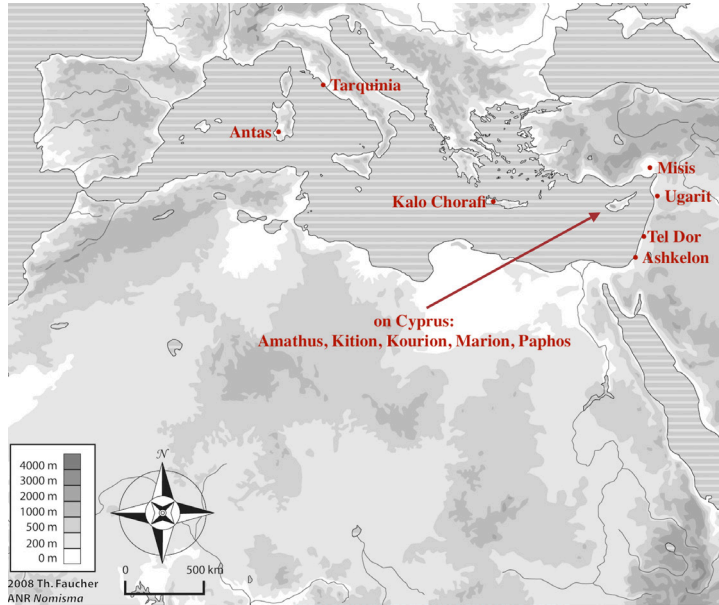


Fig. 1. Find places mentioned in the 2016-2020 report on the Cypriot syllabic inscriptions (adaptation by the author).

Concerning chronology, some inscriptions belong to the oldest periods of both traditions, Cypro-Minoan and Cypro-Greek. Among them is the new inscription from Kalo Chorafí, which belongs to the period of the beginning of the Cypro-Minoan syllabary, while others belong to the end of its use: the one from Paphos and, possibly, also the one from Ashkelon. For the Cypro-Greek syllabary, the new inscriptions from Antas and Kition also belong to the beginning of the tradition. Something, however, remains unchanged: we have inscriptions from the periods Cypro-Geometric I and Cypro-Geometric III, but we still do not have a single one from Cypro-Geometric II. These inscriptions must have existed, but the reduction and the new increase during the Cypro-Geometric indicated by this distribution may reflect historical reality. The 10th century BC is problematic not only for Cypriot syllabic epigraphy, but also for Phoenician alphabetic epigraphy³⁷ and for the Greek alphabetic one.³⁸

³⁷ SASS 2021.

³⁸ SASS forthcoming.

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Rapporto sulla preparazione del corpus della scrittura cipro-minoica

Massimo Perna

La scrittura cipro-minoica, in uso a Cipro nel 2^{do} millennio a.C. dal XVI al X secolo, è presente in due diverse forme, denominate da Emilia Masson cipro-minoico 1 e 2, e in una forma attestata solo a Ras Shamra-Ugarit, denominata cipro-minoico 3 [di seguito CM 1, 2 e 3].¹ La stragrande maggioranza delle iscrizioni è in CM 1, ben 230 su 245 (Fig. 1). Dodici documenti sono ascrivibili al CM 3 e solo tre tavolette sono iscritte in CM 2. La grandezza dei segni e il *ductus* della scrittura di questi tre documenti ricordano molto le tavolette vicinorientali e, anche visivamente, sembrano diversi dai 230 documenti in CM 1. In realtà le differenze non si limitano a questa sensazione. Circa 28 segni del CM 1 non si trovano nel CM 2, e ben 16 nuovi segni sono stati creati per il CM 2. Si tratta di una differenza enorme, basti pensare che il sillabario della lineare B ha solo 23 segni nuovi rispetto a quello della lineare A e si tratta di due diverse scritture e di due lingue diverse.

Fino ad oggi il testo di riferimento per lo studio del cipro-minoico è stata l'Édition *holistique* di Jean-Pierre Olivier.² Si tratta una raccolta di iscrizioni, 217 per l'esattezza, con foto per la maggior parte tratte dalle originali pubblicazioni che ha il pregio di fornire una trascrizione dei segni affidabile, data la competenza di Olivier che ha lavorato direttamente su buona parte del materiale, correggendo e utilizzando i vecchi disegni presenti nelle pubblicazioni. Per ammissione dello stesso Olivier, non si tratta di un corpus, ma di un tentativo di mettere a disposizione degli studiosi quanto più materiale possibile nella forma quanto

¹ MASSON 1973, 99.

² *HoChyMin*.

più completa possibile. Infatti, come spesso amava ripetere con molta ironia, non basta scrivere sulla copertina di un libro la parola ‘corpus’ per pretendere che lo sia davvero.

Nel volume è mantenuta la tripartizione in CM, 1, 2 e 3 creata da Masson. Comprendendo che non sarebbe stato in grado di realizzare, per questioni anagrafiche, un vero corpus, Olivier nel 2013 mi ha affidato il suo database passandomi il testimone per la realizzazione del corpus del cipro-minoico, cosa che è stata ufficializzata nel 2015, in occasione del XIV Colloquio Internazionale sugli Studi Micenei di Copenaghen.

A tal proposito vorrei ricordare che nel 2013 è apparso un volume dal titolo *Cypro-Minoan Inscriptions. Volume II: The Corpus*.³ Il titolo lascerebbe inequivocabilmente intendere che si tratti di un corpus delle iscrizioni cipro-minoiche, ma nella prefazione l'autrice precisa: “In brief, rather than offering an analysis of the Cypro-Minoan inscriptions in terms exclusively relating to the signs that they carry.....this book offers a study of their existence as artefacts. Indeed, while not aspiring to be a conventional corpus *stricto sensu*, it aims to outline the anatomy of Cypro-Minoan objects by developing a narrative of their archaeological life, from the day they were manufactured or deposited to the day they were uncovered.”⁴ Coerentemente con questa premessa, il disegno delle iscrizioni non è stato eseguito dall'autore ma è stato affidato ad un ottimo disegnatore che ha riprodotto diligentemente gli oggetti ma ovviamente non le iscrizioni, che data la totale mancanza di esperienza epigrafica del disegnatore, sono riprodotte in maniera approssimativa.

Che le iscrizioni non siano il focus del volume si evince anche dal fatto che il lato B della tavoletta RS17.06 (##212)⁵ come anche la famosa tavoletta 1687 da Enkomi (##208), sono entrambe pubblicate capovolte in due diversi punti del volume.⁶ Anche l'ansa ADD##237 è ugualmente pubblicata capovolta.⁷ Inoltre, contrariamente a *HoChyMin*, manca la trascrizione delle iscrizioni, sia quella con i font che quella con i segni

³ FERRARA 2013.

⁴ FERRARA 2013, v. La cosa sarebbe stata anche di indubbio interesse ma purtroppo di uno sviluppo in questo senso non vi è traccia nel volume, al di là dell'identificazione dello stile degli oggetti, la loro datazione e il loro contesto, informazioni di base che non possono mancare nella pubblicazione di qualunque iscrizione. Per una recensione del volume, vedi EGETMEYER 2015, 128-132 e PERNA 2015, 558-560.

⁵ L'enumerazione delle iscrizioni cipro-minoiche seguono *HoChyMin*.

⁶ FERRARA 2013, 256 e Pl. XXXVII la prima; 250, 251 e Pl. XXXI la seconda.

⁷ FERRARA 2013, 276.

standardizzati, e non vi sono tavole paleografiche dei segni. Il volume non è quindi utilizzabile in chiave epigrafica ma può essere utilizzato per recuperare tutta una serie di informazioni di carattere archeologico estremamente utili,⁸ che vanno a integrare *HoChyMin*, il cui focus è invece sulle iscrizioni.

Il corpus della scrittura cipro-minoica si compone al momento di 245 iscrizioni che sono per la maggior parte conservate a Cipro, anche se una cinquantina di iscrizioni sono conservate presso il Museo di Damasco, il British Museum, l'Ashmolean Museum, il Louvre, il Museum of Antiquities di Stoccolma, il Metropolitan Museum di New York, il Walters Art Museum di Baltimora, il Puskin Museum di Mosca, la Yale Babylonian Collection e in alcune collezioni private.

Vediamo come sarà strutturato il corpus. Il materiale sarà diviso in due volumi. Nel primo compariranno tutte le iscrizioni in CM 1 e nel secondo quelle in CM 2 e 3.

Alcuni documenti iscritti in cipro-minoico, come i cilindri e le cosiddette *boules*, sono estremamente diversi rispetto ai documenti redatti nelle altre scritture egee e sono particolarmente difficili da fotografare a causa della loro forma; di conseguenza è difficile eseguire i disegni partendo da normali foto in due dimensioni. Per questa ragione per molti documenti si è resa necessaria una presa d'immagine mediante uno scanner 3D per ottenere buone immagini in 2D per la stampa.⁹



Fig. 1. L'iscrizione ##014 (ENKO Abou 013).

⁸ FERRARA 2013, 13-126.

⁹ I modelli 3D sono stati realizzati da Martina Polig durante il lavoro di preparazione del suo dottorato, durante il quale ha usufruito di un periodo di studio presso il *Cyprus Institute* di Nicosia.

Come è possibile vedere nella Fig. 1, l'iscrizione sulla *boule* ##014 prende un aspetto lineare.¹⁰ Rispetto alla presentazione di Olivier in *HoChyMin*, che presenta un dettaglio di ogni segno montato in una griglia, questa soluzione permette innanzitutto di conservare la grandezza relativa dei segni, ma conserva anche la posizione relativa dei segni, uno rispetto all'altro. Inoltre, va sottolineato che il grande vantaggio di questa tecnologia, ormai di ampia diffusione, è che genera immagini con una luce impattante da diverse angolazioni che consentono una migliore visione di segni danneggiati o volontariamente abrasati, come il caso dei palinsesti. Per fare un solo esempio, basti pensare che fino ad oggi nessuno ha mai fornito un disegno o una trascrizione di quello che resta di uno dei due frammenti della tavoletta di Enkomi, ##207, iscritta in CM 2, perché la superficie è troppo abrasata. Gestendo le immagini con Meshlab, programma che permette di lavorare le immagini ottenute mediante scansione, siamo riusciti in pochi giorni a tirare fuori una ventina di segni e contiamo di realizzare anche un RTI di questo documento che ci metterà in condizioni di leggere anche altri segni.

Altri documenti che si avvantaggiano della presa di immagini mediante lo scanner 3D sono i cilindri. Infatti, la scansione permette di avere una visione *unwrapped*, srotolata, che non comporta la deformazione dei segni. In altre parole, un cilindro viene trasformato in una tavoletta e lo studio della paleografia ne risulta estremamente facilitato e avvantaggiato.

Nel corpus ogni iscrizione è identificata da un numero progressivo. Di ogni iscrizione viene fornito il luogo di rinvenimento, quello di conservazione, le dimensioni totali dell'iscrizione e dei segni. Segue poi l'indicazione dell'*editio princeps* per le iscrizioni già pubblicate e la bibliografia essenziale.

Per ogni iscrizione, sono fornite una o più foto digitali dell'oggetto (in bianco e nero o a colori), o in molti casi una foto ricavata da un modello 3D. Ovviamente vi sarà anche un dettaglio dell'iscrizione con la migliore definizione possibile, e un disegno realizzato sulla foto e corretto sull'originale presso il museo. Segue poi la transnumerazione dell'iscrizione e la standardizzazione dei segni mediante il font del cipro-minoico seguito da un apparato critico comprendente eventuali problemi di lettura.

¹⁰ Questa immagine in 2D è stata creata partendo da un modello 3D creato da Polig e il suo uso è stato autorizzato dal Prof. Sorin Hermon dello STARC (*The Science and Technology in Archaeology and Culture Research Center*) del *Cyprus Institute* di Nicosia per il corpus della scrittura cipro-minoica.

Una sezione a parte conterrà i contesti archeologici, la datazione e le principali informazioni sugli oggetti che recano le iscrizioni. Chiuderanno il volume una bibliografia, le concordanze, un indice dei gruppi di segni, oltre alle tavole dei segni indispensabili per lo studio della paleografia.

Vediamo adesso a che punto è il lavoro. Il numero totale delle iscrizioni è 245, ma 42 non sono rintracciabili in quanto perdute o in-trovabili nei musei. Per la maggior parte di queste 42 iscrizioni abbiamo comunque una documentazione fotografica accettabile. Grazie alla donazione di Diane Masson al Centro CIRCE di Oristano di un dossier con foto e disegni realizzati dal padre, Olivier Masson, nel 1957, abbiamo recuperato ottimo materiale fotografico e importanti informazioni per alcune di queste iscrizioni oggi perdute.

Attualmente sono disponibili 203 iscrizioni su 245, che sono state documentate con foto o scansioni nei musei ciprioti, europei ed extra europei (USA e Russia). Tutte le iscrizioni che abbiamo documentato sono state già disegnate e prevediamo che entro due anni il volume sarà consegnato alla stampa e apparirà nella collana *Incunabula Graeca* con la collaborazione di Maurizio Del Freo, Cassandra Donnelly e Martina Polig.

Lavorando sui documenti nelle riserve dei musei, ci siamo resi conto che alcune 'letture' palesemente errate, talvolta fatte su fotografie e non sugli originali, sono state riportate in varie pubblicazioni fino ad arrivare al caso limite di documenti pubblicati e 'letti' capovolgendo l'iscrizione. Questo dimostra che nessun documento può essere pubblicato sulla scorta di una foto seppure di buona qualità,¹¹ in quanto le foto 'mentono' mostrando talvolta tratti che non esistono o rendendone invisibili altri; di conseguenza, 'letture' e analisi paleografiche fatte senza un'autopsia del documento inevitabilmente possono risultare inadeguate. È compito dell'epigrafista fare da tramite fra le foto e l'utente di un corpus fornendo un disegno, controllato sugli originali, che sveli proprio le false immagini che si nascondono in una foto.

In definitiva, questo corpus avrà le sue fondamenta ben piantate nella metodica che ha ispirato la creazione dei precedenti corpora delle scritture egee, strizzando l'occhio alle moderne tecnologie alle quali bisogna guardare con interesse, senza pensare che la sola tecnologia possa sostituire il lavoro dell'epigrafista e senza cercare scorciatoie per evitare di fare i disegni.

¹¹ Vedi PERNA 2021, 79-90.

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***DĀMOS*, database of Mycenaean at Oslo – Developments and perspectives**

Federico Aurora

Introduction*

The first online version of *DĀMOS* appeared in early 2013.¹ From the beginning it was conceived as an annotated database through which users would be able to browse and search the texts in their most updated version. The annotations in *DĀMOS* make it possible to search for archaeological, epigraphic, linguistic and content features of the texts. Some of these annotations were already available for searches in the first version, but many more have been made available in the new online version, which will be described in the present article. Other annotations are not yet available because of the lack of a dedicated interface module, and others are still in progress.

Another aspect which will be discussed here is the work on integrating and connecting *DĀMOS* with other digital resources in the field of Mycenaean and Classics in general. This process is still in its early stages but will hopefully benefit from, and be encouraged by the ongoing development of Digital Classics and Digital Humanities in general.

Finally, some reflections on fully digital editions of Linear B texts are

* I would like to thank Richard J. Firth, Hedvig Landenius Enegren, José L. Melena, and Katerina Voutsas (National Archaeological Museum of Athens) for sharing their data; Maurizio Del Freo (*LiBER*), Mark Depauw (*Trismegistos*), Alessandro Greco (*pa-i-to* Project), Diamantis Panagiotopoulos (*CMS/Arachne*) and Rupert Thompson (*CaLiBRA*) for the kind collaboration on linked data; also, the Norwegian Institute at Athens for hosting me during part of my work with the new version of *DĀMOS*.

¹ <https://damos.hf.uio.no/> [last accessed 5.11.2022].

presented here, which will hopefully contribute to the discussion on the topic.

Making all the Mycenaean documents available online

The first aim of *DĀMOS* is to allow users to read and browse all published Mycenaean documents online. This has also meant keeping them up-to-date with new finds and new editions, e.g. the 6th edition of the Knossos tablets, which appeared in 2019.² New practical and methodological challenges emerged, however, when three partially different, competing editions of the Pylos tablets were published between 2019 and 2021.³ Until then, the most up-to-date edition of a given set of tablets had always been a single, authoritative one, which could be used as basic standard reference, while data from subsequent articles about joins or new readings would be incorporated in the database as soon as they were published. As a temporary solution, the texts of the documents in *DĀMOS* are (unless otherwise specified in the notes) based on *PT*³, while discrepancies between the different editions will gradually be included in the notes. I posit, however, that a more functional solution, suitable also for similar cases in the future, requires a move towards a fully digital edition of the Linear B texts. I will return to this matter in the final part of my paper.

The new graphic interface and its search possibilities

The new online version of *DĀMOS* was launched in October 2019 at the Norwegian Institute in Athens and has superseded the old interface since February 2020.⁴

Without technical limitations (e.g. querying and loading time) and budget restrictions, the ideal solution for the online graphic interface of a database would be to make all the data available through as many modes of searching and visualization as possible. Hardly any graphic interface, however, can ever provide access to all the possible combinations of data an expert user might want to search for. This is why alongside interfaces, which make data easily available to both specialists and

² *KT*⁶.

³ *ARN* in 2019-2020; *PTT*² in 2020; *PT*³ in 2021.

⁴ A recording of the presentation can be found here: https://www.youtube.com/watch?v=NZu-WR_rW6tA.

a broader audience, raw data should also be made openly available to the research community wherever possible.⁵ In this way, any researcher can fully search and manipulate the data according to their particular research needs. A similar solution is now also being developed for *DĀMOS* (see *infra*).

Data visualization

As in the previous version of *DĀMOS*, document level metadata (e.g. series, find-place, etc.) and lower level metadata (i.e. pertaining to lines, words and signs) are searchable through two different search mechanisms, each of which gives priority to the visualization and browsing mode that best seemed to suit those data.

Document level metadata are made searchable through a filtering interface (Fig. 1). This is made up of columns showing the available values for each metadata category. By choosing the desired values, a subset of documents can be selected, visualized, browsed and read one by one in the browsing panel (Fig. 2). Here, text, document level metadata and external links to available pictures of the object are shown. A basic tablet bibliography with references to the main handbooks and anthologies, primarily designed for use in teaching, completes the browsing module.⁶

Through the word search interface, lower level metadata are made searchable, and search results are shown in tabular form together with the relevant line(s), hand attribution, dating and find-place. Quick access to browsing through the full text of the related documents is given through pop-up windows. Finally, the results can be downloaded as a CSV-file, a format which is easily readable (for example in a spreadsheet) and reusable.

⁵ Cf. BLEIER & KLUG 2018, XIII; FRANZINI *et al.* 2019, 15.

⁶ References to BERNABÉ & LUJÁN 2020 and *Manuale* have been added.

The screenshot displays the DAMOS filter module interface. At the top, it identifies the user as 'UO | University of Oslo' and the project as 'DAMOS Database of Mycenaean at Oslo'. A 'RESET ALL' button is located in the top right corner. The interface is divided into two main sections: 'Classification, Hands & Seals' and 'Chronological & Spatial data'. The first section features a grid of filter options for Site, Document (Lx3), Hand, Stylus, Series, Subseries, Set, and Seal. The second section features a grid of filter options for Chronology, Find-areas, Find-spots, Provenience, Find year, Location, and Inv. No. Each filter option includes a dropdown menu and a search icon.

Fig. 1. DAMOS filter module.

Filtering and browsing the documents

Filtering possibilities have been improved by allowing the user to filter the documents for multiple values from the same category at the same time (e.g. selecting to browse the documents from Pylos and Mycenae concomitantly). Further, while all other filter choices will exclude documents that do not contain the chosen feature, adding a single document from the *Document* column (which lists all individual Linear B documents) is always possible. In this way, it is possible to create a user-defined subset of tablets, independently of all other variables. For example, if users wish to browse through – or perform word searches in – the subset of tablets from Knossos written by Hand 115, but want to add **KH Ar 4** to the subset, they can simply add it by selecting it in the *Document* column.⁷ Finally, clicking on a given tablet (part of the subset or otherwise) in the *Document* column will always make it appear in the *Document* tab of the browsing interface.

⁷ Selecting a value for a given column, e.g. ‘Thebes’ in the *Site* column, will make non-relevant values in other columns, including the *Document* column, disappear. To see these values, users can click on *Show/hide empty*.

Prev PY Wr(1) 1331 (Room 99;29) 6 of 20 Next

- Image at Arachne
- Image at CalIBRA

Highlight changes in latest edition

α
OVIS:m supra sigillum CMS I 329

β
vac.

γ
o-pa

Notes 🔍

Metadata

- Site: Pylos
- Number: 1331
- Joins:
- Series: W
- Subseries: r
- Set: 1
- Hand: 29
- Stylus: 1331
- Seal: CMS I 329
- Chronology: LH IIIB2/LH IIIC
- Context:
- Find-area: PY, Room 99
- Find-spot:
- Provenance:
- Find Year:
- Preserved: Yes
- Location: NMA
- Inv. no.: NMA (84906)
- Trismegistos:

Basic Tablet Bibliography 🔍

- Interpretation1 376
- Doria(1965) 87
- Manuale(2019) 582

T (e.g. 337) = thorough treatment of the text in question

Doc2 = VENTRIS, M. & J. CHADWICK. 1973. Documents in Mycenaean Greek. Cambridge, University Press.

Doria(1965) = DORIA, M. 1965. Avvicamento allo studio del miceneo: struttura, problemi e testi. Roma, Edizioni dell'Ateneo.

Companion 1 = DAVIES, A. M. & Y. DORHOLD. 2008. A Companion to Linear B: Mycenaean Greek texts and their world. Louvain-la-Neuve, Peeters.

Handbuch = BARTONEK, A. 2003. Handbuch des mykenischen Griechisch. Heidelberg, Winter.

Interpretation1 = PALMER, L. R. 1963. The interpretation of Mycenaean Greek texts. Oxford, Clarendon Press.

Introducción(2020) = BERNABÉ, A. & E. R. LUJÁN. 2020. Introducción al griego micénico. Zaragoza, Prensas de la Universidad de Zaragoza.

Introduction = HOOEKER, J. T. 1980. Linear B: an introduction. Bristol, Bristol Classical Press.

Kanassystem = HAJNAL, I. 1995. Studien zum mykenischen Kanassystem. Berlin, De Gruyter.

Local Cases = WAANDERS, F. M. J. 1997. Studies in local case relations in Mycenaean Greek. Amsterdam, Gieben.

Manuale(2019) = DEL FREO, M. & PERNA M. 2019. Manuale di Epigrafia Micenea. Libreria Universitaria.

Melena(2001) = MELENA, J. L. 2001. Textos griegos micénicos comentados. Vitoria-Gasteiz, Eusko Legebiltzarrak, Parlamento Vasco.

RUIPÉREZ-Melena(1990) = RUIPÉREZ, M. S., & MELENA, J. L. 2005. Los griegos micénicos. Madrid, Alba Libros.

Fig. 2. DĀMOS browsing module.

A number of new metadata categories have also been added, which can be used to filter the subset of documents that a user might wish to select. These are described below.

Chronology

The modelling of the data regarding the dating of Mycenaean documents is not straightforward.⁸ Different publications, as is well known, might assign different dates for the same group of documents and vary in the way in which they group documents. With the present interface, the only viable solution seemed to be to create a list of document groups that all sources agreed should be grouped together,⁹ and assign them

⁸ See also AURORA 2015, 87.

⁹ Some publications might place two of these groups together, but no publication would split any of them into further subgroups.

to a time span, broad enough to encompass slightly different date estimates, but narrow enough to be meaningful. Time spans are indicated with ‘-’ (e.g. LH IIIA2-LH IIIB), while transition periods are indicated with ‘/’ (e.g. LH IIIB2/LH IIIC). In the few cases where different date estimates are irreconcilable, i.e. too far apart in time, as in the case of the Knossos documents, these groups have been assigned different alternative dates divided by ‘or’ (e.g. LM IIIA1 or LM IIIA2 or LM IIIB). A fuller account of the structure of these groups will be included in the forthcoming database documentation.

An important complement of these chronological data is the archaeological context in which a given object was found. This can, of course, be different from the final dating of the document. While the archaeological context is not yet searchable in the present interface, it has been entered – when available – in the database, and it can be found in the *Metadata* section of the *Document* tab.

Find-area, find-spot and provenance

Find places have been divided into a broader *Find-area* and a more precise *Find-spot* (currently only relevant for the Pylos documents and the vases from Malia). The provenance of the vases, as reported by John Killen,¹⁰ has also been added to the metadata in *DĀMOS* and made available for browsing via the filter.

Location, inventory number, recovery date (year)

Location refers to the museum or private collection where the objects are currently preserved. Where available in the literature, or thanks to direct information from museums, it is now also possible to search for the year in which an object was found and the inventory number currently assigned to it in the local collection.

Seal impression

The documents can also be filtered by the presence of a given seal impression. As in the previous version of *DĀMOS*, a link in the document text leads to the seal post –when available– in the digital *CMS* hosted by the *Arachne* database.

¹⁰ KILLEN 2011.

Joins and previous document number

The previous version of DĀMOS had a dedicated filter column for searches for joined tablets. In the new interface, the *Document* column works as a concordance where all numbers ever assigned to a Mycenaean document can be found together with its new number. In this column, all Mycenaean documents are listed, together with all instances of a number no longer indicating a main document; the latter preceded by '!'. Thus, by searching in the search field above this column, it is possible to find any Mycenaean document with its current, or previous, number and any joined tablet. Numbers previously assigned to a document are followed by '>'; joins are followed by '>+' and, as usual in standard publications, documents no longer preserved are included between '<' and '>'. Thus it is possible to look for all document numbers no longer used by typing '!' in the search field above the 'Document' column; to search only for old denominations by typing '=,' joins by typing '>+'; all documents no longer preserved by typing '<' and, finally, to look for all previously assigned numbers by typing '>' (with a space before and after '>', to distinguish this search from a 'join' search).

Finally, it would, of course, be very useful to include in the searchable metadata the detailed information about the history and composition of each tablet as it is presented in the 'Reconstruction' chapters of the Melena and Firth publications,¹¹ as well as the physical descriptions of the objects which are now usually published in the standard editions. It is my hope that these data will be made available in a digital format, which will allow their integration into the data set of DĀMOS, or any other such database, without unnecessary reduplication of work, such as manually entering data taken from a printed publication.

Textual searches

Textual searches have been significantly enhanced in the new online interface. As in the previous version of DĀMOS, after using the browsing filter to select the desired subset of data, users can perform a word search. What has been added to the new version is a multiple word search and advanced search options for both simple and multiple word searches.

¹¹ *KT*⁶, 535-683; *PT*³, 283-373.

Multiple word search

The multiple word search (Fig. 3) allows users to search for up to five words co-occurring in the same line or in the same text (this parameter can be set in the menu *Where to search*). This search also allows users to determine *proximity*, i.e. the number of words within which the searched words should occur. It is also possible to determine this space as being ‘near,’ ‘before,’ or ‘after’ the first word of the search. The *proximity count* can be further defined so as to include all elements present in a transcription or to exclude word dividers (‘’) and philological notation (e.g. *vacat*, *quantum satis*, *graffito*, etc.) from the word count, so that in the sequence ‘*pa-ro, da-mo*’ the word divider is not counted and *pa-ro* and *da-mo* are considered adjacent (i.e. the search scope is ‘within 1 word’).

The screenshot displays the DAMOS multiple word search interface, which consists of four vertically stacked search entry forms. Each entry form includes the following elements:

- Header:** "1. Word show/hide advanced search options" (with a red "show/hide" link), followed by a set of navigation icons (back, forward, search, etc.).
- Options:** A row of checkboxes: "Normalized" (checked), "Case sensitive" (checked), "Exact" (checked), "Free text" (unchecked), "From start" (unchecked), "From end" (unchecked), and "Regular expression" (unchecked).
- Word Input:** A text field labeled "Word" containing the text "ko-wa".
- Where to search:** A dropdown menu currently set to "Within one line".
- Proximity Count:** A dropdown menu currently set to "All elements".
- Logic and Position:** Radio buttons for "and" (selected), "or", and "and-not", followed by a "Within" input field, the word "words", a "near" dropdown menu, and a "first word" dropdown menu.
- Second Entry:** The second entry has the word "ko-wo" and the "and-not" radio button selected.
- Third Entry:** The third entry has the word "MUL" and the "and" radio button selected.
- Fourth Entry:** The fourth entry has the word "ma-te" and the "Exact" radio button selected.
- Footer:** A row of buttons: "Search" (red), "Add word", "Remove", and "Reset" (red).

Fig. 3. DAMOS multiple word search.

Logical operators that can be used in multiple word searches are: AND, AND NOT and OR. The AND and AND NOT operators in this search always refer to the first word. OR always adds a free-standing word that can be searched for in addition to the AND/AND NOT group. For instance, a search for ‘*ko-wa* AND *ko-wo* AND NOT MUL OR *ma-te*’ will return all the documents which contain *ko-wa*, *ko-wo*, but not MUL, together with all the documents that contain the word *ma-te*.

Advanced (multiple) word search

Perhaps the biggest improvement in DĀMOS’ new online interface is the introduction of an advanced search option for both simple and multiple word searches (Fig. 4). This search function is built on, and gives access to, most of the epigraphical annotations stored in the database, which were automatically generated (but subsequently refined manually), when text files with the transcriptions were imported into the database.¹² Users can now search for a given category of words: syllabic words, logograms of different kinds (ligatured, specified, etc.), monograms, metrograms, numerals and philological notation, including the start or the end of a broken (‘[‘, ‘]’) or erased area (‘[[‘, ‘]]’) in the text. It is not necessary to specify a content for the word to be searched, so that, for example, all instances of monograms can be retrieved by simply choosing the word type ‘Logogram: monogram’ and starting the search.¹³

Advanced searches can be further specified for the preservation state of the target word(s), i.e. certainty of reading, reconstruction state, presence of erasures or damages. Users can thus decide whether their search should include or exclude non-reconstructed words (e.g. *ko-wa*), partially reconstructed words (e.g. *ko-[wa]*), or completely reconstructed words (e.g. *[ko-wa]*). In the same way, users can include or exclude certain readings (e.g. *ko-wa*), partially uncertain readings (e.g. *ko-wa*), or completely uncertain readings (e.g. *ka-wa*). Finally, the same holds true

¹² On the import process: AURORA 2015, 25-26; on the epigraphical annotations: AURORA 2017, 87-91.

¹³ A very large search such as, for example, one which would retrieve a complete list of all Mycenaean words, requires a powerful machine and very good internet connection in order not to be timed out by the server. However, a substantial search like, for example, a non-case sensitive, free text search for ‘a’ (returning 13181 lines) should be possible on an average computer with an average internet connection.

Word [showhide advanced search options](#)

Normalized
 Case sensitive
 Exact
 Free text
 From start
 From end
 Regular expression

Word: all words or specify here

Word type

Select all

Common word
 Abbreviation
 Logogram
 Logogram: monogram
 Logogram: syllabogram used as logogram
 Logogram: specified
 Logogram: specified: gender
 Logogram: specified: ligature: logogram + syllabogram

Logogram: ligature: logogram + syllabogram
 Logogram: ligature: logogram + logogram
 Logogram: ligature: logogram + syllabogram + syllabogram
 Logogram: ligature: logogram + ?
 Measure unit
 Numerical
 Check mark
 Missing signs

Large dot
 Traces
 Word divider
 Dividing line
 Seal
 Graffito
 Blank space (vacat)
 Deest

Narrow line
 Quantum satis
 Question mark
 Break at left (I)
 Break at right (I)
 Start of erased area (I)
 Start of erased area at right (I)

No damage
 Damage at left
 Damage internal
 Damage at right

Size: select Size previous: select Size next: select

Include non-reconstructed
 Include partly reconstructed
 Include entirely reconstructed

Include certain readings
 Include partly uncertain readings
 Include uncertain readings

Include non-erased
 Include partly erased
 Include entirely erased

Position: select Supra Sigillum: select Contains omitted signs: select

Line type: select

Search Reset

Documents: 4; Types: 3; Tokens: 5 Download as csv

Type	Token	Line	Document	Hand	Chronology	Find-area
OLE+	OLE{	r. ka-ke-we	OLE... KN Fh(-) 386	141?	LM IIIA1 or LM IIIA...	KN, E1
AROM+PYC	AROM+PYC	r. b tu-wi-no / ku...	KN Ga(1) 517	135	LM IIIA2 or LM IIIB	KN, F8
AROM+PYC	AROM+PYC	r. b a-jpu-do-si	... KN Ga(1) 518	135?	LM IIIA2 or LM IIIB	KN, F8

Fig. 4. *DAMOS* advanced search options.

for non-erased (e.g. *ko-wa*), partially erased (e.g. *[[ko-]]wa*), or completely erased occurrences of a word (e.g. *[[ko-wa]]*). This means that, for example, if users wished to retrieve only the certain occurrences of a word written by a given scribe, they would probably exclude conjectures and uncertain occurrences, but include the erased ones. The search can be further refined by specifying whether the word searched for is transcribed as ‘not damaged’ (e.g. *ko-wa*), ‘damaged at left’ (e.g. *]ko-wa*), ‘damaged at right’ (e.g. *ko-wa[*) or having an ‘internal damage’ (e.g. *se-to[-i]-ja*).

Words (and combinations of words) can also be searched according to their particular position in the text. Thus, words can be searched for that appear over a seal impression (*supra sigillum*); (partially) written under the text line to which they belong; or written, usually in smaller characters, above their line (e.g. *qe-te-o*). In current editions, howev-

er, the latter can also be represented by being assigned to a line of the ‘1a’ type.¹⁴ Therefore, a search for words completely or partially written above the line must also include results from a ‘Line type’ search. This can be done by choosing the desired ‘Line type’ (ruled, unruled, single line, etc.) in which the word(s) searched for should occur.

The advanced search also allows the user to look for words containing modern corrections of omitted signs (e.g. *ME<RI>* in **KN Gg 7232**). The insertion of modern corrections in the text, however, is very limited in current editions, with the corrections rather being proposed in the apparatus.¹⁵

Finally, searched words can also be defined as being of bigger (+1), smaller (the current editions of the Knossos tablets present three degrees of smallness, represented in the search menu as ‘-1’, ‘-2’, ‘-3’)¹⁶ or of the same size as the previous word (‘normal’) in the same line. Words can also be searched for according to the size (‘same’, ‘smaller’, ‘bigger’) of the preceding or following word in the same line. This search feature is somewhat problematic since it is based on a transcription convention that has generally not been used for the Pylos documents.¹⁷ Melena and Firth explicitly state that ‘no representation is given in the transcribed text of the relative sizes of the signs.’¹⁸

Linguistic annotations

The main challenge in annotating the Mycenaean texts is the need for allowing for multiple competing interpretations of both the form and the function of a given word. This is, of course, due to the well-known shortcomings of Linear B in rendering ancient Greek phonology and morphology, and to the concise and fragmentary nature of the extant texts. I have previously described these challenges and the solutions which have been adopted and tested in *DĀMOS* for the modelling of the data and the annotation strategy.¹⁹ Nominal forms (nouns and adjectives) and participles constitute ca. 90% of the attested Mycenaean

¹⁴ Cf. *PT*³, liii-liv.

¹⁵ Cf. *PT*³, l.

¹⁶ **KN Ak 612.C**: “da-te-we-ja / ko-wo / me-zo 1 [k̄o-w̄o / m̄e-]” contains the only case where the edition marks three degrees of progressive decrease in the relative size of the words in a line.

¹⁷ It was used, however, in MELENA 1992-1993a; 1992-1993b; 1994-1995; 1996-1997.

¹⁸ *PT*³, l.

¹⁹ AURORA 2015, 27-29; 2017, 93-96.

word occurrences. While the annotation of the other word classes has been completed (although it is not yet available for online searches), the annotation of these forms is unfortunately not yet finished. The data model for the annotation of case,²⁰ however, has been further refined and systematized in order to attain a more economical representation of the data while still including a range of possible form/function combinations that include all possible forms of any of the possible case systems proposed in the literature.²¹

Let us look at an example: the annotation of *u-wa-si-jo* in **KN Ai 115** (*pa-ro*, *u-wa-si-jo*, *ko-wo*) is stored in the database in two different posts of the *ling_word* table (the table in which the linguistic annotation of each word occurrence is stored). These two posts are further connected through a *foreign key* to the post for *u-wa-si-jo* in the *phys_words* table (the table where 'epigraphical' words are stored). In one *ling_words* post, *u-wa-si-jo* is analysed as being a noun dependent on the preposition *pa-ro*, in the other as an adjective belonging to the prepositional phrase *pa-ro*, *u-wa-si-jo*, *ko-wo*. In both posts, therefore, *u-wa-si-jo* is considered part of a prepositional phrase and allows the following interpretations of form/function combination (depending on the interpretation of the text and on the theoretical point of view on the Mycenaean case system):

singular dative with source/origin function
 singular locative with source/origin function
 singular instrumental with source/origin function
 singular dative with locative function
 singular locative with locative function
 singular instrumental with locative function
 singular ablative with source/origin function
 plural ablative with source/origin function
 singular *o*-genitive with source/origin function

These two posts are condensed and annotated in *DĀMOS* as:

1.
 N
 s;dat|loc|ins|sou

²⁰ Cf. AURORA 2017, 93-94.

²¹ Cf. HAJNAL 1995, 8-16, for an overview.

s;dat|loc|ins|;pos
 s|p;abl;sou
 s;gno;sou

2.

Adj
 s;dat|loc|ins|;sou
 s;dat|loc|ins|;pos
 s|p;abl;sou
 s;gno;sou

These posts will be used to build searches for given form/function combinations.

Relevant features of variation in Mycenaean (e.g. alternations as the one in *te-mi-ti-ja/ti-mi-ti-ja* or in the derivational suffix *-ti-ra₂/-ti-ri-ja*) are also in the process of being tagged,²² while prosopographical data based on the works of Dimitri Nakassis and Hedvig Landenius Enegren²³ have been entered, but need to be revised before being made available online.

Linked (open) data

In order to give users easy and quick access to data stored in relevant digital resources within Mycenology or Classics, more links have been added to the individual document posts. In this way, most Linear B documents are now connected to one or more pictures and to databases where further metadata or textual searches can be done. In addition to *Arachne* and the online Sir Arthur Evans Archive of the Ashmolean Museum, links are now included to the individual document posts in *CaLiBRA*, *LiBER*, *pa-i-to* Project, National Archaeological Museum at Athens, British Museum and Fitzwilliam Museum. In this way, *DĀMOS* can also be used to find pictures and other resources about a given Linear B document. A step in the direction of linking Mycenaean data with other Digital Classics resources is the interlinking of *DĀMOS* with the database *Trismegistos*, which, among other things, assigns a stable unique identifier to each document from the ancient world. Using the

²² For a list of such features, see BERNABÉ & LUJÁN 2020, 328-329; GARCÍA RAMÓN 2016, 242-243.

²³ LANDENIUS ENEGREN 2008; NAKASSIS 2013.

data in *DĀMOS*, *Trismegistos* now provides a stable unique identifier for each Linear B document, as it does for papyri and inscriptions. In this way, Mycenaean documents can be retrieved together with later documents from, for example, Thebes, if users search for ancient documents from that location. A link to the post in *Trismegistos* is to be found in the Metadata section of *DĀMOS*' browsing module.

EpiDoc

EpiDoc is “an international, collaborative effort that provides guidelines and tools for encoding scholarly and educational editions of ancient documents [...] [It] specifies a subset of the Text Encoding Initiative [TEI]'s standard for the representation of texts in digital form using the Extensible Markup Language (XML), a technical standard promulgated by the World Wide Web Consortium. It addresses not only the transcription and editorial preparation of the texts themselves, but also the history, materiality and metadata of the objects on which the texts appear.”²⁴

For *DĀMOS*, we chose initially not to make use of EpiDoc and rely instead on a relational database for the storage of its data. While this choice was made for good reasons and still presents advantages for the entering and manipulation of the data,²⁵ the creation of an export system that can convert *DĀMOS*' textual data into EpiDoc-compliant XML-files is a current goal.

Together with Gabriel Bodard, therefore, I have started to devise the alignment of EpiDoc to the Wingspread convention.²⁶ This means the integration into EpiDoc of tags corresponding to the transcription rules of the Wingspread convention. EpiDoc is a widely used standard in the Digital Classics community: papyrus texts are coded with EpiDoc in *Papyri.info*, as are inscriptions in the resources which are part of *Epigraphy.info*, while *LGPN* online makes use of a compatible TEI-XML format. The main motivating factor behind our work, thus, is *interoperability*: creating EpiDoc-compliant XML files of the Linear B texts will make exchange and integration of data with other Classics resources

²⁴ <https://sourceforge.net/p/epidoc/wiki/Home/> [last accessed 28.11.2022].

²⁵ AURORA 2015, 24; 27-29. On the choice between XML and relational databases in epigraphy see DI FILIPPO 2018; FRANZINI *et al.* 2019, 16-17; LIUZZO 2017.

²⁶ The Mycenaean section, published in the latest release (9.3) of the EpiDoc guidelines (BODARD *et al.* 2007-2021), can be found here: <https://epidoc.stoa.org/gl/latest/app-epi-mycenaean.html>. This is still work in progress and collaboration and contributions are of course most welcome.

much easier and, ultimately, possibly automated. Survival over time of the data contained in *DĀMOS* is another concern which creating XML export files gives an answer to.

Database documentation and data download

DĀMOS has now been migrated from a MySQL to a MariaDB database and a full account of its structure will soon be published. Downloading possibilities are currently limited to downloading word search results, but the ultimate goal is to make the whole data set of *DĀMOS* freely accessible under a Creative Commons *Attribution-NonCommercial-ShareAlike* license (CC BY-NC-SA)²⁷ and in various formats, including a Plain Text (TXT) version of the texts.²⁸

Towards a fully digital edition of the Mycenaean texts

DĀMOS is, of course, not an original digital edition of the Mycenaean texts,²⁹ but it neither is a fully digital edition. It does fulfil many of the requirements outlined in the literature for scholarly digital editions (e.g. advanced search functionalities, different data visualization modes, links to images)³⁰ and “cannot be given in print without a significant loss of content and functionality,” but it still presents features of a ‘digitized edition’, in that it does not yet fully embrace the shift towards a ‘digital paradigm’ in the organization and presentation of data;³¹ that is, it does not fully exploit the possibilities offered by digital tools. *DĀMOS* is also not a fully critical edition. It does have notes which explain the reasons behind a number of choices taken in the representation of the texts, but it does not have a full *apparatus criticus*.³²

A critical edition of Mycenaean texts fully exploiting the possibilities of digital infrastructure would require a full apparatus of variant readings, restitutions and other textual criticism, tagged by edition. This apparatus should, of course, be combined with appropriate visualiza-

²⁷ <https://creativecommons.org/licenses/by-nc-sa/4.0/>.

²⁸ Downloadable TXT-files appeared to be a very common *desideratum* in a recent survey of users of digital editions (FRANZINI *et al.* 2019, 16-17).

²⁹ Although it could be considered *an edition of editions* (REGGIANI 2017, 238).

³⁰ Cf. FISCHER 2019; FRANZINI 2012-; SAHLE 2016.

³¹ SAHLE 2016, 27-28.

³² The graphic interface of the *LiBER* database does, in fact, have an *apparatus criticus*. This is, however useful, still presented as a digitized and not a digital *apparatus criticus*.

tions, allowing users to visualize the texts with or without restitutions, to choose the desired edition or the desired variant readings. In this way, different contemporary editions of a given text could be easily accommodated and represented together.³³ Further features of a fully digital edition³⁴ include access to advanced imaging of the documents (e.g. 3D and RTI)³⁵ and text-image linking as in the *SigLA* database.³⁶ Such an edition would, of course, also offer a solution to the concerns about the limitations of current transcription conventions (e.g. in representing word size variation or damaged and erased areas) raised by Melena and Firth,³⁷ and contribute precious data for a future online edition of *DMic*.

A fully digital and critical edition of the Mycenaean texts is one of the current goals of the work with *DĀMOS*. However, not all the elements of such an edition need to be stored in *DĀMOS*. Digital editions, because of their scope, tend to be collaborative endeavours and might, in fact, be better thought of as having a distributed architecture, integrating data from different resources.³⁸

If the first step is broad collaboration on the digitization of the data of current editions, the really crucial point is that future editions of Mycenaean texts should be conceived and produced (also) as (preferably) open access digital data sets that can easily be integrated into – and made accessible through – platforms such as *DĀMOS* or *LiBER*.

Paper editions, although they cannot, due to limitations of the medium, reproduce all the features of a digital edition, can always be easily derived from digital editions. In fact, a digital edition allows for multiple possible print editions according to the needs of editors and users. Digitizing print editions, on the other hand, is time consuming and does not result in a digital edition without extensive manipulation and enrichment of the data. Naturally, the data set of a scholarly rigorous digital edition will also provide an invaluable and time saving starting point for any new edition.

Finally, data sets from older and superseded editions could, in time, also be digitized and integrated. While this can hardly be a priority in

³³ FISCHER 2019; KEELINE 2017, 351-353.

³⁴ Cf. FRANZINI 2012-.

³⁵ GRECO & FLOUDA 2017; NAKASSIS & PLUTA 2017.

³⁶ SALGARELLA & CASTELLAN 2021.

³⁷ *PT*³, xlviii-li.

³⁸ FISCHER 2019, 213-214.

a field with small budgets, it would give a full historical overview of the history of the decipherment and interpretation of the Mycenaean documents.

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**Mycenaean philology and materiality:
the “*pa-i-to* Epigraphic Project.”
An integrative approach to Linear B tablets
from Knossos***

Georgia Flouda, Erika Notti

Preface

Since the early days of the discipline, specialised studies have demonstrated that an integrative approach exploring materiality, philology and palaeography may afford the best possible understanding of Linear B documents. The *pa-i-to* Project¹ that was initiated in 2016 has worked in this direction on a small batch of documents, characterised by the presence of the toponymic reference *pa-i-to*. While the methodology and research focus adopted by our team have been addressed in previous publications, it is our intention here to expand on our ‘all-round’ approach, to quote Palaima², by discussing our most significant results with regard to the materiality and palaeography of the documents.

* The authors participate in the *pa-i-to* Epigraphic Project. The first part of this paper concerning materiality has been developed by Georgia Flouda, and the second part concerning philology has been developed by Erika Notti; as regards palaeography, see GRECO, this volume.

¹ GRECO & FLOUDA 2017.

² PALAIMA 2011, 90.

Materiality explored through 3D-laser scanning and RTI: research objectives and outcomes of the *pa-i-to* Project

By G. Flouda

Essential questions that serve as guidelines for approaching the inscription supports as material artefacts have been recently brought to the fore and, accordingly, were integrated within the *pa-i-to* Project.³ Thus, a major research goal of the project, beyond visualizing the Linear B tablets under study, was to render their diverse material qualities ‘explorable’ to researchers and laymen alike through the 3D-laser scanning and RTI technologies. As both methods enable the users to interact with the digital models and renderings of the tablets at an unprecedented level of accuracy, they have been employed by the *pa-i-to* Project as a tool for studying the materiality of the tablets, and for validating past hypotheses with regard to the following two perspectives: a. their three-dimensionality, which entails the forming techniques, the resulting tablet format (shapes and sizes), as well as colouring; b. the preparation and treatment of the writing surfaces in order to hold the inscriptions.

Whereas tablet format is mostly associated with record-keeping priorities and tablet content, forming techniques are related to fabric composition and texture, which may also have been affected by the agency of specific scribes or tablet makers associated with them. Tom Palaima has noted that tablets were often made of finely levigated clay, especially by the principal tablet makers at Pylos.⁴ Recently, experimental approaches have systematically treated questions of erasure and textual correction on unfired Linear B tablets.⁵ The practice of cutting longer tablets to smaller ones that can be considered as ‘simili-joins’, in order to fit specific record keeping tasks, has also received attention.⁶ Both parameters are associated with the *chaîne opératoire* followed by the tablet makers and/or the scribes, and should be treated along with paleography and context every time we try to assess complex stratigraphic and taphonomical issues related with the deposition of the tablets.⁷ In the following discussion, we shall focus on forming techniques and on conclusions reached

³ FLOUDA 2013; JUDSON 2017; PALAIMA 2011, 76; TSOU PAROPOULOU 2016.

⁴ PALAIMA 2011, 105.

⁵ JUDSON 2017; PAPE *et al.* 2014.

⁶ DRIESSEN 1988; also recently explored by FLOUDA 2022; MOUTHUY 2019; TOMAS 2013, 177-183.

⁷ MOUTHUY 2019.

through the RTI and 3D models, due to constrictions of space.

Tablets by Hand 117: insights into forming techniques

In the case of the *pa-i-to* Project, our targeted group of tablets affords a notable chance to reconstruct practices of recording information and handling the records enforced by Hand 117,⁸ a scribe who may have personally monitored sheep husbandry at *pa-i-to*.⁹ Besides, from a practical point of view, clay can be stored moist in a closed container and thus preserved ready to use indefinitely,¹⁰ whereas evidence for records written in the Knossian periphery is particularly strong.¹¹

One of our research questions has been to follow Palaima's observations on how Pylian tablet-makers produced leaf-shaped tablets by flattening clay out into a thick sheet and rolling it up at top and bottom to create a long tablet with a closure seam along the back side, which was usually smoothed out.¹² The most obvious features for documenting this shaping method are the joints of the edges of the rolled up clay sheet. These joints are also visible at both ends of many Knossian tablets we examined, since they have not been smoothed out and they often overlap with hole-channels (e.g. **Db 1159**). Careful observation of many examples through RTI and 3D provides insights into the no-longer preserved fibrous cord that apparently was laid lengthwise across the sheets of clay. This was done before they were 'rolled up', in order to tie them together, and in most of the cases projected from the tablet edges.

The fairly charred tablet **De 1084** of Scribe 117 (Munsell 10YR 4/1 dark gray: *recto* surface, 10YR 3/1 very dark gray: *verso* surface) presents an intriguing case. More than half of its *verso* is broken (max. preserved thickness 1.3cm; height 2.4cm; length 12.1cm), so that it reveals its core and the negative imprint of a cord that ran obliquely along the long axis of the tablet, through the upper right corner to its lower left one (Fig. 1). This may be identified with some kind of organic fibre, cylindrical in section, possibly some kind of dried stems of plants, such as those suggested for strings running through clay nodules, namely raffia, hemp

⁸ FIRTH & MELENA 2016a-b, 287-292.

⁹ See BENNET 2001, 32-33 on bureaucrats active in the wider Pylian territory; also, GRECO 2010.

¹⁰ PALAIMA 2011, 105.

¹¹ BENNET 1992, 82-83; GODART 1972, 424, on the **Co** series as written at Chania; HALLAGER & HALLAGER 2015, 111.

¹² PALAIMA 2011, 105-106, Fig. 12.43.

or bulrush rush.¹³ The cord ran out at both ends of the tablet, thus being possibly used for handling it. It is noteworthy that this practice was also enforced at Pylos in a later chronological horizon, where the use of a twisted plant-like material, possibly rush broom or weaver's broom (*Spartium junceum*) or stalk, has been suggested for the inner cords of tablets.¹⁴



Fig. 1. Photo of verso of tablet **De 1084** preserving the channel of a fibrous cord (© *pa-i-to* Project).

Two other examples also bear remarkable traces of organic fibres. **Dv 8413**,¹⁵ the recto of which is preserved very fragmentarily (Munsell 5YR 2.5/1 black surface), displays a thin cord channel which points to a non-braided or non-twisted cord. Unlike what has been observed in the case of tablet **De 1084** and in most others as well, this cord did not run longitudinally across the whole length of the document; it rather ran obliquely from the broken right edge towards the lower left edge of the tablet. By adjusting the light on the RTI model, it has become possible to observe three parallel grooves, which correspond to a fibrous substance of streaky texture; the width of the middle groove is quite similar to the one of the incised OVIS logogram. Moreover, the three-dimensional model of tablet **Da 1341** allows to observe and document the trace of a similar streaky cord with parallel grooves (Fig. 2).¹⁶ The closest parallels to these traces of grooves on tablets **Dv 8413** and **Da 1341** belong to the reconstructed cords of a Late Minoan IB nodule from Hagia Triada (HM S-T 451/2) and of a Pylian hanging nodule, which on the basis of an X-ray examination has been attributed to bulrush rush.¹⁷ The evi-

¹³ MÜLLER & PINI 1997, 67-68, Pl. 40: 5-7.

¹⁴ PALAIMA 2011, 105-106, Fig. 12.43.

¹⁵ Above the logogram *-to*, horizontal striation marks have been preserved, which hint at traces of burnishing on the recto surface before inscribing it.

¹⁶ The same 3D model highlights traces of burnishing on the side of the tablet made with some hard medium, possibly wood or bone, after moulding and before the inscriptions are engraved.

¹⁷ MÜLLER & PINI 1997, 67-68, Pls. 40:7 [Pylian nodule cat.no. 74]-41:3 [HM S-T 451/2].

dence of the Haghia Triada nodule is particularly significant, as we may deduce the endurance of a practice that may have been enforced since the Neopalatial period. Imprints of wicker made of similar material are also documented on ‘combination nodules’ or *Objektschnurplomben* from Knossos, which broadly belong to the same chronological horizon with the examined tablets¹⁸.



Fig. 2. Three-dimensional model of tablet Da 1341 (© *pa-i-to* Project).



Fig. 3. Tablet Db 1159 with traces of a fibrous strand on its fragmentary verso

Nonetheless, tablet **Db 1159** bears similar traces of a fibrous strand on its fragmentary verso, at the point where the two sheets of clay have been pressed together (Fig. 3). In this case, it is possible that non-twisted strands of hemp or linen had been used for the inner cord.¹⁹



Fig. 4. Photo of tablet Dv 1607 with traces of a fibrous strand (© *pa-i-to* Project).

Last but not least, due to its fragmentary state, tablet **Dv 1607** (Fig. 4) (Munsell GLEY2 4/5 PB surface, GLEY2 6/5 PB core) bears traces of the channel of a non-twisted cord that runs from the centre of the left edge diagonally up to the lower right edge. The 3D model of the tablet allows us to accurately observe the cross section of this channel.

¹⁸ MÜLLER 2002, 71, Fig. 29b-h.

¹⁹ ZOLLINO 2018, 59-60.

Concluding thoughts on the materiality of the tablets

These findings have important repercussions on how tablets were shaped and handled after they were dried out and inscribed, as they reveal aspects of the relevant *chaîne opératoire*. The diagonal arrangement of the inner fibrous cords, which in most cases run through the tablet from one end to the other, provides ground for proposing that they possibly helped to tie groups of ‘contiguous’ leaf-shaped records together, either in their storage transport baskets or during storage at the palace, as has been established for the Pylian **Sh** series.²⁰ At the same time, as the tablets examined by the *pa-i-to* Project belong to different series, further research is by all means needed in order to ultimately verify this hypothesis.

Philology in the pa-i-to Project

By E. Notti

Myc. *po-ro-de-ī-qo-no* (KN F(1) 51 v.1) and *ma-ka* (KN F(1) 51 v.2)²¹

In the course of our research project we have also turned our attention to documents of complex interpretation due to difficult readings, such as KN F(1) 51. As it is known after the discovery of the Theban texts, the uncertain reading *ma-ka* – a likely recipient of HORD on KN F(1) 51 v.2 – was considered to be more convincing than *ma-qa* in light of the attestations of *ma-ka*²² emerging on the Theban texts from the Odos Pelopidou excavation.²³

Nonetheless, the presence of a small fracture in the clay, cutting across the second sign (*ka*), has caused conflicting interpretations. These are reflected in several studies, both in their conclusions and in the traditional, accompanying photographs and drawings. Evans himself was initially deceived by this fracture: in the drawing he published, a complete cross appears inside the circle of the sign, including a vertical

²⁰ PALAIMA 1996, 379-380, 384-385, Figs. 4-5.

²¹ This contribution is not meant as a deep-dive into the interrelated questions that have already been widely discussed for some time now, especially in relation to the Theban *côté*. However, in the space allotted, we present several preliminary considerations, which – *in votis* – will be followed by further, specific observations currently under preparation.

²² On the occurrences of *ma-ka* and the controversial thesis of the ‘Theban triad’: *DMicSupl s.v. ma-ka* and the related bibliography; DUHOUX 2002-2003; 2006; *FdC* I, III-IV; PALAIMA 2000-2001; 2003a; 2003b; RUIJGH 2004, 2006.

²³ ARAVANTINOS *et al.* 1995, 834.

(slightly oblique) line visible also in the lower part of the sign.²⁴ However, in later editions this line is correctly excluded.²⁵ Moreover, Duhoux in particular, excluded the presence of any vertical line at all inside the circle of the sign, both in its upper and lower part, simply confirming the presence of two horizontal lines and thus establishing the reading *ma-qe*.²⁶ Following his exhaustive studies, this reading has come to be generally considered preferable.

Consequently, one of the crucial arguments sustained by the editors, i.e. the presence of *ma-ka* both in the archive of Knossos and Thebes, has practically been ruled out.²⁷ On the basis of current knowledge, the following readings are now, in fact, generally accepted: *ma-qe* – “*ma-ka* unlikely” (KN F (1) 51 v.2); traces of uncertain interpretation between *po-ro-de-* and *-qo-no* (KN F (1) 51 v.1) have also been perceived as “accidental scratch or divider (?)”.²⁸

The analyses carried out in the course of the *pa-i-to* Project²⁹ allow us to contribute to this field of research, as the results produced by the RTI method confirm the presence of traces between *po-ro-* and *-de-qo-no*. In fact, these do not seem to be accidental scratches, but rather the constitutive traits (at least four of which are more clearly discernible) of a writing sign. This sign – smaller, more condensed, and the only one not resting on the same line of writing as the others – appears to be the result of a secondary annotation, as suggested also by the discernible order of the strokes incised by the scribe after the incision of the sign *-qo*.³⁰ The *ductus* of the sign encourages us to propose the reading *po-ro-de-i-qo-no* (Fig. 6). We may therefore note that this reading provides further confirmation of the currently accepted interpretation */pro-deik^wno-/, “banquetier”*.³¹ This also leads to update the list of no-

²⁴ SM II, facsimile 51a.

²⁵ CoMIK, 30; DRIESSEN 2000, 294; DUHOUX 2006.

²⁶ DUHOUX 2006, 9.

²⁷ On more recent studies focused especially on the Theban evidence and an interpretative perspective according to which *ma-ka* may not be intended as a recipient of HORD, see BERNABÉ & PIERINI 2017; DEL FREO 2014; PIQUERO RODRÍGUEZ 2018; SERRANO LAGUNA 2017.

²⁸ KT⁶, 170.

²⁹ Autopsy was first performed by the founders of the *pa-i-to* Project Greco and Flouda in 2016, and was repeated by the same scholars together with Notti and Lopez in 2018-2019. For more information, an extensive photographic apparatus, and new drawings, see FLOUDA & GRECO 2021; also, FLOUDA *et al.* 2021; NOTTI 2020.

³⁰ For a broader discussion, see GRECO *et al.* 2023, 464-467.

³¹ DMicSupl s.v. *po-ro-de-qo-no /pro-deik^wno-/. Cf. de-qo-no /deik^wnōi/ (dat.) ‘banquet’ (: δειπνον); *infra*.*

tations of the second element of *-i* diphthongs so far attested in Linear B, and especially in the archive of Knossos.³²

With regard to the debated reading on KN F(1) 51 v.2, RTI technology has helped us in the following:

- a) to highlight the fracture in the clay, isolate it in detail, and distinguish it from the voluntary strokes of the second sign;
- b) identify and highlight each constitutive feature of the sign *ductus* (namely, the circle and the cross); in particular, the trace left by the *stylus* in the upper left quadrant, where the circular line was infringed upon when the vertical line was made, producing a still clearly visible notch.³³ These elements lead us to identify the sign *-ka* (Fig. 5).³⁴ This new data allows us to resolve the palaeographic problem posed by this tablet by ruling out, beyond any reasonable doubt, the reading *ma-qe*. Consequently, this Knossian parallel with the Theban texts may now be restored (naturally assuming that the meaning of Myc. *ma-ka* is the same in the two archives).³⁵



Fig. 5. Particulars of the sign *ka* from the RTI taken by the authors (© *pa-i-to* Project).

³² As regards scribal mistakes and *lapsus*, see CONSANI 2019; DUHOUX 1987, 111-113; MELENA 2014, 92-98.

³³ Sometimes some cracks can run smoothly and straight and deceive, so to speak, the eye of the camera as well as that of the palaeographer; but here the proof lies in the *ductus* of the upper left edge of the sign, and above all in the notch left by the stylus in the circular line at the point where it is met by the vertical one. If one also observes the starting point of the fracture in the lower horizontal section, it can be clearly seen that it is not regular, and that the fracture itself does not continue upwards into the body of the sign (FLOUDA & GRECO 2021).

³⁴ The presence of the distinctive strokes of the syllabogram *-ka* can be verified on the RTI, which will be made available online at the site <https://www.paitoproject.it>.

³⁵ In the light of the new data emerging from KN F(1) 51, we may expect that the parallels offered by this document, which were already brought to attention after the discovery of the Theban texts – in light, in particular, of Myc. *ma-ka*, *po-ro-de-qo-no* (*nunc*, see above) *po-ro-de-i-qo-no* (cf. *de-qo-no*), *di-we* (cf. *o-po-re-i* (?)) – will naturally come back to mind and will be worthy of further discussion. Without delving further into this subject in the present paper, we may remember that *de-qo-no* (TH) does not actually provide a direct parallel with the figure of the “*banquetier*” (KN), but rather seems to provide information alluding to the context (this linguistic datum alone would not rule out the hypothesis of a cultic context); for a discussion on this topic, see DMicSupl s.v. *de-qo-no*; and in particular GARCÍA RAMÓN 2010, 79). An in-depth linguistic and philological discussion on the methodological and phonetic problems, also raised,

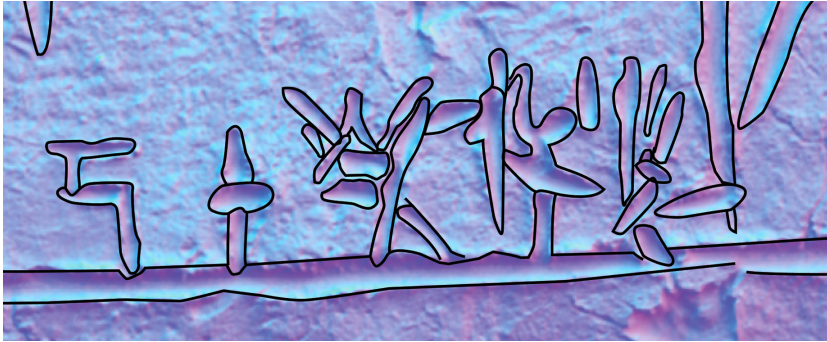


Fig. 6. Drawing of *po-ro-de-i-qa-no* made by Greco after the RTI image taken during the autopsy by Greco et al. 2023 (© *pa-i-to* Project).

Concluding thoughts on the philological aspects of the text

KN F(1)51 alludes to the cultic context of the recording and to the theonymic nature of *ma-ka*.³⁶ It may also be interesting to remember that the intriguing interpretation of Myc. *ma-ka* as (dat. of) *Mā Gā* (?), “Mother Earth”³⁷ is acceptable in Greek (despite the uncertain origin).³⁸ Al-

in particular, by the question of the interpretability of Myc. *o-po-re-i*, goes beyond the scope of this paper. However, it is worth remembering that the interpretation *op(i)-* (: *ὀπι-*, cf. *ἐπι* “above”) -*oros* (: *ὄρος* “mountain”) is to be considered the most economical and thus preferable, as it easily satisfies the lexemic and morphological analysis. This linguistic interpretation would not suggest the rejection of the possibility – at least in theory – that *o-po-re-i* might in fact be an epiclesis. However, this question necessarily connects with the general problem of the identifiability of epicleses (and epithets) in the accidental and fragmentary picture suggested by the Mycenaean evidence. On this general issue, which would naturally take us too far afield now, see GARCÍA RAMÓN 2010; 2011; HILLER 2011; on the hypothesis of a Zeus “of the mountain” (?) – cf. e.g. *di-ka-ta-jo di-we* (KN Fp(1) 1.2) – see the recent overview by NEGRI 2020.

³⁶ *DMicSupl* s.v. *ma-ka* p. 206 n. 17.

³⁷ Although this is not the only possible one (*DMicSupl* s.v. *ma-ka*), we may notice that from this perspective, the epigraphic evidence would not seem to pose an insuperable problem, assuming that *ma-ka* may be the result of (graphic (?)) univertation – this would, in fact, appear to be a suitable strategy in a syllabic system such as Linear B, which is notoriously refractory to the notation of monosyllables; see now NOTTI 2024, 102.

³⁸ The form *mā* is acceptable in Greek, see *DELG* s.v. *μά* cf. *μαῖα*; see also s.v. *μήτηρ*: the picture of the Indo-European languages suggests the importance of this basic syllable re-morphologised with the suffix forming the fundamental class of kinship terminology. According to a widely accepted view, an origin in the form of a *Lallwort* designating the “maternal”, as attested in many languages of the world, is likely (BUCK 1988 § 2.36, 103-104; GREENBERG 1966, XXII: “There is a high probability that a word designating a female parent will have a nasal consonant”; JAKOBSON 1971, in particular 129-141). As for Gr. *γᾶ* (of unknown etymology), cf. *γαῖα*, see *DELG* (and also *EDG*) s.v. *γῆ*; as regards, in particular, the well-known hypothesis *γᾶ = δᾶ* (?) (KRETSCHMER 1902), s.v. *Δημήτηρ*; cf. also s.v. *Ποσειδῶν* (?) (*Ποσειδᾶων*, *Ποτειδᾶων*, *Ποτ(ε)ιδᾶς* *vel sim.*; epith.: *ἐνοσίχθων*, *γαῖήχοχος ἐνοσίχθαιος* *Il.* 7.445, 13.43, etc., or *ἐνοσιδᾶς* (Pind.), cf. Myc. *e-ne-*

though this is not, of course, the only possible one, this interpretation is of special interest from a linguistic and cultural point of view, and is supported by later evidence (*Suppl.* 890, 900) as the editors of *FdC* I observed, although in the (probably relict) form of invocation/exclamation.³⁹ The ascertained presence of *ma-ka* in documents of Knossos and Thebes that may be traced back, admittedly with varying degrees of probability, to the religious sphere thus provides another piece of fundamental evidence in order to update the picture of current knowledge and foster future studies, even if it is, of course, not conclusive in itself.

KN F(1) 51

(124-D)

HORD T 7 v 5 z 3[

⇒

- | | | |
|----|----|--|
| v. | .1 | wa HORD T 1 v 3 po-ro-de-ḫ-qo-no v 2 z 2 |
| | .2 | di-we HORD T 1 HORD T 4 z 1 ma-ka HORD v 6 |

Final remarks

By combining the new digital technologies with the traditional methodology, we strived to steer away from the bi-polar methodology including the epigraphical (philological) and stylistic approach that impedes exploration into literacy and its display. In addressing the materiality of the tablets through 3D-laser scanning and RTI, we examined how shaping techniques, and the handling of tablets after they were dried out and inscribed may illuminate us on the *chaîne opératoire* followed by the scribes. RTI technology has also helped to address the debated reading of KN F(1) 51 v.2 and to establish the presence of *ma-ka* on the tablet beyond doubt.

si-da-o-ne (?); Myc. *po-se-da-o* (gen. *-o-no*, dat. *-o-ne(-ni)*) and related forms, cf. Gr. πόσις, Skr. *pāti-*), obviously if the interpretation Lord of (the) “Earth” is correct.

³⁹ As remarked by GARCÍA RAMÓN 2010, 81 n. 46, this does not pose an insurmountable difficulty.

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Mycenaean palaeography: the “*pa-i-to* Epigraphic Project.” An integrative approach to Linear B tablets from Knossos

Alessandro Greco

Since 2016, the *pa-i-to* project worked on a small batch of Linear B tablets of Knossos, characterized by the presence of the toponymic reference *pa-i-to*. Referring to previous publications for the definition of the methods, themes and approach adopted by our team¹, it is our intention here to provide some of the most significant results obtained from our palaeographic research on the important scribe 117.

If 3D and RTI technologies allowed us to refine the pinacological and philological analysis of the tablets² with regard to palaeography, they have also proved capable of imposing a revision in the traditional approach to the study of scribal hands. As already noted,³ although the hands of Mycenaean scribes have been precisely individuated through the palaeographic works of a series of scholars,⁴ we still lack a palaeographic approach that can be verified and retraced.⁵ Scholars have often followed the methodological lines highlighted by Emmett Bennett Jr., but then they have practically enforced an ‘intuitive’ study of signs. This approach has caused shortcomings in the methodological apparatus, with the partial exception of studies by Tom Palaima and Jan Driessen.⁶

¹ GRECO & FLOUDA 2017; FLOUDA & GRECO 2021; GRECO *et al.* forthcoming. See also FLOUDA & NOTTI, this volume.

² FLOUDA & NOTTI, this volume.

³ GRECO & FLOUDA 2017; FLOUDA & GRECO 2021; GRECO *et al.* forthcoming.

⁴ *MT* I, 440-441; *MT* II, 90; DRIESSEN 2000; FIRTH & MELENA 2016a-b; OLIVIER 1967; PALAIMA 1988; for bibliography, see also GRECO *et al.* forthcoming; DONATO 2020, 9-45.

⁵ DONATO 2020; FLOUDA & GRECO 2021.

⁶ DONATO 2020, 9-46; FLOUDA & GRECO 2021; GRECO *et al.* forthcoming.

These shortcomings include the absence of a study on the order and direction of the traits which compose the syllabograms; also, the absence of a definition and a systematization of the different characteristics of the scribes, their trends, their graphic characters, namely the very elements which graphology calls ‘graphological sign’⁷ and which include the whole set of elements we call *ductus*. These factors have certainly been evaluated and taken into consideration by scholars with excellent results, but, with rare exceptions, very few define them clearly or even list them.⁸

This methodological attitude is evident, mainly, in the work of Jean-Pierre Olivier, who, commenting on Bennett’s ‘manifesto’ of Mycenaean paleography, concludes that “certes, il y aurait moyen de préciser tel ou tel point de l’exposé du père de la paléographie mycénienne.... mais cela me paraît assez inutile: un simple examen de la reproduction du «syllabaire» *des différents scribes et des planches photographiques en apprendra plus que pages analysant le tracé des signes*.”⁹ But, after the autoptic analysis of tablets of the *pa-i-to* set, we realized the risks inherent in the use of these tables, which represent, together with the tables of Driessen, the only source for a palaeographic study on the scribes of Knossos for a Mycenologist. For example, for an effective inter-scribal comparison of the syllabograms *75, *we*, and *03 *pa*,¹⁰ the drawings of Olivier are of little use, as they reproduce the signs in their ‘calligraphic’ form, typical of the larger syllabograms which Hand 117 writes at the beginning of the tablet, but which occur rarely if compared to the ‘cursive’ forms usually adopted by this scribe. As a matter of fact, Hand 117 traces *we* predominantly like a ‘2’ and not as the elegant *reverse* S of the table by Olivier, apparently in a very similar way to SOME minuscole scribe of the Room of the Chariot Tablets. As a consequence, the tables by Driessen¹¹ also represent a graphic ‘distance’ between these scribes, which may not be so pronounced. The same is valid for the syllabogram *03 *pa*: Hand 117 usually writes its two strokes with a large groove, almost constantly

⁷ MASSEI 1997, 43: “Con il termine ‘segno’ si intende, nel linguaggio proprio del test della scrittura, ogni particolarità della grafia che sia stato possibile catalogare.”

⁸ But see how they emerged, in the case of the *vexata quaestio* of the tablets of Chania: FLOUDA & GRECO 2021, 142-145.

⁹ OLIVIER 1967, 29.

¹⁰ See also the case of the syllabogram *13 *me* of Hand 102, in GRECO *et al.* forthcoming.

¹¹ DRIESSEN 2000.

horizontal and rarely oblique, often a little arched, and almost always set back from the axis constituted by the vertical line, while the upper stroke is on average longer than the one written below, as reproduced below (Fig. 1). We do not know what led Olivier to make these choices in his tables of scribes, but it would certainly be precious for us to know.

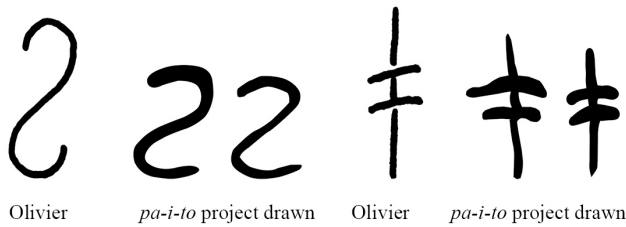


Fig. 1. Syllabograms *75 *we*, and *03 *pa*.

In order to overcome these methodological gaps, a ‘protocol’ of palaeographic approach was established for the analysis of the *pa-i-to* group tablets, based on the study of the modern principles of graphological and graphotechnical disciplines.¹² As a first result, it was possible to verify that the methodological problems highlighted for Mycenaean palaeography are the same that afflict these disciplines as well: a certain tendency to prefer an intuitive and a purely calligraphic-morphological approach. But, since graphology often represents an important tool for the graphotechnic appraisal in court, graphologists had to focus on getting the discipline out of this ‘intuitive’ sphere, with a constant effort to systematize and objectify the investigative practices and tools. In other words, they finally produced the formulation of a purely scientific method.¹³

If the effort of objectification of the graphotechnic approach obviously has provided an easy-to-apply methodological support for our study,¹⁴ much more problematic has been the discovery that the traditional method of handwriting analysis (Italian: ‘perizia calligrafica’) is considered by the graphotechnic field to be unreliable, if not completely outdated, because it gives rise to easy errors.¹⁵ This approach relies

¹² MASSEI 1997; CROTTI *et al.* 2011.

¹³ CROTTI *et al.* 2011; DONATO 2020, 47-78.

¹⁴ GRECO *et al.* forthcoming.

¹⁵ CROTTI *et al.* 2011, 68 e 80. The inefficiency of the method was decreed with a sentence of the Supreme Court of Cassation.

mainly on the study of the morphology of the letters for the identification of the writer, and till now it has been the quasi-sole approach model used by mycenologists.

The graphometric approach of Nosch,¹⁶ to date, represents the only alternative palaeographic method adopted in Mycenology. Graphometry¹⁷ is the technique which deals with the measurement of the so-called graphological signs.¹⁸ This approach is undoubtedly useful, as it allows to study the dimensions of signs, in particular the dimensional and dynamic relationships between the graphic forms. Nosch provided an accurate study of the measures of the LANA logogram and attempted to derive executive constants between the traits.¹⁹ However, her study has highlighted what, in the literature, is considered the intrinsic weakness of the graphometric method: the tendency, after the rigorous phase of measurements, to degrade itself in the comparison phase, since it tends to settle for tolerances and to make use of averages and ranges of variation.²⁰

Therefore, the approach of the graphotechnic expert who makes use of the most useful tools, adopted by various disciplines, for the identification of a graphic personality should be favoured. The aforementioned tools can be graphometry, graphology, the signalling-descriptive method etc.²¹, but it is essential to underline that it is not the analysis of the signs *per se* which allows the identification of a hand, but rather an investigation that embarks from the *movement* and *dynamic relationships* between every graphic element that make up a graphic phenomenon. As a matter of fact, only by analysing the documents in terms of the dynamic relation between the signs that compose a syllabogram, between the syllabograms that make up a word, between the words that make up a line, and, finally, the whole text that makes up the layout, it will be possible to define the graphic behaviour ('gesto grafico') and the specific personal characteristics ('idiotismi') of a scribe. To this end, once the terminology for the identification of the signs composing a syllabogram, and a tool for the definition both of their direction and of

¹⁶ NOSCH 2007.

¹⁷ MASSEI 1997, 56-65; CROTTI *et al.* 2011, 68-70.

¹⁸ MASSEI 1997, 44-45.

¹⁹ NOSCH 2007, 15-23.

²⁰ CROTTI *et al.* 2011, 69.

²¹ CROTTI *et al.* 2011, 63-78.

their order (sequence) of execution²² have been produced, the palaeographic investigation adopted by the *pa-i-to* Project team has followed these steps:

1. Layout methods;
2. Relationship between line, words, logograms and the general layout;
3. Spatial relationship between words;
4. Spatial relationship between signs;
5. Similarities between syllabograms;
6. Sequence of signs which compose a syllabogram;
7. Direction of every single sign that composes a syllabogram;
8. Morphological investigation of syllabograms and logograms;
9. Definition of the scribe's graphic personality.

Comparing this scheme with those elaborated by other scholars,²³ few differences can be seen, but it is clear that all mycenologists, as we have seen, with the exception of Driessen, have adhered to it more in terms of principle than of system. This is shown, for example, by the study of the direction and the order of the strokes which were considered fundamental²⁴ albeit never reported, or by the lack of any hint to the dynamic relationships between the words and the lines, and between the syllabograms and the single signs which compose them. Finally, no one has attempted to elaborate a final identikit of the graphic personalities identified.

In the following part of my paper, some diagnostic examples of the validity of the adopted method have been preferred to the complete description of each step, impossible for reasons of space. The case study focuses on scribe 117.

²² GRECO *et al.* forthcoming.

²³ DRIESSEN 2000, 35-36; *MT I*, 440-441; *MT II*, 90; OLIVIER 1967, 27-32; PALAIMA 1988, 21-27.

²⁴ OLIVIER 1967, 29.

Layout and the word-unit

The great scribe of Knossos does not pay particular attention to the right margin of the tablet. The information reported, in fact, never tends to be so extensive as to require specific attention. Towards the left, however, some peculiarities can be found, as the palm leaf-shaped tablets generally influence the direction and the size of the first written word. Since the measuring of the distances between the first word and the edges of the tablet, as we have seen, can be very useful, but needs the admission of a wide range of variability, we adopted a simpler method, that is to say, to individuate nine types of trends, described in Fig. 2.









- 1 = The lemma runs horizontally, regardless of the edges of the tablet
- 2  The lower part of the lemma runs horizontally, but the syllabograms get bigger towards the right, following the upper edges of the tablet
- 3  The lower part of the lemma runs horizontally, but the syllabograms get smaller towards the right
- 4  The upper part of the lemma runs horizontally, but the syllabograms get smaller towards the right
- 5  The upper part of the lemma runs horizontally, but the syllabograms get bigger towards the right, following the lower edges of the tablet
- 6  The lemma gets smaller towards the right
- 7  The lemma gets bigger towards the right, following both the edges of the tablet
- 8  The lemma runs toward the bottom, following the lower edges of the tablet. All syllabograms share the same dimension
- 9  The lemma runs toward the top, following the upper edges of the tablet. All syllabograms share the same dimension

Fig. 2. Types of trends.

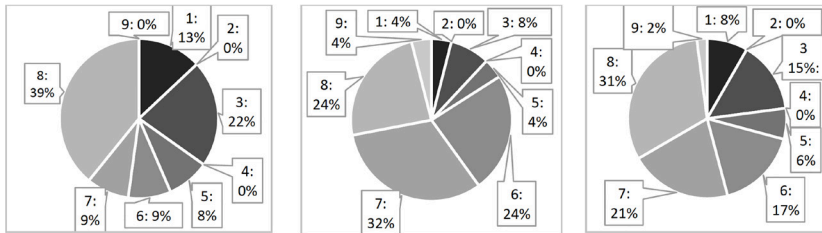


Fig. 3. a. The type of trend of the first word written by scribe 117 on the sample of documents submitted to RTI (set *pa-i-to*), b. The type of trend of the first word written by scribe 117 on the sample of documents of the *ku-ta-to* set (based on *CoMIK* drawings), c. The type of trend of the first word written by scribe 117 on the sample of documents of both the *ku-ta-to* + *pa-i-to* sets.

In the documents analysed with the RTIs (the *pa-i-to* set), and in those viewed through the *CoMIK* apographs (set *ku-ta-to*), Hand 117 tends mainly to write the anthroponym slightly inclined (type 8 – 31%), or

to widen the body of the word to the right (type 7 – 21%) (Fig. 3c). The different statistics between the *pa-i-to* group (Fig. 3a) and the *ku-ta-to* group (Fig. 3b) are probably due to a greater care exercised by the scribe during the compilation of the *pa-i-to* group, where type 8 prevails together with the tidier type 1, while in the *ku-ta-to* set the words tend to follow both the edges of the document (type 7), prevailing in percentage also over the types 8 + 1. Examining the cases of *pa-i-to* + *ku-ta-to*, however, a prevalence of the 8 + 1 group can be found. A marked tendency to type 7, on the contrary, is noted in the **Dk(2)** set, written by 119, where it reaches the 67% of cases (Fig. 4).

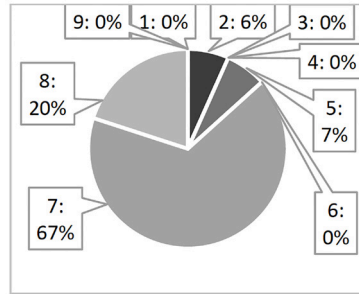


Fig. 4. The types of trend in Hand 119 (set *ku-ta-to*), based on *CoMIK* drawings.

The difference between Hand 117 and Hand 119 may be a clue of greater care and/or experience of Hand 117 (the absence of type 1 in Hand 119, in particular, is surprising), but it is also probably the effect of the specific tendency of this scribe for the graphological sign of the ‘methodical difference’,²⁵ which induces him to progressively reduce the size of the syllabograms in the terminal part of the word, as demonstrated by the considerable incidence of types 3 and 6 as well.

An interesting trend has also emerged through the analysis of the relationship between line and text + logograms, particularly when a word or logogram is written above the line: scribe 117 seems more imprecise when he writes the logograms than when he writes the syllabic part, so much so that out of 25 logograms written above a line, as many as 20 cross the line below, while for nine names in the same position the crossing occurs only three times.²⁶ Undoubtedly, this occurs because the line was written before the data relating to the animals, but the high percentage of logograms cutting the line with respect to the names,²⁷ particularly in the *pa-i-to* set, is compatible with the hypothesis that Hand 117

²⁵ FLOUDA & GRECO 2021, 162-163.

²⁶ But it should be noted that two out of these three tablets belong to the groups **Dm** and **Dn**, and therefore were not necessarily written together with those of the *pa-i-to* set *stricto sensu*: cf. GRECO 2014.

²⁷ A very similar trend can be noted also in the *ku-ta-to* set, by Hand 117 and Hand 119.

first compiled the main text (name + toponym + collector), and only successively²⁸ proceeded to complete the data relating to the animals.

Similarities and sequences

A useful tool for the definition of the executive order of traits used by scribe 117 for writing a syllabogram is represented by the signalling-descriptive method.²⁹ It consists in grouping the syllabograms on the basis of mutual similarity (or the similarity of even only parts of them) to define the order (and characteristics) of execution which are likely to be identical, in the same hand, even in different signs. This criterion is mentioned by Olivier³⁰ and Palaima,³¹ but the scientific validity of this method recognized by the graphotechnic discipline has encouraged a more structured approach which was adopted by the *pa-i-to* Project.

Consequently, we proceeded to define some tables of affinity between the syllabograms and/or a part of them. An example is the affinity between *03 *pa*, *05 *to*, *41 *si*, and *106 *ovis*, which share a vertical line crossed by two parallel traits. For an easier analysis, each sign was labelled with a roman numeral: it identifies each sign but not the sequence followed for its transcription (Fig. 5).

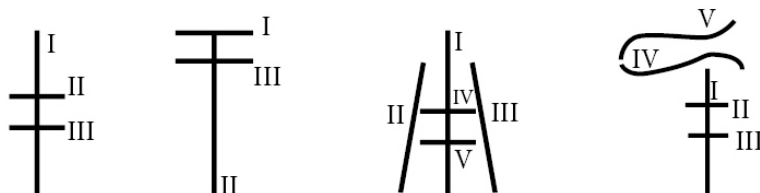


Fig. 5. *03 *pa*, *05 *to*, *41 *si* and *106 *ovis* transcribed.

This approach has helped us solve some uncertainties dealing with the sequence of execution of the syllabogram *pa*. The ‘standard’ order of traits adopted by Hand 117 for this syllabogram seems to be 1^I<(2^{II}?, 3^{III}?), that is to say, 117 traces first sign I and then cuts it with the other two horizontal strokes, whose order of execution, however, is not de-

²⁸ Keeping the tablets moist, cf. FLOUDA & NOTTI, this volume.

²⁹ CROTTI *et al.* 2011, 72-77.

³⁰ OLIVIER 1967, 29-30.

³¹ PALAIMA 1992-1993, 276.

tectable as we have demonstrated in a previous work,³² By avoiding using a 'logical' (top-down) deduction for guessing the original order of II and III, we were able to demonstrate that Hand 117 traced first II and then III, on the basis of a dynamic analysis of the relations between the syllabograms *pa* and *i* and between *i* and *to* in the word *pa-i-to*.³³ This sequence was confirmed also by some cases³⁴ where, in the transcription of the syllabogram *pa*, the strokes III shift and deform the strokes II, a proof that II was traced before.

A similar method allowed the verification of the 'standard' sequence used by Hand 117 to trace the syllabogram *to*. In the sample of texts at our disposal, the dominant sequence is $1^I, 2^{II?} < 3^{III?}$,³⁵ which, again, doesn't help in defining the absolute order of transcription of the traits, because I is separate from II. But, on one hand the dynamic analysis led to think, as we have seen, that trait I was drawn before II and III, and, on the other, there are seven cases where trait II cuts the stroke I,³⁶ a proof that Hand 117 traced first the upper line, then the vertical one, and finally the lower horizontal stroke, according to a sequence $1^I < 2^{II} < 3^{III}$.

The comparison with the logogram *ovis* and the syllabogram *si* provided other evidence about the absolute sequence of execution of the strokes of *pa* and, consequently, of *to*, as well as the ones of these same signs. For example, in *ovis* the executive sequence of strokes I, II and III is almost always ambiguous (as in *pa*), but, even in this case, in some tablets, stroke III deforms II.³⁷ The same thing can be said for syllabogram *si*, where, in **Da 1164**, the lower horizontal stroke deforms the upper.

Through the graphometric analysis, it was possible to find another clue that for two horizontal parallel strokes Hand 117 used to write the

³² GRECO *et al.* forthcoming.

³³ In the execution of the word *pa-i-to*, when Hand 117 draws the vertical line of *i*, it fails to take the right distance from the previous *pa*, and so the virtual spaces between the two syllabograms overlap; on the contrary, when Hand 117 traces *to*, the overlap with the virtual space of the previous *i* never occurs. This is a clue that Hand 117 traces the upper horizontal stroke of *to* first, and can consequently take the distance from the previous syllabogram with greater precision. See DONATO 2018, 110-112; FLOUDA & GRECO 2021, 162-136 and, in particular, GRECO *et al.* forthcoming.

³⁴ **Da 1163**, **Da 1164**, **Dm 1184** and **Dv 1085**.

³⁵ The sign I, isolated (indicated by '!'), may have been traced first, while II is cut by III, so that only the relative sequence II-III is sure (but not the absolute sequence I - II- III; as a consequence in the formula we have to indicate II and III both with '?'). See GRECO *et al.* forthcoming.

³⁶ **Da 1156**, **Da 1163**, **Da 1173 lat.inf**, **Da 8201**, **Db 1160**, **Db 1464**, **Dd 1157**, **Dd 1171**.

³⁷ **De 1585.A**, **Dg 1158.b**, **Dm 1184**, **Dn 1094.1**.

upper one first and then the lower: when Hand 117 draws two horizontal superimposed strokes in sequence, he almost always executes the lower one shorter and less accurately.

Hand 117 & 101	<i>pa</i> (40 cases) Hand 117	<i>to</i> (37 cases) Hand 117	<i>si</i> (14 cases) Hand 117	OVIS (48 cases) Hand 117
Upper stroke longer than lower	29	33	7	33
Upper stroke identical to lower	2		1	3
Upper stroke shorter than lower	2		1	4
Not verifiable	7	4	5	8

This attitude, which is ultimately to be traced back to an ‘executive haste’, also allows us to define the absolute sequence in the incision of the two isolated strokes II and III of the syllabogram *si*, since on average stroke III is shorter (and less carefully made) than II, as it can be seen in the table below.

	<i>si</i> (14 cases) Hand 117
Left stroke longer than right stroke	8
Left stroke identic to right stroke	2
Left stroke shorter than right stroke	2
No definibile	2

Spatial relationship between signs and scribe’s graphic personality

The comparison between similar groups of signs has allowed us not only to solve specific problems of the sequences of traits, but also to define a specific ‘graphological sign’ characteristic of Hand 117, the ‘executive haste.’ This graphic feature is proven not only in the execution of the syllabogram, but also, in broader terms, in the word-unit; in fact, when Hand 117 writes two successive identical signs, as in the case of *we* and *jo* of *we-we-si-jo-jo*, he tends, on average, to render the second syllabogram of the couple more cursive and less accurate (Figs. 7-9), exactly as it happens when he reproduces two similar elements within the same syllabogram.³⁸ The set of graphic features linked to this ‘haste’ probably

³⁸ DONATO 2020, 103-154.

leads also to the tendency of Hand 117 to reduce the dimension of the last two syllabograms of a word (graphological sign of ‘methodical difference’)³⁹ (see the word *pa-i-to* in Fig. 6).

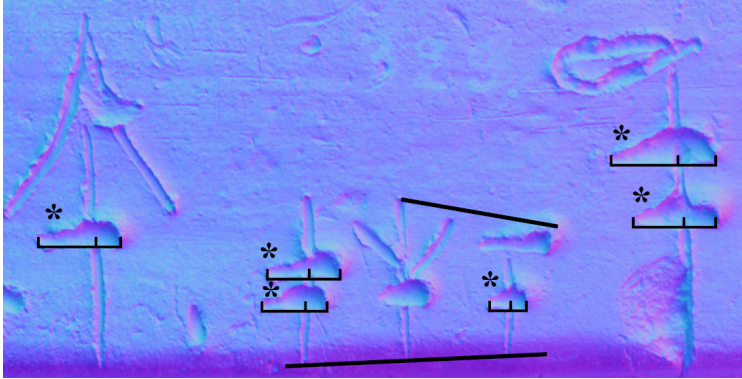


Fig. 6. Da 1173 (© *pa-i-to* Project).

Another typical feature of Hand 117, already identified, is the tendency, when he traces crossed lines, to set back the horizontal strokes towards the left, with respect to the central vertical axis (asterisk in Fig. 6).⁴⁰ In the case of *pa*, *to*, *si* and *ovis* of the documents at our disposal, this trend is recognized in the vast majority of cases.

Hand 117 & 101	<i>pa</i> (40 cases) Hand 117	<i>to</i> (37 cases) Hand 117	<i>si</i> (14 cases) Hand 117	OVIS (48 cases) Hand 117
Higher stroke set back	33	15	4	39
Higher stroke advanced	1	13	3	1
Higher stroke centered	2	5	3	1
Not verifiable	x	4	4	7
Lower stroke set back	24	23	2	35
Lower stroke advanced	7	7	2	2
Lower stroke centered	4	2	2	2
Not verifiable	5	6	4	9
lower stroke is missing			4	

³⁹ FLOUDA & GRECO 2021, 162-163.

⁴⁰ FLOUDA & GRECO 2021, 162-163.

As can be seen, the case of *si* is a little anomalous; this phenomenon is due to the presence of the lateral lines II and III, which reduce the space for IV and V. It can also be noted that, in the transcription of the syllabogram, the 'haste' of Hand 117 on one hand, and the reduced space on the other hand, often lead the scribe to omit the stroke V, and this represents another peculiarity of 117.

Morphological investigation

With regard to the morphology of syllabograms, a calligraphic approach that paid attention to the dynamic interaction between signs and syllabograms has made it possible to collect many diagnostic data that recur in a relevant percentage of cases.⁴¹ These data represent what we could call a syllabographic 'identikit': their immediate applications will emerge from the example of the syllabogram *75 *we* (Fig. 7):

When Hand 117 writes this syllabogram, he proceeds in a significant percentage of cases:

- 1) to trace the line from top to bottom
- 2) to make a first sinuous curve (x) with an oblique stylus, so as to create a small clay shifting
- 3) to execute the section that joins the two curves (i2) with a quasi-straight line and, on average, with faster execution speed; as a consequence this forces Hand 117:
- 4) to make the lower curve (y) sharp-cornered, with a less oblique stylus

We also observed on average that:

- 5) the swelling of the lower concavity (y) exceeds to the left of the starting point of the sign (α);
- 6) the swelling of the upper concavity (x) exceeds to the right of the end point of the sign (ω).

Moreover, when we have two signs *we* in sequence, as in the word-unit *we-we-si-jo*, the following characteristics can be also found in the second *we*:

⁴¹ All statistics can be found in DONATO 2020, 107-123.

- 1) lower sinuosity;
- 2) a little bit lower position;
- 3) smaller dimension (due to the ‘methodical difference’);

While as regards the trait, we can observe

- 1) a shorter i1 section;
- 2) i2 and i3 become more straight.

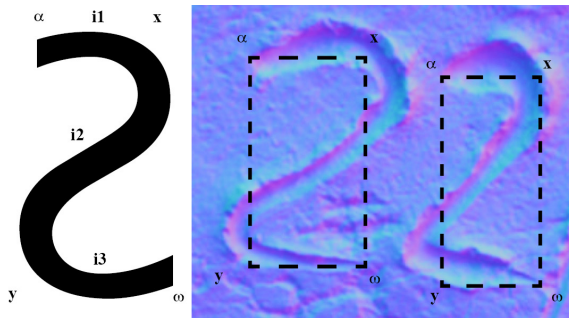


Fig. 7. DONATO 2020, 108, 119.

Thanks to this kind of ‘syllabic identikits’ we have been able to attribute to Hand 117 the tablet fragment **X 9606**, whose syllabograms *we* and *si*⁴² present all typical features of the graphic personality of Hand 117 (Fig. 8).



Fig. 8. Tablet X 9606 (after CoMIK).

⁴² DONATO 2020, 135-154.

By applying the same method to the syllabogram *36 *jo* and observing it in the doubled sequence *jo-jo*, it has also been possible to attribute the fragment **X 9436** (Fig. 9) to Hand 117, because the reported syllabograms share many features with the *jo* written by this scribe. These are:

- 1) very wide and deep horizontal traits, creating important clay shifting towards the right;
- 2) the hook traced with a trait running from top to bottom and from left to right with an oblique stylus so as to create small clay shifting on the upper curve, towards the right;
- 3) tendency to trace the vertical hooked line as mostly orthogonal;
- 4) reproduction of the second *jo* slightly lower than the first;
- 5) reproduction of the second *jo* smaller than the first (methodical difference);
- 6) reproduction of the hook of the second *jo* in the sequence *jo-jo*, more cursive than the first.



Fig. 9. Tablet X 9436 (after *CoMIK*).

The only persisting doubt relates to the horizontal strokes, which although wide and ‘coarse’ are more regular than the similar traits of Hand 117, which tend, on average, to a slight curvature. But straight horizontal traits are also documented in Hand 117.

Since it was possible to analyse only a very small batch of documents through the RTI, we were not able to study in depth all the syllabograms of Hand 117. For this reason, in the case of **Dp 1061** (Fig. 10), which has been doubtfully attributed to Hand 117, it was not possible to reach a definitive conclusion. Nevertheless, it has been possible to highlight the

idiosyncratic elements that left the attribution in doubt: a starting point, at least, for future investigations.



Fig. 10. Tablet Dp 1061 (© *pa-i-to* Project).

The following elements lead one to doubt this attribution:

- 1) the vertical lines traced in this tablet are much wider than those usually drawn by Hand 117;
- 2) the horizontal strokes, although wide and deep like those of Hand 117, are, on average, less curved or tend to be traced with a slight double curve, which is not characteristic of Hand 117.
- 3) the syllabogram *pa* presents an advancement of the horizontal traits with respect to the vertical one: a rare feature for Hand 117;
- 4) The syllabogram *28 *i* presents some anomalies with respect to the *ductus* of Hand 117:
 - a) it is well spaced from the preceding syllabogram *pa*, as opposed to the general practice of Hand 117;⁴³
 - b) the first stroke on the left is very long and well traced compared to the same strokes of Hand 117, who generally tends to make them more oblique, smaller, less accurate, and written at a certain distance from the horizontal trait;
 - b) by observing the order of the traits that compose the syllabogram, it emerges that the horizontal stroke cuts all the others. This sequence never occurs in Hand 117 in the 36 recurrences of this syllabogram available in our group of tablets, but, in the same sample, it occurs three times in the nine recurrences attributable to other scribes;

⁴³ FLOUDA & GRECO 2021, 162-163.

- 5) The signs for 'hundred', although made according to the sequence used by Hand 117 (i.e. the left curved line first and then the right one), are well rounded and small, traced slowly or carefully amended to provide a calligraphic form; on the contrary, on average, Hand 117 traces this numeral larger, more cursive, less accentuated, and with the left semicircle a little bit cornered.

Only a complete study of Hand 117 and of the other scribes could make it possible to dispel the doubt about the attribution of this tablet, just as only a study carried out on the entire archive of Knossos will be able to provide a precise picture of the graphic personality of 117 and his colleagues. However, we hope to have provided at least a framework of the tools and guidelines we have adopted to produce a study which is methodologically correct, open to the scientific community, and verifiable at any time during its investigation.

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A new tool on Greek lexicography: *El léxico del griego micénico**

Juan Piquero Rodríguez

Introduction

The aim of this paper is to present to the scientific community of Mycenologists a new instrument on Greek lexicography [henceforth: *LGM*].¹ Following the pattern of Aura Jorro's *DMic*, this new lexicon is also published in Spanish.

The purpose of the lexicon is two-fold. On the one hand, *LGM* presents a comprehensive survey of Mycenaean vocabulary in its current state of research. On the other hand, it enables a comparison between Mycenaean and alphabetic Greek vocabulary of the 1st millennium BC. In this light, its objective is to determine which part of the lexicon has been preserved and to what extent, as well as how much has been lost. The lexicon intends to fill a major gap in Greek lexicographical studies. Due to the syllabic character of the Linear B script and its inherent problems of interpretation, the Mycenaean vocabulary preserved in alphabetic Greek is not treated in sufficient depth in general dictionaries of ancient Greek from a comparative perspective. To address this issue,

* This paper is part of the research project *LERMIC* “Léxico religioso del micénico: conceptos, prácticas, objetos” (“Mycenaean Greek Lexicon: concepts, practices, objects”), which is funded by the Spanish Ministry of Science and Innovation (PID2020-118204GA-I00).

¹ This recently published tool comprises the results of my PhD research, conducted under the supervision of Francisco Aura Jorro and Alberto Bernabé, and was defended in Madrid in 2017. The final version of the PhD manuscript, enriched with the comments and improvements made by the thesis committee, was published in 2019 in the prestigious collection *Études anciennes*. I would like to thank Massimo Perna for his invaluable help and Guy Vottéro for his enormous patience.

LGM follows an alphabetical lemmatization and introduces the Mycenaean lexicon through alphabetic Greek. Thus, by using a known code, it hopes to facilitate access to everyone who has not had the opportunity to further their studies in the Mycenaean lexicon due to the lack of an updated, systematic and critical work which deals with it.

Conceived as a comprehensive examination of the topic, *LGM* is not only an index of more or less certain Greek correspondences, but approaches the lexicographical study with precision, referring to the context in which each word appears. It is also accompanied by an updated bibliography which covers the years 1990 to 2018, and takes into account not only the interpretation of the terms, but also the documents in which they are listed. Previous bibliography can be consulted in *DMic*.

Predecessors: a brief history of Mycenaean lexicography

The reason for this study can be found in the very origins of the discipline itself, since the question of how the lexicon contained in the Linear B inscriptions compared with its corresponding forms in alphabetic Greek was already raised from the time of the script's decipherment.²

It is well-known that the information provided by the Mycenaean lexicon has contributed to clarifying the etymology of some terms in alphabetic Greek with which a comparison can be made. The evidence from Mycenaean is chronologically earlier than alphabetic Greek and preserves archaic features which were lost in later periods. Examples of these archaic traits include the preservation of the labiovelars (e.g. the attestation of the form *o-te* showed that the etymology of ὄτε 'when' should be reconstructed on the basis of *-te* and not *-qe*; otherwise a form †*o-qe* would be expected in Mycenaean), *wau* (*w*) in all positions (which disproved, for example, old etymologies such as **enweka* for ἔνεκα), or the origin of the *-m* inflection in *e-me* (*ἔμει) 'one' from the Indo-European root **sem* versus the analogical levelling from the neuter forms of the *-n* inflection which took place in the 1st millennium BC.

Throughout the history of Greek lexicography three types of scholarly works have taken into consideration the Mycenaean data: a) general dictionaries of ancient Greek; b) etymological dictionaries of ancient Greek; c) Mycenaean vocabularies and lexica.

² VENTRIS & CHADWICK 1953, 88-101.

Mycenaean vocabulary in general dictionaries of ancient Greek

There are only two standard dictionaries of ancient Greek where the Mycenaean lexicon has been taken into account: the *DGE*,³ and the ninth edition of the *Greek-English Lexicon (LSJ)*.⁴

However, as Adrados himself acknowledged, it is impossible to include the Mycenaean vocabulary in a standard dictionary such as *DGE*.⁵ There are two main difficulties in this respect. First, the problems related to the adaptation of Linear B for writing Greek mean that the same syllabic sequence can be interpreted in two different ways (for instance, *pa-te* could be interpreted as πατήρ or πάντες depending on the context). Second, there are often important semantic changes between Mycenaean and alphabetic Greek (the most characteristic example being the comparison between the Greek βασιλεύς ‘king’, and the Mycenaean *qa-si-re-u* ‘chief’ *uel sim.*). Indeed, one of the major difficulties is that every Mycenaean word must be submitted to critical interpretation: the syllabary does not allow for unequivocal interpretations and the context where a term appears is crucial. No standard dictionary can collect all this information. The need to create a specific tool for Mycenaean lexicography was therefore pressing.

Both *DGE* and *LSJ* include Mycenaean words in the last part of the entries and refer the reader to Mycenaean vocabularies for fuller accounts of Mycenaean vocabulary and its context: *DGE* cites *DMic*; *LSJ* does the same with the addition of *MGV*.

Etymological dictionaries of ancient Greek

Mycenaean vocabulary occupies a prominent position in the etymological dictionaries of ancient Greek. There are two main reasons for this. On the one hand, the documents written in the Mycenaean dialect are, together with those in Hittite, the oldest testimonies for the reconstruction of the Indo-European language. On the other, this early evidence is crucial for the etymological reconstruction of 1st millennium Greek. Hence, Greek etymological dictionaries, such as Pierre Chantraine’s *DÉLG*, and

³ Compiled by Francisco Rodríguez Adrados and his collaborators; also to be consulted online.

⁴ Compiled by Henry George Liddell, Robert Scott, Henry Stuart Jones, Roderick MacKenzie and their collaborators and successors; also to be consulted online.

⁵ ADRADOS 1977, 68. With regard to the incorporation of Mycenaean vocabulary in *LSJ*, see VINE 2019.

Robert Beekes' *EDG*, systematically employ Mycenaean vocabulary.

This is not the case, however, with Hjalmar Frisk's *GEW*. Frisk published the first volume of *GEW* in 1960, when the debate about the decipherment of Linear B was still very lively.⁶ By contrast, *CÉG*, the Greek etymology chronicle, always integrates Mycenaean data.⁷

The problems of incorporating the Mycenaean vocabulary into Greek etymological dictionaries are similar to those described above with regard to the general dictionaries. For more information on the Mycenaean data, *DÉLG* refers readers to *MGV*, while *EDG* to *DMic*.

Mycenaean vocabularies and lexica

The issues concerning the inclusion of the Mycenaean lexicon in general dictionaries led from early on to the publication of dictionaries dedicated exclusively to Mycenaean vocabulary. Compared to general dictionaries, lemmatization in these is not alphabetic but is based on the transcription of the syllabograms. Thus, one finds *a-to-ro-qa* instead of ἄνθρωπος.

Vocabulary studies began to be written soon after the decipherment of Linear B. Therefore, already in 1955 Piero Meriggi and Vladimir Georgiev published two lexica.⁸ However, it was only after the publication of *MGL* in 1963 by Morpurgo Davies that Mycenaean lexicography made a breakthrough. From a structural point of view, each transliterated entry includes a comprehensive index of references to the tablets where the term appears, and occasionally a complementary bibliography which justifies the possible interpretations.

The importance of the methodology of *MGL* is well captured by Adrados:⁹ “inaugura la táctica [...] de preferir a las propias opiniones la exposición de las de los otros”. Indeed, up to that moment lexica did not mention other hypotheses than those of their own authors.

MGL remained the most important tool in Mycenaean lexicography

⁶ He recognizes his lack of coherence and tries to justify it in the *Vorwort* of *GEW* (vii). Regarding the context of the decipherment at the early stage, see CHADWICK 1992.

⁷ *CÉG* is published regularly in the *Revue de philologie, de littérature et de histoire anciennes*, under the supervision of Alain Blanc, Charles de Lamberterie and Jean-Louis Perpillou. The last edition of *DÉLG*, published in 2009, has a *Supplément* containing the numbers 1-10 of *CÉG*.

⁸ GEORGIEV 1955a; MERIGGI 1955. GEORGIEV 1955a has two supplements: GEORGIEV 1955b, 1955c.

⁹ ADRADOS 1995, 110.

until the publication of *DMic*. In the 1960s, Adrados put together a team of collaborators and began the preparation of *DGE*.¹⁰ At that time, with the decipherment confirmed, it would have been a serious mistake not to include the Mycenaean vocabulary in the dictionary. However, due to the problems related to the inclusion of this lexicon in *DGE* for the reasons explained above, the solution that was opted for was the creation of a Mycenaean dictionary as a supplement to *DGE*.¹¹ Adrados entrusted this dictionary to Aura Jorro as part of his PhD, which was finally published in two volumes in the years 1985 (A-N) and 1993 (O-*89).¹²

As Aura Jorro admits,¹³ *DMic* was to a large extent indebted to and continued Morpurgo's *MGL*. Moreover, it included information and references to etymological, prosopographical and geographical studies, making *DMic* the main working tool of every Mycenologist. However, there were at least two reasons which made its replacement necessary: the publication of new Linear B texts, and the large amount of books and articles on Mycenaean published after *MGL*.

In addition, despite the publication of all these resources, the problem of the access to the Mycenaean lexicon for those who were not familiar with the system of the Linear B syllabary, as is the case with many Hellenists and historians, remained unresolved. To address this, Georgiev's *Lexique* included in its final pages an index in which the Mycenaean terms are transcribed into alphabetic Greek, although not in a systematic way:¹⁴ the words are sometimes transcribed in the nominative and sometimes in an inflected form, e.g. 'ἄρμοτεύς = *a-mo-te-wo gen.*' vs. 'ἄξονες = *a-ko-so-ne.*' This situation changed in the *Index Graecus* of *MGL*, where "ubi Graeca verba quae ad voces inlustrandas in

¹⁰ On the origins of *DGE* see ADRADOS 1971.

¹¹ ADRADOS 1971, 21: "parece inconcebible, en el día de hoy, redactar un Diccionario griego que no tenga en cuenta el Micénico. Sin embargo, es evidente que este material no puede ser tratado igual que otro cualquiera, incorporándolo sencillamente a los mismos artículos. Son demasiados los puntos dudosos en la interpretación del Micénico para que pueda procederse así. Pero tampoco se puede dejar de hacer referencia en un artículo del Diccionario a la forma micénica de la palabra en cuestión. La solución ha sido ecléctica. El plan es publicar un Diccionario Micénico que ponga al día los existentes, indicando la interpretación o interpretaciones que se consideran más verosímiles; sin separar, claro está, nombres propios de comunes."

¹² *DMic* I; *DMic* II, and both were reprinted in 1999. A *Suplemento (DMicSupl)* has been recently published by Aura Jorro, Bernabé, Luján, Varias and myself.

¹³ AURA JORRO 2012, 45-46.

¹⁴ GEORGIEV 1955a.

lexico laudantur reperies”.¹⁵ However, the most important breakthrough was made with the publication in 1963 of *MGV I* by John Chadwick and Lydia Baumbach. This paper, followed by *MGV II* by Baumbach in 1971, in which she included new terms and an updated bibliography, has served to fill the existing gap until the publication of *LGM*. In *MGV I-II* the Mycenaean lexicon is dealt with in alphabetical entries, so that the relationship between the Mycenaean and alphabetical terms is clearly established. This method involves certain difficulties, since, as Chantraine points out, “ils est vrai que les procédés orthographiques [...] présentent à l’etymologiste une difficulté malaisément surmountable”,¹⁶ but represents the only way to include Mycenaean vocabulary in studies of the Greek lexicon. Despite the problems of the syllabary, it should not be forgotten that the Mycenaean lexicon is part of the Greek lexicon and must be given its rightful place in dictionaries like any other vocabulary. Furthermore, Mycenaean vocabulary is fundamental since “il s’agit des mots grecs que fournissent la première attestation historique dont nous disposons”.¹⁷ Other significant improvements made by *MGV I-II* are the inclusion of morpho-syntactic information in each entry, and a brief bibliographical reference indicating the place where the interpretation is proposed or discussed. In addition, *MGV I-II* has created a way of classifying the degrees of plausibility of the suggested hypotheses, information which is essential for readers. Thus, the highest degree of probability is indicated by the absence of a description, while the terms ‘probably’ (prob.), ‘possibly’ (poss.) and ‘perhaps’ (perh.) indicate different degrees of probability from greater to lesser.

There has been no updated catalogue of Greek words incorporating newly published texts and new interpretations after the publication of *MGV I-II*.¹⁸ In fact, an important gap in *DMic* is the absence of an *Index Graecitatis*. As early as its publication some pointed out the lack of this important instrument,¹⁹ and Aura Jorro himself has continued

¹⁵ *MGL*, xiv.

¹⁶ CHANTRAINE 1962, 7.

¹⁷ CHANTRAINE 1962, 8.

¹⁸ PROBONAS 1978 is based on a similar perspective, but unfortunately only the first volume has been published (ἀ-βέλεμνον).

¹⁹ ADRADOS 1995, 117. Also RODRÍGUEZ SOMOLINOS 2008, 425-426.

to insist on its indispensable elaboration.²⁰ However, despite attempts,²¹ the methodology proved unsuccessful, both because a mere index could not easily indicate the degree of probability of the hypotheses, and because *DMic* was by then dated and the methodology did not allow the addition of vocabulary from new texts or of recent hypotheses about old terms.²² It was therefore necessary to create a complete and up-to-date tool to overcome these difficulties. The result is *LGM*. It is based on the publications of Chadwick and Baumbach and its purpose is none other than to expand, improve and, above all, update the work of these two scholars of the last century in a systematic way.

LGM: the organization of the lexicon

Like *MGV* I-II, *LGM* adopts an alphabetical lemmatization in alphabetical order, as its more important function is to offer access to the Mycenaean lexicon to those unfamiliar with the rudiments of the Linear B syllabary. It includes the entire Mycenaean lexicon except for proper nouns: anthroponyms and toponyms (*infra*).

LGM displays the characteristics of a lexicon in that it provides information about every Mycenaean word and its meaning in the context in which it appears.²³ This latter point is very important in Mycenaean lexicography, as contexts often limit the possible interpretations of a given word.

In terms of methodology, *LGM* is organized as follows. The dictionary lists in alphabetical order the nominative singular of names, adjectives and pronouns, and the 1st person singular of the present active indicative of verbs. When a term is attested defectively (as in a gloss, for example), it is recorded in that way, since there is no certainty about its complete paradigm. In accordance with general dictionaries, Attic is usually preferred, unless a word is only attested in a different dialect.

The syllabograms are presented transliterated and in italics, according to the commonly accepted convention. Graphic variants of the same Mycenaean term are usually given in a footnote. According to the editorial standards of the second volume of *DMic* II,²⁴ terms that are part of a

²⁰ AURA JORRO 2012, 50.

²¹ PIQUERO RODRÍGUEZ 2014.

²² See *LGM*, 18-22 for more details.

²³ LARA 1997, 19-20.

²⁴ *DMic* II, 8.

compound or are attested alongside an enclitic term, without independent attestation, are written in bold (-**qe**, **a₃-zo-ro-**, etc.). Inflected forms belonging to the same paradigm are grouped within the same lemma, always in bold.

When a word has survived in alphabetic Greek in the same form in which we know it in Mycenaean (with the distinctive features proper to the Mycenaean dialect and its writing system), it is inserted under the lemma without any sign. Homographs are distinguished by Roman numerals from ‘I’ onwards.

When there are various attestations of a word in Mycenaean, these are included in the paradigm in parentheses by adding ‘también’ (tb.) followed by the attested forms. Whenever several verbal forms of the same paradigm are attested in Mycenaean in different verbal tenses, these are included under the same lemma with the assignment of a capital letter from ‘A’ onwards.

Information about the grammatical category of a word (noun, adjective, pronoun, adverb, verb) is provided at the beginning of each entry. In nominal forms and participles, the case, number and gender in which the word appears in the Mycenaean documentation is noted. In nouns, gender is mentioned immediately after the category.

ἄναξ

Apel. de pers. masc. Nom. sg. *wa-na-ka* (tb. Gen. sg.]*wa-na-ka-to*;
Dat. sg. *wa-na-ka-te*).

ἀνάμπυξ

Adj. Nom. pl. fem. *a-na-pu-ke*

In personal verb forms, the person, number, time, mood and voice are recorded.

δίδωμι

A. 3^a pers. pl. pres. Ind. act. *di-do-si*

B. 3^a pers. sg. aor. sin aumento Ind. act. *do-ke*

C. Part. perf. med.-pas. Nom. pl. *de-do-me-na*

The derived and compound forms of a term that is not attested in alphabetic Greek are recorded under the heading FORMAS RELACIONADAS. If several terms related to the same lemma are attested in Mycenaean, they are preceded by an Arabic numeral from ‘1’ onwards.

δατέομαι

3^a pers. sg. aor. med. sin aumento **-da-sa-to**

FORMAS RELACIONADAS

1. Adj. verbal Nom. sg. masc. *e-pi-da-to*
2. 3^a pers. sg. perf. Ind. med.-pas. *e-pi-de-da-to*

The transliteration of the Mycenaean term is followed by its phonetic interpretation, which is given in a double transcription: in Latin characters, between slashes (//) and in italics, and in Greek characters (preceded by an asterisk if the term is not documented).²⁵

ἄναξ

Apel. de pers. masc. Nom. sg. *wa-na-ka* (tb. Gen. sg.]*wa-na-ka-to*;
Dat. sg. *wa-na-ka-te*) /*wanaks*/ *ἄναξ

When a compound term is not attested in alphabetic Greek, its elements are always mentioned by means of a parenthesis with a vertical bar followed by an arrow (|→) and the lemma to which one must refer to.

After the double transcription of the term, its translation is presented in single quotation marks (‘’).

ἄναξ

Apel. de pers. masc. Nom. sg. *wa-na-ka* (tb. Gen. sg.]*wa-na-ka-to*;
Dat. sg. *wa-na-ka-te*) /*wanaks*/ *ἄναξ, ‘rey’.

The translation may be accompanied by one or more question marks between parentheses, i.e. ‘(?)’, indicating that the interpretation and, consequently, the translation are questionable. A plus sign in square

²⁵ Regarding the problems on transliteration, see *LGM*, 26-27.

brackets, i.e. '[+]', indicates the existence of other suggested meanings in *DMic* which however have not been addressed in *LGM*, as they have been rejected by scholars.

LGM follows the general consensus regarding interpretations, that is, those supported by the largest number of scholars, unless otherwise stated. The footnotes list the bibliography on which an interpretation is based and the arguments against the options that are considered less likely. Different degrees of probability are indicated as follows: the absence of a symbol indicates a higher degree of probability; one interrogation mark (?) probable; two (??) possible, and three (???) low probability.

The entry continues with an examination of the documents in which the term appears. The number of the tablet or series is always given in the body of the text, although it is sometimes placed in a footnote when this enhances the clarity of the text of the entry for the reader. Cross references to other terms in the *LGM* often appear in this part through the inclusion of the Mycenaean term in parentheses by means of a *sub voce* (*s.v.*) and the lemma that one refers to.

In many cases, the morphology of the term is described after the overview of the documents, especially when the meaning largely depends on it. The reason is that many terms are not attested in alphabetic Greek, so that their meaning must also be reconstructed.

When a Mycenaean term has an exact correspondence in alphabetic Greek, a reference to the alphabetic term is inserted with its meaning in single quotation marks (' '), and the context in which it is attested in parentheses. These references have been taken directly from the general dictionaries *DGE* and *LSJ*⁹, and, with few exceptions, have not been re-examined.

When a Mycenaean word can satisfactorily be interpreted in two ways which correspond to two distinct lemmas in *LGM*, the following sentence is introduced at the end of the entry: '*Vid. tb. s.v. X*'.

An arrow (→) is used to refer to a word in *LGM* which has the same etymology as that of the lemma in which it appears.

Finally, all bibliographical references are given in the footnotes.

The theoretical information presented can be found in the following example:

ἀπυδοσμός

Sust. masc. Nom. sg. *a-pu-do-so*[-*mo* /*apudosmos*/ ἀπυδοσμός, ‘pago’¹, en un documento (KN Nc 4484) que recoge el total del pago en lino (?)², tal vez en concepto de impuesto³, de la localidad cnosia de *a-mi-ni-so*. El término está atestiguado en gr. alf. con el significado ‘venta’ (ἀ[π]υδοσμόν, *IG* V 2, 343.28-29, Orcómeno, s. IV a.C.).

→ ἀποδίδωμι

¹ Melena, *Textos*, 61; Perna, *Recherches*, 256 ss.; Varias García, *Fiscality*, 242; Rougemont, *Contrôle économique*, 88; Luján, *Barter; Money and Coinage*, 25; Santiago Álvarez, *Homenaje Aura Jorro*, 157 («parece un sinónimo de *a-pu-do-si*, pero al ser un *hápax* no es posible averiguar si la diferencia formal respondería a alguna diferencia semántica»).

² Perna, *l.c.* («ces tablettes présentent (tout du moins pour les exemplaires les mieux conservés) un anthroponyme suivi de la notation de poids μ et de l'idéogramme du lin *SA* (quand il est conservé)»).

³ Perna, *o.c.*, 261.

FORMAS RELACIONADAS

1. Sust. masc. Nom. sg.¹ *do-so-mo* /*dosmos*/ *δοσμός, ‘tasa’, ‘impuesto’². Indica la imposición de un pago, no el pago efectivo como *a-pu-do-si* (s.v. ἀπόδοσις). Aparece referido a un impuesto en grano a beneficio del santuario de Posidón y de otros tres destinatarios (serie Es de Pilo)³ y a un pago a Posidón (PY Un 718) efectuado por una parte importante de la sociedad de Pilo⁴, tal vez en concepto de ofrenda para realizar un banquete⁵. El término figura también en la etiqueta (PY Wa 731) de la cesta que contendría las

¹ Para PY Un 718.1 se han propuesto otras opciones: Palaima, *Festschrift Panagl*, 271 (Nom. pl.); *DMic. s.v.* (Ac. sg.). Sobre la posible restitución del término en PY An 1281, v. s.v. ἀρθμός, n. 1.

² Palmer, *WINE*, 103 ss.; Palaima, *Administrative Documents*, 268; Melena, *Textos*, 73; Killen, *Economy and Administration*, 1125; Weilhartner, *Opfergaben*, 110 ss.; Del Freo, *Censimenti*, 166 ss.; Varias García, *Fiscality*, 242; Duhoux, *Companion I*, 309, 345; Perna, *Land and Textiles*, 89 ss.; Luján, *Barter; Money and Coinage*, 25; Santiago Álvarez, *Homenaje Aura Jorro*, 152; De Fidio, *Palatial Economy*, 122 s.

³ *we-da-ne-wo* y *di-wi-je-u-* V. Nakassis, *Individuals*, 233 s., 402 s. El tercer destinatario, *34-ke-te-si, debe probablemente ser interpretado como un apel. masc. V. *DMic. s.v.* En PY Es 644 el destinatario no aparece explícitamente y Es 650 registra terrenos y no grano. V. Del Freo, *l.c.* Sobre la función de estos individuos, v. Rougemont, *Contrôle économique*, 167 s.; Perna, *l.c.* Puede que se trate de ofrendas en lugar de impuestos *strictu sensu*, de acuerdo con Killen, *o.c.*, 856, n. iv.

⁴ Shelmerdine, *DAIS*, 402. Se ha querido ver en este documento un reflejo de la sociedad pilia en prácticamente todas sus clases: Palaima, *THE ROLE OF THE RULER*, 131 ss. («(the) fundamental functional divisions of society»); Nikoloudis, *Coll. Rom.*, 592 ss., pero cf. la crítica de Piquero, *Actas XIV SEEC*, 358 s.

⁵ Palaima, *THE ROLE OF THE RULER*, 131 ss.; Weilhartner, *DAIS*, 419. Pero cf. Killen, *o.c.*, 856, n. v («there is nothing to indicate that the small numbers of animals and amounts of other foodstuffs, etc. listed on this record were consumed at a large, state-sponsored banquet»).

tablillas relacionadas con el impuesto registrado en PY Un 718⁶. Aparece asimismo en un documento (PY Nn 831) que asienta un pago en lino que algunos personajes de la localidad de *ko-ri-to* debían hacer al palacio de Pilo⁷.

⁶ Palaima, *Studies Killen*, 219; Del Freo, *o.c.*, 153.

⁷ V. PofN IV (draft) ([*do-so-mo*]) «was possibly part of the actual text». V. Perna, *Recherches*, 231 ss.

Limitations of the study

The omission of proper names from *LGM* represents an important limitation of this study. Although the *Index Graecitatis* was initially planned to include anthroponyms, theonyms, toponyms, demonyms and patronymics,²⁶ this vocabulary has been excluded from *LGM* for a number of reasons:

- a) Proper names are mere designations which do not have inherent semantic features and designate single entities.
- b) Most Mycenaean proper names admit different interpretations due to the nature of the syllabary: accordingly, some of the proposals are largely arbitrary. Moreover, shorter proper names allow a larger number of hypotheses (e.g. *a-ne-o*: **Ἀνέθων* / **Ἀνειος* / **Ἀίνεος* vs. *a-re-ka-sa-da-ra*: *Ἀλεξάνδρα*).²⁷
- c) The exclusion of proper names from a dictionary or lexicon is a common feature of Greek dictionaries. Only *DGE* includes this type of vocabulary.²⁸
- d) Toponyms present similar problems but, in addition, are often formed to roots which do not have a clear etymology. There are some exceptions which have been included in *LGM*. Some toponyms, even as designations of places, preserve semantic features, namely relevant lexical information. This is the case of *ti-mi-to-a-ke-e*, whose elements can be divided into *ti-mi-to* **τιρμίνθων* (gen. pl.) ‘terebinth’ and *a-ke-e* **ἀγκέχει* (dat.-loc. pl.) ‘valley’.²⁹

²⁶ PIQUERO RODRÍGUEZ 2014.

²⁷ See *DMic*, s.vv.

²⁸ LARA 1997, 30.

²⁹ See *LGM*, s.vv *ἄγκος* and *τέρμινθος*.

The decision to omit proper names clearly means that some anthroponyms with possible meaning remain unrecorded. Thus, *a-re-ka-sa-da-ra* has a first element ἀλεξ^ο (cf. ἀλέξω) – also probably present in *a-re-ke-se-u* – which does not figure in any other Mycenaean word included in *LGM*. This information is indeed lost. However, the methodological problems involved in the inclusion of proper names were greater than the advantages.

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Errata et corrigenda à PTT² au 04/07/22

Maurizio Del Freo

Ce que je présente ci-dessous est une liste de corrections au volume *The Pylos Tablets Transcribed. Deuxième édition (PTT²)* paru à Padoue en janvier 2020. J'ai rassemblé la plupart de ces corrections en faisant la mise à jour de la base de données *LiBER*, à laquelle je travaille avec Françoise Rougemont (CNRS) et Francesco Di Filippo (CNR). Un nombre considérable de ces corrections s'appliquent également aux deux volumes d'*ARN*.

P. VII, n. 2, l. 7: lire « MARWP » au lieu de « MAWRP ».

Aa 60, apparat: insérer « Traces de [[]] entre *-wa* et 7. » au dessus de « 22,1 × 2,5 × 1,3 cm. ».

Aa 61, apparat: insérer « Trace accidentelle croisée par *DA* et croisant *TA*; *-ra₃* ressemblant à *OLIV*. » au dessus de « 22,1 × 2,5 × 1,3 cm. ».

Aa 717, apparat: insérer « Coupée à droite. » au dessus de « 18,2 × 2,5 × 1,4 cm. ».

Aa 775: lire « *o-wi-to-ṇo* » au lieu de « *o-wi-to-no* ».

Aa 775, apparat: lire « *o-wi-to-ṇo* » au lieu de « *o-wi-to-no* ».

Aa 795, apparat: insérer « Coupée à droite. » au dessus de « 14,5 × 3 × 1,6 cm. ».

Ab 559, apparat, l. 2: lire « 3 » au lieu de « 3 ».

Ab 746.B: lire « *ko-wa* » au lieu de « *ko-wo* ».

Ad 289: lire « 3 » au lieu de « 3 ».

Ae 634, endroit de trouvaille: insérer « (?) » après « Sector ».

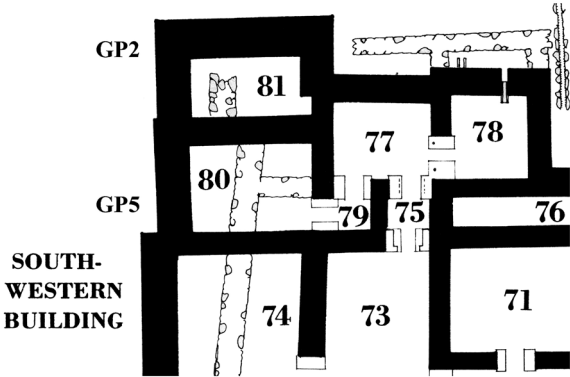
- An 39**, apparat, l. 12: remplacer «*m̄a-jo-* et *-jo-ri* (Bennett 1992, p. 106)» par «*m̄a-jo-* (Bennett 1992, p. 106) et *-jo-ri* («Melena 2003»)».
- An 39**, apparat, l. 15: ajouter «[cf. As(1) 602.3 *a-ta-qe*]» après «Cnossos».
- An 39**, apparat, l. 16: supprimer la dernière «)».
- An 207**, apparat, l. 2: lire «.15» au lieu de «.13».
- An 261**, apparat, l. 8: lire «*a-pi[-qo-ta-o]* au lieu de «*a-pi[-qo-ta-o]*».
- An 435.8**: lire «]r̄o-jo [» au lieu de «]r̄o-jo[».
- An 614**, second apparat, l. 1: remplacer «à droite» par «sur le verso».
- An 615.17**: lire «]vest.» au lieu de «]vest.[».
- An 661**, apparat, l. 2: lire «*a-ti-p̄a-m̄o*» au lieu de «*a-ti-pa-mo*».
- An 724.5**: lire «VIR» au lieu de «YIR».
- Aq 218**, apparat, l. 1: ajouter «] vest. [» avant «]-wi-je-u[».
- Cn 131**, apparat, l. 5: lire «130» au lieu de «130».
- Cn 453**, apparat: remplacer «bas» par «haut».
- Ea 71**: lire «3» au lieu de «3».
- Ea 71**, apparat, l. 1: lire «v 3» au lieu de «v 3» et «[[v 3]]» au lieu de «[[v 3]]».
- Ea 71**, apparat, l. 2: supprimer «)».
- Ea 778**, apparat: insérer «Coupée à gauche;» avant «-ta sur [[]]».
- Eb 149**, apparat, l. 5: lire «]du-wo-u-pi» au lieu de «du-wo-u-pi[».
- Eb 177**, apparat, l. 2: lire «(•)-w̄o-re-u» au lieu de «(•)-k̄e-re-u».
- Eb 416.2**: lire «v» au lieu de «y».
- Eb 416**, apparat: au dessous de la l. 1 insérer «.2 T 1 v 3 était attendu (cf. Ep 704.2)».
- Eb 496.B**: insérer un espacement entre «T» et «₁4[».
- Eb 858.2**: lire «[T 1» au lieu de «[T 2».
- Eb 903**, apparat, l. 2: lire «Eo 211.2» au lieu de «Eo 211.1».
- Eo 160**, apparat, l. 3: lire «pa-ro» au lieu de «pa-ro».
- Ep 212.8**: lire «T 1» au lieu de «1».
- Ep 301**, second apparat, l. 2: ajouter «(?)» après «Eb 903».
- Ep 539**, endroit de trouvaille: lire «3440» au lieu de «8.3440».
- Ep 613**, apparat, l. 2: lire «-u-» au lieu de «-u».
- Ep 704**, apparat, l. 2: lire «Eb 294.1» au lieu de «Eb 294.2».

- Ep 705.1:** lire «]T 2» au lieu de «]T 2».
- Eq 36.12:** supprimer «qs».
- Es 644,** apparat, l. 4: lire «Es 650.8A» au lieu de «Es 650.8».
- Es 644,** apparat, l. 5: lire «Es 650.8B» au lieu de «Es 650.9».
- Fn 41.4:** supprimer «qs».
- Fn 79,** apparat, l. 4: lire «v 3» au lieu de «v».
- Fn 187,** apparat, ll. 5-6: supprimer «trait vertical, que nous n'expliquons pas, sous la partie gauche du second -po- ;».
- Fn 324.11:** supprimer «qs».
- Fn 837,** apparat, l. 1: lire «*i-na-ø*[» au lieu de «*i-na-ø*».
- Fr 343,** apparat, l. 1: lire «OLE+PO» au lieu de «OLE+PØ».
- Fr 1218,** apparat: lire «1232.1» au lieu de «1232».
- Fr 1479,** second apparat, l. 6: supprimer «: second « [+] fr. » dissocié».
- Gn 428,** apparat, l. 1: ajouter «, avec traces d'un réglage précédent» après «Palimpseste».
- Jn 431,** apparat, l. 8: après «effectuée;» insérer «apparemment le fragment de droite des lignes .14-15 conservait le contact original quand il a été trouvé;».
- Jn 658.11:** lire «2» au lieu de «1».
- Jn 658,** apparat, ll. 3-4: remplacer «1: probablement corrigé de 3 (3: lecture de PTT ; J. T. Killen [autopsie de mars 1995] lisait «2», corrigé de 3; toutefois, l'effacement est assez superficiel et pourrait être accidentel).» par «2: corrigé de 3 (J. T. Killen, autopsie de mars 1995 [toutefois, l'effacement est assez superficiel et pourrait être accidentel]; 3 PTT).».
- Jn 693,** apparat, l. 4: lire «Sc 237» au lieu de «Sc 257».
- Jn 706.9:** supprimer «qs».
- Jn 725,** apparat, l. 15: remplacer «(Bennett 1992, p. 117)» par «(PTT, p. 181)».
- Jn 750.10:** supprimer «qs».
- Jn 832,** apparat, l. 6: lire «Cn 437.5» au lieu de «Cn 437.4».
- Jn 881,** apparat, l. 2: remplacer «Bennett 1992, p. 119» par «PTT, p. 182».
- La 635,** endroit de trouvaille: insérer «(?)» après «Sector».

- Ma 216**, apparat l. 2: lire «[[M]]» au lieu de «[[M]]».
- Ma 216**, apparat l. 6: ajouter «)» avant «.».
- Ma 244**, apparat l. 3: ajouter «) » avant «.».
- Ma 397**, apparat, l. 3: lire «**Ma 378.2**» au lieu de «**Ma 378.1**».
- Mb 1436**: lire «*146[» au lieu de «*146[».
- Mn 1408.2**: lire «4» au lieu de «4».
- Na 195**, apparat: lire «**Na 395.A, Na 568.A**» au lieu de «**Na 395, Na 568**».
- Na 425**, apparat: lire «**Na 106.A**» au lieu de «**Na 106**».
- Na 568**, apparat, l. 1: lire «**Na 195.B**» au lieu de «**Na 527**».
- Na 856**, apparat, l. 2: lire «**Na 195.B**» au lieu de «**Na 527**».
- Na 1041**, apparat, l. 2: lire «**Na 195.B**» au lieu de «**Na 527**».
- Na 1054**, apparat, l. 2: lire «**Na 941.B**» au lieu de «**Na 941**».
- Na 1179**, apparat: lire «**Na 520.B**» au lieu de «**Na 520**» et «3 unités» au lieu de «5 unités».
- Qa 1295**, apparat: insérer «Coupée à gauche.» au dessus de «14,5 × 3,1 × 1,7 cm.».
- Qa 1304**: ajouter «qs» après «[».
- Tn 316**, apparat, l. 3: lire «[[AUR *213^{VAS} 1]]» au lieu de «[[AUR *213^{VAS} 1]]».
- Ub 1316**, apparat: lire «**Ub 1317.a**» au lieu de «**Ub 1317**».
- Ub 1317**, apparat: lire «**Ub 1316.a**» au lieu de «**Ub 1316**».
- Ub 1318**, apparat, l. 4: ajouter «;-di- de pe-di-ra incomplet» après «[[]]».
- Un 6**, apparat, l. 16: supprimer «:» avant «Bennett».
- Un 616**, apparat, l. 1: remplacer «[» par «(».
- Un 616**, apparat, l. 3: remplacer «]» par «)».
- Un 616**, apparat, l. 4: supprimer «)».
- Un 616**, apparat, l. 16: lire «4» au lieu de «4».
- Un 718**, apparat, l. 6: lire «*me-]ri-to*» au lieu de «*me-]ri-to*».
- Un 853**, apparat, l. 8: lire «*]pu₂-we-e-a₂*» au lieu de «*]pu₂-we-e-a₂*».
- Un 853**, apparat, l. 10: lire «[[*rø-wi-jo*]]» au lieu de «[[*rø-wi-jo*]]».
- Va 15**, apparat, l. 4: lire «*q[]a₂*» au lieu de «*q[]a₂*», «*e-[•]*83*» au lieu de «*e-[•]*83*» et «*e-[.]-tē*» au lieu de «*e-[.]tē*».

- Va 482:** lire «ZE» au lieu de «ZE».
- Vn 10,** apparat, l. 8: lire «101» au lieu de «101».
- Vn 493,** apparat, l. 6: lire «a-]tē-re-wi-ja-qe» au lieu de «a-]tē-re-wi-ja».
- Vn 1339,** apparat, l. 4: lire «Vn 1341.3.5» au lieu de «Vn 1341».
- Wa 748,** apparat, l. 2: supprimer «)».
- Xa 463,** apparat, l. 1: lire «-ra[» au lieu de «ra[».
- Xa 565,** apparat, l. 2: remplacer «(Bennett 1992, p. 123)» par «(PTT, p. 271)».
- Xa 1337,** apparat: lire «Cn 595.1» au lieu de «Cn 328.2».
- Xa 1582,** apparat, l. 2: remplacer «(» par «:».
- Xn 637:** reclasser comme **Xa**.
- Xn 1342:** reclasser comme **Xa**.
- Xn 1343.2:** lire «]-qē-re-te-u[» au lieu de «]qē-re-te-u[».
- Xn 1343,** apparat, l. 1: lire «]-qē-» au lieu de «]qē-».
- Xn 1585,** apparat: lire «]mā-ja[» au lieu de «]mā-ja».
- P. 317, col. Photos Séraf, tablette **Ea 304:** remplacer «140.5» par «140.5_3».
- P. 329, col. Composants par lieu de trouvaille, tablette **Ae 634:** insérer «(?)» après «Sector».
- P. 329, col. Composants par lieu de trouvaille, tablette **La 635:** insérer «(?)» après «Sector».
- P. 332, col. Photos Séraf, étiquette **Wa 731:** remplacer «456.3» par «456.1».
- P. 332, col. Photos Séraf, étiquette **Wa 732:** remplacer «456.1» par «456.2».
- P. 332, col. Photos Séraf, tablette **Sh 739:** ajouter «399.1» avant «402.2».
- P. 332, col. Photos Séraf, étiquette **Wa 748:** remplacer «456.4» par «456.3».
- P. 333, col. Photos Séraf, étiquette **Wa 784:** remplacer «456.2» par «456.4».
- P. 333, col. Composants par lieu de trouvaille, tablette **Aa 786:** lire «255.f» au lieu de «255,f».
- P. 337, col. Photos Séraf, tablette **Eb 915:** ajouter «209.2» avant «215.3.4».

- P. 339, col. Photos Séraf, tablette **Xn 960**: remplacer «492.8» par «492.5».
- P. 343, col. Photos Séraf, tablette **Xn 1096**: remplacer «492.5» par «492.6».
- P. 348, col. Photos Séraf, tablette **Ac 1272**: remplacer «023.1» par «023.1.2».
- P. 349, col. Photos Séraf, nodule **Wr 1326**: remplacer «498.4» par «498.2».
- P. 349, col. Photos Séraf, nodule **Wr 1330**: remplacer «498.1» par «498.3».
- P. 349, col. Photos Séraf, nodule **Wr 1331**: remplacer «497.1» par «497.2».
- P. 349, col. Photos Séraf, nodule **Wr 1332**: remplacer «497.4» par «497.3».
- P. 349, col. Photos Séraf, nodule **Wr 1333**: remplacer «498.3» par «498.4».
- P. 349, col. Photos Séraf, nodule **Wr 1334**: remplacer «496.1» par «496.4».
- P. 350, col. Photos Séraf, nodule **Wr 1358**: remplacer «501.2» par «501.4».
- P. 350, col. Photos Séraf, nodule **Wr 1359**: remplacer «501.3» par «501.1».
- P. 350, col. Photos Séraf, nodule **Wr 1360**: remplacer «501.4» par «501.3» et «503.1» par «503.2».
- P. 350, col. Photos Séraf, nodule **Wr 1361**: remplacer «501.1» par «501.2».
- P. 351, col. Photos Séraf, nodule **Wr 1374**: supprimer «497.2» et remplacer «498.2» par «498.1».
- P. 352, col. Photos Séraf, tablette **Ea 1424**: ajouter «471.4» après «139.3».
- P. 353, col. Photos Séraf, nodule **Wr 1457**: remplacer «503.3» par «503.1».
- p. 360, colonne de droite: remplacer «*637 → Xn» par «*637 → Xa».
- P. 367, l. 25: ajouter «Room 99, scribe – ;» avant «SW Area» et «Trench T ext. near floor of Room 4, scribe – ;» avant «W Blegen dump».
- P. 367, l. 26: ajouter «637»,.
- P. 367, l. 27: ajouter «1342»,.
- P. 368, l. 4: supprimer «637»,.
- P. 368, l. 6: supprimer «1342»,.
- P. 377, l. 22: ajouter «637», et «1342»,.
- P. 377, l. 26: supprimer «637»,.
- P. 377, l. 28: supprimer «1342»,.
- P. 380, Fig. 1: ajouter les endroits de trouvaille «GP 2» et «GP 5» comme dans la figure qui suit.



Η αποκρυπτογράφηση της Γραμμικής Β και ο Κωνσταντίνος Δ. Κτιστόπουλος*

Vasileios L. Aravantinos, Charalambos E. Maravelias

Σήμερα, εβδομήντα σχεδόν χρόνια μετά την ανακοίνωση της αποκρυπτογράφησης της Γραμμικής Β, η Μυκηναϊολογία αποτελεί ειδικό και ανθηρό κλάδο των Κλασικών Σπουδών.¹ Η έρευνα της ηρωικής εποχής και των πρώτων προσπαθειών φέρνει στο προσκήνιο άγνωστες και ενδιαφέρουσες πτυχές και λεπτομέρειες για πρόσωπα και γεγονότα, που οδήγησαν τότε στο σπουδαίο αυτό επίτευγμα.²

Η ανακάλυψη και η ονομασία των τριών συστημάτων γραφής της αιγαιακής Χαλκοκρατίας οφείλονται στον Arthur Evans, που τα περιέγραψε, χωρίς όμως να κατορθώσει να τα αποκρυπτογραφήσει.³ Παρατήρησε ότι η Γραμμική Β ήταν το νεώτερο από τα τρία συστήματα και εμπεριείχε χαρακτηριστικά ενός πιο εξελιγμένου σταδίου γραφής.⁴ Η Alice Kober πίστευε και αυτή ότι οι μινωικές γραφές δεν ταυτίζονται, αλλά ότι διαφέρουν πολύ μεταξύ τους και οι άγνωστες γλώσσες τους δεν θα μπορούσαν να αποκρυπτογραφηθούν εύκολα, ακόμη και αν ερχόταν στο φως μια δίγλωσση επιγραφή. Η Γραμμική Β για διάφορους λόγους προσφερόταν ως η καλύτερη αφετηρία και τα κλιτικά της

* Οι συγγραφείς αφιερώνουν την εργασία αυτή στη μνήμη του Κωνσταντίνου Δ. Κτιστόπουλου (1891-1977), η οικογένεια του οποίου ευγενώς παραχώρησε το προσωπικό του αρχείο στον Χ. Ε. Μαραβέλια. Το έργο του Κ. Δ. Κτιστόπουλου θα παρουσιαστεί προσεχώς σε αυτοτελή μελέτη μας.

¹ *Aegean Scripts 2015· Companion·* LEJEUNE 1996, 3-6· *Manuale.*

² BENDALL 2003· BENNETT 2014, 127-137· BENNETT 1989, 9-23· FOX 2020, PALAIMA 2017, 771-788· ROBINSON 2004.

³ EVANS 1935. Πρβ. BENNETT 1989, 9-23· PALAIMA 2010.

⁴ EVANS 1935, 683.

φαινόμενα θα πρόσφεραν το κλειδί μιας καλής αρχής.⁵ Μετά την ανακάλυψη πινακίδων Γραμμικής Β στην Πύλο (1939) και στις Μυκήνες (1950, 1952), ο Emmett Bennett Jr. υπέθεσε ότι όντως οι διαφορές μεταξύ Γραμμικής Α και Β είναι σοβαρές και ότι μάλλον δεν επρόκειτο για σταδιακή εξέλιξη αλλά για ριζική προσαρμογή του παλιού στο νέο.⁶

Οι πολλές αποτυχημένες απόπειρες αποκρυπτογράφησης των αιγαιακών γραφών δεν απεθάρρυναν τους επίδοξους αναγνώστες τους. Απεναντίας, μετά την αποκάλυψη νέων αρχείων στην Πύλο (1939), το θάνατο του Evans (1941) και τη λήξη του πολέμου (1945), εντατικοποιήθηκαν οι προσπάθειες και μεγάλωσε ο αριθμός των ενδιαφερόμενων, ώστε και μόνη η αναφορά των ονομάτων και των έργων τους θα υπερέβαινε τα όρια του παρόντος συνοπτικού άρθρου.⁷

Από τον Ιούνιο του 1952, όταν ανακοινώθηκε η αποκρυπτογράφηση της Γραμμικής Β, η εγκυρότητά της επαληθεύτηκε σταδιακά, όχι με τον έλεγχο των μεθόδων της αλλά με τη δημοσίευση και την εφαρμογή των αποτελεσμάτων της.⁸ Ο ίδιος ο Michael Ventris αναγνωρίζει ευθέως την πολυετή, εργώδη προσπάθεια, τη συνεπή συνεργασία και την αποφασιστική συμβολή του Κωνσταντίνου Κτιστόπουλου στην ολοκλήρωση της δικής του προσπάθειας (Εικ. 1).⁹ Ο Έλληνας λόγιος, όπως προκύπτει από το γνωστό έργο του, από το προσωπικό του αρχείο και κυρίως από τις κρίσεις των συγχρόνων του ειδικών, διεδραμάτισε αποφασιστικό ρόλο στην ανάλυση και την ανάγνωση των κειμένων

⁵ KOBER 1948, 101-102.

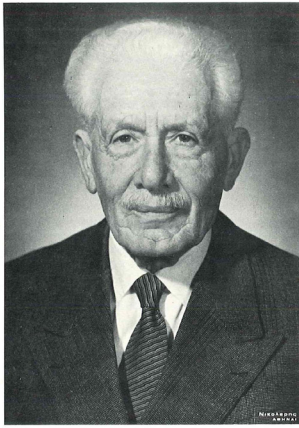
⁶ *Docs*², 37.

⁷ Επιλεκτική βιβλιογραφία υπάρχει στο “Mid-Century Report” του Ventris (SACCONI 1988, 119-124)· CHADWICK 1959· *Docs*²· FOX 2020· ROBINSON 2004· VENTRIS & CHADWICK 1953, 84-103.

⁸ Η αποκρυπτογράφιση ανακοινώθηκε από τον Ventris τον Ιούνιο και Ιούλιο του 1952, αρχικά σε μικρή ομάδα ερευνητών (CHADWICK 1959· SACCONI 1988, 369-396). Επίσης, VENTRIS 1958, 69-81. Ο GELB (1958, 83-87) αναφέρει ότι ο Ventris, σε επιστολή του (7.6.1952) είχε εκφράσει την υποψία ότι η Γραμμική Β περιέχει μια πρώιμη μορφή της ελληνικής γλώσσας. Οι Myres και Bennett έλαβαν ανάλογες επιστολές στις 17.6.1952 (BENDALL 2003· PALAIMA 2010). Ο Ventris έγραψε στις 24.6.1952 στον Κτιστόπουλο ότι είχε επεξεργαστεί ήδη δικό του σύστημα αποκρυπτογράφησης.

⁹ CHADWICK 1959· *Docs*²· SACCONI 1988, 31-132. Ο Ventris (SACCONI 1988, 44-46) είχε σχολιάσει λεπτομερώς και επαινετικά τις εργασίες των Bennett και Κτιστόπουλου, που έλαβε μετά την αποστολή της “Σημείωσης Εργασίας 8”, στις 18.6.1951. Εκεί παραδέχεται ότι ο κατάλογος του Κτιστόπουλου “anticipates much of the material already sketched out for my Work Note 14” (SACCONI 1988, 45,192). “Ktistopoulos and I have now for several years agreed that the sign (-jo) may well be the mark of the genitive case.” Και συνεχίζει: “Ktistopoulos, Bennett and I have each been struck, too, by the fact that nominatives in (-u) for some reason adopt a form in (-we).” Διευκρινίζεται ότι -jo, -u και -we είναι οι αξίες της αποκρυπτογράφησης για τα αντίστοιχα συλλαβογράμματα.

της Γραμμικής Β. Ασχολήθηκε με τις κρητικές γραφές αθόρυβα, επίμονα και συστηματικά αρκετά χρόνια πριν από την αποκρυπτογράφηση και παντοιοτρόπως ενέπνευσε και ενίσχυσε τις προσπάθειες της Kober και του Ventris.¹⁰ Ομολογείται μάλιστα από τους συγχρόνους του ότι, εκτός του Ventris, ο Κτιστόπουλος, η Kober και ο Bennett, καθώς και ο Johannes Sundwall, ξεχωρίζουν από όσους ασχολήθηκαν επίμονα και σοβαρά με την ανάγνωση των αιγαιακών γραφών¹¹. Τούτο οφείλεται κυρίως στην αφοσίωσή τους στη στατιστική ανάλυση και στην παρατήρηση των συχνοτήτων εμφάνισης των συλλαβογραμμάτων.¹²



Konstantinos Demetrios Ktistopoulos
1891–1977

Εικ. 1. Κωνσταντίνος Δ.
Κτιστόπουλος (αρχείο Κ. Δ.
Κτιστόπουλου).

Ο Κτιστόπουλος ασχολήθηκε καταρχήν με τις ανατολικές γλώσσες και από το 1928, με προτροπή του Michael Deffner, άρχισε να μελετά τις κρητομυκηναϊκές γραφές. Στην πρώτη εργασία του εξετάζει “the intercorrelation of various sign-groups of the Minoan inscriptions and to combinations agreeing with the names of cities or of persons of the Minoan period.”¹³ Με αφορμή τη βιβλιοκρισία αυτής της μελέτης του από την Kober,¹⁴ ξεκίνησε η μεταξύ τους αλληλογραφία που διήρκεσε από τον Μάιο 1946 μέχρι τον Οκτώβριο 1949, όταν διακόπηκε λόγω των σοβαρών προβλημάτων υγείας της Αμερικανίδας ερευνήτριας. Από την αλληλογραφία τους προκύπτει ότι ο Κτιστόπουλος ζήτησε από την Kober και τη διεύθυνση του Ventris. Σε γράμμα του δηλώνει ότι ενδιαφέρεται για

¹⁰ Στο *Docs*², 18, 38-40, σημειώνεται: “He (Ktistopoulos) gave statistics for the frequency of each phonetic sign at Pylos, broken down by position into initial, medial and final. This necessary calculation was repeated independently by Bennett and later extended to Knossos by ΚΤΙΣΤΟΠΟΥΛΟΣ (1954).” Η τεκμηριωμένη απάντηση του Κτιστόπουλου (21.12.1949) στο “Mid-Century Report” ήταν από τις πρώτες (SACCONI 1988, 68-70), και τούτο σπανίως αναφέρεται (POPE 2008, 1-14).

¹¹ Ο GELB (1958, 83-87) τονίζει ότι οι ερευνητές που εφάρμοσαν με επιτυχία την εσωτερική προσέγγιση των κειμένων ήταν οι Sundwall, Kober, Bennett και Κτιστόπουλος.

¹² GELB 1958, 83-87· MARAVELIAS 2004, 196-198· ROBINSON 2004, 76-95.

¹³ ΚΤΙΣΤΟΠΟΥΛΟΣ 1945.

¹⁴ KOBBER 1945, 605-606.

Psychiko (Athens)
Malakassi St.3

8 July 1947

Dear Miss Kober,

You can imagine how much I was pleased with your information that you have collaborated with Prof. Myers on Evans' unpublished material. The hastening of the publication of this material has a primordial importance for all the persons who are occupied with the problem of the Minos script, and they must, therefore, be grateful to every scholar contributing to the quicker accomplishment of the publication in question. So, although my desire for having your opinion upon my monograph is vivid, I am obliged to assure you sincerely that you must not feel embarrassed because you have not yet written me about that. On the other hand, I do not conceal that I amjealous of you, as I imagine you amidst your new "thesaurus", who must be inaccessible to us others for a long time. When you will have the occasion to write me, I would be very much obliged to you if you would have the kindness to tell me, where my conjecture that the sign E (Lin. A) \neq E (Lin. B) pp. 5-6 of my article - seems to have some probability to be correct.

In the meantime, I received the copy of your study, which you have been good enough to send me, and I express to you, once more, my many thanks. I have read it again; your arguments are generally correct. I think also that at least the sign-groups of the type AB or of the type AB represent, most probably, two different cases of the same noun - (unless they are two different forms of the same word); furthermore, I agree with you in thinking that the sign-groups AB etc. have a close relation with the words etc.

I beg your pardon for having distracted you with the hypothetical sign-group AB ; I have not paid due attention to the note 6 of the page 270. Please, forgive me. As regards the sign-group of the f.704, I think that the second sign is a variant of the B 23 and not of the A ; then, the word is to be probably read AB in my monograph (p.4) I correlate the sign-group AB (Lin. A) with AB supposing that A = B , and in this case AB would be in harmony with AB etc. When you will have leisure, it would be probably good to examine my point of view, because, supposing that it would be proved correct, we would have a paradigm of relation of probable inflection between sign-groups of the Lin. A and the Lin. B, and I think that it would have some interest for you.

I read with a great pleasure that you may come to Greece next year. Mr. Nic. Platon, Director of the Candia's Museum, had informed me, some seven months ago, that the tablets, remained still enclosed in the boxes where they have been put to be protected from the war's dangers, and that he anticipated that they should remain there for a long time. But I hope that until the time of your coming the things will be in order.

In spite of your courteous proposal and although I know that my English is inadequate, I write to you again in English, because I think that I must not be a greater charge upon you. The French would not probably be easier for me. As regards modern Greek, you know perhaps

that we have a pending question of language. I think that the evolution takes place towards the direction of a moderate "demotic".

I hope that you should have received the new study of Prof. Sundwall "Methodische Bemerkungen zur Entzifferung Min. Schrift-denkmäler", relative to the work of Prof. Hrozný. I do not know the work of Mr Emilio Ferruzzi and I would beg you to have the great kindness to give me his address; (I had begged you also to give me the address of Mr M.G.F. Ventris, if perchance you know it).

The address of Prof. Hrozný is:

Dr. B. Hrozný
Professeur à l'Université Charles IV.
Ordoúka 285
Prague
Tchecoslovaquie

Επίστευτέ μου ὁ "ἀδὸς μεγάλου βασιλέως", ξικκιέρις καὶ γενναῖος ἄνθρωπος, ὁ ὅστις ἐπέβλεπε ἐπὶ τῶν ἀρχαίων ἀπομνημονεύματων καὶ ἐπὶ τῶν ἐπιγραφῶν τῶν ἀρχαίων, ἐδὼν εἶναι ἐξυμνηστικὸν ἐπὶ αὐτῶν τὴν ἀδακτικὴν μας.

Sincerely yours

Charalambos E. Maravelias

Εικ. 2. Επιστολή Κτιστόπουλου προς Kober (8.7.1947) (αρχείο Κ. Δ. Κτιστόπουλου).

το άρθρο “Introducing the Minoan Language,”¹⁵ αγνοώντας προφανώς την αρνητική άποψη της Kober για το συγκεκριμένο άρθρο του Ventris, όπως και για τη μέθοδο της δουλειάς του γενικότερα.¹⁶ Στο γράμμα του αυτό ο Κτιστόπουλος απαντά στην Kober, που τον παροτρύνει, αν τον εξυπηρετεί, να της γράφει στα γαλλικά, ότι δεν θα ήθελε να την επιβαρύνει.¹⁷ Κλείνοντας της δίνει τη διεύθυνση του Hrozny που του είχε ζητήσει, ενώ της ζητάει τη διεύθυνση του Emilio Peruzzi. Ο Κτιστόπουλος τελειώνει το γράμμα του αστείζόμενος στα ελληνικά: «Ελπίζω ότι ο ‘Διός μεγάλου οαριστής’, δίκαιος και γενναιόφρων κριτής, θα φροντίσει ώστε να ανταμειφθούν όλοι όσοι ασχολούνται με την έρευνα των αρχείων του...» (Εικ. 2).¹⁸ Απαντώντας σε άλλη επιστολή της Kober, που εκφράζει την απογοήτευσή της “for making no progress whatever with Minoan,” ο Κτιστόπουλος την ενθαρρύνει ότι τελικά τα πέτρινα τείχη θα υποχωρήσουν στις προσπάθειές τους.¹⁹

Η Kober σχεδίαζε να επισκεφθεί το Μουσείο Ηρακλείου, ώστε να παραβάλει τις σημειώσεις του Evans με τα πρωτότυπα των πινακίδων της Κνωσού, όπως της είχε προτείνει ο John Myres.²⁰ Ο Κτιστόπουλος όμως την ενημερώνει ότι κατά πληροφορίες του από τον Νικόλαο Πλάτωνα, διευθυντή τότε του Μουσείου, οι πινακίδες φυλάσσονταν σε κιβώτια και θα παρέμεναν εκεί για αρκετό διάστημα. Εκφράζει όμως την ελπίδα ότι μέχρι να έλθει αυτή στην Ελλάδα τα πράγματα θα τακτοποιηθούν.

Η αλληλογραφία των δύο ερευνητών περιλαμβάνει πάνω από είκοσι επιστολές. Σε ένα από τα πρώτα του γράμματα ο Κτιστόπουλος πληροφορεί την Kober ότι έχει διαγνώσει κλιτικά φαινόμενα στις λέξεις της Γραμμικής Β.²¹ Αναφέρει ότι, σύμφωνα με τις στατιστικές του σε 1100 λέξεις, 450 της Γραμμικής Α και 650 της Β, όμοιες φαίνονται μόνο 10-13 λέξεις· κάτι που εκ των πραγμάτων οδηγεί στη διαφορετικότητα των γλωσσών στα δύο αυτά συστήματα γραφής, άποψη διαφορετική από, την κυρίαρχη τότε, του Evans. Σε άλλο γράμμα του (18.5.1947) ο Κτιστόπουλος γράφει ότι του αρέσει «ο σχεδόν μαθηματικός τρόπος»

¹⁵ VENTRIS 1940.

¹⁶ MARAVELIAS 2020, 295-311· PALAIMA 2017, 771-788.

¹⁷ Κτιστόπουλος προς Kober 8.7. 1947.

¹⁸ “Μίνως... Διός μεγάλου οαριστής” (Οδύσσεια τ 177).

¹⁹ <https://repositories.lib.utexas.edu/bitstream/handle/2152/17078/CDKtoAEK19480329.pdf?sequence=2&isAllowed=y>. ΚΤΙΣΤΟΠΟΥΛΟΣ (επιστολή 29.3.1948).

²⁰ FOX 2020· MARAVELIAS 2020, 295-311.

²¹ ΚΤΙΣΤΟΠΟΥΛΟΣ (επιστολή 3.10. 1946).

με τον οποίο αυτή αναπτύσσει τις ιδέες της. Σημειωτέον, ότι ο Κτιστόπουλος ήταν και δεινός μαθηματικός. Το τελευταίο γράμμα του προς την Kober έχει ημερομηνία 7 Οκτωβρίου 1949.

Ο Κτιστόπουλος έχοντας πλέον τη διεύθυνση του Ventris αρχίζει αλληλογραφία μαζί του. Ο Ventris μάλιστα σε γράμμα του προς την Kober, εκφράζει την ανάγκη ανταλλαγής απόψεων μεταξύ τους. Τονίζει ότι δεν γνωρίζει ποιοί ασχολούνται με τη μινωική γραφή: «Ο Hrozny προφανώς, αν και ο Myres λέει πως κινείται σε λάθος κατεύθυνση, ο Sundwall, ο Κτιστόπουλος.»²² Η εικόνα που προκύπτει από την αλληλογραφία των πρωταγωνιστών είναι ότι ο καθένας τους περίμενε το θαύμα από άλλον, δηλαδή ο Ventris από την Kober και αυτή από τον Κτιστόπουλο.²³ Σε εκτενή επιστολή της, η Kober γράφει, μεταξύ άλλων, στον Έλληνα ερευνητή: «Αν την αποκρυπτογραφήσετε εσείς, θα είμαι πολύ ευχαριστημένη και υπερήφανη. [...] Έχω βαθύτατη εκτίμηση στις γνώσεις σας της Μινωικής. Εσείς και ο Sundwall (και ο συμπατριώτης μου Bennett) είστε οι μόνοι των οποίων την κρίση σε σχέση με μια ανάγνωση θεωρώ εξίσου καλή ή και καλύτερη από του Evans. Και αυτός είναι ο μεγαλύτερος έπαινος που εγώ μπορώ να απονείμω.» Παρακάτω μάλιστα προσθέτει αστεϊζόμενη: «as far as transliterating is concerned – you are Plato, and I'm Aristotle.»²⁴

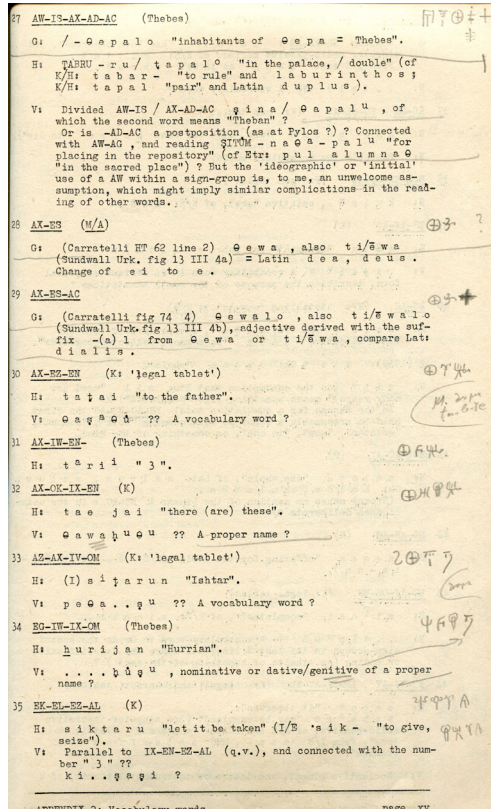
Είναι σαφές ότι στην πραγματικότητα δεν υφίστατο αγώνας δρόμου ανάμεσα στους ασχολούμενους με την επίλυση του μυστηρίου της Γραμμικής Β, αλλά, αν όχι συλλογική προσπάθεια, υπήρξε τουλάχιστον ευγενής άμιλλα. Άλλωστε, σε αντίθεση με τον Evans, κανένας από τους σοβαρούς ερευνητές της αποκρυπτογράφησης δεν έκρυβε τα χαρτιά του. Τούτο προκύπτει και από την πρόταση της Kober στον John Daniel, αρχισυντάκτη του *AJA*, για τη συγκρότηση «Επιστημονικής Εταιρείας» για τη μινωική γραφή. Αμέσως μετά τον Sundwall και τον Myres, η Kober προτείνει τον Κτιστόπουλο.²⁵ Άτυπη όντως επιτροπή συγκρότησε λίγο αργότερα ο Ventris, με την έκδοση του *Mid-Century Report* και την κοινοποίηση των Σημειώσεών του σε διάφορους ερευνητές (Εικ. 3).

²² VENTRIS (επιστολή 26.3. 1948).

²³ FOX 2020· MARAVELIAS 2020· Ventris (επιστολή σε Kober, 22.2.1949, PASP Archives): “I shall probably give the problem a rest for a bit now, so hurry up and decipher the thing for us.”

²⁴ <https://repositories.lib.utexas.edu/bitstream/handle/2152/17087/AEKtoCDK19490228.pdf?sequence=2&isAllowed=y>. Kober (επιστολή 28. 2. 1949).

²⁵ Επιστολή Kober σε Daniel, 1.7.1948 (PASP Archives). FOX 2020· MARAVELIAS 2020, 295-311.



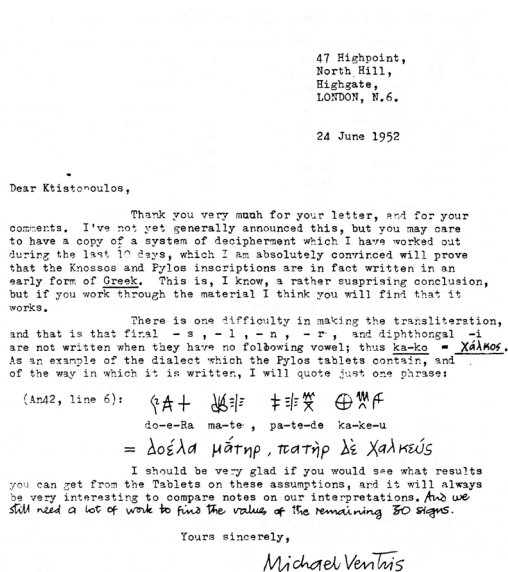
Εικ. 3. Απόσπασμα από το 'Mid-Century Report' του Ventris (SACCIONI 1988, 113), με χειρόγραφες σημειώσεις του Κιστόπουλου (αρχείο Κ. Δ. Κιστόπουλου).

Η αλληλογραφία μεταξύ Κιστόπουλου και Ventris δείχνει την επικοινωνία τους σε όλα τα στάδια της αποκρυπτογράφησης, ακόμη και μετά την ανακοίνωσή της. Άλλωστε η στενή συνεργασία τους προκύπτει από πλήθος αναφορών στις «Σημειώσεις Εργασίας» και από σχόλια σε δημοσιευμένες εργασίες τους.²⁶ Τα ανωτέρω αποδεικνύουν την αμοιβαία αναγνώριση της παράλληλης προσπάθειας και τον αλληλοσεβασμό τους, πέραν από τις τυχόν ασυμφωνίες σε κάποιες προτάσεις τους.²⁷

²⁶ Βλ. Docs², 18. Βλ. σημ. 11.

²⁷ Στη «Σημείωση Εργασίας» (18.6.1951), σε δύο σελίδες, σχετικές με τις μελέτες των Bennett και Κιστόπουλου, το όνομα του δεύτερου αναφέρεται εννέα φορές και παρατίθεται και ο πίνακας των προτεινόμενων από αυτόν φθογικών αξιών (SACCIONI 1988, 44-46, 191-196).

Η «Σημείωση Εργασίας 20» είναι ενδεικτική της παράλληλης πορείας Ventris, Κτιστόπουλου και Bennett στις προσπάθειες της αποκρυπτογράφησης.²⁸ Η άγνωστη, μέχρι πρότινος, αλληλογραφία Κτιστόπουλου και Ventris, λίγες ημέρες πριν από την ανακοίνωση της αποκρυπτογράφησης στο ραδιόφωνο του BBC, είναι αποκαλυπτική για τα παραπάνω.²⁹ Σε δακτυλογραφημένη επιστολή του, διανθισμένη με χειρόγραφες λέξεις και σημεία της Γραμμικής Β, ο Ventris ανακοίνωσε στον Κτιστόπουλο την ανακάλυψή του προσδιορίζοντάς την χρονικά (Εικ. 4).³⁰ Από την επιστολή αυτή, και από τη διασταύρωσή της με άλλες από και προς τον Ventris που γράφηκαν από τα μέσα Ιουνίου ως τις



Εικ. 4. Επιστολή Ventris προς Κτιστόπουλο (24.6.1952) (αρχείο Κ. Δ. Κτιστόπουλου).

²⁸ Ο Ventris (SACCONI 1988, 172-173, 327), αρχίζει την «Σημείωση Εργασίας 20» (1.6. 1952) ως εξής: "With the publication of the Knossos tablets in *Scripta Minoa* volume II, and with the promise of Dr Bennett's revised Index, we are in a position to begin a detailed analysis of the whole Linear B material under its various aspects. One of the first studies of this is Ktistopoulos' *Recherches sur les mots minoens*, which I have just received. Until this work has been done it will be as well not to start with any preconceived notions about phonetic values or about the language relationships."

²⁹ ROBINSON 2004, κεφ. 6.

³⁰ Η επιστολή (24.6.52) και το χειρόγραφο σημείωμα (9.7.1952) του Ventris από το αρχείο του Κτιστόπουλου, καθώς και η απάντησή (6.7.1952), σε MARAVELIAS 2004, 196-209.

αρχές Ιουλίου του 1952,³¹ φαίνεται ότι ο Κτιστόπουλος ήταν από τους λίγους που πληροφορήθηκαν αμέσως την αποκρυπτογράφηση, ενώ παράλληλα ο ίδιος επεξεργαζόταν τη δική του πρόταση.³²

Ο Ventris γράφει στις 24.6.1952:

«Αγαπητέ Κτιστόπουλε,

ευχαριστώ για την επιστολή και τα σχόλιά σου. Δεν έχω ανακοινώσει ευρύτερα το ζήτημα αλλά ίσως θα ήθελες να αποκτήσεις αντίγραφο ενός συστήματος αποκρυπτογράφησης που έχω επεξεργαστεί τις τελευταίες δέκα ημέρες, το οποίο, (όπως) είμαι απόλυτα πεπεισμένος, θα αποδείξει ότι οι επιγραφές της Κνωσού και της Πύλου είναι όντως γραμμένες σε μια πρώιμη μορφή της Ελληνικής (γλώσσας). Γνωρίζω ότι αυτό είναι ένα συμπέρασμα που προκαλεί έκπληξη αλλά αν το δοκιμάσεις στο υλικό θα βρεις ότι το σύστημα λειτουργεί.

Υφίσταται όμως μια δυσκολία στη μεταγραφή και αυτή έγκειται στο ότι τα τελικά -ς, -λ, ν, ρ, και οι δίφθογγοι σε -ι δεν γράφονται όταν δεν ακολουθούνται από φωνήεν. Έτσι το *ka-ko* είναι ο χαλκός. Ως δείγμα της διαλέκτου, η οποία περιέχεται στις πινακίδες της Πύλου, και του τρόπου κατά τον οποίον αυτή γράφεται, αναφέρω μία μόνο φράση:

do-e-ra ma-te pa-te-de ka-ke-u

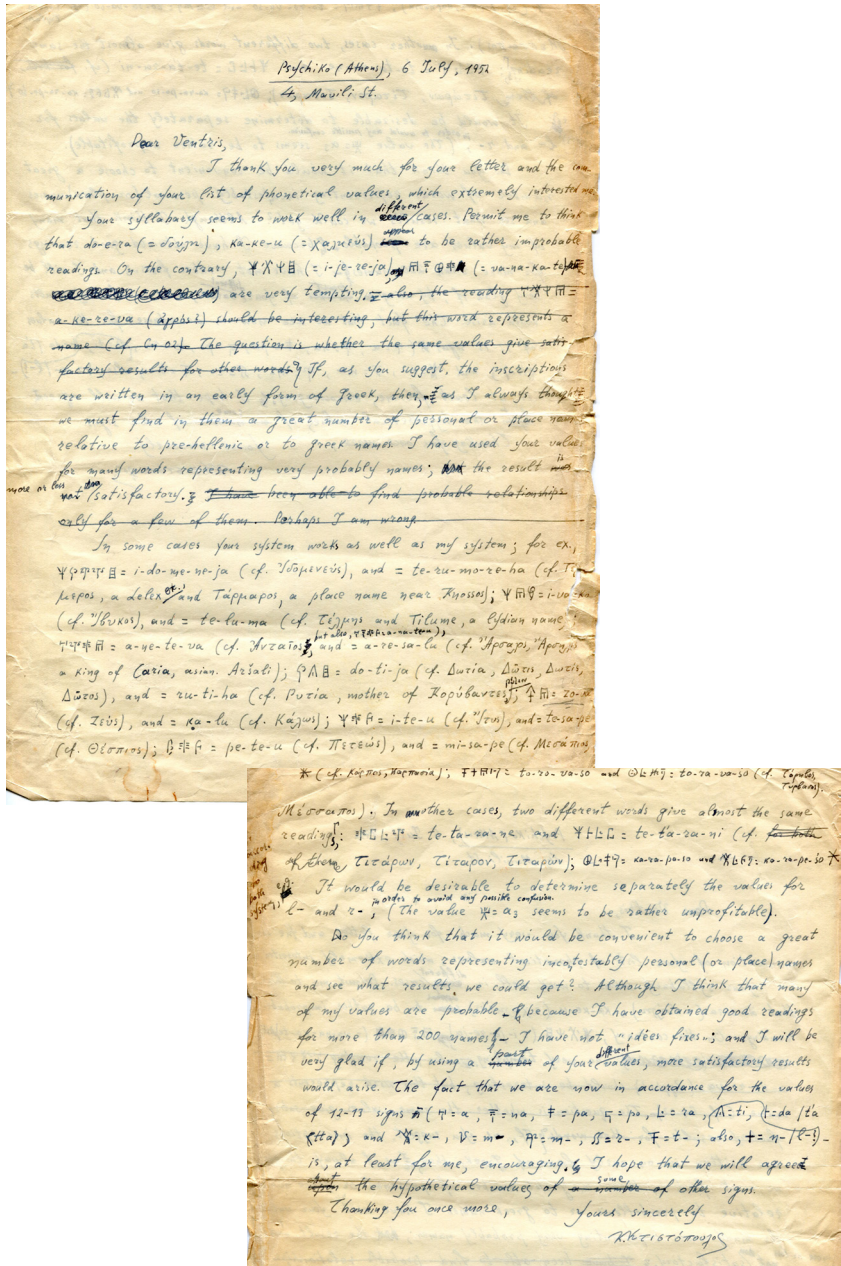
δούλη (η) μήτηρ (και ο) πατήρ χαλκεύς

Θα χαιρόμουν πολύ αν έβλεπες τι αποτελέσματα μπορείς να εξάγεις από τις πινακίδες υπ'αυτές τις προϋποθέσεις και πάντοτε θα έχει πολύ ενδιαφέρον να συγκρίνουμε τις παρατηρήσεις μας επάνω στις ερμηνείες μας (ακολουθεί κείμενο γραμμένο στο χέρι): Ακόμη βέβαια χρειαζόμαστε πολλή δουλειά ώστε να βρούμε τις αξίες των υπόλοιπων τριάντα συμβόλων.

Ειλικρινά υμέτερος Michael Ventris»

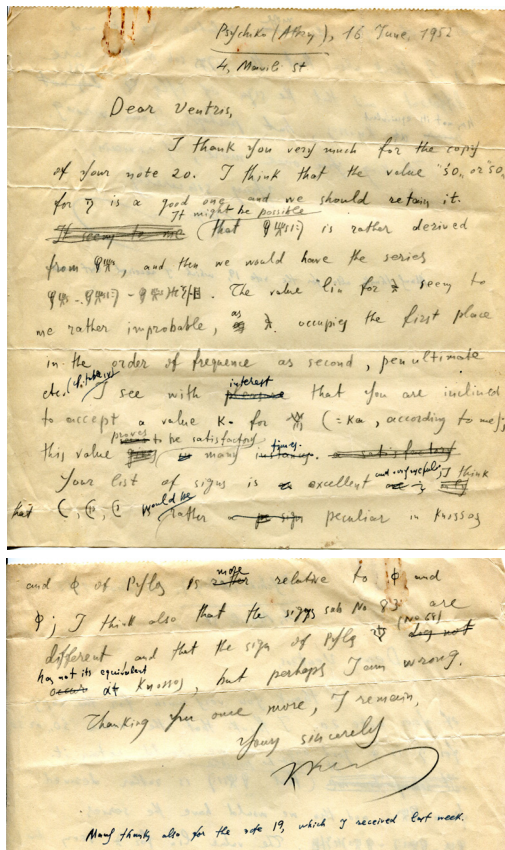
³¹ Προφανώς ο Κτιστόπουλος έστειλε τα σχόλιά του στον πίνακα (5.6.52) πολύ νωρίτερα από τους άλλους και για τούτο ο Ventris ήδη τον ευχαριστεί (24.6.1952). Ταυτόχρονα του αναγγέλει την πρώτη ανάγνωση των κειμένων, όχι όμως τα νέα ευρήματα του Blegen. Αντίθετα στην επιστολή του Bennett στον Ventris (SACCONI 1988, 351) στις 6.7.1952, αναφέρεται η παραλαβή του πίνακα των σημείων (SACCONI 1988, 333), τα σχόλια του Myres στον πίνακα, καθώς και τα νέα ευρήματα του Blegen την άνοιξη του 1952 (BENNETT 1989, 9-23· ROBINSON 2004, 122).

³² MARAVELIAS 2004, 198-202. Η επιστολή Ventris (24.6. 1952), στάλθηκε στον Κτιστόπουλο πριν από την εκπομπή του BBC, η οποία μεταδόθηκε την 1η Ιουλίου του 1952, όταν την άκουσε και ο Chadwick (SACCONI 1988, 363-367).



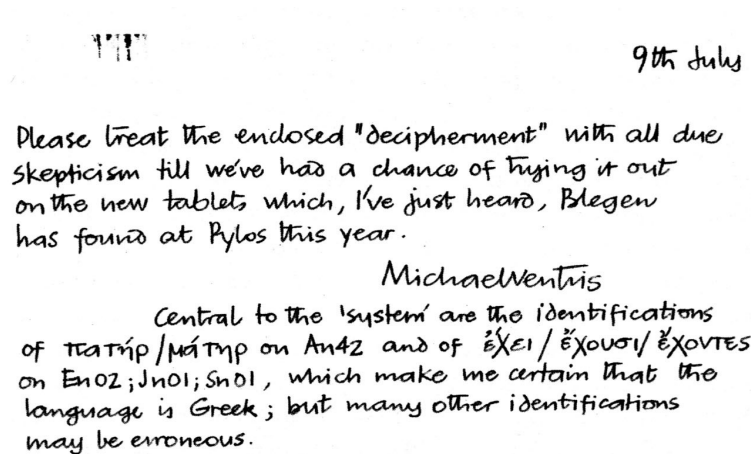
Εικ. 5. Επιστολή Κτιστόπουλου προς Ventris (6.7.1952) (αρχείο Κ. Δ. Κτιστόπουλου).

Στην επιστολή αυτή απάντησε ο Κτιστόπουλος στις 6 Ιουλίου (Εικ. 5). Στην απάντησή του υποστηρίζει ότι αν οι επιγραφές είναι γραμμένες σε μια πρώιμη μορφή της ελληνικής, τότε θα πρέπει να υπάρχει σ'αυτές ένας μεγάλος αριθμός ανθρωπωνυμίων και τοπωνυμίων, χωρίς να αποκλείονται τα προελληνικά. Γράφει επίσης ότι δοκίμασε τις συλλαβικές αξίες του πίνακα του Ventris σε κάποιες λέξεις που έμοιαζαν με κύρια ονόματα και βρήκε το αποτέλεσμα ικανοποιητικό. Προσθέτει επίσης ότι το σύστημα του Ventris σε κάποιες περιπτώσεις λειτουργεί, όπως και το δικό του, και αναφέρει μια σειρά από παραδείγματα. Τονίζει τη δυσκολία που υπάρχει με τα υγρά (λ και ρ). Συνεχίζει προσθέτοντας ότι παρόλο που θεωρεί και τις δικές του αξίες πιθανές, αφού του απέδωσαν ικανοποιητικές σημασίες για κάπου διακόσια κύρια ονόματα, δεν έχει εντούτοις έμμονες ιδέες και ότι θα χαιρόταν αν με την εφαρμογή των φωνητικών αξιών του Ventris επιτυγχάνονταν καλύτερα αποτελέσματα. Τελειώνει τονίζοντας πως θεωρεί πολύ ενθαρρυντικό το γεγονός ότι συμφωνούν στις φωνητικές αξίες για 12-13 σημεία και ότι ίσως αργότερα θα συμφωνήσουν και σε άλλες. Είχε προηγηθεί η από 16.6.52 επιστολή Κτιστόπουλου προς τον Ventris, σχετικά με τη λήψη της περίφημης Work Note 20 (Εικ. 6). Ο Ventris, στην πιο κρίσιμη καμπή της προσπάθειάς του, προτού ακόμη λάβει την παραπάνω ευγενική και ενθαρρυντική



Εικ. 6. Επιστολή Κτιστόπουλου προς Ventris (16.6.1952) (αρχείο Κ. Δ. Κτιστόπουλου).

απάντηση του Κτιστόπουλου, του ταχυδρόμησε (9.7.1952) το δωδεκάσέλιδο «Δοκιμαστικό Μυκηναϊκό Λεξιλόγιο», με το παρακάτω χειρόγραφο σημείωμά του (Εικ. 7).³³



9th July

Please treat the enclosed "decipherment" with all due skepticism till we've had a chance of trying it out on the new tablets which, I've just heard, Blegen has found at Pylos this year.

Michael Ventris

Central to the 'system' are the identifications of πατήρ/μάτηρ on An 42 and of ἔχει/ἔχουσι/ἔχοντες on En 02; Jn 01; Sn 01, which make me certain that the language is Greek; but many other identifications may be erroneous.

Εικ. 7. Σημείωμα Ventris προς Κτιστόπουλο (9.7.1952)
(αρχείο Κ. Δ. Κτιστόπουλου).

9th July

«Please treat the enclosed 'decipherment' with all due skepticism till we've had a chance of trying it out on the new tablets which, I've just heard, Blegen has found at Pylos this year.

Michael Ventris
(υπογραφή)

Central to the 'system' are the identifications of πατήρ/μάτηρ on **An 42** and of ἔχει/ἔχουσι/ἔχοντες on **En 02; Jn 01; Sn 01**, which make me certain that the language is Greek; but many other identifications may be erroneous».

Είναι πολύ ενδιαφέρον ότι στο Δοκιμαστικό Λεξιλόγιο ο Κτιστόπουλος σημείωσε με μολύβι τις αξίες της δικής του «αποκρυπτογράφησης» (Εικ. 8).³⁴ Όπως όμως διαπιστώνεται από την πρώτη σελίδα του «Λεξι-

³³ MARAVELIAS 2004, 201 και Εικ. 3· Ventris (SACCONI 1988, 337-348: Experimental Mycenaean Vocabulary).

³⁴ MARAVELIAS 2004, 203, Εικ. 4.

EXPERIMENTAL MYCENAEAN VOCABULARY 7.52						
SIGNGROUPS ARE FROM PYLOS 1939 UNLESS PREFIXED BY K						
1	𐀀	la-ue	da-wo	ds	δαῶμω	community
2	𐀁	la-ma-wo	da-ko-ro	np	δαῖκοροι ?	carvers ?
3	𐀂	la-ma-wo-te	da-ko-ro-i	np		
4	𐀃	la-pi-sa	da-wo-ye	np	δάμαρες	[see 𐀀 𐀃]
5	𐀄	pa-ro	pa-ro	PREP	παρό + dat	= παρά ?
6	𐀅		pa-te	np.m	πάντες	all
7	𐀆	pa-ia	pa-te	ns	πατήρ	father
8	𐀇	pa-ia-sa	pa-te-de	ns	πατήρ δέ	but her father....
9	𐀈	pa-va	pa-si	dp	πάσι	to all
10	𐀉	pa-va-se-ke-te	pa-si-te-o-i		πάσι-θεοῖς ?	
11	𐀊	pa-ta-so	pa-ra-jo	ns.m	παλαιός ?	old
12	𐀋	pa-ta-ke	pa-ra-ja	np.f	παλαιαί	''
13	𐀌	pa-to-a	pa-we-a	np	φάφεια	lights
14	𐀍	pa-ta-ka	pa-ka-na	np	σφαγναί ?	swords
15	𐀎	sa-pa-ni-ka	te-u-ta-ka-ko-ro	ns	τεύλαγρος	beetroot land
16	𐀏	sa-ma-ic	te-me-no	ns	τέμενος	area of corn-land
17	𐀐	sa-se-ni	te-ke-ta	ns	τηρητάς	quaridian
				[OR: τελεστάς		official ?]
18	𐀑	sa-te-ni-ko	te-ke-ta-o	np	τηρητάι	''
19	𐀒	sa-ko	te-o	gp	τηρητάων	''
				[OR: θείωι ?]		for the meanwhile
20	𐀓	sa-ko-so	te-o-jo	gs	θεοῖο	of the god
21	𐀔	sa-ma-to-na	te-ko-to-na-pe	ns	τέκτων ἀπη- ?	wainwright ?
22	𐀕	sa-ma-to-a-ai	te-ko-to-a-pe	ns		
23	𐀖	sa-ma-fa-te	te-ko-to-ue		τέκτονες	carpenters
24	𐀗	sa-me-ma	te-mi-ee	ns.n	τερμιόφεν ?	edged, bordered ?
25	𐀘	sa-me-ma-sa	te-mi-ee-te	ds.n	τερμιόφέντελ	''
26	𐀙	sa-me-ma-ni	te-mi-ee-ta	np.n	τερμιόφέντα	''
		sa-se-sa-to	te-ke-te-we	np	-ήρες	guardians? fosterparents?
27	𐀚		to-ro-no-wo-ko		θρονοφόρο-	chair-maker
			to-ro-no-wo-ko		τροφοφόρο-	chaisard ?

Εικ. 8. Η πρώτη σελίδα του 'Experimental Mycenaean Vocabulary' του Ventris, με χειρόγραφες σημειώσεις του Κτιστόπουλου (αρχείο Κ. Δ. Κτιστόπουλου).

λογίου» η αναντιστοιχία των αξιών του Κτιστόπουλου με τις προτεινόμενες από τον Ventris ήταν σημαντική και προφανώς ανάλογη με την τεράστια πρόοδο και την αλυσωτή αντίδραση της αποκρυπτογράφης.³⁵ Στην απάντησή του προς τον Ventris την 21.7.1952, ο Κτιστόπουλος είναι, όπως συνήθως, αισιόδοξος και μάλιστα τον ενθαρρύνει να συνεχίσει. Του γράφει ακόμη ότι το «Λεξιλόγιο» του αποτελεί ένα σημαντικό βήμα για την 'αποκρυπτογράφηση' διότι περιέχει και άλλες λέξεις (ουσιαστικά, επίθετα, ρήματα κ.λ.π.) πέρα από τα κύρια ονόματα και τα τοπωνύμια. Τέλος αναφέρει ότι και αυτός πληροφορήθηκε για τις καινούργιες πινακίδες που βρήκε ο καθηγητής Blegen στην Πύλο και

³⁵ MARAVELIAS 2004, 203. Πλήρες κείμενο σε SACCONI 1988, 337-348.

Στις 9 Ιουλίου του 1952, ημέρα της αποστολής του χειρόγραφου σημειώματος και του «Λεξιλογίου» του στον Κτιστόπουλο, ο Ventris φαίνεται πως ήταν πολύ απασχολημένος. Εκείνη την ημέρα χρονολογείται και η επιστολή, γνωριμίας και συνεργασίας με τον John Chadwick, μετά από παρέμβαση του τελευταίου στον κοινό γνωστό τους Myres.³⁷ Η επιστολή του αυτή είναι χειρόγραφη με την ίδια δομή, το ίδιο συγκρατημένο ύφος για την αποκρυπτογράφηση και τις ίδιες λέξεις του σημειώματος προς τον Κτιστόπουλο.³⁸ Συνοδευόταν επίσης από κάποιες «Σημειώσεις Εργασίας» και από το «Δοκιμαστικό Λεξιλόγιο» το οποίο, όπως αναφέρει, είχε συντάξει «κυρίως χάριν του Blegen στην Αθήνα, που είχε βρει νέες πινακίδες στην ανασκαφή της Πύλου την άνοιξη».³⁹

Όπως αργότερα παραδέχονται οι Ventris και Chadwick, η ορθότητα μιας προτεινόμενης μεταγραφής σε μια αποκρυπτογράφηση, που έγινε χωρίς δίγλωσση επιγραφή ή άλλη εξωτερική βοήθεια, μπορεί να ελεγχθεί μόνο με την εφαρμογή της στο σύνολο του διαθέσιμου υλικού. Ομολογούν επίσης ότι η αυστηρή στατιστική ανάλυση των σημείων της συλλαβικής γραφής έπαιξε σπουδαίο ρόλο στο εγχείρημα.⁴⁰ Οι στατιστικές αναλύσεις των Bennett και Κτιστόπουλου, όπως και οι προηγηθείσες έρευνες της Kober και του Sundwall, καθώς και οι πρόδρομες των Evans και Myres, υπήρξαν καθοριστικές και πολύτιμες.⁴¹ Έδειξαν ότι η μεγάλη όντως συχνότητα των *a*-, *o*- και *e*-, ως αρχικών λέξεων, δήλωνε, σε αναλογία με άλλα ήδη γνωστά συλλαβάρια, ότι αυτά θα πρέπει να είναι απλά φωνήεντα και για τα πρώτα δύο είχαν ήδη προταθεί οι αξίες *-a* και *-i*. Το πρώτο μάλιστα είχε ήδη προταθεί από την Kober και τον Κτιστόπουλο.⁴²

Τότε, πριν ακόμη από την έκδοση των *Docs*¹ (1956), ο Κτιστόπουλος έγραφε: «Η προταθείσα από τους Ventris και Chadwick αποκρυ-

³⁷ Επίσκεψη και επιστολή του Chadwick στον Myres (BENDALL 2003, 15-17). Επιστολή Ventris (9.7.52) σε Chadwick σε λάθος διεύθυνση (56A αντί 86A), με αποτέλεσμα να καθυστερήσει. Απάντηση του Chadwick στις 13.7.52 (BENDALL 2003, 19-22) και αυθημερόν επιστολή Ventris (BENDALL 2003, 24).

³⁸ Ο Ventris χρησιμοποιεί την έκφραση «δοκιμαστικές αναγνώσεις».

³⁹ BENDALL 2003, 18 και 25-26. Ο Blegen γράφει στον Ventris 16.5.53) ότι η πινακίδα των τριπτόδων άργησε να καθαριστεί και να φωτογραφηθεί. Τελικά πρότιμησε να την δημοσιεύσει ο ίδιος (BLEGEN 1955, 59, σημ. 1)· VENTRIS 1954, 15-21.

⁴⁰ VENTRIS 1958, 70· VENTRIS & CHADWICK 1953, 23, 80.

⁴¹ Βασικές ήταν οι στατιστικές αναλύσεις των σημείων της γραφής από τους δύο ερευνητές σε αρκετά άρθρα τους. Βλ. ενδεικτικά GELB 1958, 85· ΚΤΙΣΤΟΠΟΥΛΟΣ 1954, 100-106.

⁴² *Docs*², 18· GELB 1958, 85.

ποτογράφους- ασχέτως προς το ζήτημα της εν τω μέλλοντι οριστικής αποδείξεως της ορθότητος αυτής- έδωσε νέαν και σπουδαίαν προώθησιν εις τας σχετικές μελέτας, αίτινες προβλέπεται ότι θα αναπτυχθώσι περισσότερο μετά την αναμενομένην δημοσίευσιν του επιγραφικού υλικού των νέων πινακίδων της Πύλου και των Μυκηνών». ⁴³

Η αποκρυπτογράφηση της Γραμμικής Β χαιρετίστηκε από γλωσσολόγους, φιλολόγους, ιστορικούς της αρχαιότητας και αρχαιολόγους. Η επιδοκμασία της ήταν υπέρτερη και των προσδοκιών των πρωτεργατών της. ⁴⁴ Μεταξύ των λογίων που αποδέχθηκαν εξαρχής την ελληνική λύση, εκτός του Chadwick, ήσαν και οι 'συνδοιοπόροι' του Ventris, Sundwall, Sitting, Peruzzi, Bossert, Meriggi, Pugliese Carratelli, Blegen, Bennett, και Κτιστόπουλος. ⁴⁵ Οι αρχικές επιφυλάξεις τους διαλύθηκαν εξαιτίας μιας σειράς γεγονότων, όπως η έκδοση νέων επιγραφών, οι συζητήσεις και αποφάσεις του πρώτου Μυκηναϊολογικού Συμποσίου, ⁴⁶ η υποστήριξη και η ήρεμη πειθώ του Chadwick και οι επισκέψεις των Ventris και Bennett για μελέτη σε Αθήνα, Πύλο και Ηράκλειο. ⁴⁷ Οι εκδόσεις πινακίδων της Πύλου, των Μυκηνών και της Κνωσού προσέφεραν το απαιτούμενο νέο υλικό, που διευκόλυνε τα μέγιστα την αποκρυπτογράφηση. ⁴⁸ Ταυτόχρονα η δημοσίευση της πινακίδας των τριπόδων (PY Ta 641) προσέδωσε στην αποκρυπτογράφηση επιπρόσθετο κύρος ⁴⁹.

Το πρώτο Διεθνές Μυκηναϊολογικό Συμπόσιο διοργανώθηκε στη Γαλλία (Gif-sur-Yvette, 3-7.4.1956). ⁵⁰ Εκτός των Ventris και Chadwick και των διοργανωτών του, συμμετείχε ομάδα ελληνιστών, φιλολόγων και γλωσσολόγων (Εικ. 10). Ο Κτιστόπουλος εκπροσωπούσε την Ελλάδα και την Αρχαιολογική Εταιρεία. ⁵¹ Προέβη μάλιστα σε δύο ανακοινώσεις που δημοσιεύτηκαν στα Πρακτικά του Συνεδρίου. ⁵² Παράλληλα πρωτοστάτησε στις συζητήσεις και αποφάσεις για την περαιτέρω ανά-

⁴³ ΚΤΙΣΤΟΠΟΥΛΟΣ 1955, 229-1969, 108-119.

⁴⁴ Docs², 24.

⁴⁵ Docs², 24-27· PALAIMA 2017, 771-788· VENTRIS 1958, 69-81.

⁴⁶ *Études Mycéniennes* 1956· 1990, 3-9.

⁴⁷ BENDALL 2003, 31-32. Βλ. και Docs², 24-25 (E. Bennett, 20.11. 1952)· CHADWICK 1959, 85-86.

⁴⁸ Docs².

⁴⁹ BLEGEN 1955, 59-62· VENTRIS 1954, 15-21.

⁵⁰ *Études Mycéniennes* 1956· ΚΤΙΣΤΟΠΟΥΛΟΣ 1956c, 268-270.

⁵¹ *Études Mycéniennes* 1956, 12. ΚΤΙΣΤΟΠΟΥΛΟΣ 1956c, 268. Ο Κτιστόπουλος ήταν εταίρος (1949-1977), μέλος (1954-1975) και επίτιμο μέλος του Δ. Σ. (1975-77). ORLANDOS 1980, 1· PETRAKOS 1987, 318.

⁵² ΚΤΙΣΤΟΠΟΥΛΟΣ, 1956a, 25-34· 1956b, 189-191· 1956c, 268-270.



Εικ. 10. Συνέδριο στο Gif-sur-Yvette, 1956. Ο Κτιστόπουλος στο κέντρο των συνέδρων, μεταξύ των Chadwick και Palmer (*Études Mycéniennes*).

πτυξη των σχετικών ερευνών, καθώς και για τη σύσφιξη των σχέσεων και του πνεύματος συνεργασίας μεταξύ των συνέδρων.⁵³ Όταν μάλιστα συζητήθηκε η έκδοση των επιγραφών της Πύλου, της Κνωσού και των Μυκηνών σε *Corpus*, ο Κτιστόπουλος ανακοίνωσε τη συμμετοχή και οικονομική στήριξη της εν Αθήναις Αρχαιολογικής Εταιρείας.⁵⁴

Τη δράση του Έλληνα ερευνητή, με τη σημαντική παρουσία του στη διεθνή σκηνή τα χρόνια της αποκρυπτογράφησης, τη χαρακτηρίζουν συνέπεια, εργατικότητα και αξιόλογη πνευματική παραγωγή.⁵⁵ Μετά την αποκρυπτογράφηση το ρηξικέλευθο έργο του Κτιστόπουλου δεν αναγνωρίστηκε επαρκώς, όπως θα άξιζε σε κάποιον που, ακολουθώντας διαφορετικούς δρόμους, έφτασε σε ικανοποιητικό σημείο του στόχου

⁵³ Ο CHADWICK (1959, 100) αναφέρει ότι ο Ventris συνομιλούσε με τους συνέδρους στις γλώσσες τους και με τον Κτιστόπουλο ελληνικά.

⁵⁴ *Études Mycéniennes* 1956, 12. Ο Ορλάνδος (1980, 1), αναφέρεται στον «Κωνσταντίνον Κτιστόπουλον, άνδρα συνेतόν και μελίχιον, ασχοληθέντα ου μόνον περί τα οικονομικά, αλλά και λίαν ευδοκίμως περί την ανάγνωσιν των προϊστορικών γραφών, περί των οποίων και επανειλημμένως επραγματεύθη ιδία εις το περιοδικόν *Kadmos*, ούτινος ήτο εκ των συνεκδοτών».

⁵⁵ MARAVELIAS 2004.

του.⁵⁶ Ο ίδιος συνεχάρη και επαίνεσε τον Ventris αναγνωρίζοντας την ιδιοφυΐα, τη γόνιμη ερευνητική του ικανότητα και την ακατάβλητη επιμονή και φιλοπονία του.⁵⁷ Αποτιμώντας τη δική του συμβολή έγραψε: «Ας μου επιτραπεί να αισθάνομαι ηθική ικανοποίησιν διότι αι εργασίαι μου προσεκόμισαν ποιάν τινα συμβολήν εις την έρευναν. Ελπίζω δε, ότι το πρόβλημα θα κινήσει νυν αδιάπτωτον το ενδιαφέρον αρμοδίων Ελλήνων επιστημόνων, ίνα συντελέσωσιν εις την όσον το δυνατόν επιτυχεστέραν περαιτέρω εξέτασιν αυτού».⁵⁸ Οι εκκλήσεις του όμως για το ενδιαφέρον των αρμοδίων, συνάντησαν τη γενική αδιαφορία.⁵⁹ Εξάιρεση αποτέλεσε η Εν Αθήναις Αρχαιολογική Εταιρεία η οποία, σύμφωνα με το καταστατικό της, δέχεται στους κόλπους της όχι μόνον αρχαιολόγους και ειδικούς αρχαιογνώστες αλλά ανθρώπους καλλιεργημένους που επάξια, έστω και εμμέσως, θεραπεύουν και συνδράμουν τις ανθρωπιστικές επιστήμες ωφελώντας παντοιοτρόπως το κοινωνικό σύνολο και την πατρίδα τους.⁶⁰

Την εποχή της αποκρυπτογράφησης δεν υπήρχαν μυκηναϊολόγοι με τη στενή έννοια του όρου.⁶¹ Ανεπίδευτοι στους πολιτισμούς του προϊστορικού Αιγαίου ήταν ο Ventris, η Kober, η Bennett, ο Chadwick, ο Sundwall και άλλοι λόγιοι, που ήλθαν σε επαφή με τις αιγαιακές επιγραφές. Άλλωστε, και οι προϊστορικοί αρχαιολόγοι δεν ήταν εξοικειωμένοι στην εσωτερική ανάλυση και ανάγνωση των κειμένων και σε γλωσσολογικά και άλλα συναφή ζητήματα.⁶² Ο πολυμαθής και μειλήχιος Κτιστόπουλος είχε προβεί σε επανειλημμένους εσωτερικούς στατιστικούς και συνδυαστικούς ελέγχους για τις μινωικές γραφές. Οι επιφυλάξεις του, παρά την υποστήριξη της όλης προσπάθειας και την πολύχρονη αλληλογραφία του με τους πρωτεργάτες των προσπαθειών και πολλούς άλλους (Kober, Ventris, Sundwall, Bennett, Hrozný, Georgiev και άλλους), ελαύνονταν από την ελπίδα νέων συνεχών βελτιώσεων του αποτελέσματος.⁶³ Σε κάθε περίπτωση οι μεθοδολογικές παρατηρήσεις

⁵⁶ Σε πρόσφατα συλλογικά έργα, όπως *Companion· Fox 2020· Manuale· MELENA 2014, 1-186· PALAIMA 2017, 771-788· ROBINSON 2004.*

⁵⁷ ΚΤΙΣΤΟΠΟΥΛΟΣ 1956c, 268.

⁵⁸ ΚΤΙΣΤΟΠΟΥΛΟΣ 1955, 229· 1956c, 270.

⁵⁹ ΚΤΙΣΤΟΠΟΥΛΟΣ 1956c, 270· ΜΑΡΙΝΑΤΟΣ 1946, 760-762· 1953, 139.

⁶⁰ PETRAKOS 1987.

⁶¹ BENNETT 2014, 131.

⁶² BENDALL 2003, 32· ΜΑΡΙΝΑΤΟΣ 1951, 39-42· 1953, 139-149· 1956, 11-21· PLATON 1947, 450-452· 1954, 143-163.

⁶³ ΚΤΙΣΤΟΠΟΥΛΟΣ 1955, 184-240, ιδίως 229· 1957, 416.

του βρίσκονταν στο σωστό δρόμο και εκφράστηκαν πάντοτε σεμνά αλλά αισιόδοξα και θαρραλέα.⁶⁴

Ο ρόλος του Κτιστόπουλου στο ειδικό περιοδικό *Kadmos*, που ίδρυσε (1962) ο Ernst Grumach και αργότερα διηύθυνε ο William Brice, ήταν ουσιαστικός. Ενόψει της γλωσσομάθειάς του έκανε τον έλεγχο των προς δημοσίευση μελετών, η δε εργατικότητα, η παιδεία και το ήθος του έχαιραν καθολικής αναγνώρισης από τα μέλη της συντακτικής επιτροπής.⁶⁵ Η διεύθυνση του περιοδικού, επιθυμώντας να τιμήσει τα ογδοηκοστά του γενέθλια, εξέδωσε ευρετήριο των πρώτων δέκα τόμων, συνοδεύοντάς το με λίαν επαινετικό σημείωμα.⁶⁶ Ο συντάκτης του σημειώματος Brice του απένειμε τη μεγαλύτερη διεθνή διάκριση που έλαβε ποτέ εν ζωή, ως ερευνητής και ως άνθρωπος. Με εξίσου ζεστά και απλά λόγια για τη ζωή, το χαρακτήρα και το έργο του, ο Brice ανακoinώσε τον θάνατο του Κτιστόπουλου, λίγα χρόνια αργότερα.⁶⁷

Ο Ventris, σε μια κρίσιμη καμπή των προσπαθειών του, εναπέθεσε τις ελπίδες του στον Bennett,⁶⁸ ενώ παραδεχόταν ότι οι εργασίες της Kober και του Κτιστόπουλου προλείαναν το δρόμο του.⁶⁹ Η πορεία του Κτιστόπουλου, στα χρόνια της μεγάλης προσπάθειας, ήταν παράλληλη με της Kober και του Ventris. Ο ρόλος του Ventris στην αποκρυπτογράφηση και στη θεμελίωση της μυκηναϊολογίας αναγνωρίστηκε δικαίως, πλήρως και διεθνώς.⁷⁰ Ο Κτιστόπουλος, όπως και ο Ventris, δεν διέθετε γνώσεις γλωσσολογίας και άλλων αρχαιογνωστικών κλάδων και ως εκ τούτου δεν ασχολήθηκε με την ερμηνεία των κειμένων, όταν πλέον οι δύο επί μακρόν 'συνδοιπόροι' του είχαν φύγει πρόωρα από τη ζωή. Ίσως για τούτο η μακρά, δραστήρια και ως ένα σημείο επιτυχημένη προσπάθειά του, έμεινε

⁶⁴ ΚΤΙΣΤΟΠΟΥΛΟΣ 1955, 229. Βλ. αναφορές από Kober (επιστ. 8.7.1947). KOBER 1948, 101-102.

⁶⁵ Στ. Αλεξίου, E. L. Bennett, B. Καραγεώργης, O. Masson, P. Meriggi, G. Neumann, F. Schachermeyr και W. C. Brice.

⁶⁶ BRICE 1971, 177.

⁶⁷ BRICE 1978, 169. Ο Κτιστόπουλος γεννήθηκε στις 28. 10. 1891 (Αιτωλικό Μεσολογγίου) και απεβίωσε στις 7.10. 1977 (Αθήνα).

⁶⁸ CHADWICK 1959· GELB 1958, 84-87· PALAIMA 2005, 195-196· 2017, 771-788· SACCONI 1988, 31-132,386· VENTRIS 1958, 71.

⁶⁹ SACCONI 1988, 67. Πρβ. την απάντηση της Kober (Brooklyn 20.2.1950) στο 'Mid-Century Report', 37. Βλ. και ROBINSON 2004, 73-75. Η Kober απεβίωσε στις 16.5.1950. Βλ. FOX 2020· PALAIMA 2003, 50-51· 2005, 195-196· 2017, 771-788· ROBINSON 2004, 73-75.

⁷⁰ BENDALL 2003, 13-20, 33-34, 58· BENNETT 2014, 17-137· BENNETT 1989, 9-23· MELENA 2014, 1-186· PALAIMA 2003, 56-58· 2005· 2017, 771-788· POPE 2008, 1-23.

σχεδόν άγνωστη και σχεδόν λησμονήθηκε από τις επόμενες γενιές.⁷¹

Στις δεκαετίες που ακολούθησαν την αποκρυπτογράφιση οι μυκηναϊολογικές σπουδές καλλιεργήθηκαν από ερευνητές σε πολλές χώρες. Οι επιγραφές της Γραμμικής Β έπεισαν την οικουμένη ότι οι δημιουργοί του μυκηναϊκού πολιτισμού μιλούσαν ελληνικά επτακόσια τουλάχιστον χρόνια πριν από τα ομηρικά και τα ησιόδεια έπη.⁷² Στο δεύτερο μισό του 20^{ου} αιώνα η συμμετοχή Ελλήνων ερευνητών υπήρξε μικρή σε έκταση και κατώτερη των προσδοκιών των πρωταγωνιστών της αποκρυπτογράφισης. Η Μυκηναϊολογία δεν καλλιεργήθηκε ως ιδιαίτερος επιστημονικός κλάδος στα ελληνικά πανεπιστήμια, παρά τις κατά καιρούς εκκλήσεις και αντίστοιχες υποσχέσεις. Αντίθετα η προσφορά των Ελλήνων αρχαιολόγων, που έφεραν στο φώς και διέσωσαν μεγάλες ή μικρές ομάδες κειμένων και των τριών γραφών της Εποχής του Χαλκού στο Αιγαίο, θεωρείται ιδιαίτερος σημαντική.

⁷¹ BRICE 1971, 177· 1978, 169· MARAVELIAS 2004, 194-209· PALAIMA 2017, 771-788.

⁷² CHADWICK 1959, 133.

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Wilhelm Deecke's bequest at the *Bibliothèque Nationale et Universitaire de Strasbourg*: a glimpse into 19th century archaeological investigations in Cyprus

Artemis Karnava

Archival material, be it public records or personal bequests, is always of interest to later scholarship on any given topic. In the latter instance, there is always room for surprises when going over scholarly working papers. Personal archives can reveal the cognitive processes that resulted in the creation of certain theories or scientific accomplishments, or they can provide secondary glimpses into old, thought to be known, finds. It is also the case that sometimes the accidents of time hinder publication altogether, so old archives can contain primary, unpublished information. Archives are therefore sought-after potential treasure troves, even when they belonged to scholars that produced state-of-the-art archaeological or epigraphic publications.

The instance of one such archive and its modern 'discovery' is the topic of this paper, an archive that came into my attention half-fortuitously.* I was searching online for information on Wilhelm Deecke, a 19th century philologist, who was instrumental in (one of) the deci-

* I am indebted to my colleague Daniela Lefèvre-Novaro, a professor at the University of Strasbourg, who directed me to the correct electronic sources and also conducted some inquiries on my behalf. We met on the occasion of a conference in Venice, Italy, in April 2018, and talking about Wilhelm Deecke, an old Strasbourg professor, with her was what prompted me to inquire further. My debt extends to the head conservator and in charge of the legacy collections of the BNU Claude Lorenz, and the library personnel, who assisted my work in every way possible. This is an adapted version of a paper I gave on 5 April 2019 at UCL in London, in a symposium entitled *Cypriot archaeology, pre-modern material culture, and cultural heritage in the UK*, hosted by the Institute of Archaeology/UCL, the Cyprus High Commission in the UK and the British Museum.

pherment(s) of the Cypriot syllabary of the 1st millennium BC in 1874 and a prominent figure in Cypriot epigraphy in the first dozen or so years of the discipline's founding. My search was part of my work for the corpus of Cypriot syllabic inscriptions.¹ Numerous inscriptions that interested me, especially from the region of Marion in northwest Cyprus, had been published for the first time by Deecke, a Strasbourg-based scholar who had seemingly never even set foot on Cyprus. Deecke wrote in 1886 on how he came about obtaining evidence for new, unpublished inscriptions from Marion:

“Von allen diesen Inschriften hat mir Hr. Ohnefalsch-Richter Abklatsche oder Abdrücke und Abschriften, zum Teil in mehreren Exemplaren, gesandt und mit großer Liberalität die vorläufige kurze Veröffentlichung gestattet”.²

It was therefore obvious that Deecke had some sort of contact with Max Ohnefalsch-Richter, the first excavator of Marion, who had provided him with inscription documentation, namely squeezes, casts and transcriptions. But no Deecke *Nachlass* was known to be kept somewhere, and all this material was unaccounted for.

Knowing, however, that Deecke was connected to Strasbourg in Alsace, nowadays in France, but a part of Germany at the time, I googled the relevant search terms in German.³ The information that came up online as two library catalogue entries was surprising: not only ‘Abklatsche von cyprischen Inschriften’ (=squeezes of Cypriot inscriptions), but also ‘Photographien von cyprischen Inschriften’ (=photographs of Cypriot inscriptions). The entries pointed to the archival collections of the Strasbourg National and University Library [*Bibliothèque Nationale et Universitaire de Strasbourg*, henceforth: BNU], I therefore requested permission to document and study whatever they stood for.

¹ The project of putting together a corpus of inscriptions in the Cypriot syllabary of the 1st millennium BC has been described in a number of papers, the most recent of which is KARNAVA & MARKOU 2021, 113-116. The first corpus fascicle (out of three) appeared as *IG XV 1,1* in 2020. See also EGETMEYER, this volume.

² DEECKE 1886a, 1289. The hasty publication is in a philological weekly journal, dated to 9 October of that year.

³ I think something in the order of: ‘Deecke’, ‘Strassburg’, ‘Abklatsch’ and ‘Inscription’. The web addresses seem to have since ‘migrated’ and are not readily found through a simple Google search, a constant problem when quoting electronic addresses.

I visited the BNU on two occasions in July 2018 and January 2019.⁴ The Wilhelm Deecke archive kept at the BNU seems to cover the period after 1875 and consists of three parts: notes, paper squeezes of inscriptions and photographs. During my last visit I was informed on how the bequest came to the possession of the BNU. An entry in the BNU archives reveals that after Deecke passed away in 1897, his papers and part of his library were sold by his family to the library for 75 German marks. This information confirmed my initial impression that it was a 'cleaned up' version of the scholar's personal papers.

Wilhelm Deecke in Strasbourg and Max Ohnefalsch-Richter in Cyprus

The two personalities involved in the creation and the keeping of this archive deserve particular mention. Ohnefalsch-Richter's life and work are, to a great extent, known and investigated,⁵ but Deecke's life and work are not. The accounts on their life and disposition, as well as their work, show two men very different in character, demeanour and intellectual capacities, with the former appearing as an infuriating extrovert, while the latter seemed low-key, rather anti-social and introverted. If they ever actually met, or how their collaboration panned out is not said, since the archive contains no actual correspondence between them.

Wilhelm Deecke, the scholar

Wilhelm Deecke, born in 1831 and deceased in 1897,⁶ was a philologist active in the second half of the 19th century. Originating in Lübeck in Schleswig-Holstein, in the north of today's Germany, he studied classical philology and comparative linguistics in Leipzig, as well as Egyptology and Uralic languages in Berlin. Due to financial constraints he did not submit his doctoral thesis until 1869,⁷ so his studies, the *Promotion*,

⁴ I took photographs of squeezes and photographs of photographs, and I had the notebooks pertaining to Deecke's Cypriot material scanned by the library personnel. All the material I documented digitally, besides being kept in Strasbourg, is also deposited to the *Inscriptiones Graecae* archive in Berlin.

⁵ Unlike Deecke, numerous biographical and bibliographical accounts exist on Ohnefalsch-Richter's personality, among which BUCHHOLZ 1989; FIVEL 1989; KRATA 1992. Recently, a whole volume was dedicated to his activities in Cyprus (SCHMID & HORACEK 2018), the rich archival documentation in which supersedes all previous publications.

⁶ Detailed biographic account by Therese Deecke, his wife, and August Baumeister, a close friend (DEECKE & BAUMEISTER 1901). Another short biography, KRONASSER 1957.

⁷ DEECKE 1869.

were completed in 1870 at the age of 39. He was employed as a secondary school teacher throughout his working life in schools in Lübeck (since 1855), then Strasbourg and its vicinity (since 1871). He is recognised primarily as an Etruscologist,⁸ and his bequest in the BNU supports that, since most of his notes are on Etruscan and other scripts and languages of the Italic peninsula, or related material (Messapic, Faliscan, Lemnian).

Deecke, Strasbourg Lyceum's *Konrektor* since 1871, became active in Cypriot epigraphy from 1874 onward, or shortly before that. It is not clear why exactly he got into the study of Cypriot inscriptions: his belated dissertation was about the Latin language, but he published very little anyway on Latin or other topics before 1874.⁹ It was in that year that his first major publication appeared, which was, in fact, the extended decipherment article on the Cypriot syllabary in collaboration with a young *génie*, Justus Siegismund.¹⁰ The latter's posting in 1873 in Strasbourg's protestant *Gymnasium* as a teacher¹¹ was probably the crucial turning point, since there is no indication that Deecke was interested in Cypriot before meeting Siegismund. Cypriot epigraphy was a fresh and, in all likelihood, 'trendy' topic at the time that they got into its study: only in 1852 had scholars realized that there existed an unknown writing system during the 1st millennium BC in Cyprus,¹² and, until its decipherment in 1874, it was a race against time for whoever managed the glorious task.¹³

The collaboration between Deecke and Siegismund culminated in (one of) the successful decipherment(s) of the syllabary.¹⁴ Their common connection was their *alma mater*, Leipzig, and the person who

⁸ BENELLI 2017, 97.

⁹ The account of his publications before 1874 shows only 13 entries, including obituaries, his dissertation, a book on German family names, and school syllabi (DEECKE & BAUMEISTER 1901, 100).

¹⁰ DEECKE & SIEGISMUND 1874, an article finished at the end of May of that year (information in MASSON 1991, 33, ft. 8). As far his involvement with the Cypriot syllabary is concerned, MASSON (1991, 33, ft. 2) attributes to him a small, unsigned notice on Brandis' decipherment effort on the March issue of a journal (DEECKE 1874).

¹¹ This *Gymnasium* is a rather famous school: it was founded in 1538 by Johannes Sturm, and it later evolved in what is today the University of Strasbourg.

¹² The feat of a numismatist, who realized that legends of coins identified as coming from Cyprus were written in an unknown writing system (LUYNES 1852).

¹³ The full story in POPE 1999, 123-135.

¹⁴ DEECKE & SIEGISMUND 1874. On their effort, MASSON 1991.

must have brought them together was Georg Curtius, the professor of classical philology in Leipzig at the time. Curtius was Siegismund's mentor, who additionally supervised Deecke's *Promotion*. Siegismund's untimely accidental death caused by a fall inside a deep rock-cut tomb in Amathous in Cyprus in 1876, at the age of 24, during a trip he had earned as reward for his contribution to the decipherment, obviously put an end to their joint Cypriot endeavours.¹⁵ After the decipherment and Siegismund's passing, Deecke, the late bloomer, continued to study and publish on the syllabary; his last pertinent publication dates to 1886. Throughout the period of his scientific production between 1874 and 1889, which demonstrates a clear focus first on Etruscan and then on Cypriot, he additionally published on Pamphylian, Lycian, various Semitic alphabets and cuneiform, and even Indian scripts.

Max Ohnefalsch-Richter, the archaeologist

Ohnefalsch-Richter, born in 1850 in Sohland in Saxony, in the east of today's Germany and on the border with the Czech Republic, was a German who was involved in (or conducted and initiated himself) excavations in Cyprus in the second half of the 19th century and the beginning of the 20th century.

When Cyprus became a protectorate of the British Empire in 1878, the ever-resourceful Ohnefalsch-Richter, who had tried to earn a living by entering the military, but was dismissed for health reasons, and had spent the years between 1873 and 1878 in Italy, was tasked as a press correspondent and a photographer in Cyprus with a recommendation by the German emperor's court. He seized the opportunity and started his life-long stay and involvement with Cyprus, which lasted intermittently until his passing in 1917. Upon his arrival on the island, he very quickly became interested in archaeology and excavations, an exciting and emerging field on the island during a time of intense international political competition, where there was money and other perks to be had. In view of his interest, he managed to assign himself the task of conducting excavations as a representative of the British administration. He had no formal archaeological training, but he was persistent and hard-working, and was after archaeological finds mostly as an income through their sale.

His training in photography also came in handy, since photography

¹⁵ MASSON 1987, with a colourful description of Siegismund's passing.

was, at the time, an emerging and expensive technology that revolutionised the way archaeological sites in far away lands and archaeological finds could be presented to the scientific community and the public back in Europe.¹⁶ Ohnefalsch-Richter is known to have made numerous photographs of his excavation sites, as well as the retrieved objects. He would send these photographs to various scholars in Europe, in order to have his finds studied, appreciated, published, and thus be made more marketable. Photographs also helped him execute drawings of finds and sketch recreations of archaeological sites, which even resulted in some primitive, for our standards, enhanced reality and a not-so-faithful rendering of his excavations and the retrieval circumstances of his finds.

The source of all the photographs in the Deecke archive at the BNU is, in fact, Ohnefalsch-Richter, and they are, in all probability, photos taken by the man himself. This same person seems to have been the source of the majority of the paper squeezes in the same archive.

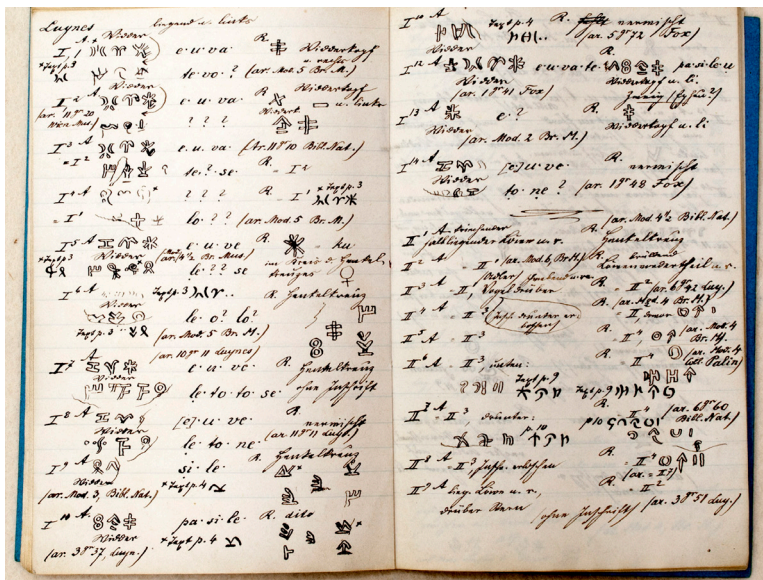


Fig. 1. Pages from one of Deecke's notebooks on inscriptions on Cypriot coins (photo by author; courtesy of the BNU, box 2822).

¹⁶ A detailed and interesting account of the relationship Ohnefalsch-Richter had with photography in FILSER 2018, who relies on KRATA 2010.

The Wilhelm Deecke bequest at the BNU

The Wilhelm Deecke bequest kept at the BNU consists of three parts: notes, paper squeezes of inscriptions and photographs.

Deecke's notes and notebooks

Where I could follow the dates of the entries in his notebooks, the earliest entry is a reference to a paper published in 1875 (but which he could have read any time after that). The multiple notebooks entitled 'Mülhausen' suggest that the bequest mostly consists of his papers after Deecke's posting in Mülhausen, a smaller city to the south of Strasbourg, a posting which took place in 1889. But many notebooks seem more weathered than the Mülhausen ones, so they must be the bulk of his work in the 1880s (Fig. 1). After 1886 Deecke does not publish anything any more on the Cypriot syllabary, but from his papers it seems that he continued to work privately on it. Unfortunately, I could not find anything that would be relevant to the decipherment or his collaboration with Siegismund, which is regrettable, since we know almost nothing about the path they followed.¹⁷ Siegismund died quite early on, in 1876, two years after the decipherment, and he left practically nothing behind him.¹⁸

I suspect that an expert in Etruscan would be in a better position to evaluate the time length involved, since most of Deecke's work was on Etruscan.

Deecke's paper squeezes of inscriptions

The box of paper squeezes contains in all 58 items, the majority being paper squeezes of Cypriot syllabic stone inscriptions, but also a few copies of inscriptions of various nature (pencil copies). Many of the squeezes are in duplicates, a fact which concords with Deecke's information, the Ohnefalsch-Richter would send him multiple copies of the mate-

¹⁷ In Deecke's biography written for the most part by his wife (DEECKE & BAUMEISTER 1901), Siegismund is such a distant memory, that Therese (see above, n. 6) even misspells his name (93: 'Sigismund').

¹⁸ MASSON 1987, 13, claims that Siegismund's two travel notebooks had gone missing. He does mention however that they were last known to be in the possession of Richard Meister, the philologist who was tasked by the Berlin Academy of Sciences to compile a corpus of Cypriot syllabic inscriptions in the turn from the 19th to the 20th century. The notebooks are, in fact in the archives of the Berlin Academy, in the care of the *Inscriptiones Graecae* corpus, apparently left over by Meister.

rial.¹⁹ The provenance of the original inscriptions, to the extent it was possible for me to ascertain, are various regions in Cyprus, sites that were first excavated in the 19th century and produced the first syllabic inscriptions: Marion (28 squeezes); Drymou (4); Soloi (2); Paphos (4); Golgoi (3); Salamiu (2), a total of 43 squeezes.²⁰

I took photographs of select paper squeezes that are not to be found nowadays. Thankfully, almost all of the inscriptions, the squeezes of which are in the archive, are still accounted for, dispersed between Poland, Cyprus (Nicosia and Marion-Polis Chrysochous museum itself), UK, Turkey and the U.S.A. One of the lost inscriptions however was also depicted on a photograph from the same archive (Fig. 2; see also below, Fig. 3, for the photo of the missing inscription carrier). All this information has been included in the first volume of the corpus of Cypriot syllabic inscriptions (*IG XV 1,1*), which contains inscriptions from Amathous, Drymou, Kourion and Marion.



Fig. 2. Paper squeeze of a now lost inscription; the inscription was listed as *ICS 108*, and is now *IG XV 1, 178* (photo by the author; courtesy of the BNU).

The squeeze collection also contains a rather unusual kind of paper squeezes of small size (3×4cm for instance, with signs of 1cm size): squeezes of inscriptions incised on clay vases (179, if I counted them correctly).²¹ Because the production of a paper squeeze involves hitting the inscribed surface with a brush, paper squeezes are usually made on stone inscriptions and not clay, which is delicate and can break. The archive contains however a number of paper squeezes of inscriptions in-

¹⁹ See above, n. 2.

²⁰ The remaining 15 squeezes are of Etruscan inscriptions (3); Greek alphabetic (2); and some remain unidentified due to their bad state of preservation (10).

²¹ For a more extensive account and photographs of these vase inscription squeezes, see KARNAVA 2022, 499-501, Fig. 1.

cised on clay vases from Marion. The little squeezes have a round shape, because the inscriptions were incised under the (round) bottoms of clay vases. Because the inscriptions are identified with material recovered by Ohnefalsch-Richter at Marion, they were probably made by him and sent to Deecke, in order for the latter to study and publish them. The majority of the original vases seem to be kept in the Cyprus Museum in Nicosia and the Berlin *Antikensammlung* today. Having documented, however, all the relevant inscribed vases both in Nicosia as well as Berlin, I believe that some of these little squeezes document also inscriptions on vases that are now lost, dispersed in different, probably private, collections over Europe. Again, all this information is included in the corpus volume, and it has actually helped me to make a lot of sense of the findspots and ordering of the vases excavated by Ohnefalsch-Richter.

Deecke's photographs

The third strand of information in the bequest are the photographs. The bequest contained 32 photographs, all sent by Ohnefalsch-Richter to Deecke. I can readily understand why Ohnefalsch-Richter would send Deecke photographs that contain inscriptions to Deecke, an epigraphist. Some three-four photos are of finds from the excavations Ohnefalsch-Richter conducted in Marion in 1885, but mostly in 1886 (Fig. 3). They are group photos of funerary stone *stelae*, almost all of them accounted for today.²²

But the value of these photographs lies in two points. The first, that some of the inscriptions depicted are now lost, and the second, that they constitute the only evidence of how some of the stone *stelae* looked like before they were cut off. Concerning inscriptions now lost, let us return to the inscription IG XV 1, 178 (see above, Fig. 2), the squeeze of which has a peculiar shape. But it is this peculiar and unique shape of the squeeze that helps us identify the very same inscription among many in the photograph of Fig. 3 (below). In the middle-lower part of the photograph, under the lion's statue, there is a sizeable stone sarcophagus cover, which appears unmistakably to be the inscription carrier. So, through this archival testimony we have now some more evidence for an

²² All the photographs from Deecke's bequest in Strasbourg have been used for the first fascicle of the corpus and they can be seen in the Plates section (IG XV 1,1, Pls. 18-42). Each individual inscription in these photos also accompanies the (modern) photographs inserted for each inscription in the corpus.

inscription we are missing, and moreover it is the only testimony for an inscription on a stone sarcophagus cover.



Fig. 3. Photograph sent by Ohnefalsch-Richter to Deecke, with inscriptions discovered in Marion in 1886 (*JG XV 1*, Pl. 42A; photo of the photo by the author; courtesy of the BNU).

The second, valuable contribution of these photographs lies in the fact that they depict the whole of the inscription *stela*, before it was sawn off. It appears to have been the case, that because most of these inscriptions found their way to the antiquities market, in order to facilitate their transportation, the non-inscribed part of the stone was cut off and only the inscribed part was kept. For instance, a number of these that are visible in Fig. 3 ended up in a castle in Poland, after having been bought by a Polish countess in the famous 19th century auction houses of antiquities in Paris. So, they probably had to be shipped from Cyprus to France, and then travel on to Poland; this is what these inscriptions look like today, kept in the Gołuchow Castle in Poland (Fig. 4).²³ To my knowledge, these Ohnefalsch-Richter photographs were never pub-

²³ <https://www.zamkipolskie.com/goluc/goluc.html> [last accessed 22.11.2022].

lished anywhere. I would think that Ohnefalsch-Richter did not want to show to the authorities that he was sowing off his finds in order to transport them more easily. Deecke's publications of the *stelae* texts do mention sometimes the original size of the stone, so it is also possible that it was a common secret that stone inscriptions could not be kept intact back in those days. Alternatively, Deecke did not know and could not have known what the fate of the *stelae* was.



Fig. 4. Cypriot stone inscriptions embedded in the wall of a corridor in the castle of Gołuchow, Poland; the various ICS and IG numbers of the inscriptions are listed below each inscription (photo by the author, 2008; courtesy of the Gołuchow Castle and National Park authorities, Poland).

Moreover, there are also two batches of photographs that are rather unusual in an epigraphist's archive. The first batch consists of seven photographs with finds from the excavations by Ohnefalsch-Richter in Geri-Phoenikiais ('Phönitschäs'), a burial site between Nicosia and Idalion (Fig. 5). The excavations were conducted by order of the British Museum in 1883 and the finds are kept today at the British Museum. The tombs date primarily to the Middle Bronze Age, roughly between 2000-1700 BC,²⁴ but Late Bronze Age material was also collected.²⁵

²⁴ OHNEFALSCH-RICHTER 1893; KIELY 2010, 244-245.

²⁵ FURTWÄNGLER & LÖSCHCKE 1886, 24-31, Pls. XIII-XIV, XXII.



Fig. 5. Photograph sent by Ohnefalsch-Richter to Deecke, with finds retrieved in Geri-Phoenikiais in 1883 (photo of the photo by the author; courtesy of the BNU).

The second batch are 17 photographs of finds recovered in excavations in Agia Paraskevi-Nicosia, another funerary site situated today within the town of Nicosia in the area of where, until recently, was the Nicosia Hilton (Fig. 6). The excavations were conducted again by Ohnefalsch-Richter in 1884-1885. He initially excavated 11 tombs, and then 30 more tombs, which date to the Early and Middle Bronze Age (roughly between 2500-1700 BC). Again, the burial ground seems to have continued in use until the Late Bronze Age.²⁶

Regarding the photographs of archaeological objects, such as vases and figurines, from excavations conducted by Ohnefalsch-Richter in Geri-Phoenikiais and Agia Paraskevi, I asked myself why would Ohnefalsch-Richter send Deecke, a philologist, photographs of archaeological finds irrelevant to inscriptions, especially finds that were already

²⁶ The first succinct account of the excavations at Agia Paraskevi appeared in REINACH 1885, 355-356, to whom the excavator sent summary reports of his finds in Cyprus. Subsequently: FURTWÄNGLER & LÖSCHKE 1886, 24-31, Pls. XIII-XIV, XXII; OHNEFALSCH-RICHTER 1886a, 199-200; 1893. More recent investigations followed up on the research of the area, which was an extensive necropolis: GEORGIU 2002; HENNESSY *et al.* 1988; KARAGEORGHIS & BRENNAN 1999; KROMHOLZ 1982; MERRILLEES 2008.

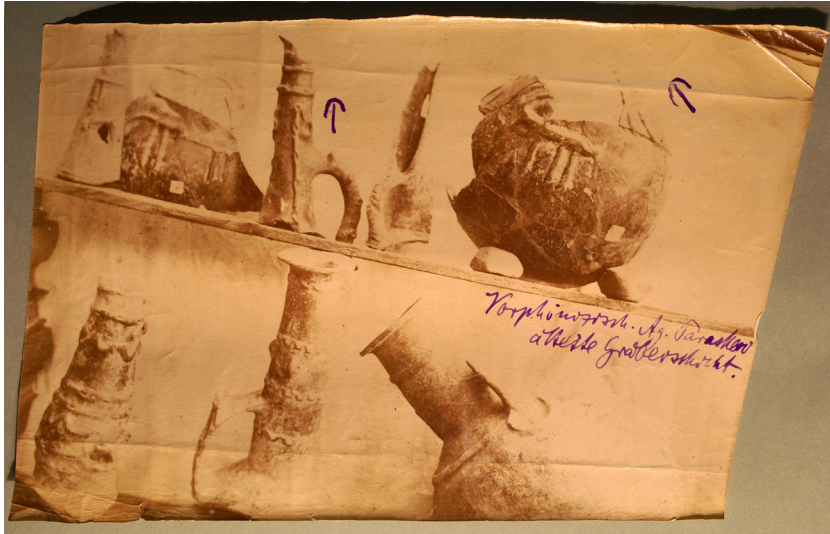


Fig. 6. Photograph sent by Ohnefalsch-Richter to Deecke, with finds retrieved in Agia Paraskevi-Nicosia in 1884-1885 (photo of the photo by the author; courtesy of the BNU).

promised to the British Museum, since it was the Museum that had paid for the excavations. The vases seem to attest to some decoration, or even some incised post-firing marks, that maybe Ohnefalsch-Richter thought of as writing (see Fig. 6, and possibly also Fig. 7), so my hypothesis is that maybe they were sent to Deecke in the hope that he would verify such suspicion. It seems therefore that Ohnefalsch-Richter requested Deecke's opinion as an expert in ancient writing (of the 1st millennium however) that would be able to have an opinion on whether this intricate decoration constituted writing or not. In any case, these relief vases come up again and again in Ohnefalsch-Richter's initial mentions of the site and its finds,²⁷ and they somehow enter in the reasoning of a certain polemic he engages in against Schliemann and his interpretations of Hissarlik.²⁸ Additionally, he was always looking for ways to increase the market value of his 'merchandise', so being able to identify writing or precursors of writing in Cyprus at such early dates would be something spectacular.

²⁷ OHNEFALSCH-RICHTER 1886b, 323-325.

²⁸ For the relationship between Ohnefalsch-Richter and Schliemann, see MERRILLEES & KRATA 1997.

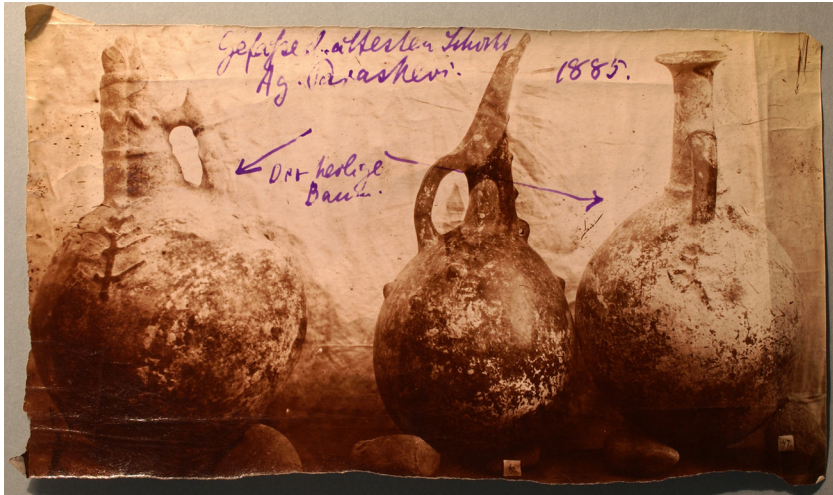


Fig. 7. Photograph sent by Ohnefalsch-Richter to Deecke, with finds retrieved in Agia Paraskevi-Nicosia in 1884-1885; hand-written arrows on the photo point to relief decoration on the vases, and the legend writes 'Der heilige Baum' (= 'the sacred tree') (photo of the photo by the author; courtesy of the BNU).

At the same time, however, Ohnefalsch-Richter would send Deecke vases which he thought bore religious connotations (Fig. 7). The theory of the 'holy tree' and the 'holy tree branch' appears in his book, and is laid out in great detail.²⁹ Besides writing, all evidence pertaining to religious practices and beliefs always attracts the public's attention. Ohnefalsch-Richter had a hard time being recognised as a scholar in the archaeological circles, so I suspect that he was maybe looking for some seal of approval from the part of Deecke for his theories. Deecke was also interested in the beginning and the creation of writing, he had even written something relevant previously,³⁰ which was however harshly criticized and promptly dismissed in the literature of his time.

To my knowledge, these photographs are not published anywhere. Ohnefalsch-Richter, as mentioned above, was known to have taken many photos himself, but printing photographs in archaeological publications was expensive. Some line drawings of some of these objects appear in his *Kypros* book, and they were already drawn in one of his first

²⁹ OHNEFALSCH-RICHTER 1893, *passim*.

³⁰ DEECKE 1877.

attempts to summarily present his excavation results.³¹ It is possible that copies (of some, or of all?) of these photos exist also in other archives, since it was his habit to send copies of his photographs to different directions, either to have people date and publish his finds, or to convince them to fund further excavations.

Concluding: old archives, new evidence

Regarding the Cypriot material in the Deecke bequest at the BNU, this short account aimed at providing an overall appreciation of the material it contains. It seems that in 1886 Ohnefalsch-Richter sent to Deecke from Cyprus in Strasbourg squeezes of inscriptions, photographs and transcriptions. It is not certain that he sent the Geri-Phoenikiais and the Agia Paraskevi photographs earlier, when the two sites were being excavated, in 1883 and 1884-1885 respectively: he could have sent them along with the inscribed syllabic material in 1886, after having started his collaboration with Deecke.

Deecke duly published all of these inscriptions in a series of small articles in 1886.³² But most of the work done by him on the Cypriot syllabary was already behind him: the decipherment publication together with Siegismund was already lost in time back in 1874, and his most significant contribution to the study of the syllabary since that time had been a corpus of all the then known inscriptions in 1884.³³ Apparently, because of the fame acquired through the above publications, Deecke was last sent documentation to read and assist the publication of inscriptions from Paphos and Amargetti as late as 1887-1888 by the British *Cyprus Exploration Fund*.³⁴ Today, after some 125 years have elapsed since the last time these working papers and antiquities documentation were useful to someone, it is fair to say that, after this hiatus, they have been and will be, useful, again.

³¹ OHNEFALSCH-RICHTER 1889, Pl. II, where a lot of vases are captioned as 'Ag. Paraskevi'

³² DEECKE 1886a-d.

³³ DEECKE 1884.

³⁴ HOGARTH *et al.* 1888.

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3



𐎶𐎵𐎲𐎠𐎧

**Linear A
and
Linear B texts**



Landowning and the creation of private estates in Pylian *pa-ki-ja-ne**

Claudia Valeria Alonso Moreno

Agricultural estates in Mycenaean Pylos

In Mycenaean Pylos, the land had an outstanding economic role but also social prestige and ideological value. Agricultural production was the basis of subsistence and served to feed the cattle. Moreover, it created surplus and wealth. According to the Pylian tablets, the most important people in the kingdom, including the *wanax* himself, were important landholders. In fact, it has been stated that access to agricultural wealth was the common trait shared by Pylian elites.¹ Moreover, land was used by the palatial administration as payment, with some people receiving agricultural plots in exchange for their services, work, or simply because they held an important position within the Pylian society. Some land was also consecrated to the divinities.² Nevertheless, as an institution, the Palace of Pylos was not a landowner itself. Messenian land was in the hands of private landowners and their families. Rural communities sometimes also shared land ownership of pastures and woods. Since it was the *damos*, and not the palace, who owned those lands, I consider them private, despite being communally owned. In this paper, I will address how Mycenaean Pylos gained access to agricultural wealth and its derivatives thanks to the management of different types of private

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¹ ALONSO MORENO 2020.

² DE FIDIO 1977.

estates within the territory of *pa-ki-ja-ne*, which housed the best known agricultural land in all of Mycenaean Messenia.

Landowning in pa-ki-ja-ne

pa-ki-ja-ne, *Σφαγιάνες, “the place of slaughter”, is the fourth Pylian district within the province *de-we-ro-a₃-ko-ra-i-ja* according to **PY Cn 608.6**, **Jn 829.7**, and **Vn 20.6**. It was probably located in the modern town of Chora, just five kilometres away from Pylos.³ The place was highly intertwined with official palatial cult. It housed many different sanctuaries and religious festivals, and the initiation of the *wanax* also took place here.⁴

Apart from its leading role within the Pylian religion, *pa-ki-ja-ne* was a rich agricultural territory. However, it was not a palatial agricultural estate. The palace gained access to agricultural production thanks to the imposition of a direct tax on landholders and tenants based on the dimensions of their plots.⁵ The land of *pa-ki-ja-ne* was also a good in itself since it was used to compensate the members of the palatial elite. Even prominent members of the rural community benefited from the distribution and sanctioning of land by the palace.

The scribes recorded the size of the taxable field according to the amount of seed that could be grown on each plot.⁶ Therefore, in the tablets, we do not find actual plots but theoretical tax units.⁷ Hands 41 and 1 registered *pa-ki-ja-ne* fields in the series **Eb**, **En**, **Eo** and **Ep** to calculate the tax amount.⁸

Moreover, the scribes also registered the total amount of *pa-ki-ja-ne* land divided by category in series **Ed**.⁹ Hand 41 wrote the preliminary series, **Eo** and **Eb**. Hand 1 used those documents to prepare the series, **En** and **Ep**, the final documents. This scribe also wrote the **Ed** tablets.¹⁰ Information about the land included the names of landowners and tenants, the legal category, and the size of each plot. In *pa-ki-ja-ne* there

³ CHADWICK 1972, 109; STAVRIANOPOULOU 1989, 140-141.

⁴ LUPACK 2008, 45-46; 2011, 208; 2016, *passim*; PALAIMA 1995, 131; 2004, 225.

⁵ DE FIDIO 1987, 144; ZURBACH 2017a, 165.

⁶ DEL FREO 2005, 7; DUHOUX 2016, 49; PALAIMA 2015, 628.

⁷ ZURBACH 2017a, 165.

⁸ ZURBACH 2017b, 41-42.

⁹ ZURBACH 2017a, 46-47.

¹⁰ However, **Ed 411** was written by both hands (see the comment on this tablet in *PTT*²).

were four land categories: *ko-to-na ki-ti-me-na*, *ke-ke-me-na ko-to-na*, *ka-ma*, and *e-to-ni-jo*. *ko-to-na*, κτοῖνα, was the generic name for an agricultural plot.¹¹ As a noun, it was insufficient to classify the type of land; therefore, it was accompanied by the medio-passive participles *ki-ti-me-na* or *ke-ke-me-na*. On the other hand, *e-to-ni-jo* and *ka-ma* lands were deducted from *ke-ke-me-na* estates. In this paper, I will focus on the relationship among the palatial administration, landowners, and tenants in relation to *ko-to-na ki-ti-me-na* and *ke-ke-me-na ko-to-na*.

ki-ti-me-na land and the *te-re-ta* from *pa-ki-ja-ne* (Eo/En series)

The *ko-to-na ki-ti-me-na* land category appears in the **Eo** (preliminary texts written by Hand 41) and **En** (definitive texts written by Hand 1) series. *ki-ti-me-na* is the passive present middle participle of *κτιμενα. The root is *ktei-, which creates the verb κτίζω, “to settle”. Much bibliography has been written about the interpretation of this land category, which is usually defined as opposed to *ke-ke-me-na*.¹² The definitive characteristic of the *ko-to-na ki-ti-me-na* is that it belongs to individuals.

In the Pylian tablets, holders of *ki-ti-me-na* land were named *te-re-ta*. This name belongs to the lexical family of τέλος, “charge”, most likely the plural form *τελέσται.¹³ Therefore, the *te-re-ta* were people with some kind of obligations.¹⁴ According to the text in **En 609.1-2**, the heading of the entire series, there were 14 *te-re-ta* in *pa-ki-ja-ne* (1.*pa-ki-ja-ni-ja*, *to-sa*, *da-ma-te*, DA 40/2. *to-so-de*, *te-re-ta*, *e-ne-e-si* VIR 14). Their names appear in the rest of the series in the genitive case next to the plot and its measurements. The **Eo/En** series contains information about 13 plots. The “lost *te-re-ta*” is probably *su-ko*, who is a *po-ro-du-ma*, a grain overseer, according to **Ep 613.4-5**.¹⁵ *a-ka-ta-jo* (**Eo 269.B/En 659.18**), *pi-ri-ta-wo* (**Eo 224.7/En 467.5**), *qe-re-qo-ta* (**Eo 444.1/En 659.1**), *ru-**83 (**Eo 276.1/En 74.1**), and *ti-qa-jo* (**Eo 278/En 467.1**) also appear in the texts along with their professions and official titles. On the other hand, there is no additional information about *a-da-ma-o* (**Eo 351/En 659.8**), *a-i-qe-u* (**Eo 471/En 659.12**), *a₃-ti-jo-qo* (**Eo 247/En 74.11**),

¹¹ DEL FREO 2001, 31; PALAIMA 2015, 626; ZURBACH 2017a, 40.

¹² For a summary of the different proposals, see ALONSO MORENO 2020, 238-240.

¹³ CARLIER 1987, *passim*; ZURBACH 2017a, 41.

¹⁴ CARLIER 1987, 66.

¹⁵ ZURBACH 2017a, 104.

¹⁶ Here he is called *pe-re-qo-ta*.

pi-ke-re-u (Eo 160/En 74.20), *ra-ku-ro* (Eo 281/En 659.15), and *wa-na-ta-jo* (Eo 211/En 609.3). However, these people also appear in the Eb/Ep series as *ko-to-no-o-ko*. De Fidio thought that all of the *ko-to-no-o-ko* hold this position as owners of *ki-ti-me-na* land. Thus, all the *te-re-ta*, as owners of *ko-to-na ki-ti-me-na*, would also be *ko-to-no-o-ko* and, if this was not explicitly stated, it is because it would have been redundant.¹⁷ Nevertheless, the existence of two different expressions is remarkable and must be explained. The rest of the *te-re-ta* are *po-te-u* (En 467.3) and *a-ma-ru-ta* (Eo 224/En 609.10). There is no additional information about their situation and they are not *ko-to-no-o-ko*.

We should not think about *te-re-ta* as isolated individuals. As land-owners and people close to the palace, they should have held a high-rank position. Moreover, their plots could conceal a familiar patrimony, the *oikos* of each *te-re-ta*.¹⁸ According to Carlier, the *te-re-ta* received this designation because of the “charge” imposed on their lands. According to the author, they were bound to cultivate their plots.¹⁹ Since the Linear B tablets only reflect information about the last days of activity of the Pylian administration, we cannot ascertain the origin of their properties. However, it has been stated that they received these lands as a reward for rendered services to the Pylian Kingdom.²⁰

Some other people also had access to these plots: the *o-na-te-re*. Their names appear after the mention of the *ko-to-na ki-ti-me-na* of each *te-re-ta*.²¹ They were tenants of the *te-re-ta*. The *o-na-te-re* were the recipients of *ko-to-na ki-ti-me-na* land thanks to the legal category of land tenure designated as *o-na-to*. *o-na-to*, *ὄνατόν, is a noun or nominalised neuter adjective that designates a usufruct or an amphictyonic tenure.²² It is the most common type of agricultural tenure in the written record, even more so than the property.²³ The *te-re-ta* could also be *o-na-te-re* of other *te-re-ta*. This is the case of *wa-na-ta-jo*, who held part of the *ki-ti-me-na* land that belonged to *a-ma-ru-ta* as *o-na-te-re* (Eo 224.5/En 609.15). We also find the royal armourer and *ko-to-no-o-ko a-tu-ko*

¹⁷ DE FIDIO 1977, 147.

¹⁸ ALONSO MORENO 2020, 245.

¹⁹ CARLIER 1987.

²⁰ ADRADOS 1994-1995.

²¹ Only *po-te-u* does not have *o-na-te-re* within his *ko-to-na ki-ti-me-na* (Eo 268/En 476.3).

²² PALAIMA 2015, 624; ZURBACH 2016, 354; 2017a, 41.

²³ ZURBACH 2005, 316.

(**Eo 211.2/En 609.5b**) and the royal fuller, *pe-ki-ta* (**Eo 160.3/En 74.23; Eo 276.2/En 74.3**). However, the vast majority of *o-na-te-re* were *te-o-jo do-e-ro/a*, “slaves of a divinity”.²⁴ Of 34 *o-na-to* plots, 29 were awarded to *te-o-jo do-e-ro*. The priestess of *pa-ki-ja-ne* also occupied one of these plots, property of the *te-re-ta wa-na-ta-jo* (**Eo 224.8/En 609.18**). The high number of religious personnel is not surprising as the district of *pa-ki-ja-ne*, as we have already seen, housed many sanctuaries and was strongly connected with the official Pylian cult and the supernatural power of the *wanax*. However, the role of *wa-na-ta-jo*, *a-tu-ko*, and *pe-ki-ta* as *o-na-te-re* means that *o-na-to* plots were not exclusively for religious personnel. We can think in a general context of the palatial elites. Even the *i-je-re-ja* could have had access to her *o-na-to*; not because she performed rituals but because of her high social position. The palatial elites gained secondary access to the agricultural wealth of *pa-ki-ja-ne* by leasing *ki-ti-me-na* land from the *te-re-ta*.

ke-ke-me-na, ka-ma land, and the damos from pa-ki-ja-ne (*Eb/Ep series*)

The *ke-ke-me-na* land category appears in the **Eb** (preliminary texts written by Hand 41) and **Ep** (definitive texts written by Hand 1) series. The term *ke-ke-me-na* is a perfect middle passive participle and it is written before *ko-to-na*. Again, different proposals have been made for the interpretation of this category.²⁵ It is linked to the *da-mo*, the rural community of *pa-ki-ja-ne*. **Ep 301** is the first document of the series:

Ep 301

.1 *ke-ke-me-na, ko-to-na, a-no-no, to-so-de, pe-mo* [GRA 1 T 1

.2a ko-to-no- -o-ko

.2b a₃-ti-jo-qo, o-na-to, e-ke, pa-ro, da-mo, ke-ke-me-na, ko-to-na, to-so, [pe-mo GRA 1 T 4 V 3

.3 wa-na-ta-jo, o-na-to, e-ke, pa-ro, da-mo, ke-ke-me-na, ko-to-na, to-so-del |pe-mo GRA T 5

.4 a-da-ma-o, o-na-to, e-ke, pa-ro, da-mo, ke-ke-me-na, ko-to-na, to-sol |pe-mo GRA T 4

.5 a-tu-ko, e-te-do-mo, o-na-to, e-ke, pa-ro, da-mo, ke-ke-me-na, ko[-to-na to-so pe-mo GRA

.6 ta-ta-ro, o-na-to, e-ke, pa-ro, da-mo, ke-ke-me-na, ko-to-na, to-so pe-mo[GRA V 3

.7 *vac.*

.8 p i-ke-re-u, e-ke-qe, ke-ke-me-na, ko-to-na, ko-to-no-o-ko, to-so, pe-mo[GRA

²⁴ *Docs*², 445.

²⁵ ALONSO MORENO 2020, 247.

.9 ra-ku-ro, e-ke-qe, ke-ke-me-na, ko-to-na, ko-to-no-o-ko, to-so, pemo	GRA[
.10 ku-so, e-ke-qe, ke-ke-me-na, ko-to-na, ko-to-no-o-ko, to-so pe-mo	GRA V [3
.11 ke-ra-u-jo, e-ke-qe, ke-ke-me-na, ko-to-na, ko-to-no-o-ko, to pe-mo	GRA T 4
.12 pa-ra-ko, e-ke-qe, ke-ke-me-na, ko-to-na, ko-to-no-o-ko, to-so pemo	GRA T 7
.13 ko-tu[-ro ₂], e-ke-qe, ke-ke-me-na, ko-to-na, ko-to-no-o-ko, to-so, pe-mo	GRA T 1
.14 a-i-qe-u, e-ke-qe, ke-ke-me-na, ko-to-na, ko-to-no-o-ko, to-so, pemo	GRA T 6

Line 1 states the amount of undivided (*a-no-no*) land, *ke-ke-me-na* (.1 *ke-ke-me-na, ko-to-na, a-no-no, to-so-de, pe-mo* [GRA 1 T 1]). Then, we find the new division of the land among 12 individuals. Hand 1 divided the tablet into two parts. First, we find information about five of these characters (*a₃-ti-jo-qo, wa-na-ta-jo, a-da-ma-o, a-tu-ko, and ta-ta-ro*), who appear in the text collectively named *ko-to-no-o-ko* (ll. 2-6). They hold *pa-ro da-mo* land, which means that the rural community was the landowner of these plots. Actual land tenure is outlined by Hand 1 thanks to the use of the verb form *e-ke*, which is also used in the **Eo/En** series with the same purpose. The second part of the tablet collects information about the rest of the *ko-to-no-o-ko* (*pi-ke-re-u, ra-ku-ro, ku-so, ke-ra-u-jo, pa-ra-ko, and ko-tu-ro₂*). These people are not collectively named. Each name is followed by the designation *ko-to-no-o-ko*. Also, we find the verb form *e-ke-qe* instead of *e-ke*; nor does *o-na-to* appear. De Fidio stated that this meant that the attribution of these plots had not yet been confirmed,²⁶ whereas Zurbach explained that these lands were free from the obligations that normally fell on lands leased as *o-na-to*.²⁷ Therefore, in this text, both groups of individuals shared one common feature: they were *ko-to-no-o-ko*, which means “holders of *ktoina*”.²⁸ However, we do not know which properties were actually theirs, as **Ep 301** only shows that their lands were *ke-ke-me-na ko-to-na* as *o-na-to* leased from the *damos*. They act as tenants here, although we know that they were actually the landholders. In the rest of the series, we find *ke-ke-me-na ko-to-na pa-ro da-mo* plots granted, fundamentally, to religious personnel, as in the case of the **Eo/En** series, seeing that the position of *ko-to-no-o-ko* did not allow access to this type of land tenure. All were tenants of *ke-ke-me-na* plots whose property was collectively held by the *damos* of *pa-ki-ja-ne*.

²⁶ DE FIDIO 1977, 156.

²⁷ ZURBACH 2017b, 49.

²⁸ See the entry in *DMic*.

The distinction of the *ko-to-no-o-ko* from the rest of the individuals is highly significant. In fact, they are featured performing another role in the series. Preliminary record **Eb 297** and definite record **Ep 704** (ll. 5-6) show the well-known dispute between the priestess *Eritha* and the *damos* of *pa-ki-ja-ne* over the juridical status of the *ke-ke-me-na* land that she leased. In summary, she claimed that she held an *e-to-ni-jo* on behalf of the goddess, a type of agricultural tenure that was exempt from fees. The *damos*, for its part, stated that she held a normal *o-na-to*. This means that she was trying to avoid paying taxes for her land tenure while the landowner stated the contrary.²⁹ Hand 1 considered the *da-mo* and *ko-to-no-o-ko* as equivalent entities, as Hand 41 used the last noun in **Eb 297.1** to name the collective landowner of the land leased by *Eritha*.³⁰ The *ko-to-no-o-ko* acted on behalf of their common economic interest representing the *damos* in the conflict with *Eritha*. In this context, they acted as a collective landholder, not as individual tenants, as outlined by Hand 1. The scribe no longer uses the term *ko-to-no-o-ko* in **Ep 704**, but refers to the collective *damos*.³¹

The lands of the *damos* may have originally been pastures and forests for communal use, forbidden for individual enrichment.³² Ploughing, division, and cultivation of the land was permitted for private use, although the rural community kept ownership of the land. The first to take advantage of the division of the *ke-ke-me-na* lands into lots would have been the *ko-to-no-o-ko*, the landowners that also belonged to the rural community of *pa-ki-ja-ne*. Their position was ambiguous: they belonged to the community, they represented and defended it but, at the same time, they used land that was collectively owned by the *damos* for themselves, taking advantage of the division of the *ke-ke-me-na* land.

The **Eb/Ep** series also register the existence of *ka-ma* lands, granted also as *o-na-to* and related to *ke-ke-me-na ko-to-na*. It is not surprising to find *ka-ma* land in the **Eb/Ep** series, as the *damos* was its owner.

²⁹ ALONSO MORENO 2014, 247-249; DE FIDIO 1987, 144; ZURBACH 2017a, 45.

³⁰ DE FIDIO 1987, 144.

³¹ Hand 1 tends to group parcels of similar legal status that belong to the same person (ZURBACH 2006, 271), focusing on the true interests of the administration. In this case, it would be the landowner.

³² ALONSO MORENO 2020, 251.

In fact, it seems that *ka-ma* plots were created from *ke-ke-me-na ko-to-na*.³³ The creation of *ka-ma* parcels is framed within the formation of individual properties within the communal lands of the *damos*. Apart from being large parcels, *ka-ma* plots had another outstanding feature: they had to be cultivated. This is indicated with the verbs *te-re-ja-e* (**Eb 495/Ep 613.1-2**; **Eb 149/Ep 613.4-5**), *wo-zo-e* (**Eb 338/Ep 704.7.8**), *wo-ze*, with the suffix *-qe* (**Ep 613.3,6-7**; **Eb 156/Ep 613.9**; **Eb 839/Ep 613.13**), and *te-ra-pi-ke* (**Eb 842/Ep 613.8**). They all share the general meaning “agricultural working”. General tax estimation implies that all tenants had to ensure a minimum of agricultural production, so this obligation had to imply something beyond regular cultivation. By alternating between *ka-ma* and *e-re-mo*, “wasteland”, in **Un 718.11** and **Er 312.7**, Del Freo suggests that these obligations refer to the set of tasks necessary to condition wild land for cultivation and its maintenance as arable land in the style of emphyteutic-type regimes.³⁴ We have, in that case, the transformation of marginal lands of the *damos* into large plots prepared for agriculture.³⁵ The large size of the plots is linked to the necessity to obtain a productive volume that surpassed the subsistence level. Moreover, the obligations implied some kind of work outsourcing: part of the agricultural production redounded to the palace, which did not have to use additional resources to work these lands, handing the labour to do this over to the individual tenants. Again, we would be facing evidence of a direct taxation on land ownership, probably due to those specific productive needs of the administration, and the creation of more individual estates from common land. *o-na-te-re* of *ka-ma* included the *te-re-ta pe-re-qo-ta* (**Ep 613.5**), the priest *a-ke-re-u* (**Ep 613.7**), the *te-o-jo do-e-ra po-so-re-ja* (**Ep 613.12**), or the *ko-to-no-o-ko ko-tu-ro₂* (**Ep 613.13**) and *pa-ra-ko* (**Ep 613.11**). Although we find the obligation to cultivate mainly associated with *ka-ma*, it was not exclusive to this category: in **Eb 338/Ep 704.7-8** we find that the Keybearer of *pa-ki-ja-ne*, *ka-pa-ti-ja*, failed in her obligation, *o-pe-ro-sa wo-zo-e*, to cultivate her *ke-ke-me-na ko-to-na*. Some people held *ka-ma* but with exemptions from land working, such as the *te-re-ta su-ko* (**Ep 613.4-5**). This could mean that he did not have to prepare and cultivate his *ka-ma* plot for the palace, perhaps allowing him to keep the harvest for himself

³³ See **PY Ed 236**.

³⁴ DEL FREO 2009, 47.

³⁵ ALONSO MORENO 2020, 264.

or use the land for something else (e.g., subleasing).

Land division for the creation of *ke-ke-me-na ko-to-na* and *ko-to-na* allowed the extension of the tax system to include agrarian property. More disposable plots also created more opportunities to gain access to agricultural wealth. However, these lands were only available to a few already privileged people, such as the *ko-to-no-o-ko*.

**The estates of the *te-re-ta*, the *ko-to-no-o-ko*, and the *da-mo*:
taxation and palatial use of *pa-ki-ja-ne* land**

The kingdom of Pylos needed land for two main and intertwined purposes. Firstly, it was required to ensure the supply of agricultural surplus to feed palatial workers.³⁶ On the other hand, the land created desirable social allegiances and networks. Taxation over land production enabled the arrival of agricultural goods. The creation of plots and their allocation to individuals could have acted as an economic control tool. Some of these individuals were not landowners. By guaranteeing access to the social and economic benefits derived from land ownership, the palace rewarded the inner elite of the kingdom, mainly religious personnel associated with the official cult.

The palatial administration did not own land in *pa-ki-ja-ne*. However, it had the capacity to parcel it out, impose certain obligations on land tenure, control land allocation and, above all, benefit from the land thanks to taxation. *o-na-to* plots came from two types of owners: the *te-re-ta*, each with their individual plots called *ko-to-na ki-ti-me-na*, and the *damos* of *pa-ki-ja-ne*, who held the property of *ke-ke-me-na ko-to-na*. Both land categories were subject to taxation and allocated to individuals, benefiting private estates. Land division points to the collaboration between the central administration and the local powers, which would have been represented in this case by the *ko-to-no-o-ko*. In this context, their individual privileges and assets benefit from their relationship with the palace, which may have strengthened their position within the *damos*. Land division must also have required control over inheritance and ways of acquiring plots.

Due to the nature of the documentation, we are merely presented with a snapshot of the situation. Therefore, it is difficult to assess the evolution of the forms of property and trace the origins of the properties

³⁶ On this issue, see ALONSO MORENO 2020, 361-363.

of the landowners of *pa-ki-ja-ne*: the *te-re-ta*, the *damos*, and the *ko-to-no-o-ko*. The *te-re-ta* and *ko-to-no-o-ko* were individual landowners. However, the origins of their properties are not clear. We only know the *ko-to-no-o-ko* as tenants of the *damos*. They could also be *te-re-ta*, but not because of their role as *ko-to-no-o-ko*, as there are other characters that also held *ko-to-na ki-ti-me-na*, as we have already seen. Therefore, we do not know their original properties, probably because the palace did not tax them. The *damos*, represented by the *ko-to-no-o-ko*, acted as a collective landowner. The palace intervened in their communal properties, promoting the creation of individual plots for greater economic control and to stimulate agricultural production. These individual plots were leased as *o-na-to* to the *ko-to-no-o-ko* and many other characters, mainly the *te-o-jo do-e-ro/a*.

The economic and social relations created around land tenure were complex and not exempt from conflict, as we can discern from the dispute between *Eritha* and the *damos*. The *damos* owned the land held by *Eritha*. Although land division created more fiscal units, benefited private wealth, and stimulated taxation, it also generated economic and social struggle. Further research must be done to determine if these problems could have created a structural weakness in the Pylian economic system and irreconcilable differences within the landowning elites.

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a₂-geš-gar-ra during the Ur III period: an early example of *ta-ra-si-ja*

Richard Firth

Introduction

In outline, Mycenaean *ta-ra-si-ja* was a managed system where the Centre issued quantities of materials to their workforce, who in turn were required to use those materials to manufacture and provide the Centre with finished goods. The clearest example is the textile industry of Knossos, where weighed quantities of wool were issued for the production of specified textiles.¹

John Killen drew attention to the similarities between *ta-ra-si-ja* and the Near Eastern system of *iškāru*. More recently, this was discussed at some length in connection with the wheel and chariot records of Nuzi by Françoise Rougemont.²

During the Ur III period (2112-2004 BC), the bureaucratic language used was Sumerian, and from lexical lists (CT 19, pl. 27, K 2061) the Akkadian *iškāru* can be identified with the Sumerian term *a₂-geš-gar-ra*.³

The *a₂-geš-gar-ra* system was prevalent during the Ur III period for a number of occupations, but it is most frequently found in the textile industry. This paper gives a brief survey of the range of tasks that used *a₂-geš-gar-ra* and then goes on to give a more detailed discussion of its use in the Ur III textile industry of Girsu. In addition, there are examples of materials which are provided, and of finished products which are supplied,

¹ KILLEN 2001; NOSCH 2006.

² KILLEN 1999; ROUGEMONT 2015.

³ Infrequently *a₂-geš-ga₂-ra*. The variant *eš₂-gar₃* was used at Nippur.

but which are not labelled in the texts as *a₂-geš-gar-ra*, indicating that *a₂-geš-gar-ra* had a more specific meaning. Finally, there is a comparison between the conclusions drawn from this paper on *a₂-geš-gar-ra* and those of Killen in his extended discussion of Mycenaean *ta-ra-si-ja*.⁴

Definition and usage

This section considers the definition and scope of *a₂-geš-gar-ra* in the Ur III period. According to the Sumerian Dictionary, this word can be understood in terms of the issuing of working materials and assessment of the work performed.⁵ There is a third interpretation associated with the delivery of a quota, usually of birds or fish. This last example is not directly relevant to the current study, but nevertheless carries a similar implication of obligation to provide the Centre with the fruits of labour.

In the CDLI database, there are currently over 170 texts that include the term *a₂-geš-gar-ra*, and a further 16 using *eš₂-gar₃* (mostly from Nipur).⁶

Over a hundred of these deal with the issuing of wool or flax for making textiles. Much smaller numbers of texts concern the issuing of oils and plants for dyeing to craftsmen. There is also a single tablet from Ur issuing stones to stone-workers, and another issuing goat hair to rope-makers.

There are 13 tablets concerning the weighing of textiles that have been made under the *a₂-geš-gar-ra* system.⁷ In addition, there are a small number of tablets concerning work in the fields.

There is no evidence of the term *a₂-geš-gar-ra* being used in the Lagash II period, immediately preceding Ur III. However, there are a number of examples of the term *eš₂-gar₃* being used during the earlier Old Akkadian period.

⁴ KILLEN 2001.

⁵ SJÖBERG 1994, part AII, 67-68.

⁶ Cuneiform Digital Library Initiative (<https://cdli.ucla.edu>). References to texts use the standard CDLI abbreviations.

⁷ Strictly, the Sumerian Dictionary suggests that this is “work to be performed”. However, the precision used for the weights of textiles (given to the nearest gin, i.e. 8 grams) suggests that they are almost certainly the weights of actual textiles rather than target weights for textiles still to be woven.

a₂-geš-gar-ra in the textile industry

Attention will be concentrated here on the textile industry of the city of Girsu. Although this reduces the number of texts to about eighty, these represent almost half of the total of *a₂-geš-gar-ra* texts and form a coherent set.

The Girsu *a₂-geš-gar-ra* tablets fall into two groups: those recording the disbursement of the wool; and those recording the weight of the textiles that have been produced.

There are relatively large numbers of tablets for each of the years Amar-Suen 7 & 8,⁸ recording the disbursement of wool to men, who are presumably the overseers of the weaving workshops, although this is not made explicit.⁹ An example is given below.

Nisaba 18, 7

1.	40 ma-na siki tug ₂ šar ₃	20 kg wool (for) 1st quality textiles
2.	17 ma-na siki tug ₂ us ₂ šar ₃	8½ kg wool (for) 2 nd quality textiles
3.	10 gu ₂ 20 ma-na la2 10 gin ₂ siki tug ₂ 3-kam us ₂	310 kg, less 83g, wool (for) 3rd quality textiles
4.	4 gu ₂ 10½ ma-na siki tug ₂ 4-kam us ₂	125¼ kg wool (for) 4th quality textiles
5.	1 gu ₂ 3½ ma-na siki tug ₂ guz-za du	31¼ kg wool (for) guz-za textiles of ordinary quality
6.	1 gu ₂ 4½ ma-na siki du	32¼ kg wool of ordinary quality
7.	a ₂ -geš-gar-ra	(for) a ₂ -geš-gar-ra
8.	ab-ba-gu-la	received by Abbagula
9.	šu ba-ti	received by Abbagula
10.	iti GAN2-maš	1st month
11.	mu hu-uh ₃ -nu-ri ^{ki} ba-hul	7th year of Amar-Suen

⁸ The rulers of Ur III were Ur-Namma, Šulgi, Amar-Suen, Šū-Suen and Ibbi-Suen. Šulgi ruled for 48 years, Amar-Suen and Šū-Suen both for 9 years and Ibbi-Suen ruled for 24 years although the evidence shows that the bureaucratic system beyond Ur ceased to function after his initial years.

⁹ It is a general finding of the texts that, throughout the Ur III period, textile weavers were women and their overseers were usually men (WAETZOLDT 1972, 2007; but see also GARCIA-VENTURA 2014).

This example has been chosen because it shows wool being supplied for the manufacture of textiles with a range of different qualities. It can be noted that they are listed with the items of the highest quality at the top and then descending in order to the lowest quality. A more typical example would include fewer different textile qualities.

There are over 30 tablets of this type dated to the years of Amar-Suen. It is interesting to note that almost all of these tablets are in the British Museum. These tablets were not formally excavated but were unearthed by locals and sold on the antiquities market. Examination of the BM catalogues shows that there are other such tablets that remain unpublished.

For the years of the following ruler, Šū-Suen, there are again around 30 tablets and many of these take a similar form to those already considered. However, it is useful to show a text that gives some insight into the administrative process.¹⁰

MVN 5, 192

1. 5.8 kg wool (for) textiles of 3rd quality
2. 86 kg wool (for) textiles of 4th quality
3. from the great weaving house
4. wool (for) a₂-geš-gar-ra (for) the weaving house of Šū-Suen
5. disbursed by Lu-uš-gi-na
- 6-7. received by Lu-dingir-ra
8. conveyed by Lugal-amar-ku
9. 12th month
10. 7th year of Šū-Suen

This tablet clearly has a similar function to the previous one. However, it includes some additional information. In particular, it provides the source of the wool (*e₂-uš-bar gu-la-ta*, the great weaving house), the name of the man who distributed/paid for the wool, the name of the man who was responsible for conveying the wool, in addition, to the person who finally received the wool for the weaving house (named after Šū-Suen).

¹⁰ The following texts are given in translation only. The Sumerian transliterations can be found on the CDLI web-site.

The following tablet records the weighing of the woven textiles:

TCTI 2, 3790

1. One nig-lam textile, 3rd quality
2. weight 1.17 kg
3. Three guz-za textiles, 4th quality
4. weight 7.5 kg
5. Two guz-za textiles, ordinary quality
6. weight 4.8 kg
- 7-8. weighed *a₂-geš-gar-ra* textiles
9. (from the) women weavers of Šū-Suen
10. 7th year of Šū-Suen

Thus, it can be seen that the *a₂-geš-gar-ra* in the textile industry was a tightly managed system, where the wool was weighed before it was disbursed, and the textiles were weighed once they had been manufactured.

This is clearly analogous to the Mycenaean *ta-ra-si-ja* system, where specific weights of wool were issued for specific textiles. Although there are differences of detail, both systems were designed to closely monitor the issuing of materials and the collection of the manufactured items, leaving little opportunity for wool to be wasted, lost or stolen.

The a₂-geš-gar-ra weaving groups

As already noted, texts identify the weaving group. This was done by using the name of their overseer or by referring to them using the generic term *geme₂ uš-bar*, women weavers. However, some *a₂-geš-gar-ra* groups are named explicitly in the Girsu tablets:

- women weavers of Šū-Suen
- women weavers of the governor (of Lagaš)
- women weavers of the high priestess of Bau
- women weavers of Girsu
- women weavers of Guabba
- women weavers of Irisaġrig

The first three of these groups are named after a prominent person: the king, the local governor, or a high priestess. The latter three are identified by toponyms: Girsu, Guabba and Irisağrig. It is, of course, possible that the same group could appear twice in the list.

Guabba was located in the province of Lagash that included Girsu. The more surprising item in this list is the ‘weavers of Irisağrig’. Irisağrig was a significant town with its own calendar (i.e. local month names). Its precise location is uncertain, but it was roughly 100 km from Girsu.¹¹ It is most likely that, although this weaving group was somehow associated with Irisağrig, its actual location was in the Girsu region.

Rations/wages for the a₂-geš-gar-ra weavers

It is interesting to consider the numerous tablets listing the provisions supplied to the a₂-geš-gar-ra weavers. However, the question of rations/wages is more significant than it might first appear. So it is worthwhile introducing a short digression to give some perspective.

Digression on basic rations

Ignace Gelb states that the ration system was very much standardised throughout the Old Akkadian and Ur III periods.¹² The standard rations of barley were up to 60 litres per month for men, 30 litres for women, 20/30 litres for sons and daughters, depending on their age, and 10 litres for infants.

In addition, men and women would receive two to five litres of oil per year, with correspondingly lower rations for children. In this case, Gelb concludes that the oil ration was received once a year in the 11th or 12th month of the year. The wool ration was up to 2 kg for men and 1.5 kg for women, but it is not clear how frequently they received this ration.

Gelb also draws a distinction between semi-free serfs who received rations such as those outlined above, and free people who offered their services for hire and received wages.¹³ However, Hartmut Waetzoldt states that it is more correct to suggest that workers who were perma-

¹¹ MOLINA 2013.

¹² GELB 1965.

¹³ STEINKELLER 1987 summarises the on-going discussion on the distinction between slaves and serfs in the Ur III texts.

nently attached to a particular employment received rations, whereas wages were given for periods of short-term employment.¹⁴

Thus, when we consider the food allocated to the a₂-geš-gar-ra workers, we should be considering whether it is given as rations or wages and, if it is given as rations, we should also consider the extent to which it rises above the level of basic rations outlined above.

Barley rations for the a₂-geš-gar-ra weavers of the high priestess of Bau

This section returns again to discussion of the a₂-geš-gar-ra weaving groups and considers the distribution of barley. In practice, commodities were issued in bulk to the different weaving groups. This section examines how the barley rations were divided and distributed to the women weavers of the high priestess of Bau (*geme₂ uš-bar nin-dingir^dba-u₂*).

The first point to make is that, within the group, it was not necessary for the workers to refer to themselves as the ‘women weavers of the high priestess of Bau’. Therefore, the identification is more indirect. ASJ 2, 22 62 (S 34) lists the barley rations issued to the female weavers (*še-ba geme₂ uš-bar*) by the overseer Ur-Damu (*ugula ur-^dda-mu*). Its envelope has the seal of Ur-Damu, dedicated to the high priestess, with the following legend:

- | | |
|---|--------------------------------|
| 1. geme ₂ - ^d lamma | 1. ur- ^d da-mu |
| 2. nin-dingir | 2. dub-sar |
| 3. ^d ba-u ₂ | 3. dumu ur-sa ₆ -ga |
| | 4. ARAD ₂ -zu |

(Geme-Lamma, high priestess of Bau/ Ur-Damu, scribe, son of Ursaga, your servant). Thus, it is clear that Ur-Damu was the overseer of the weavers who worked for the high priestess of Bau.

There is a sequence of tablets that contain the wording ‘barley rations for the female weavers, overseer Ur-Damu’ (*še-ba geme₂ uš-bar / ugula ur-^dda-mu*). Each records the (usually) monthly distribution of barley during the years Š 33-43. In addition, there are five unpublished texts in the British Museum that have the seal of Ur-Damu and (based on catalogue information) are probably from the same sequence. There

¹⁴ WAETZOLDT 1987.

are differences in detail between the tablets, as the number of workers varies. However, the following is a reasonably typical example (CTPSM 1, 13; Š 33 xii):

1. 9 female workers 60 litres of first quality barley
2. 2 female workers 50 litres
3. 77 female workers 40 litres
4. 21 female workers 30 litres
5. 3 female workers, half-work, 30 litres
6. 5 old female workers, 20 litres
7. 35 [children?] 15 [litres]
8. 28 children 10 litres
9. their barley, 5645 litres
10. barley rations to female weavers
11. overseer Ur-Damu
12. 12th month
13. 33rd year of Šulgi

The quantities of barley issued for this month are typical of those for female workers, with the majority of women having 30 to 40 litres. If 30 litres is taken to be the necessary minimum for feeding adult females, then the 77 women who were given 40 litres of barley per month received in excess of this minimum.

It seems probable that the (unnamed) 11 women with higher rations probably served in a supervisory capacity. On this basis, they would each have managed teams of about 10 women.

The remaining people on the list could be regarded as beneficiaries of the work group. This particularly applies to the three workers who are only recorded as doing half the work but nevertheless received full 30 litres rations. One might guess that these women might have been pregnant, looking after infants or with other caring responsibilities or perhaps unwell. There are also five old female workers who had presumably become less efficient and were deemed to only require 20 litres of barley per month. There are also large numbers of children. The older children qualified for half rations and smaller children had one-third rations.

Table 1 shows how the numbers of people in each category changed over the ten years spanned by a group of 11 texts.¹⁵

Year Month	60 l. women	50 l. women	40 l. women	30 l. women	half-work	old women	20 l. children	15 l. children	10 l. children	Total nos.
Š 33 xii	9	2	77	21	3	5		35	28	180
Š 34 ii	14	2	43	7	3	6		32	25	132
Š 34 vii	9	7	77	24	3	5		33	28	186
Š 37 x	16	2	92	43	11	4	24	26	32	250
--,--	16	2	93	44	8	6	33	28	29	259
Š 38 vi	16	2	94	42	5	6	28	27	18	238
Š 38 xi	8	1	63	43	9	6	25	19	17	191
Š 42 viii-x		18		134	5	4	19	25	41	246
Š 42 xi		18		134	4	4	19	25	43	247
Š 43 ix		19		133	5	4	20	21	36?	238
Š 43 xi		19		144	5	4	15	26	30	243

Table 1

From Š 42 onwards, the tablets include an old male janitor who received 50 litres of barley per month, which was a normal ration for elderly male workers.¹⁶

There seems to be clear evidence of changes of policy. Firstly, in Š 37 there was the introduction of a third category of children receiving 2/3 of the standard ration. Secondly, in Š 42, it appears that the 60 and 40 litre rations were reduced to 50 and 30 litres, respectively. The latter seems to coincide with the introduction of the male janitor.¹⁷

It would be possible to extend this discussion by considering the named personnel attached to the different weaving groups. However, this paper concerns the nature of the system of a₂-geš-gar-ra, and therefore that discussion is beyond its scope.

Thus, this section has shown that the barley received by these weavers are clearly described as barley rations (*še-ba*), and that levels of the ration for adult females, although initially more generous than the basic ration, in the later years became comparable to that basic ration.

¹⁵ The tablets used in Table 1 are respectively: CTPSM 1, 13; ASJ 2, 22 62; Mycenaean 4; Nisaba 18, 40; OTR 95; (CUSAS 16, 34, date missing); PPAC 5, 1188; SAT 1, 44 & 276; PPAC 5, 1329; SAT 1, 277; ASJ 3, 152 108. For an earlier discussion of some of these tablets, see WILCKE 1998.

¹⁶ WILKE 1998.

¹⁷ For completeness, we should also note the less likely alternative explanation that Ur-Damu distributed rations to two separate groups of weavers, and that we have the set of rations for one group from Š 33-38 and the other from Š 42-43.

Additional commodities for the a_2 -geš-gar-ra weaving groups

The previous section considered barley rations. This section extends that discussion to the other commodities that were issued to the a_2 -geš-gar-ra weaving groups named in Section 4 above. This shows examples that extend well beyond the limited constraints of basic rations.

It is worthwhile beginning with the following example given in full:

SNAT 258

1. 10.2 cubic metres of top quality fresh fish
2. fish rations for the women weavers of Girsu
- 3-4. Ahum-beli received
5. 2 cubic metres
6. (for the) women weavers of the high priestess of Bau
7. La-a disbursed
- 8-9. the women weavers received
10. 11th month
11. 7th year of Amar-Suen

Fish was transported in baskets, which would explain why it is measured by capacity rather than by weight.¹⁸ Nevertheless, this seems to be a very large amount of fish. The most likely explanation is that once this fish was supplied to the overseers, it became their responsibility either to distribute the fish, or to organise its preservation in some way and then distribute it with the rations over an extended period.

It is possible to give further examples of food and drink being allocated to the a_2 -geš-gar-ra weaving groups. TCTI 2, 2628 (IS 3) records an allocation of 5280 litres of barley to women weavers of Girsu. In addition, TCTI 2, 3679 (AS 8 iii) lists 1036 litres of beer (of ordinary quality) and 1036 litres of bread to those workers:

- ITT 2, 4203 (undated) records 40 litres of cooked fish for the women weavers of the governor. TCTI 2, 3460 (ŠS 2) notes 740 litres of top quality fish for the same group of weavers.

- PPAC 5, 1189 (IS 1) records the corpses of 390 sheep being received by the women weavers of Guabba, and HSS 4, 146 (ŠS 9 xi²) adds a fur-

¹⁸ ENGLUND 1990.

ther 20 to that total. Nisaba 17, 26 (AS 4 viii) notes 58.3 cubic metres of barley being given as wages for the same group of weavers; BPOA 1, 308 records a further 159.5 cubic metres; ITT 2, 661 (IS 2 xii) adds 9.1 cubic metres. Nisaba 18, 161 (AS 7 viii) lists 574 litres of sesame oil to these weavers.¹⁹

- ITT 5, 6799 records the corpses of 100 sheep being disbursed to the women weavers of Irisağrig.

- ITT 3, 5419 (ŠŠ 7) notes a gift from the king (*nig₂-ba lugal*) of 500g unbleached wool (*siki mug*) for each of the 42 women weavers of Šū-Suen.

The quantities of food listed here imply that the *a₂-geš-gar-ra* weavers were given generous supplies in return for their labour. However, these still are described as rations wherever the terminology is specific. The single explicit exception is Nisaba 17, 26, where the barley is described as wages. In addition, the large number of dead sheep listed in PPAC 5, 1189 and ITT 5, 6799, and the beer and bread listed in TCTI 2, 3679 are described as neither rations nor wages. Nevertheless, the presence of large quantities of fish and meat in their supplies clearly suggests that these women weavers, working under the *a₂-geš-gar-ra* system, were receiving rations well beyond basic subsistence levels.

It is possible to make two deductions from the analysis above. First, the fact that the *a₂-geš-gar-ra* weavers received rations implies that they had on-going permanent employment. Secondly, the generous nature of their rations implies that their status was markedly higher than the bulk of the serfs who received only basic rations.

Examples of non a₂-geš-gar-ra production

It is clear that the term *a₂-geš-gar-ra* was not used in all cases where materials were supplied to work groups and finished goods were returned to the Centre. This can be demonstrated by considering two examples.

The first example concerns weavers, and shows that most weaving was not labelled as *a₂-geš-gar-ra*. CT 10, pl. 40, BM 17747 (Š 35) summarises the disbursement of large quantities of wool to supervisors from seven different weaving workshops. However, only one of these is labelled as *a₂-geš-gar-ra*.

¹⁹ In order to avoid ambiguity, these lists exclude records, for example, of commodities being sent to Guabba for the women weavers (i.e. not using the set phrase *geme₂ uš-bar gu₂-ab-ba^{ki}*), as there is a possibility of more than one group of weavers at Guabba.

It is most probable that the majority of Ur III weavers would not be working in *a₂-geš-gar-ra* schemes. It seems likely that most weavers would have received basic rations and would be part of the category that Gelb describes as semi-free. Thus, if this were correct, then the *a₂-geš-gar-ra* weavers would fall into a more privileged group than most other weavers.

The second example is brewers who were also not described as *a₂-geš-gar-ra*. In this case, it is suggested that the brewers would have a higher status than the *a₂-geš-gar-ra* weavers.

Barley was distributed to the brewers of Umma to produce beer as part of the annual tax (*bala*) contribution of the city.²⁰ The quantities required were very large and this obligation caused a substantial spike in demand over a short period, which could only be met by special preparations.

The tablet Bod S 568 lists the beer supplied for the *bala* by 19 brewers, and this was overseen by Luturtura. Based on the information from seal impressions, it is evident that Luturtura was closely related to three of the 19 brewers listed in this text: his brother, Šešani, and his two uncles, Hala and ARAD-mu. This implies that the provision of the beer for the *bala* was lucrative for the brewers, and that the overseer specifically tried to involve his family members in the scheme.

It seems likely that the brewers worked as independent artisans who did not rely on rations, but were instead paid for their labours. Thus, although they were provided with materials (in this case barley) and supplied finished commodities for the Centre (the beer), this was not described as *a₂-geš-gar-ra*. It is tentatively suggested that gender might have played some part in this.

Discussion

In a paper comparing *ta-ra-si-ja* and *iškāru* in respect of the wheel and chariot records of Nuzi, Rougemont stated that the aim was to help improve our understanding of the relatively sparse and elliptical Mycenaean texts by comparing them with relevant near contemporary parallels from the Near East.²¹ The discussion in this paper has the same aim, although, in this case, the Near Eastern texts are much older than the

²⁰ FIRTH forthcoming.

²¹ ROUGEMONT 2015.

Middle Babylonian Nuzi records. However, here there is the considerable advantage that there are a substantial number of texts, which allow us to gain a fuller picture of the processes being considered.

Although one might try to suggest that *a₂-geš-gar-ra* in Ur III was a distant precursor of Mycenaean *ta-ra-si-ja*, there is clearly not a simple link between these two systems because of the substantial geographical and chronological differences. Therefore, it is not possible to assume that the presence of some feature in the *a₂-geš-gar-ra* texts necessarily implies the same feature was present in *ta-ra-si-ja*. Nevertheless, these were both Bronze Age bureaucracies trying to tackle the same problem of organising the manufacture of finished goods from the surplus raw materials held by the Centre, using the skills of a dispersed workforce. Thus, it is likely that they would encounter the same issues and perhaps solve them in similar ways. Therefore, there is some possibility that the *a₂-geš-gar-ra* and *ta-ra-si-ja* systems would share common features.

In this respect, it is interesting to compare the findings of this paper with those of Killen.²² In his paper, Killen tentatively concluded that:

- *ta-ra-si-ja* was a method of organising production in cases where the palace would otherwise not have had full control;
- *ta-ra-si-ja* production was mostly decentralised;
- it involved an extremely large workforce with a relatively low status;
- there were intermediaries between the palace and the workforce who also acted as supervisors, and these were not members of the ruling élite.

Killen's conclusions on *ta-ra-si-ja* with regard to textile workers are largely consistent with the findings of this paper on *a₂-geš-gar-ra*. Certainly, in both cases, the textile industry required a large workforce and there would have been supervisors who acted as intermediaries between the Centre and the workforce. Furthermore, the workforce would have had a relatively low status. However, it has been suggested in this paper that the *a₂-geš-gar-ra* workforce had a higher status than many other textile workers because they received rations that far exceeded the standard basic rations.

²² KILLEN 2001.

Thus, the a_2 -geš-gar-ra / ta-ra-si-ja systems were used as a means of exerting control through strict monitoring of the supplied raw materials and the received manufactured items where the Centre did not have direct control.

In the case of the Mycenaean unguent makers, Killen concludes that they would not have been included within the ta-ra-si-ja system. He suggested that the unguent makers were regarded as master-craftsmen with a higher status than the workers in ta-ra-si-ja industries. He also notes the practical difficulty under a ta-ra-si-ja system of trying to monitor the wide range of ingredients that were used in the unguents.

This latter type of argument would not be applicable to the brewers of Umma, as the range of ingredients needed for making beer was more limited. Therefore, it would seem more pertinent to concentrate on their status as master-craftsmen. Thus, it appears that the ta-ra-si-ja / a_2 -geš-gar-ra system was not appropriate for such workers with a higher status.

In his discussion, Killen notes that the extent of ta-ra-si-ja in wheel and chariot production is less certain, as the word ta-ra-si-ja is only used in one text, **So 4442**, probably relating to production at se-to-i-ja. It is tempting to assume that all of the wheel and chariot production for Knossos was under ta-ra-si-ja. However, the present discussion shows the possibility of flexibly operating both a_2 -geš-gar-ra and non a_2 -geš-gar-ra processes at the same time according to the prevailing circumstances.

Conclusions

The Ur III system of a_2 -geš-gar-ra with the textile industry has been described. It has been shown to be closely analogous to the ta-ra-si-ja system in the textile industry of Knossos.

It has also been shown that much of Ur III textile production was not under the a_2 -geš-gar-ra system. It has been suggested that, in these cases, the weavers had a lower status and were probably under a different sort of obligation to work in the textile workshops.

A further comparison has been made between with Mycenaean unguent makers and the Ur III brewers of Umma. In this case, it is suggested that they were regarded as master-craftsmen, and that it was not appropriate to subject them to the constraints of the ta-ra-si-ja / a_2 -geš-gar-ra systems. It is tentatively suggested that gender may have been a contributing factor in this distinction.

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Quelques remarques sur les tablettes en linéaire B de Pylos

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Dans cet article nous illustrons quelques lectures extrapolées des deux volumes des *ARN*.

Tablette PY Ma 397



Fig. 1. Tablette PY Ma 397.

Ma 397.1: Le premier mot de chaque tablette **Ma** est un toponyme. Il en est donc de même en ce document.

Jusqu'à présent, dans toutes les éditions des textes de Pylos, ce mot a été lu *a-[•]-ta₂*.¹ L'examen du document et les agrandissements photographiques nous ont permis de mieux saisir la complexité de ce texte et de reconstruire ce que fit en ce début de ligne le scribe 602. Il a écrit *a-ta₂* puis se rendant compte qu'il faisait une erreur, il a effacé le *ta₂* et sur ses restes (la partie supérieure gauche mal effacée du *ta₂* est toujours visible), il a écrit *63 avant de compléter le mot en gravant *ta₂*, si bien que le toponyme qui ouvrait le document doit se lire *a-*63-ta₂*.

Dans l'article remarquable qu'il a consacré aux circonscriptions administratives de Pylos, Michel Lejeune s'étend sur les toponymes présents dans la série **Ma**.²

Il s'agit de districts mentionnés également en **Jn 829** et en **On 300**.

Jn 829	Ma	On 300
Jn 829.13 <i>ti-mi-to-a-ke-e</i>	Ma 123 <i>ti-mi-to-a-ke-e</i>	On 300.10 <i>te-mi-ti-ja</i>
Jn 829.14 <i>ra-]wa-ra-ta₂</i>	Ma 216 <i>ra-wa-ra-ta₂</i>	On 300.9 <i>ra-u-ra-ti-ja</i>
Jn 829.15 <i>sa-]ma-ra</i>	Ma 378 <i>sa-ma-ra</i>	On 300.11 <i>sa-ma[-ra</i>
Jn 829.16 <i>a-si-ja-ti-ja</i>	Ma 397 <i>a-*63-ta₂</i>	On 300.11 <i>a-si-ja-ti-ja</i>
Jn 829.17 <i>e-ra-te-re-wa-pi</i>	Ma 333 <i>e-ra-te-re-we</i>	On 300.10 <i>e-[ra-te]-re-wa-o</i>
Jn 829.18 <i>za-ma-e-wi-ja</i>	Ma 393 <i>za-ma-e-wi-ja</i>	
Jn 829.19 <i>e-re-i</i>		
	Ma 330 <i>e-sa-re-wi-ja</i>	On 300.9 <i>e-sa-re-wi-ja</i>

Lejeune note les absences de *e-re-i* en **Ma** et **On** et de *e-sa-re-wi-ja* en **Jn** et les attribue à une modification administrative touchant le district XVI di royaume.³

En revanche, on constate que le district XIII a pour nom *a-si-ja-ti-ja* en **Jn 829.16** et **On 300.11**, alors qu'en **Ma** il se nomme *a-*63-ta₂*. Il est tentant de considérer que le scribe 602, auteur de **Ma**, lorsqu'il écrit *a-*63-ta₂*, entend *a-si-ja-ti-ja*. Le syllabogramme *ta₂* se lit indubitablement *tja*.⁴ Par conséquent, proposer une valeur *sja* au syllabogramme *63 nous paraît une hypothèse à parcourir.

¹ Ainsi dans *PTT*¹, 192. Par la suite, pas plus *PTT*², 184, que *PT*³ 2021, 151, ne proposent d'identification pour le second signe de **Ma 397.1** et lisent *a-[•]-ta₂*.

² LEJEUNE 1972, 115-133.

³ LEJEUNE 1972, 120.

⁴ LEJEUNE 1972, 116, n. 5.

Certes le nombre de mots contenant le syllabogramme *63 est restreint et il est malaisé de vérifier la pertinence de l'équation *63 = *sja*. Outre *a-**63-*ta*₂, on n'a guère pour Pylos que les mots *ku-**63-*so* en **En 74.14** et **Eo 247.5**, *63-*o-wa* en **Vn 34.3** et pour Thèbes l'allatif *63-*te-ra-de* et l'anthroponyme *63-*u-ro*.⁵

Le logogramme *249

Mn 11.1



Fig. 2. Tablette PY Mn 11.1.

Mn 11.7

Ce logogramme *249 présente bien des points communs avec les signes *86 et A 565 (86 '188') et A 566 (86+188) du linéaire A.⁶

Alors que *86 évoque une barque pourvue à sa gauche d'un aviron, A 565 et A 566 ressemblent à une embarcation dotée d'un gaillard d'arrière.

Nous possédons six attestations de *86 en grec mycénien.⁷ À Cnosos, en **Ce 61.1** on lit *me-**86-*ta*, un anthroponyme auquel est associé un bœuf; en **Dc 1117.B** *wa-**86-*re* est «berger» dans la localité de *ku-ta-to*;

⁵ *FdCI*, 398.

⁶ *GORILA V*, 271.

⁷ *JUDSON et al.* 2019, 115.



Fig. 3. Tablette PY Mn 11.1.

à Pylos, trois attestations de *86 (*u-ra*-*86 en **Na 466**, *u-ra*-]*86 en **Na 1039** et *u-ra*-]*86 en **Na 1086**) concernent sans doute un même mot, à savoir *u-ra*-*86 qui est un toponyme. Enfin, en **PY Ua 1586.a**, tablette publiée en 2019, on a un excellent exemple de *86 que les auteurs de l'article analysent de manière impeccable.⁸

En linéaire B le logogramme *249 est représenté de trois manières différentes en **PY Mn 11.1** et **Mn 11.7**, ainsi qu'en **An 724 verso**. Dans le premier cas (**Mn 11.1**), la proue de l'embarcation est à gauche et à droite apparaît un gaillard d'arrière qui évoque les «cabines du capitaine» que l'on distingue sur certains des bateaux représentés dans la fresque de la Parade navale de Santorin;⁹ dans le second cas (**Mn 11.7**), le scribe a représenté une simple barque et le signe correspond au syllabogramme *86.

Le linéaire B offre une troisième version de *249 en **An 724 v.**, dans laquelle le gaillard d'arrière est couché, ce qui tendrait peut-être à prouver que le bateau ainsi représenté n'était pas apte à prendre la mer mais en réfection.¹⁰

⁸ JUDSON *et al.* 2019, 115.

⁹ POURSAT 2008, Pl. LVI, 191.

¹⁰ *PTT*², 189 ont omis de rapprocher le logogramme *249 en **Mn 11** du graffiti de **An 724 v.** tout en avançant l'hypothèse que le signe de **An 724 v.** pourrait représenter le signe *34 ou un navire. *PT*³ 2021, 155 a suivi Olivier et Del Freo sans commenter le logogramme *249 et en soulignant à son tour que le signe au *verso* de **An 724** pourrait représenter soit le signe *34, soit un navire, et il a classé ce document **Mm**.

An 724 verso



Fig. 4. Tablette PY An 724, verso.

La tablette **Mn 11** de la main du scribe 602 est un document fiscal. En revanche la tablette **An 724** enregistre des gens appelés à servir dans la flotte en qualité de rameurs.¹¹ Le lien entre le *recto* et le *verso* de cette tablette est évident: le scribe 601 enregistre des rameurs et au *verso* du document il dessine un bateau.

La tablette PY Tn 316

La révision attentive de ce document et surtout la réalisation des facsimilés ont permis de confirmer pour la ligne .3 du *verso*, une vieille lecture de Emmett Bennett Jr. que l'on avait écartée avec trop de précipitation (*qo-wi-ja*, *na-ti-ʹqeʹ*, *ko-ma-we-te-ʹjaʹ*).¹²



Fig. 5. Tablette PY Tn 316, verso, .3.

¹¹ DEL FREO 2002-2003, 143.

¹² BENNETT 1979, 228; DEL FREO 1996-1997, 153, en particulier n. 41.

Après le diviseur qui suit *qo-wi-ja*, le scribe a incisé le syllabogramme *na* sur un autre *na* effacé de manière maladroite, tant il est vrai que les traits qui le composent sont toujours parfaitement visibles. À droite de *na* commence une zone dont la surface a été effacée avec grand soin et qui s'étend jusqu'à la fin de la ligne. Au-dessus du texte effacé, le scribe 663 a écrit un *ti* surmonté d'un *qe*. Ces deux signes ont été incisés très profondément dans l'argile, tout comme les trois signes qui composent le mot *qo-wi-ja*. À droite de ce *ti*, on peut apercevoir les traces d'un *ti* effacé, après lequel figure un diviseur. Enfin le scribe a écrit le mot *ko-ma-we-te-ja'* aux traits gravés moins profondément que ceux des mots *qo-wi-ja* et *na-ti-qe'*. La raison en est très probablement liée au fait que ce mot a été incisé lorsque l'argile de la tablette était déjà passablement sèche.

Il est évident que lors d'une première version du texte de la ligne .3, à la droite de *qo-wi-ja* figurait un mot de trois signes dont, en dépit de l'oblitération du scribe, nous pouvons encore lire le premier et le troisième signe: $[[na-[\bullet]-ti]]$. Malheureusement, il n'existe plus aucune trace du signe effacé ($[\bullet]$) entre *na-* et *-ti*. Il est clair que l'incision de ce terme n'a pas satisfait le scribe 663 et l'a amené à l'effacer ainsi qu'outre ce terme, la dernière partie de la ligne .3.

Après avoir gravé *na-ti-qe'*, 663 a eu indubitablement un moment d'hésitation ne sachant quoi écrire à la suite de ce terme. Entre-temps la tablette a commencé à sécher et finalement le scribe l'a reprise en main pour graver *ko-ma-we-te-ja'*.

La conjonction enclitique *-qe* abondamment attestée en **Tn 316**, tant sur le *recto* que sur le *verso*, associe entre eux divers termes de même nature comme, par exemple, *do-ra-qe* et *po-re-na-qe*. Or, en **Tn 316.3** *-qe* associe entre eux *qo-wi-ja* et *na-ti*, (*qo-wi-ja*, *na-ti-qe*) de la même manière qu'à la ligne .4 *pe-re-^{*}82-jo* est associé à *i-pe-me-de-ja* et *di-u-ja-jo* (*pe-re-^{*}82-jo*, *i-pe-me-de-ja-qe* *di-u-ja-jo-qe*).

Les termes *pe-re-^{*}82-jo*, *i-pe-me-de-ja*, *di-u-ja-jo* ont universellement été interprétés comme des dérivés de noms de divinités¹³ qu'associait entre eux l'enclitique *-qe*; le mot *qo-wi-ja* mis à la ligne .3 sur le même pied que *pe-re-^{*}82-jo* à la ligne .4 est certainement un théonyme comme beaucoup l'ont soutenu¹⁴ et comme l'avance John Chadwick.¹⁵

Reconnaître dans *qo-wi-ja* une déesse «Boía», c'est-à-dire une déesse

¹³ *DMic* I, s.vv. *di-u-ja-jo* et *i-pe-me-de-ja*, *DMic* II, s.v. *pe-re-^{*}82-jo*.

¹⁴ *DMic* I, s.v.

¹⁵ *Docs*², 463.

«Génisse» est donc l'interprétation la plus satisfaisante. Entre parenthèses l'existence de nombreux animaux sacrés dans les documents mis au jour à *Odos Pelopidou* à Thèbes corrobore cette interprétation.¹⁶ L'hypothèse avancée par Leonard Palmer qui considère *qo-we* attesté en **MY Fu 711**. v.3 comme un théonyme thériomorphe,¹⁷ et fortement renforcée par les attestations d'animaux sacrés dans les tablettes de Thèbes,¹⁸ implique que l'on associe entre eux les termes *qo-we* et *qo-wi-ja*.

Par conséquent sur la base de la comparaison entre la ligne .3 et la ligne .4, là où des divinités sont associées entre elles au moyen de l'enclitique *-qe*, il nous semble que l'on doit à son tour considérer *na-ti* comme un nom de divinité.¹⁹

Comment interpréter le terme *ko-ma-we-te-ja*?

Il est à noter que ce mot a été ajouté en une seconde phase alors que l'argile de la tablette était déjà passablement séchée, ce qui pourrait signifier que *ko-ma-we-te-ja* est moins essentiel à la compréhension de la ligne que les deux théonymes *qo-wi-ja*, *na-ti-qe* qui précèdent.

Pour *ko-ma-we*, l'interprétation *Κομαφεν(τ)ς, cfr. κομήεις 'feuillu, aux longs cheveux,' est généralement acceptée.²⁰

Maurizio Del Frego dans son article sur *ko-ma-we-te-ja* résume les quatre hypothèses avancées pour expliquer ce terme.²¹ L'hypothèse 1 (théonyme) tombe car contrairement à *i-pe-me-de-ja-qe di-u-ja-jo-qe* associés à *pe-re-82-jo* en .4, *ko-ma-we-te-ja* n'est pas associé aux deux divinités précédentes (*qo-wi-ja*, *na-ti-qe*) par l'enclitique *-qe*; Chadwick a démontré que l'hypothèse 3 (un adjectif décrivant la coupe) était exclue; Del Frego note que l'hypothèse 4 (le nom d'une cérémonie) est impossible, car: (a) nous n'avons pas de fêtes mentionnées en **Tn 316**, (b) elle n'explique pas *na-ti-qe* et (c) la mention d'une cérémonie en **TH Of 35.1** serait une exception.

¹⁶ *FdC I*, 320, cf. les attestations de serpents (*e-pe-to-i*, ἐρπετοῖς), chiens (*ku-ne*, κύνες, *ku-no*, κυνῶν, *ku-si*, κυσί), mulets (*e-mi-jo-no-i*, ἡμιόνοις), oiseaux (*o-ni-si*, ὄρνισι), porcs (*ko-ro*, χοῖρος), oies (*ka-no*, χανῶν, *ka-si*, χασί).

¹⁷ PALMER 1983, 283-296.

¹⁸ *FdC I*, 196-197, 201.

¹⁹ PALAIMA 1999, 450, soutient l'hypothèse que *qo-wi-ja* et *na-* [pourrait être deux théonymes et que le mot *ko-ma-we-te-ja* pourrait qualifier les deux divinités en question: "[The scribal administrators] would have known and identified easily the probable theonym which follows *qo-wi-ja* in v.3 and thus the relationship of *ko-ma-we-te-ja* to these two entries."

²⁰ Orph. *Fr.* 258.

²¹ DEL FREGO 1996-1997, 146.

Ne demeure donc que l'hypothèse faisant de *ko-ma-we-te-ja* un adjectif se rapportant au mot précédent, c'est-à-dire *na-ti-qe*. Il s'agit bien entendu d'un adjectif féminin construit sur *ko-ma-we*, dont la signification ne peut être que «aux longs cheveux». La déesse *Natis est donc une déesse «aux longs cheveux».

En **Tn 316** v.3, avant *qo-wi-ja*, *na-ti-'qe'*, *ko-ma-we-te-'ja'*, sont mentionnées une coupe en or (*AUR *215^{VAS} 1) et deux femmes (MUL 2). On doit donc conclure que dans ce cas une seule coupe et deux femmes sont associées à deux divinités. La chose pourrait surprendre si la tablette traitait d'offrandes aux divinités citées, mais si l'on considère que le document décrit une procession au cours de laquelle sont exhibés les vases précieux du trésor du palais, imaginer deux femmes se rendant au sanctuaire ou à l'autel de ces deux déesses, l'une portant la coupe en or, l'autre les mains vides, n'a rien de surprenant. Dans les représentations de processions en l'honneur de déesses et gravées sur les sceaux, on note parfois, à côté de porteuses d'offrandes, de simples orantes n'ayant rien en main.²²

Le scribe 602

Ce personnage est l'un des auteurs les plus prolifiques parmi les scribes pyliens.²³

L'attribution à ce scribe des documents **Jo 438** et **Jn 829** aide à mieux saisir le rôle de ce personnage dans l'administration de l'État mycénien de Pylos.

L'activité du scribe 602 couvrait l'ensemble du territoire de l'État comme l'indiquent les documents des séries **Jn**, **Jo** et **Ma**. L'intitulé de la tablette **Jn 829** est clair:

- .1 jo-do-so-si , ko-re-te-re , du-ma-te-qe
- .2 po-ro-ko-re-te-re-qe , ka-ra-wi-po-ro-qe , o-pi-su-ko-qe , o-pi-ka-pe-e-we-qe
- .3 ka-ko , na-wi-jo , pa-ta-jo-i-qe , e-ke-si-qe a₃-ka-sa-ma

²² C'est vrai pour la période minoenne comme il apparaît d'après la bague de Isopata (POURSAT 2008, 249, Pl. LXXII), et pour la période mycénienne (DEMAKOPOULOU 1988, n° 170, n° 171, n° 172, 198-201). Du reste cela s'accorde parfaitement avec l'hypothèse de SACCONI 1987, selon laquelle les logogrammes VIR et MUL indiqueraient des «sacerdoti» et des «sacerdotesse», hypothèse reprise par PALAIMA 1999, 451-452.

²³ GODART 2021, 22, 97-99.

Dans l'en-tête il apparaît que plusieurs fonctionnaires (les *ko-re-te-re*, *du-ma-te*, *po-ro-ko-re-te-re*, *ka-ra-wi-po-ro*, *o-pi-su-ko* et *o-pi-ka-pe-e-we* — l'enclitique *-qe* = *-te* associe entre eux ces divers personnages) sont chargés de livrer (*do-so-si* = δώσονσι, futur de δίδωμι) du bronze (*ka-ko* = χαλκόν) qualifié de *na-wi-jo* au palais de Pylos.

Les exégètes ont beaucoup glosé sur le sens à donner à *na-wi-jo*.²⁴ Dans le premier cas on aurait affaire à une forme adjectivale correspondant à *νηριος = 'le bronze du navire,' dans le second à *ναφριος = 'le bronze du temple.'²⁵

Les contextes amènent à privilégier l'interprétation faisant de *ka-ko na-wi-jo* 'le bronze du temple.'

En premier lieu, les prélèvements de bronze dont sont chargés les fonctionnaires mentionnés en **Jn 829** concernent les 16 chefs-lieux du royaume pylien. Si certaines des localités en question sont sur la côte, d'autres sont à l'intérieur des terres. On voit mal ces localités possédant du bronze appartenant à la flotte.

En second lieu, certains des fonctionnaires appelés à «livrer» le bronze en question sont des ministres du culte. C'est le cas des *ka-ra-wi-po-ro*. Le mot *ka-ra-wi-po-ro* est un nom de fonction associé à chaque reprise à un personnage féminin. On trouve une dame *ka-pa-ti-ja* en **Eb 338.A** et **Ep 704.7** qui est *ka-ra-wi-po-ro*;²⁶ on rencontre des *ka-ra-wi-po-ro i-je-re-ja* (*i-je-re-ja* correspond au grec *ἰερεία*) en **Ed 317.1**; ces *ka-ra-wi-po-ro* sont donc des prêtresses. En **Un 6**, on retrouve cette même association entre *ka-ra-wi-po-ro* et *i-je-re-ja*. En **PY Vn 48.5**, cinq *ka-ra-wi-po-ro* sont recensées dans un document qui traite de sanctuaires et mentionne au moins une divinité, la *e-re-wi-jo-po-ti-ni-ja*, la Πότνια de *e-re-wi-jo*. Il apparaît donc que les *ka-ra-wi-po-ro* sont des prêtresses exerçant leurs fonctions dans des sanctuaires.²⁷ Tous les commentateurs s'accordent à retenir que les *ka-ra-wi-po-ro* sont des κλαφιφόρος, (ionien κληδοῦχος, attique κλειδοῦχος, dorien κλαδοφόρος) en d'autres termes des 'garde-sceaux,' des personnes contrôlant le trésor des sanctuaires.

²⁴ DEL FREO 2005, 793-803; 797, où il résume les hypothèses qui ont été avancées pour expliquer l'expression *ka-ko na-wi-jo*.

²⁵ *DMic* II, s.v. *na-wi-jo*.

²⁶ *ka-pa-ti-ja* est un anthroponyme féminin correspondant à *Καρπαθία cf. Καρπάθιος, ethnique de Κάρπαθος, «la femme de Karpathos».

²⁷ C'est du reste l'opinion de *DMic* I, 324.

Que ces trésors existassent apparaît du reste clairement d'après la tablette **PY Ae 303** où l'on lit: *pu-ro*, *i-je-re-ja*, *do-e-ra*, *e-ne-ka*, *ku-ru-so-jo i-je-ro-jo* MUL 14, à traduire: à Pylos, 14 esclaves sacrées (ἱερείαι δοῦλαι) pour (*id est* ont la garde de) l'or (préposition *e-ne-ka* = ἔνεκα + génitif; *ku-ru-so-jo* = χρυσόιο) du sanctuaire (*i-je-ro-jo* = ἱερόιο génitif de ἱερόν).

On admet que les *o-pi-su-ko* sont des intendants aux figures (*ὀπισῦκοι de *ὀπι + σῦκον).²⁸ Ici aussi il s'agit de desservants de sanctuaires.

Le terme *o-pi-ka-pe-e-we* a été interprété par Palmer suivi par Jean-Louis Perpillou, comme des ὀπισκαφεῖνες, des gens s'occupant de la vaisselle sacrée.²⁹ Il est donc évident que parmi les fonctionnaires en charge de la réquisition du *ka-ko na-wi-jo* dans les deux provinces de l'état pylien nous trouvons des desservants de sanctuaire. C'est la raison pour laquelle il m'apparaît que *na-wi-jo* signifie 'du sanctuaire' et soit à rapprocher de ναός.

Les premiers fonctionnaires à être cités dans l'intitulé sont les *ko-re-te-re* lesquels, aux lignes .4-19 de la tablette, sont associés à des *po-ro-ko-re-te-re*. Il s'agit de noms d'agent en -τήρ.

Rien ne nous permettant d'associer les *ko-re-te-re* à l'univers religieux, il est clair que ces fonctionnaires appartiennent à la sphère laïque.

On notera qu'à la ligne .1 du document, à la suite des *ko-re-te-re*, sont mentionnés les *du-ma-te* lesquels précèdent les *po-ro-ko-re-te-re* qui ouvrent la ligne .2.³⁰ Le *du-ma/da-ma*, a été rapproché du grec δάμαρ et traduit par «intendant».³¹ À côté du *du-ma* (pluriel *du-ma-te*) on trouve également un *po[-ro-]da-ma* (un vice-intendant en **Jo 438 lat. sin.**), ainsi que des *me-ri-du-ma-te/me-ri-da-ma-te* (*μελι-δύμαρτες, des intendants au miel). Il est prouvé que les *me-ri-du-ma-te/me-ri-da-ma-te* appartiennent à la catégorie des menus desservants de sanctuaire.³²

Rien ne nous autorise à affirmer qu'il en est ainsi du *du-ma*. Le fait que les *du-ma* soient cités immédiatement après les *ko-re-te-re* et avant les *po-ro-ko-re-te-re* pourrait signifier qu'il s'agisse de fonctionnaires

²⁸ *DMic* II, 43.

²⁹ PALMER 1969, 283, 438; PERPILLOU 1973, 375 sq. et n. 10.

³⁰ En un premier stade de rédaction de la tablette, le scribe, à la ligne .1, avait gravé *po-ro-ko-re-te-re* immédiatement à la suite de *ko-re-te-re*; il s'est manifestement rendu compte que l'ordre hiérarchique des gens appelés à fournir le bronze du temple était autre et il a effacé le mot, écrivant à sa place *du-ma-te-ge*; passant ensuite à la ligne .2, il a commencé par écrire *po-ro-ko-re-te-re-ge*.

³¹ *DELG*, s. v. δάμαρ.

³² LEJEUNE 1972, 131 et note 48.

provinciaux de rang élevé. Dans les tablettes du scribe 109 de la série C de Cnossos sont attestés deux *du-ma* auxquels sont destinés un porc: le premier en C 1030 est associé à la localité de *e-ko-so*, le second en C 1039, tablette mutilée qui enregistrait au moins deux localités comme l'indique l'enclitique *-qe* (-τε) à la suite du toponyme *56-]ko-we-qe, avait affaire à un territoire comprenant au moins deux bourgades. Les deux textes de Cnossos en associant le *du-ma* à des toponymes prouvent que ce fonctionnaire avait des compétences et exerçait une autorité — quelle que soit cette dernière — au niveau provincial. Dans l'accomplissement de ses fonctions il était secondé par un *po-ro-du-ma/po-ro-da-ma*, tout comme le *ko-re-te* était secondé par un *po-ro-ko-re-te*.

Cités immédiatement à la suite des *ko-re-te-re* tant en Jn 829 qu'en On 300 (lignes .5 et .6 pour les enregistrements de la province inférieure et lignes .11 et .12 pour la province supérieure), il est tentant d'imaginer que les compétences de ces fonctionnaires d'attributions mal connues pouvaient les amener à collaborer avec les *ko-re-te-re* (c'est le cas en Jn 829 et On 300), mais que dans la hiérarchie mycénienne ils leur étaient inférieurs, tout en étant, plus importants que les *po-ro-ko-re-te*.

Dans la tablette Jn 829 tous les ministres du culte sont mentionnés à la ligne .2 à la suite des *ko-re-te-re*, des *du-ma-te* et des *po-ro-ko-re-te-re* et ne sont plus cités dans la suite du document. Aux lignes .4-19 de la tablette, pour chaque chef-lieu de district, apparaissent uniquement le *ko-re-te* et son collaborateur, le *po-ro-ko-re-te*, suivis à chaque reprise du logogramme AES (logogramme du bronze) et du poids du métal concerné. Ces deux fonctionnaires apparaissent donc comme les seuls responsables de l'acheminement vers le palais du bronze réquisitionné dans les sanctuaires.

S'il en est bien ainsi, on conclura en soulignant que l'état peut intervenir dans la gestion des sanctuaires et prier les ministres du culte de consigner à ses représentants laïcs, en l'occurrence les *ko-re-te*, les *du-ma-te* et les *po-ro-ko-re-te*, les biens requis afin qu'ils soient transmis au palais, source de tout pouvoir.

De l'intitulé de la tablette Jo 438 ne subsiste que le mot *ko-re-te*.³³ En dépit de cela, il est évident que le document est strictement parallèle à Jn 829, même si outre le *ko-re-te*, son adjoint le *po-ro-ko-re-te* et le *da-]ma* ou *du-]ma*, sont impliqués dans la fourniture de l'or trois autres

³³ On consultera le bel article que Chadwick a consacré à ce texte (CHADWICK 1998-1999, 31-37).

fonctionnaires [*mo-ro-qa*, *a-to-mo* (sur le *lat. sin.*) et *qa-si-re-u* ainsi que cinq individus (*ne-da-wa-ta* (en .7), *e-ke-me-de* (en .8), *a-ka-wo* (en .18), *po-ki-ro-qo* (en .22) et *au-ke-wa* (en .23)] ne figurant pas en **Jn 829**.³⁴

Le *mo-ro-qa* est un titre lié à la possession d'un bien (de la terre comme il apparaît dans la tablette **PY Aq 64**).

L'*a-to-mo* est lui aussi un nom de fonctionnaire de rang provincial. La tablette **C 979** de Cnossos, de la main du scribe 109, comme **C 1030** et **C 1039** citées à propos de *du-ma*, nous apprend que l'*a-to-mo* recevait un porc et exerçait ses fonctions dans quatre villes de Crète (*do-ti-ja*, *ra-ja*, *pu-na-so* et *ra-su-to*) ce qui laisse supposer pour lui un prestige et une autorité au moins comparables à celle du *du-ma* et du *da-mo-ko-ro* (**KN C 7058**), eux aussi destinataires d'un porc.

Le *qa-si-re-u*, grec βασιλεύς, apparaît être un simple chef d'atelier.³⁵

On notera donc une différence essentielle entre les tablettes **Jn 829** et **Jo 438**: dans la première des ministres du culte (les *ka-ra-wi-po-ro-qe*, *o-pi-su-ko-qe*, *o-pi-ka-pe-e-we-qe*) sont chargés de fournir aux représentants officiels du roi dans les deux provinces de l'État, le bronze des temples qui servira à la fabrication de pointes de flèches et de lances, dans la seconde les desservants de sanctuaire n'apparaissent plus et ce sont uniquement des fonctionnaires provinciaux (le *ko-re-te*, le *po-ro-ko-re-te*, l'*a-to-mo*, le *du-ma* et le *po-ro-da-ma*), un chef d'atelier (*a-ke-ro*, *qa-si-re-u* en **Jo 438.20**), des charpentiers (*te-ko[-to* = τέκτων en **Jo 438.2**), des rameurs (*e-re-ta* = ἐρέτας, attique ἐρέτης en **Jo 438.2**) et des individus (*ne-da-wa-ta* **Jo 438.7**, *e-ke-me-de* **Jo 438.8**, *a-ka-wo* **Jo 438.18**, *po-ki-ro-qo* **Jo 438.22**, *au-ke-wa* **Jo 438.23**) qui fourniront au palais les quantités d'or requises dans les circonscriptions administratives du royaume.

Ces cinq personnages sont indubitablement des gens importants, possédant des ressources abondantes parmi lesquelles de l'or.³⁶

En d'autres termes, par rapport à la réquisition du bronze de **Jn 829**, la collecte de l'or en **Jo 438** s'est laïcisée. La raison en est simple: cet or n'était pas celui des sanctuaires mais émanait d'un circuit de production étranger à la sphère culturelle.

³⁴ *po[-ro]da-ma* sur le *lat. sin.* du document est bien entendu «un *vice-da-ma* ou *du-ma*» appelé ici à jouer dans le prélèvement de l'or un rôle identique à celui du *du-ma* dans le prélèvement du bronze du temple en **Jn 829**.

³⁵ GODART 2020, 289-294.

³⁶ GODART 2023.

En conclusion, si le scribe 602 enregistre des distributions d'offrandes d'orge à des divinités et des desservants de sanctuaire en **Fn**, d'huile parfumée à des ministres du culte, des divinités et l'άναξ lui-même en **Fr**, s'il dresse l'inventaire du mobilier royal dans la série **Ta**, il apparaît surtout comme le personnage principal chargé de rendre compte de la collecte de l'impôt dans la Messénie du roi Nestor (séries **Jo**, **Jn**, **Ma**, **Mn**). Il prend note des contributions que devront fournir au palais les cités, les sanctuaires, les fonctionnaires, certaines catégories professionnelles et certains individus. Il est une sorte de «secrétaire général» du «ministre des finances» du roi de Pylos.³⁷

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³⁷ Nous croyons en effet que les scribes mycéniens, loin comme on l'a soutenu, d'être des chefs de départements, transcrivaient simplement les observations et les comptes des membres de l'aristocratie (les collecteurs!) qui étaient appelés à gérer les divers secteurs de l'économie du royaume, GODART 2021, 80-82.

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Notes on the Knossos L(2) tablets

John T. Killen

In memoriam J.-P. O.

I have previously suggested that *ko-pu-ra e-ni-qe* on several L(2) tablets at Knossos are the names of two male finishers of cloth, linked by the copulative *-k^we*, Gr. $-\tau\epsilon$.¹ In a forthcoming commentary Yves Duhoux questions this conclusion, on the grounds that *e-ni-qe* is regularly written smaller than *ko-pu-ra* and he therefore prefers John Chadwick's suggestion that the term is */eni k^we/*, Gr. $\acute{\epsilon}\nu\iota\ \tau\epsilon$, 'and there is among it'.²

I set out below all the texts and drawings of tablets classified as L(2).³

L(2)	593 + 5992 + 8587	(103)
.Aa	] vac. [	]o-pe-te-wo-qe *161[
.Ab	] vac. [	]si-ja, o-re-ne-a TELA ¹ [
.B	ko-]pu-ra, / e-ni-qe, pe-ne-we-ta	*161 TELA ¹ 4 TUN +KI 2 TUN +KI[
.Aa	*161 doubtless adjunct to TELA ¹ in .Ab.	
.B	Slanting extra rule after TUN+KI 2 indicates that following entry belongs to .A.	



Fig. 1. KN L(2) 593.

¹ KILLEN & OLIVIER 1968, 120-121.

² Docs².

³ CoMIK; KT⁵. In KT⁶ all these texts and nearly all these critical notes are reproduced without change. There is one change of classification to be mentioned: Xe 7857 is classed as L(2), which is difficult to accept, given that neither of its entries (*e-ta[-wo-ne(-u)]* and [LANA] P₂) is paralleled in the L(2) tablets.

- L(2) 647 + 2012 + 5943 + 5974 (103)
 .A] 'nu-wa-ja, pe TELA¹ [] TELA¹ 17 TUN +KI 3
 .B]ra, / e-ni-qe e-ra-pe-me-na 'nu-wa-ja' TELA¹ []-ra₂ TELA¹ 1

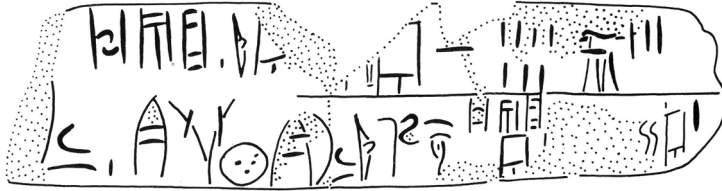


Fig. 2. KN L(2) 647.

- L(2) 5108 (103)
 .A] o-re-ne-ja *161 []
 .B] pe-ne-we-te []
*lat. inf. to-*sa TELA¹ 8 []
 .A Trace at right not incompatible with TELA[.

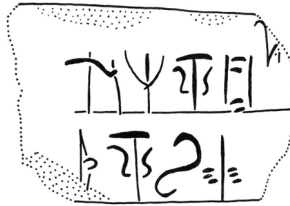


Fig. 3. KN L(2) 5108.

- L(2) 5909 + 5939 + 6007 (103)
 .1a]-ke-me-na, a-ro-za[]
 .1b]o-re-ne-ja []
 .2] 'a-ro-za' TELA^x 4 []
 .1a]ke-ke-me-na not impossible.
 .2 Traces at right.



Fig. 4. KN L(2) 5909.

L(2) 5910 + 5920

(103)

- .1] , e-ni-qe , nu-wa-i-ja , [
- .2] a 'a-ro₂-a' *161 TELA¹ 12 po[
- .1 Trace at right.



Fig. 5. KN L(2) 5910.

L(2) 5924 + 6000

(103)

- .A] zo-[
- .B] , e-ni-qe [
- .A Perhaps zo-ta[.
- .B Perhaps upright in the break at right.

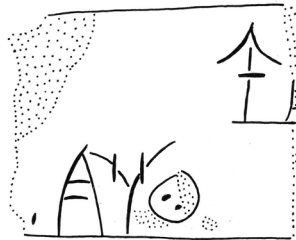


Fig. 6. KN L(2) 5924.

L(2) 5961

(103)

- .1] e-ni-qe[
- .2] TUN+KI 3[
- inf. mut.*
- .2 3[: probably at least 5[.

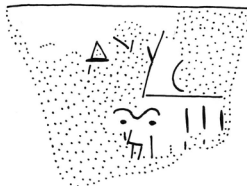


Fig. 7. KN L(2) 5961.

L(2) 5998

(103)

- .A pa-we-ḳ[
 .B ko-pu-ra, / e-ni[-qe

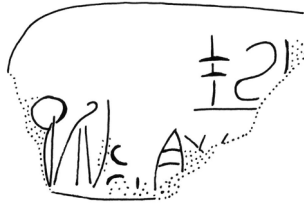


Fig. 8. KN L(2) 5998.

I begin by examining how easy it would be to follow Chadwick, and now Duhoux, in taking *e-ni-qe* as /*eni k^we/* 'and there is among it' in the contexts in which we find it. Taking *ko-pu-ra*, as I have done, as the name of the 'owner' of a finishing workshop, a first possibility would be to take the following *e-ni-qe*, if it means /*eni k^we/*, as referring to all the cloth which the tablet goes on to record: 'K's workshop: and there is among it (viz. the cloth which K. has finished): x CLOTH, y CLOTH.' There is, however, a serious difficulty with this potential approach. If I am right in taking *ko-pu-ra* as the name of a textile workshop, this term will play the same role as many other terms standing at the beginnings of Knossos CLOTH records, viz. they identify the producers of the fabric. Alternatively, it might describe the type of the cloth (like e.g. *pu-ka-ta-ri-ja* initially on L(7) 471) or its colour (like e.g. *po-pu-re-ja* initially on L(7) 474). Yet nowhere else, including on tablets in the same hand as the L(2) tablets (103) and on the L(7) records just mentioned, do we find *e-ni-qe*: this is only found on the L(2) tablets.

Another possible way of attempting to explain *e-ni-qe* if it were /*eni k^we/* would be, in cases where it stands on line B, to take it as referring to the cloth on the same line, which is noted as forming part of the cloth on line A. Thus: 'CLOTH on l. A, and there is among it the CLOTH on l. B.'

However, if we take as an example L(2) 593, where the contents of both registers are reasonably clear, the problems with this approach are immediately evident:

L(2)	593 + 5992 + 8587	(103)
.Aa	] vac. [	]o-pe-te-wo-qe *161[
.Ab	] vac. [	]si-ja, o-re-ne-a TELA ¹ [
.B	ko-] pu-ra, / e-ni-qe, pe-ne-we-ta	*161 TELA ¹ 4 TUN +KI 2 TUN +KI[
	.Aa	*161 doubtless adjunct to TELA ¹ in .Ab.
	.B	Slanting extra rule after TUN+KI 2 indicates that following entry belongs to .A.

The CLOTH on l. A is (*161) TELA qualified as]si-ja, quite likely *e-qe-si-ja*, a term which like others on the L(2) tablets appears on the Ld(1) 'store' records, and *o-re-ne-a*, plus an unknown number of chitons (TUN+KI). The fabric on l. B is *161 TELA qualified as *pe-ne-we-ta* plus two chitons (TUN +KI). It is clear from the Ld(1) 'store' records that *o-re-ne-a*/*o-re-ne-ja* and *pe-ne-we-ta* are mutually exclusive descriptions of cloth: though both are attested in the series, neither is found on the same tablet as the other. It follows therefore that the *o-re-ne-a* cloth on L(2) 593.A cannot have included any *pe-ne-we-ta* fabric, and hence that *e-ni-qe* before *pe-ne-we-ta* on L(2) 593.B cannot mean /eni k^we/ and indicate that the *pe-ne-we-ta* cloth on l. B is part of the *o-re-ne-a* cloth on l. A.

There is also a further obstacle to this line of approach: that there is clear evidence on L(2) 593 that, as on many tablets of the .A.B (and .a.b) type, line B was the first to be written and line A the second. This is confirmed in this instance by the entries at the end of line B which involve two entries of TUN + KI. As we note in the critical apparatus,⁴ the second entry is separated from the first by a slanting stroke which shows that this second entry belongs to line .A: which in turn shows that line A must have been written after line B. And if line A was written after line B it is difficult to see how *e-ni-qe* on l. B can mean 'and there is in it' and refer to cloth yet to be recorded on l. A.

It is difficult, then, to believe that *e-ni-qe* can mean 'and there is in it'. But what of the alternative proposal, that *ko-pu-ra* and *e-ni* are two personal names linked by the copulative *-qe*, *-k^we*, *Gr.* -τεε?

1. First, we do have parallels on the CLOTH records at Knossos, including on records in Hand 103, for two men's names linked by the copulative *-qe*. One group of parallels is on As(1) 602 and

⁴ And previously in KILLEN & OLIVIER 1968, 121.

As(1) 605, where we find such entries as *ka-nu-se-u ta-to-qe* VIR 2 TELA¹ 1 [(see **As(1) 602.3**). The situation here is rather different, however: the pair of men on the **L(2)** tablets, if this is what *ko-pu-ra e-ni-qe* are, form a whole workgroup, involved with a large number of cloths, whereas the men on the **As(1)** tablets are pairs of individuals each dealing with a single cloth (except for two entries on **As(1) 602.1.2**, where the MAN : CLOTH ratio is 1 : 1).

A second set of parallels is on **L 588**, the first two lines of which read as follows:

1. i-ku-tu-re , ru-si-qe , a-pa-i-ti-jo , ze-me-qe[
2. a-qo-ta , TELA § zo-ta-qe , TELA¹ 13 [

On line 1, two pairs of men, each linked by *-qe*, are listed, while *a-qo-ta zo-ta-qe* on l. 2 may be a further such linked pair, though we cannot exclude the possibility that *a-qo-ta* and *zo-ta* are the names of the fabrics whose ideograms follow each term (with *zo-ta-qe* here, compare *zo-*[, perhaps *zo-ṭa*[, on **L(2) 5924.A**). Whichever is the correct explanation, however, it seems clear that we have evidence here for pairs of men associated with more than a single cloth: **L 588.2** records a total of 21 cloths, but a maximum of six (possibly only four) men.

2. There is clear evidence on several tablets that *ko-pu-ra* and *e-ni-qe* are intended to be taken as separate from the text on the rest of the tablet, to their right. On **L(2) 593**, for instance, *ko-]pu-ra e-ni-qe* stands in an otherwise blank space at the beginning of the tablet and before the dividing line that separates lines A and B. In addition, while *ko-]pu-ra* is written (slightly) larger than *e-ni-qe*, *e-ni-qe* is in turn written larger than any of the text that follows it. On **L(2) 647**, again, while *e-ni-qe* is slightly smaller than the surviving *ra* of *ko-pu-ra*, it is again larger than the *e-ra-pe-me-na*, etc. following it, and again stands to the left of the beginning of the .A.B dividing line. On **L(2) 5924**, again, *e-ni-qe* stands to the left of the beginning of the .A.B dividing line. Clearly, given this evidence, it is attractive to conclude that *ko-pu-ra* and *e-ni-qe* should be taken together, and as forming the heading of each of the tablets on which they are found.

3. As I noted in my discussion of the newly-joined L(2) 593,⁵ further evidence to support the conclusion that *ko-pu-ra e-ni-qe* are the names of two men linked by the copulative *-k^we* is provided by line .Aa of 593, which begins as preserved with the term]*o-pe-te-wo-qe* written small above the CLOTH entry on the register and perhaps therefore forming (part of?) a gloss. Since it is difficult to doubt that *o-pe-te-wo* is genitive of a man's name in *-eus* (whose dative *o-pe-te-we* appears on So 4447), it is also difficult to doubt that *o.* stands in parallel to *e-ni-qe*: that either this is the second element in a second pair of names on the tablet, or that it is to be construed with *ko-pu-ra e-ni-qe*: K. and E. and O. It is true that while *ko-pu-ra* and *e-ni* are nominatives, *o.* is a genitive. But there are plenty of parallels for the names of 'owners' of textile workshops being quoted in the genitive at the beginning of the relevant record. See e.g. Lc(2) 504]*ku-ru-so-no*, Lc(1) 551 *e-me-si-jo-jo*, Lc(2) 7377]*wę-ri-jo-jo*, Lc(1) 7392 *we-]we-si-jo-jo*, Ld(1) 598 *wi-jo-ęo-ta-o*.
4. The final question remains, however: why, if *ko-pu-ra e-ni-qe* is a pair of (men's) names linked by the copulative *-k^we*, is *e-ni-qe* regularly written smaller than *ko-pu-ra*? It is this difference, as we have seen, that has led Duhoux to question my explanation of *ko-pu-ra e-ni-qe* as two men's names.

The first point to make is that the difference in size between *ko-pu-ra* and *e-ni-qe* is relatively small, though large enough for Jean-Pierre Olivier and I to have marked it with a forward slash in the relevant texts.⁶ It is also the case, as we have seen earlier, that *e-ni-qe*, though smaller than *ko-pu-ra*, is itself regularly written larger than the rest of the inscription on the tablet.

But how are we to explain the change of size of signs between *ko-pu-ra* and *e-ni-qe*? Two possibilities come to mind. The first is that it reflects the relative status of the two individuals: that *ko-pu-ra*, who is always named first, was as it were the 'senior partner,' and as such is given preferential treatment as far as the size of the signs in which his name was written is concerned. Alternatively, and this is the view to which I would incline myself, the

⁵ KILLEN & OLIVIER 1968, 120.

⁶ See CoMIK; KT⁵.

diminution in the size of signs in which *e-ni-qe* is written may be due to an (unconscious?) anticipation by the scribe of the smaller signs which he will be writing in the latter part of the inscription.

II

There is evidence to suggest that the cloth on the **L(2)** tablets includes fabric of high quality. Some of the epithets used to qualify it are also found on the **Ld(1)** 'store' records, including – probably – *e-qe-si-ja* (**L(2)** 593.Ab), which given its association with the high-ranking *e-qe-ta* is unlikely to have been an inferior fabric. Indeed, on three of the four occasions on which *e-qe-si-ja* occurs on the **Ld(1)** tablets the cloth being recorded is explicitly described as *a-ro₂-a* 'of better quality,' a term which also appears on the **L(2)** tablets, on **L(2)** 5910.2. Again, if I am right in interpreting *nu-wa-(i-)ja* on **L(2)** 647, **L(2)** 5910 as 'cloth for bridewealth' i.e. for purchasing a bride,⁷ this also is unlikely to be cloth of inferior quality.

Against this background, it is attractive to wonder whether]-*ra₂* on **L(2)** 647.B might be *po-pu*]-*ra₂* 'purple.' 'Purple' is the only term on Knossos textile records which is spelt with a final *-ro₂* or *-ra₂*: see *po-pu-ro₂* of two units of TELA+PU on **L** 758. Moreover, there is room enough in the space before *-ra₂* to accommodate *po-pu*. It cannot be objected to this restoration that the entry which follows *-ra₂* concerns one unit of TELA, which we would normally expect to be preceded by *-ro₂*, agreeing with *pa-wo*. But we have a parallel elsewhere in the CLOTH records for a neuter plural instead of an expected neuter singular. On **Ld(1)** 587, after four entries involving multiple amounts of TELA qualified by terms in *-Ca*, we have an entry involving a single TELA which is again preceded by a term in *-Ca*, *po-ri-wa* 'grey' (neut. plur.): presumably because the scribe, having been dealing with neuter plurals in the previous entries, has continued with one here. There are three, possibly four, terms in *-Ca* qualifying TELA in the entries preceding]-*ra₂* TELA on **L(2)** 647: is the *-ra₂* due to the same phenomenon here as we find on **Ld(1)** 587, viz. the scribe continuing with a neuter plural after those he has written earlier, even though the entry only involves a single TELA?

⁷ KILLEN 1986, 281–284.

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Migration in the Mycenaean world: the evidence for immigrants

Stavroula Nikoloudis

The flow of goods and ideas through exchange networks set up around the Mediterranean reflects contacts between the Mycenaean world and the surrounding regions, including Cyprus, Egypt, the Levant and Anatolia. This indirect knowledge of other communities, conveyed by objects and raw materials from far-away places and stories told by traders and travellers visiting different centres of exchange,¹ was augmented by the actual settlement in Mycenaean societies of people having arrived there from elsewhere. The knowledge that Mycenaean communities included such 'others' is significant because it demonstrates that Mycenaean societies were indeed culturally diverse.²

While it is often difficult to detect such 'outsiders' in relation to the dominant group in power, in the archaeological record alone, we are able to retrieve such details, however laconic, from the Linear B administrative documents in the form of 'toponymics' (i.e. adjectival designations of people indicating their geographical origins: e.g. 'Knidian women' in the texts from Pylos, discussed below).³ The toponymics used to record groups and individuals point to their diverse geographical ori-

¹ BURNS 2010; CLINE & STANNISH 2011.

² NIKOLOUDIS 2008a.

³ While 'others' (outsiders) in relation to the ruling dominant group ('insiders') could refer as much to differences in social class as to geographical origin, it is the latter type of identity group that is the subject of this paper. Of course there is potential for overlap because immigrants often constitute marginalised groups with restricted access to status and power. See ANTHIAS 1999, 162.

gins, both near and far from the Mycenaean polities in whose texts they appear. While the 'ethnic' identity of such people is unknown to us (because ethnicity as a social construct is self-ascribed, subjective and fluid, and the Linear B accounting records do not contain the kind of literary discourse that might allow an in-depth exploration of the topic),⁴ their toponymics give us a degree of understanding of their 'cultural' identity. As Jonathan Hall notes,⁵ 'ethnicity' is connected with discourse, or 'saying' (beliefs), whereas 'culture' is connected with praxis, or 'doing' (lifestyles). Put simply, culture is a way of doing things, and different groups do things differently. In this sense, and based on ethnographic research, it is reasonable to expect that people originating from different places might practise culture differently: they might speak one or more different languages (or different dialects), enjoy a different cuisine and use different cooking techniques and utensils, wear different clothing (due to environmental, religious or other factors), produce different music, and so on. These differences between groups of people, whether large or small in scale, when considered in context, lead to the identification of distinct cultural groups. Of course, no culture exists in a vacuum, and there are often interesting borrowings, mixing, and other outcomes resulting from cultural encounters and interactions.⁶ We may not always be able to pinpoint or explore such 'entanglements' in detail,⁷ due to the nature of our data sets, but being aware of their potential and, further, their likelihood is important, especially since the presence of external groups and individuals, or 'others', in Mycenaean societies is confirmed by the toponymics. This awareness can guide and inform our textual and archaeological research. At the very least, it reminds us to 'people' the past and to consider the 'agency' of these social actors of the past.⁸

Recently, human migrations have become prevalent in international news, challenging national borders and disrupting notions of identity in a globalised world. In view of the potential of these migrations to shed new light on the phenomenon, it seems pertinent to reconsider the relevant Mycenaean evidence. The migration of people from one place to another can take a variety of forms. It is often divided by migration

⁴ HALL 2002, 9-24.

⁵ HALL 2002, 19.

⁶ HALL 2002; STOCKHAMMER 2012; CAMERON 2013; BOCCAGNI 2017.

⁷ STOCKHAMMER 2012.

⁸ Cf. DRIESSEN 2018, 22.

scholars into voluntary (economic) and forced (political) migration, although overlap is possible.⁹ Whether the departure from their homeland and arrival in a new land is due to financial hardship and/or chronic warfare and raiding, migrants are usually thought of as independently deciding to leave, carefully weighing their options as they plan when and where to move, often relocating to places where they have existing relationships. In reality, as Catherine Cameron highlights, many migrations, especially those resulting from war and captive-taking, are characterised by rushed decisions and limited or non-existent choices.¹⁰ Migrations of refugees, for instance, who are forced out of their homes to seek safety elsewhere, do not fit neatly into the model and should be kept in mind.¹¹ The aim then is to review the evidence for immigrants in the broadest sense – i.e. the physical presence of groups and individuals originating from elsewhere living in Mycenaean communities. Strictly speaking, the term ‘immigrants’ designates *permanent* residents (Oxford Dictionary 1996), but given our limited understanding of the processes underway in Mycenaean times, the evidence for (likely) short-term residents is also included. The focus is on the textual evidence but a few promising archaeological analyses are incorporated into the discussion as they demonstrate the value of an integrated approach.

The toponymics appearing in the Linear B texts from the Mycenaean palaces on the mainland and on Crete reflect culturally diverse populations, with local (within the polity) and supra-local (beyond the polity, including overseas) identifications of groups and individuals.¹² Contacts with Egypt are suggested by the evidence at Knossos, Crete, including a man described as *a₃-ku-pi-ti-jo Aigyptios* ‘Egyptian’ on tablet **KN Db 1105**. Mainland texts tend to feature more toponymics referring to western Anatolia and the eastern Aegean. For example, the **A-** series of texts from Pylos record about 750 female workers, most of whom seem to be dependent on the palace for their rations, as well as their children, reaching a total of about 1500 individuals.¹³ These women work as corn-grinders, bath-pourers/attendants, and predominantly as tex-

⁹ CAMERON 2013, 219; DRIESSEN 2018, 20.

¹⁰ CAMERON 2013, 218-220.

¹¹ For useful insights drawn from contemporary migrations, see DRIESSEN 2018, 19-22; CAMERON 2013.

¹² For details, see NIKOLOUDIS 2008a, 46-49.

¹³ CHADWICK 1988.

tile-workers. Alongside local women, there are women workers from further away places, including Knidos, Halikarnassos, Miletus and the islands of Chios and Lemnos, as well as women from *a-si-wi-ja* 'Aswia' i.e. Hittite Assuwa > Aswia > later Greek Asia, likely meaning the area later known as Lydia.¹⁴ It is unclear if these women were captives or refugees, slaves or free. One group (PY Aa 807) is specifically called *ra-wi-ja-ja* 'war-captives', derived from **lāwiā* 'war-plunder' (attested as Attic λεία, Ionic λήϊη). John Chadwick believed that most of the women would have been bought in the slave markets of the eastern Aegean coastal sites for exploitation as a labour force.¹⁵ They may have been kept together, in their respective groups, on arrival at the Pylian polity for communication purposes (as speakers of the same language or dialect) to ensure maximum productivity. It is also possible that some of the women were part-time corvée workers.¹⁶ Toponymics related to Cyprus are found equally on Crete and the mainland. At Pylos, a man known as *ku-pi-ri-jo* *Kyprios* 'Cypriot' (PY Un 443) is viewed by John Killen as a 'collector', who may have been a high-status, semi-independent merchant, with ties to Cyprus, organising external trade for the palace, either personally conducting it or arranging it through others.¹⁷ Where individuals are concerned, it is sometimes difficult to determine whether these terms served as true toponymics indicating one's original homeland or if they had come to be used, over time, as onomastics.¹⁸ For instance, did the name of the female 'key-bearer', a religious official and landholder at Pylos, *ka-pa-ti-ja* (PY Ep 704.7), indicate her own origin from the island of Karpathos near Rhodes? Or did it perhaps convey an older family memory of that homeland, or some other association with that place?

Onomastics themselves may be used, with caution, as a source of information about cultural diversity. The higher number of non-Greek personal names appearing at Knossos may have belonged to the population groups that the Mycenaeans encountered when they arrived there, including the Anatolian-like names *pi-ja-mu-nu* (KN Ap 5748), *ku-ka-da-ro*

¹⁴ CLINE 1997, 190-192.

¹⁵ CHADWICK 1988, 90-93.

¹⁶ UCHITEL 1984.

¹⁷ KILLEN 1995, 218-221.

¹⁸ PALAIMA 1991, 280.

(KN Uf 836), *wa-du-na-ro* (KN C 912).¹⁹ Furthermore, the names of divinities appearing in the Mycenaean records may reflect another dimension of the society's multicultural character: the non-Greek name of the divinity *pi-pi-tu-na* (KN Fp 13) on Crete and the appearance of *po-ti-ni-ja a-si-wi-ja* (PY Fr 1206), the 'Aswian *Potnia* = Mistress/Lady of Aswia' on the mainland reveal a certain openness to external influences.

The *rower* texts from Pylos (PY An 1, An 610, An 724) record a total of about 500-600 male rowers who seem to have provided their service to the palace, by manning its fleet, in return for the use of land.²⁰ Tablet PY An 724 lines 3-4 stipulates that a settler owes service as a rower. PY An 610 specifically refers to *ki-ti-ta ktitai* 'settlers, inhabitants' (cf. Classical Greek κτίτης, verb κτιζω 'I occupy'), *me-ta-ki-ti-ta metaktitai* 'after-settlers' and *po-si-ke-te-re pos-ikteres* 'immigrants' (cf. Doric ποτί for πρὸς 'to' and verb ἴκω 'I come') in lines 2, 5 and 6 respectively. Some of these rowers seem to be from nearby areas (e.g. seven men are listed as *za-ku-si-jo* 'Zakynthians', from the island of Zakynthos to the northwest, An 610.10), but it is possible that others originated from further afield. The terminology used here suggests the settling of land in stages. Chadwick connects these *ki-ti-ta* 'settlers' with the *ki-ti-me-na* lands of the E- series landholding records.²¹ One wonders whether the absence of the specific terms *ki-ti-ta*, *me-ta-ki-ti-ta* and *po-si-ke-te-re* from those landholding texts might be due to these men's postulated subordinate and marginalised status as relative 'outsiders' to the area and to the socio-political hierarchy: perhaps these rowers worked on some of the lands mentioned in the E-series which were actually 'held' by more prominent members of the community.

The Hittite Tawagalawa letter constitutes a unique source of evidence for the interaction of Mycenaeans and western Anatolians.²² Now generally dated to the reign of Hittite King Hattusili III (1264-1239 BC), the letter complains to the king of Ahhiyawa about a local troublemaker named Piyamaradu, who is accused of regularly attacking Hittite territory and encouraging resistance (KUB XIV iii 7-17). On this occa-

¹⁹ BILLIGMEIER 1970, 179.

²⁰ PALAIMA 1991, 285-286; DEL FREO 2001-2002, with references.

²¹ CHADWICK 1987, 82.

²² BRYCE 1989, 3-5; 2003, 51-59, 76-85. The toponym 'Ahhiyawa' is taken to refer to the Mycenaean world or some component of it. It is unclear if a specific centre was meant here. The names of the two kings are not preserved. See also BECKMAN *et al.* 2013, 5-6, 100-122.

sion, Piyamaradu is blamed for the displacement of about 7,000 people from the Lukka Lands in southwest Anatolia (later Lycia) to Ahhiyawa. Some of these individuals had gone willingly with him to the Mycenaean world (perhaps as refugees seeking protection from another leader – this occurred frequently in Anatolia, where alliances were constantly changing between individuals and between states), while others seem to have been taken by force during this latest raid. The letter expresses the Hittite king's desire to have his subjects returned.

According to Trevor Bryce, there were two main incentives for the Mycenaean interest in western Anatolia: (1) access to raw materials, such as timber, gold and copper, and (2) recruitment of human labour from the Luwian regions of southwest Anatolia for the palaces' large-scale textile industries and construction projects.²³ Indeed, Strabo's reference (*Geog.* 8.6.11) to the fortification walls of Tiryns having been constructed by Cyclopes from Lycia might point to a tradition acknowledging the contribution of foreign workers from that part of the world to such monumental building projects. The recruitment of human labour through the forced resettlement of conquered people was very common in Anatolia where, since the 15th century BC, the Hittites themselves often raided Luwian territory in the west and transported people and livestock back to the Hittite homeland.²⁴ Some of the female workers recorded in the A-series of texts at Pylos might reflect a similar practice underway in the Mycenaean world. It is also tempting to consider whether some of the rowers of the **PY An** texts were members of displaced population groups such as those mentioned in the Hittite Tawagalawa letter. In two rather tantalising cases, the sons of women textile workers are linked with the rowers from *a-po-ne-we* and *da-mi-ni-ja* (**PY An 610**): on **PY Ad 684**, the boys are called the rowers' *ko-wo* ('sons' or, in Maurizio Del Frego's view, 'apprentices'²⁵) and on **Ad 697** the boys are recorded as 'serving as rowers'. Whether or not these links were based on family bonds, they suggest the teaching of specialised skills to a younger generation. It is not difficult to imagine the arrival of human labourers, both skilled and unskilled, perhaps even a steady supply of them, being welcomed by the Mycenaean palace authorities whose power depended on the smooth functioning of a system sustained by,

²³ BRYCE 2003, 85–86.

²⁴ BRYCE 2003, 84.

²⁵ DEL FREO 2002–2003.

and reliant on, a large and varied human workforce.²⁶

Another potential example of the kind of transplantation of population groups noted in the Tawagalawa letter and occurring in the contemporary Anatolian world has been suggested in the case of a possible enclave of foreign inhabitants at *sa-ra-pe-da*, appearing on text **PY Un 718**.²⁷ This tablet records the anticipated contributions of food and drink for a banquet in honour of the god Poseidon by four parties: (1) *e-ke-ra₂-wo*, taken to be the name of the Pylian *wanax*, (2) the *da-mo*, the established group of landholders and administrators, (3) the *ra-wa-ke-ta*, the official traditionally viewed as the military commander of the state, and (4) the *wo-ro-ki-jo-ne-jo ka-ma*, appearing as such only in this text, as an animate entity expected 'to give' a certain contribution and interpreted as a group of agricultural labourers, quite possibly immigrants (with the term *ka-ma* known from other contexts to designate a type of cultivable landholding). The main arguments for proposing the settlement of an immigrant group at *sa-ra-pe-da* (represented in part or in full by the *wo-ro-ki-jo-ne-jo ka-ma*) are as follows: (1) the special (= unusual) forms used by Hand 24, in this tablet (*po-se-da-o-ni*, instead of regular *po-se-da-o-ne*) and in the related texts **Er 312** and **Er 880** (*pe-ma*, instead of regular *pe-mo*), could potentially reflect a different dialect – of the tablet-writer or of the people at *sa-ra-pe-da* from whom the information was obtained;²⁸ (2) the fact that the *wo-ro-ki-jo-ne-jo* group will contribute the least amount of all four contributors probably reflects its inferior status and limited access to resources, possibly due to the foreign origin of its members; (3) it is tempting to view the strange place-name *sa-ra-pe-da* as originally coined for an uninhabited area from two Luwian elements, *sara-* 'on, above; over, up' and *pida-* (n.) 'place, precinct', by foreign settlers or by Greek-speaking officials overseeing these settlers' migration to the Greek mainland from Anatolia.²⁹ The content and layout of tablet **PY Un 718** seem to present the king as the representative of the privileged, landholding group known as the

²⁶ For work or defence or both, as CAMERON 2013, 221, notes: "host groups may welcome migrants to increase their own group size" in relation to that of their neighbouring groups.

²⁷ NIKOLOUDIS 2008b, with further details supporting this interpretation.

²⁸ PALAIMA 1998-1999.

²⁹ NIKOLOUDIS 2008a, 52 with references. Research shows that incoming immigrant groups are sometimes settled on the outskirts of existing settlements (CAMERON 2013, 226); a location in the Further Province, which was gradually incorporated into the existing territory controlled by the palace at Pylos (DAVIS & BENNET 1999, 115), might be tentatively posited.

da-mo and the *ra-wa-ke-ta* as the representative of the second group, interpreted as less privileged, landless, immigrant labourers. If so, and given that warfare is one of the most common ways that emerging states successfully integrate their subject populations, including newcomers, by engaging them in a common struggle which reinforces overall group unity and identity,³⁰ it would make sense that the military leader would be associated with the group mentioned last here.

The *ra-wa-ke-ta*'s apparent association with marginalised groups has also contributed to the proposed interpretation of the **PY Ea** series as a record of a tanning operation on the outskirts of the Pylian centre. Leather-working was an integral part of Mycenaean industrial production and, if correctly interpreted, the **Ea** texts present us with a work assignment, possibly a seasonal one, carried out, in part, by immigrant workers.³¹

It was noted at the outset that archaeological evidence may also provide relevant information regarding immigrants in the Mycenaean world. Instead of a misguided 'pots equal people' approach which ignores the complexity of the possible interactions between humans and material culture,³² a more nuanced methodology involving a thorough contextual analysis of the objects concerned may be rewarding. For example, in his careful analysis of the manufacturing techniques of all the pottery in Room 60 of the palace at Pylos, Bartłomiej Lis has identified a group of partly handmade pots which were not produced following the standard (palatial) Mycenaean techniques of pottery making, leading him to propose that the individual responsible for this particular output of vessels was most likely a non-local potter, originating from somewhere else in Messenia or even further away but, importantly, trained in a non-Mycenaean potting tradition. Lis' methodical approach opens the way for the kind of fine-tuned analysis that may be possible in this arena, by detecting a degree of cultural differentiation in the archaeological record.³³ With similar ingenuity, Phillipp Stockhammer has studied the 'entanglement' occurring between humans and pottery in the context of food consumption, when objects from one cultural sphere are introduced to users from a different cultural sphere. Selecting three

³⁰ DAVIS & BENNET 1999, 107.

³¹ NIKOLOUDIS 2012.

³² DRIESSEN 2018, 19.

³³ Lis 2016, esp. 506-511.

Aegean-type vessel forms imported to the southern Levant, namely the conical cup, the amphoroid krater, and the kylix, he examines how these objects were adopted, even refashioned in some cases, by their non-Mycenaean users to serve their particular needs. While his emphasis is on “the transformative power of intercultural encounters,”³⁴ his analysis demonstrates that attention to such details could uncover precious information about the cultural identity of social actors involved in such transformations. For example, instead of equating the presence of Mycenaean kylikes in the Levant with the presence of Mycenaeans there, or even the adoption of a popular Mycenaean drinking vessel abroad, his thorough contextual analysis demonstrates the appropriation of the Aegean kylix as an incense-burner to serve local needs in the Levant. Careful contextual analyses of ceramic and other artifacts may yield important cultural information about their users.

The imposing Lion Gate Relief at Mycenae, reminiscent of the entrance guarded by lions at the contemporary Hittite capital of Hattusa-Bogazkoy in Anatolia, has been re-studied by Nicholas Blackwell.³⁵ Alongside Mycenaean technology (e.g. the use of the pendulum saw), he has identified tool marks and stone-working techniques of the Anatolian tradition, and has suggested that the relief’s builders may have included skilled craftsmen moving between rulers in the Mediterranean region, possibly as part of a royal gift-exchange network. Engaging specialised, skilled labour in this manner is attested as a popular practice in the textual records of other contemporary cultures in the Near East and might have resulted in the temporary residence of such foreigners in the Mycenaean centres for varied lengths of time depending on the work assignment. The Pylian textual references to ‘Cretan workmanship’ (*ke-re-si-jo we-ke*, **PY Ta 641.1**) and Cretan (crafts?)men (*ke-re-te*, **PY An 128.3**) also come to mind.

A reinvestigation of the human remains of Grave Circle A at Mycenae has determined that there are likely foreign, i.e. non-local, individuals buried there, on the basis of strontium analyses of their teeth. Three individuals, including one definite and one probable female, may be foreign.³⁶ The definite female has been interpreted as a woman of very high rank buried in the centre of Grave III and the probable one from Grave

³⁴ STOCKHAMMER 2016, 91.

³⁵ BLACKWELL 2014, 482-484.

³⁶ DICKINSON *et al.* 2012, 181-182.

V. The researchers note the possibility that these non-local women were spouses arriving at Mycenae through arranged marriages underpinning diplomatic, political alliances with external powers to strengthen the status and power of the rulers at Mycenae. Skeletal analyses may have more to tell us in the future.

Returning to the textual data before closing, there is another piece of comparative evidence worth considering in relation to the presence of immigrants in the Mycenaean world. Several ethnographic examples highlight the role of key authority figures in facilitating the peaceful co-existence of diverse cultural groups in various societies and the integration of ‘outsiders’ into their wider communities. In addition to the Mycenaean *ra-wa-ke-ta*, we know of Bronze Age New Kingdom Egyptian administrators³⁷ and Hittite Empire officers and dignitaries³⁸ who were responsible for numerous population groups throughout their respective jurisdictions. The Archaic and Classical Athenian *polemarch*, who was the commander-in-chief of the army and happened to judge all cases involving non-citizens (*metics*),³⁹ serves as a particularly striking parallel to the *ra-wa-ke-ta*, if the latter has been interpreted correctly, in terms of overlapping responsibilities for the military and for outsiders. The Gortynian *ksenios kosmos* in Crete also seems to have been an official concerned with matters relating to foreigners and other non-citizens, called upon in a 6th century BC legal inscription to offer protection for those who settled in Gortyn by not allowing them to be enslaved or plundered.⁴⁰ It seems that the presence of newcomers, across time and space, warranted officials (newly created or existing posts) to take on relevant responsibilities for the maintenance of social order.

The evidence for immigrants invites contemplation concerning the changes gradually affecting and transforming one’s sense of identity and belonging in a new land. At what point, for instance, would ‘outsiders’ or ‘newcomers’ start to feel as though they belonged to Mycenaean society? When, if ever, would the foreign children accompanying their mothers at Pylos (A- series) begin to feel allegiance to this new land? How receptive was the host society? Would immigrants have opportunities for advancement? Could they ascend the social hierarchy by means

³⁷ KUHRT 1995, 218-220.

³⁸ KUHRT 1995, 266-267, 272-274.

³⁹ BURY & MEIGGS 1975, 118.

⁴⁰ GAGARIN & PERLMAN 2016, 70-73.

of a particular skill (e.g. nautical capabilities, unique pottery insights, textile expertise, useful design know-how)? Or is Mycenaean society/culture best thought of as a closed and guarded club of elites to which lower social classes and foreigners were unequivocally barred entry?⁴¹ It is quite likely that the highest echelons of society were off limits. It is also true that the status of immigrant groups in a host society that is ruled by a dominant group is usually low. As expected, immigrants are found among the slaves, bought or captured, and the dependent or semi-dependent day-labourers and seasonal workers that enabled the overall system to function. However, there are indications of several potential non-locals holding somewhat elevated positions in the Mycenaean world – e.g. *ku-pi-ri-jo* and *ka-pa-ti-ja* at Pylos, and the buried female spouse (?) in Grave Circle A at Mycenae. This allows for the possibility that the experiences of some ‘outsiders’ who were living in Mycenaean communities may have been of a different character, with a higher degree of incorporation and participation in the host culture. In any case, it would be in the interests of the ruling administration to seek to foster a collective identity of some kind and a sense of ‘belonging’ for the marginalised, including immigrants, since this would serve to reinforce social cohesion and stabilise and strengthen the overall polity. This would assist a variety of mobilisation efforts, from defence against an external enemy to participation in internal construction projects.⁴² The Linear B records inform us of state-sanctioned Mycenaean banquets that aimed to cater for large numbers of people (possibly as many as several thousand members of the society at a time).⁴³ It is likely that the long-term strategic plans of the palaces included both strategies of exclusion (keeping the ruling elite conveniently distant from the rest of the populace) and inclusion (for social order). We may not be able to answer the questions about identity and belonging to our full satisfaction, but it is worth keeping them in mind as such considerations would have been at the core of the human relationships and associated power dynamics propping up the Mycenaean palatial systems.

Overall, the evidence attests to the presence and interaction in the

⁴¹ Consider the relevant discussions in DAVIS & BENNET 1999, 112-115; CAMERON 2013, 221-226; DRIESSEN 2018; MARAN & WRIGHT 2020, 115-117.

⁴² MARAN & WRIGHT 2020, 115.

⁴³ MARAN & WRIGHT 2020, 115 with references; see also WEILHARTNER 2017, 232 for ‘work feasts’ as “‘remuneration’ in return for part-time corvée work for special commissions”.

Mycenaean world of culturally diverse population groups and individuals. Toponymics relate to nearby and overseas places, and the individuals and groups designated by non-local place-names include seemingly dependent female workers as well as higher-status individuals. The non-Greek forms of some personal names suggest mixed populations, while the worship of foreign divinities could suggest an accommodation and welcoming of ‘others’. The rowers described as ‘settlers’ and ‘immigrants’ point to the arrival of newcomers. The Hittite Tawagalawa letter alludes to the recruitment of human labour – whether by force, or invitation, or both – from southwest Anatolia in order to maintain the Mycenaean palatial systems, and the hypothesis of a migrant ‘enclave’ at *sa-ra-pe-da* awaits identification on the ground. The archaeological evidence supports the presence of non-locals in the communities as well. The length of their stays may have varied (e.g. itinerant skilled craftsmen and foreign spouses). In time, by sharpening our textual and archaeological analyses, we might be able to gain a better understanding of the possible degrees of incorporation of these voluntary, forced, individual and group arrivals into Mycenaean societies. For now, whether short-term or more permanent residents, whether slaves, captives, refugees, or independent settlers, the evidence confirms for us that through their own migration experiences or their families’ memories and migration stories, these immigrants helped to create the multicultural Mycenaean communities in which they lived.

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Diachronic perspectives on the Knossos textiles (L-series) in the Room of the Chariot Tablets, the North Entrance Passage and the Main Archival Phase*

Marie-Louise Nosch

It has long been accepted that the Room of the Chariot Tablets [henceforth: RCT] was earlier and palaeographically different to the other tablets in the Knossos archives.¹ In the 1990s, Jan Driessen, based on archaeology and palaeography, suggested that tablets from the North Entrance Passage [henceforth: NEP] should be associated with an earlier destruction date than that of the West Wing and East-West Corridor.² The suggestion was debated, but in terms of epigraphy, it could explain some peculiarities observed for the hands and tablets from the NEP.³

The diachronic approach to the Knossos archive was continued by Christina Skelton, who divided the Knossos hands into three clusters: RCT, NEP and 'later Knossos,' based on her phylogenetic analysis.⁴ This division was further elaborated on by Richard Firth and Skelton⁵ and adopted by other scholars,⁶ but is still debated.⁷ Firth and Skelton

* Richard Firth, Rachele Pierini, José Melena and Jörg Weilhartner have given valuable input to this paper.

¹ CHADWICK 1967; DRIESSEN 1988; 1990; 1997; 2000; OLIVIER 1967, 128-129.

² DRIESSEN 1990, 36-37, had already observed how the area of Room of the Flower Gatherer was disturbed; DRIESSEN 1999.

³ For example, KILLEN 1988, 172-174 identified some **Od** fragments that were similar to those of Hand 115, yet different, and they are in *KT*⁶ grouped as the **Od(5)** set by Hand 227.

⁴ SKELTON 2008, 158-176.

⁵ FIRTH & SKELTON 2016a-c.

⁶ NOSCH 2022. See also PIERINI, this volume.

⁷ FIRTH & SKELTON 2016a, 160. One anomaly is the set **Dq(3)** by Hand 217 from B4, but with tablets from both F1 and I3.

could distinguish three writing styles: the Early Knossian style found in the RCT; the Middle Knossian style found in the NEP, the Room of the Column Bases, the Arsenal, and the Corridor of the Sword Tablets; and the Late Knossian style found in the East-West Corridor and the West Wing.⁸ It was suggested to associate the three writing styles with three chronological phases: to date the RCT tablets in LM IIIA1, those of the NEP in LM IIIA2, and those from the East and West Wings in LM IIIB1.⁹

I find Firth and Skelton's work convincing, and this paper divides the Knossos corpus into the RCT, NEP and a Main Archival Phase [henceforth: MAP], and discusses the evidence for how textiles appear in these three parts. Textile administration was a major concern for the palace scribes, and textile records are documented in all three parts of the corpus.¹⁰ I observe a low interrelationship between textile scribes in the three parts of the Knossos corpus, the RCT, the NEP and the MAP. I also observe a difference in the types of textiles recorded. For example, only NEP hands use the syllable $-a_2$ and hence write *pa-we-a₂*, while MAP scribes never use the sign $-a_2$ and hence write *pa-we-a*.¹¹

There is one particular dilemma regarding textiles when dividing the NEP and the MAP: the tablets in the **L(3)** set are by Hand 207 and record *TELA+PU*, and most of them are from the MAP/F3¹² but one: **L(3) 869** is from the NEP/I3.¹³ However, all other tablets recording textiles are associated with either the RCT, the NEP or the MAP.

This paper analyses and discusses the three writing styles separately and views them as three administrative units. It should be noted that it excludes tablets which cannot be associated with relative certainty with any scribal hands and/or find-places, even though these tablets may contain much relevant information about textiles.¹⁴

⁸ FIRTH & SKELTON 2016b, 189-190.

⁹ FIRTH & SKELTON 2016c, 215-228.

¹⁰ Textiles in the Mycenaean archives are analysed in several specialised papers. KILLEN 1966; 1988; 2007; LUJÁN 1996-1997; MELENA 1975; NOSCH 2012; WEILHARTNER forthcoming.

¹¹ NOSCH 2022.

¹² **L(3) 433**, 473.

¹³ See discussion of anomalies in FIRTH & SKELTON 2016b, 196-197 and 200-203. FIRTH & SKELTON 2016a, 173, assume that **L(3) 869** (I3; 207) is in reality a stray tablet and belongs to the MAP.

¹⁴ Textile *164 on **L 520** is in *CoMIK* assigned to F8, but following FIRTH 1996-1997, 30, it has no find-place in *KT⁵*. *TELA+ZO* is also omitted here due to the uncertainty about hands and find-places: **L 433** is by unidentified hand and from E4 (Passage on east side of the RCT) but it cannot be associated with the RCT, see DRIESSEN 1990, 76 and n. 274. An erased *TELA+ZO* is

In the conclusion, new potential assignments to find-places and hands based on my analysis will be discussed.

Textile administration in the RCT

The RCT is termed as ‘C’ in the nomenclature of the fundamental palaeographical study on the Knossos material.¹⁵ Fragments from Batch I are associated with the RCT.¹⁶ Textiles in the RCT are recorded in the L series by Hands 124-η, 124, and 124-X, and in the Sc series by Hands 124-F, G, I, M, S and 124-β, γ, δ, ε, ζ.¹⁷

RCT textiles include plain TELA, *pa-we-pi*, TELA+PA *161, TELA+PU, *178, *165/*166, and TUNICA (*162, alone or with the endograms QE or RI). The logogram TELA is used alone,¹⁸ or with the endograms PA or PU. There are two variants of TELA: TELA² (L 104, 192) and TELA³ (L 178), all by Hand 124-X. This means that RCT hands use several strategies to describe textiles: by name (*pa-we-pi*), by TELA logograms with endograms (PA, PU), by the TUN logogram with endograms QE or RI, by monograms (*161), or by specific textile logograms (*178, *165/*166). There are some of the same cloth types in the RCT as in the later deposits of the NEP and MAP, but there are also some textiles that only occur in the RCT, such as *178 and TUN+RI.

*178

*178 is attested once on U(1) 95 by Hand 124-X,¹⁹ and may represent a textile with the pointed item on top resembling sign zo.

TUN+RI

By far the most numerous textile in the RCT is the *162 textile logogram TUN,²⁰ but the combination of TUN+RI (below, L 178) occurs only once,

on MAP tablet Lc 5612, but the find-place is uncertain. TELA+ZO is perhaps on L 2127 (unknown hand and find-place). DEL FREO *et al.* 2010; MELENA 1975, 109-110; NOSCH 2012, 334.

¹⁵ OLIVIER 1967.

¹⁶ Batch I I/3 (9109-9172), see KT⁶, xxiv.

¹⁷ See DRIESSEN 2000; FIRTH & MELENA 2016b; KT⁶.

¹⁸ On L 192 is *to-ni-ja* TELA, perhaps an alternative spelling of the place name *tu-ni-ja* attested on RCT tablet Xd 149, or a kind of textile, or a personal name.

¹⁹ DRIESSEN 1988, 162 and n. 85; 2000, 87, 138, Fig. 3.23; FIRTH & MELENA 2016b, 336-337; NOSCH 2012, 346 suggests reclassifying U(1) as Lx 95, and PETRAKIS 2012 as L 95.

²⁰ NOSCH 2012, 342-343.

and only in the RCT, and plausibly contains the abbreviation for *ri-no* or *ri-ta*, linen.

**166/*165*

**166/*165* are variants of the same logogram.²¹ They are attested in the RCT with TUN, horses and chariots²² and their shape suggests a garment or textile. On several Sc tablets, the scribe first wrote TUN and then erased it and wrote **165*.²³ Various hands record **165/*166* in the RCT.²⁴

**162 TUN or TUN+QE*

The logograms **162 TUN or TUN+QE*²⁵ occur many times in the RCT with military gear and chariot equipment in the Sc series.²⁶ Often TUN or TUN+QE appear in pairs.²⁷ Hand 124-M always writes TUN+QE while all other RCT scribes simply write TUN. In Driessen's analyses of the Sc series, TUN is related to armour;²⁸ I would suggest a linen tunic allocated to charioteers.²⁹

*TELA+PU, pa-we-pi, *161*

On RCT tablet L 5599 are 40 pieces of TELA+PU.³⁰ There is also the instrumental form *pa-we-pi* on L 104, and it is attractive to assume that the textile name in the RCT was *pa-we-a₂*, as it is attested in the NEP.³¹

²¹ DRIESSEN 2000, 141; DUHOUX 1974, 123.

²² Sc 225, <246>-249, 5141, 7461, 7462.

²³ Sc <246>, Sc(1) 247, Sc 7461: *apparatus criticus*: **165* over [[TUN]].

²⁴ **166*: Sc(1) 225 (C;124-F); Sc(2) 5141 (C;124-G); Sc 7462 (C;124). **166* invariably occurs on the verso. **165*: Sc <246> (C;124); Sc(1) 247 (C;124-F); Sc(3) 248 (C;124-I); Sc 249 (C;124-β); Sc 7461.

²⁵ TUN+QE: Sc(4) 224, 227, 229, 266, 8271. Probably an abbreviation for *qe-ro₂* and related to armour.

²⁶ Sc(1) 230, 243, 250, 261, 263, 5060, 5070, 8124, 8467, 8468, 8470; Sc(2) 130, 235, 5138, 7469; Sc(3) 103, 226, 252, 254-256, 258, 5068, 5086, 5164, 5169; Sc(4) 224, 227, 229, 266, 8125, 8271; Sc(5) 219, 221, 236-237, 251, 253, 5137, 5155, 5162, 8469; Sc 135, 217, 222, 233-234, 238-239, 259-260, 1644, 5046, 5085, 5139, 5156, 7444, 7456, 7466, 7475, 7480-7481, 7772, 7782, 7821, 7882, 7996, 8471, 8759, 8796, 9113-9114.

²⁷ TUN 2: Sc(1) 5060; Sc(2) 130, 232; Sc(3) 103, 252, 254-256; Sc 217, 222, 234, 259, 1644, 5085, 5156, 7444, 7456, 7481, 7996. TUN+QE 2: Sc(4) 224, 227, 229.

²⁸ DRIESSEN 2000, 136-137.

²⁹ NOSCH 2012, 342-343; 2022.

³⁰ MELENA 1996-1997, 418; NOSCH 2012, 331-333.

³¹ NOSCH 2022.

*161 is attested once on RCT tablet L 178. *161 is linked to TELA³+PA and made of wool, *we-we-e-a*, as indicated on L 178.

Textile administration in the NEP

Firth and Skelton do not view the NEP as a real archive but more as a deposit of tablets that had become irrelevant or no longer necessary when the administration was concentrating activities above the West Wing and in the East-West Corridor. The NEP is therefore later than the RCT and older than the MAP, but the NEP may be very close in time to the MAP.³²

The NEP is comprised of the find-places I1, I2, I3, I4 and I5.³³ Firth demonstrated that I1, I4 and I5 are parts of the same area,³⁴ and I2 and I3 are not clearly distinguished archaeologically.³⁵ Fragments from Batch III, VI and VII are associated with the NEP in the most recent edition of the Knossos tablets.³⁶

Hands 114 (Ld[2]) and 213 (L[9]) record textiles, yet there are further unidentified hands who record textiles in the NEP.³⁷

Some textiles in the NEP are similar to the earlier RCT textiles: TELA+PU, *pa-we-a*₂, and TUN. Other textiles are attested for the first time: *wehanos* *146 is attested in the NEP and continues to be used in great quantities in the MAP; *166 occurs with the endogram WE. Finally, another new textile, *to-mi-ka*, is only attested in the NEP, and unattested in the RCT and MAP. The most well-attested NEP textiles are *to-mi-ka* and *146, and there are probably at least 250 pieces of each recorded in the NEP. Other textile types from the NEP include TELA+PU, *166+WE, *161 TELA, TELA+PA or *pa-we-a*₂, plain TELA and TUN+KI.

³² FIRTH & SKELTON 2016b, 201: "In the case of the NEP, it is most unlikely that it was ever used as a scribal area because of the gradient of the passage, but it could have been used as a storage area for tablets that might have seemed 'worth keeping' at one time and then became forgotten."

³³ KT⁶, 682: I1=Area of *Bügelkannes*: 1900 season (=I5); I2=Deposit of Great Seal; I3=Area of Bull Relief; I3bis=South of Bull Relief Area; I4=Area of *Bügelkannes*: 1901 season; I6=East of Chamber of Hieroglyph Inscriptions.

³⁴ FIRTH 1996-1997, 44-46. The tablets from find-places I1 (Room of the Flower Gatherer) are not only from this room but also from the adjacent Room of the *Bügelkannes*. FIRTH & SKELTON 2016b, 198; MELENA 1999.

³⁵ I follow Firth's identification and refer to I2 as the southern part of the NEP, that is, inside corridor I3 (called the Area of the Bull Relief), which is the area to the west of I2.

³⁶ KT⁶, xxiv: Batch III (9287-9406), Batch VI (9665-9838) and Batch VII (9839-9932).

³⁷ NEP hands in FIRTH & SKELTON 2016a, 172-174 and Table 4. KT⁶ added hands 102c, 205, 213, 215, 218, 227, 230. See also OLIVIER 1967, and the updates in FIRTH & MELENA 2016a; 2016c.

to-mi-ka textiles

to-mi-ka textiles³⁸ are recorded in the **L(9)** set by Hand 213.³⁹ The tablets start with a place name or an ethnic name,⁴⁰ followed by the term *to-mi-ka* and the textile logogram TELA. It is not stated whether *to-mi-ka* was made of linen or wool.⁴¹ In the **L(9)** set there are no records of ‘missing pieces.’ This could indicate that **L(9)** tablets were general counting or perhaps target records for *to-mi-ka* cloth.

TELA+PU

TELA+PU is attested on three NEP tablets.⁴² On **L 759** are 70 pieces of *TELA+PU*, and *TELA+PU* is recorded with cloth type *146 on **L 868**. The number of *TELA+PU* and *146 is not preserved, but quite large numbers of 15 and 11 textiles appear on the lines above and below. This suggests that the textiles were not allocations of clothing for a single individual.

It is not common to see records of linen and wool textile production together, and there is some evidence to suggest that *TELA+PU* is made of wool while *146 is made of flax. The two fibres come from different sources and are treated differently. This could indicate that **L 868** is not a record of textile production, nor a delivery from a producer, but could be a record of the disbursement of various gear or an inventory of clothing.

*wehanos *146, *166+WE*

*wehanos *146*⁴³ is recorded on only two tablets from the NEP,⁴⁴ yet in a very large number of at least 251 pieces. *166+WE⁴⁵ is plausibly also a kind of *we-a₂-no / wehanos*, like *wehanos *146*.⁴⁶ *146 and *166+WE are

³⁸ NOSCH 2012, 336-337.

³⁹ **L(9) 761, 764** (I1;213). Tablets **L(9) 7396, 7400, 7401, 8025, 8035, 8058** (-;213?). **7396** and **7400** are associated with batches II and VI; **7401, 8025, 8035, 8058** are associated with batch II. For Hand 213, see FIRTH & MELENA 2016c, 369-370.

⁴⁰ The *to-mi-ka* cloth in the **L(9)** set is recorded either with men's names (*we-we-si-jo*l) or with masculine ethnic designations (*ra-su-ti-jo, ra-je-we,]ti-jo,]j o*), and these men might be the textile producers, finishers, or responsible for the deliveries of *to-mi-ka* cloth.

⁴¹ WEILHARTNER forthcoming suggests that TELA is a generic logogram for wool textiles.

⁴² **L 758** (I1;-), **759** (I1;-), **868** (I3;-). MELENA 1996-1997, 418; NOSCH 2012, 331-333.

⁴³ MELENA 1975, 62; NOSCH 2012, 337-340.

⁴⁴ **L 868** (I3;-); **M 757** (I1;-).

⁴⁵ **M 878** (I3;-).

⁴⁶ NOSCH 2012, 343-344; PERNA 2004, 33-34.

both likely made of linen⁴⁷ and seem closely associated,⁴⁸ especially in a naval context.⁴⁹

In the **Ld(2)** set,⁵⁰ Hand 114 records *pa-we-a₂* and the cloth logogram *161 in store, and these textiles are richly decorated. Hand 114 uses detailed descriptions of *pa-we-a₂* in store and a delivery record on **L 871** (Table 1).

*161 TELA, *162 TUN

*161 TELA⁵¹ seems to be a variant of *pa-we-a₂*. *161 is associated with many textile terms for dyes, state of preservation, or decoration. *161 is also associated with the garment terms *ki-to-na* and *ki-to-pi /khitonphi/* ‘for *khitons*’ (Table 1), and this suggests that *161 is used for making *khitons*.⁵²

The logogram *162 TUN appears only once in the NEP, with the endogram *KI*, plausibly the abbreviation for *ki-to*, *khiton*, and thus represents a single garment. **L 871** counts one plain wool (*we-we-e-a*) textile and one TUN+*KI*, and this is what John Killen terms ‘a suit.’⁵³

Textile administration in the MAP

Tablets recording textiles in the MAP come from the West Wing (F1-F18), and batches II and IV contain many fragments from the West Wing.⁵⁴ The **Wm** nodules recording *146 were found in J2bis near the East-West Corridor. Batch V contains many fragments from the East-

⁴⁷ MELENA 1975, 62.

⁴⁸ *wehanos* *146 is probably recorded together with ten pieces of logogram *181 on **M 757**, and *166+*WE* is recorded together with 16 *e-to-ro-qa-ta* on **M 878**, while **U 736** records *na-u-do-mo* and 10 pieces of *181 designated *e-to-ro-qa-ta*. MELENA 1975, 50-59, 62, therefore suggested that *181 equals *e-to-ro-qa-ta*. However, tablets **M 757** and **878** are from the NEP, while **U 736** is from H2 (Bathroom, part of Throne room complex).

⁴⁹ DUHOUX 1975, 121-124 and KILLEN 2008, 431-447, interpret *146, *166+*WE* and *181 as pieces of clothing, which could be distributed as remuneration, while MELENA 1975, 62, suggests that *146 and *166+*WE* in connection with *181 are pieces of linen for naval use.

⁵⁰ **Ld(2) 785** (I2;114), **786** (I2;114), **787** (I3[bis];114), **788** (I2;114), **8192** (114).

⁵¹ **Ld(2) 785-787, 8192** by Hand 114, from the NEP. See KILLEN 1979, 171-172. For *161, see MELENA 1975, 94-117; NOSCH 2012, 340-341.

⁵² Concerning **Ld(2) 785**, KILLEN 1979, 171, writes that “*ki-to-na* here describes, not the present form of the TELA, but the use to which it will be put. Does in fact *ki-to(-na)* TELA throughout the records mean a cloth due to be made into a chiton, as against TUN+*KI*, the finished product?”

⁵³ KILLEN 1988, 175.

⁵⁴ Batch II (9173-9286) and batch IV (9407-9566), see *KT*⁶, xxiv.

West Corridor.⁵⁵ There are also some minor find-places of MAP tablets recording textiles in sectors G and H.⁵⁶

The MAP has the largest number of tablets preserved in the Knossos corpus. The textile administration in the MAP is characterised by the activities of a few major scribes including the prolific Hand 103, along with Hands 113, 115 and 116, and their detailed records of *TELA+TE*, *tu-na-no* and *pa-we-a* under the wool textile manufacturing system called *ta-ra-si-ja*.⁵⁷ In contrast, *146 is recorded by Hands 103, 140 and 232 while *TELA+PU* is recorded by Hands 207, 208, 210 and 211. Hands 119 and 209 also record textiles. The hands of the MAP, also called those with the 'Late Knossian Linear B Style' by Firth and Skelton, are numerous.⁵⁸

The most numerous textile types in the MAP are *TELA+PU* / *pu-ka-ta-ri-ja*, *TELA+TE* / *te-pa* and *pa-we-a*. *TELA+TE te-pa*, *TELA+TE pe-ko-to* and *tu-na-no* *TELA* are only attested in the MAP. They are all made of wool, are associated with central Crete and are recorded by Hands 103 and 115. *po* *TELA*, *TELA+KU*, *158, and 168+*SE* also only appear in the MAP, but more rarely. Other textile types are well attested in the MAP as well as in the NEP and the RCT: *TELA+PU*, *146, *166(+*WE*), *pa-we-a/-a*, *161 and *TUN*.

TELA+TE

TELA+TE is only attested in the West Wing, and only on target tablets pertaining to central Crete in the **Lc(1)** set,⁵⁹ in the deliveries in the **Le** series⁶⁰ and on **Ln 1568**. All these tablets are by Hand 103. There are two *TELA+TE* targets preserved for collectors,⁶¹ and numerous *TELA+TE* targets for non-collector groups,⁶² who have a total target of 267 regular

⁵⁵ Batch V (9567-9663), see *KT*⁶, xxiv.

⁵⁶ **M(1) 720** by Hand 103 is from G1 (Gallery of Jewel Fresco). From G1 are also tablets **M 719**, **724** and **1808**. Hand 140 records *146 on a tablet from G1. **M 729** is from G2 (Small room to the east of Gallery of Jewel Fresco), and the **L(6)** set by Hand 210? is from G2. H4 (Space under bath corridor) is the find-place of **M 745** recording *166+*WE* by Hand 140?, and if this is indeed Hand 140, H4 would be associated with the MAP.

⁵⁷ KILLEN 2001; NOSCH 1999; 1997-2000; 2006.

⁵⁸ FIRTH & SKELTON 2016a, 170-175.

⁵⁹ **Lc(1) 525-530, 532-533, 536, 541, 543, 547, 551, 553, 558, 561, 646, 5746**. Probably also *TELA+TE* on **Lc(1) 535, 546, 549, 552, 555, 7321, 7549, 7901**.

⁶⁰ **Le 641-642**, probably **654, 5629, 5646, 5903, 5930, 6014**. From F14.

⁶¹ **Lc(1) 532**: four pieces of *TELA+TE* of collector]*k**u*-*w*o; **Lc(1) 551**: ten pieces of *TELA+TE* (*e-me-si-jo*).

⁶² See n. 59, above.

TELA+TE recorded on **Lc(1) 536**. This compares to the more rare types of TELA+TE *pe-ko-to*⁶³ and *mi/mi-ja-ro* TELA+TE.⁶⁴ A few TELA+TE are called 'royal'.⁶⁵ TELA+TE are made of sheep wool and correspond to seven units of wool (21 kilos), while the variety TELA+TE *pe-ko-to* requires ten units of wool (30 kilos).⁶⁶ TELA+TE are heavy, large, woven of wool, and not particularly decorated.

tu-na-no

tu-na-no TELA are only attested in the MAP, perhaps exclusively recorded by Hand 103,⁶⁷ and only on records pertaining to central Crete. A *tu-na-no* is made of wool, is undecorated, and equals 3 units of wool (nine kilos).⁶⁸

po TELA

po TELA occur in the **L(5)** set from F7.⁶⁹ Hand 209 seems to contrast regular TELA and *po* TELA. **L(9)** tablets contain the term *qe-te-o*, 'to be paid (for)'.⁷⁰ It is unknown what the syllable *po* stands for, but on **M(1) 720** is perhaps an example of *po* TELA and *146 and may record textiles for a religious purpose.⁷¹

*168+SE, TELA+KU

*168+SE only occurs in the MAP, in the **Pp** series from F7, and might be a textile.⁷² Likewise, TELA+KU is only attested in the MAP.⁷³ It occurs

⁶³ **Lc(1) 526-527, 535, 551, 646** and **5746**. TELA+TE *pe-ko-to* is a part of the *ta-ra-si-ja* textile target for both collectors and non-collectors on **Lc(1) 535-536** by Hand 103.

⁶⁴ On **Ln 1568**, TELA+TE are either *mi/mi-ja-ro* or *pe*, and some are *pa/pa-ra-ja*. There are at least 12 TELA+TE *mi* on **Le 5930**. FIRTH 2012.

⁶⁵ **Lc(1) 525** and **Le 654**.

⁶⁶ KILLEN 1964; 1966.

⁶⁷ **Lc(1) 525-532, 534, 543, 551, 558, 582, 646, 5746, 7289, 7392, 7549; Ln 1568**. All by Hand 103 and from F10. Probably also recorded on **Lc(1) 547, 552-553, 555**.

⁶⁸ KILLEN 1964; 1966; NOSCH 2012, 335-336.

⁶⁹ **L(5) 513** (F7;209), **5092** (-;209), **7380** (-;209), **7393** (batch IV;209), **8063** (-;209?), **8441** (-;209). Regrettably, forgotten in NOSCH 2012.

⁷⁰ KILLEN 2007, 383-387. This transactional term also occurs on **L 693** by Hand 103, where fine linen *khitons* are paid for in bronze.

⁷¹ KILLEN 2007.

⁷² DAVARAS 1986 and FIRTH 2016, 235 do not interpret *168 as a textile; DUHOUX 1975; MELENA 1975, 118-134.

⁷³ MELENA 1975, 108-109. **L(4) 515-516** and **7413** (F7;208). **L 514** (F7;-).

in a pair with *TELA+PU* and they are recorded on the same tablets, first with numbers of *TELA+PU*, followed by numbers of *TELA+KU* in the **L(4)** set.⁷⁴

TELA+PU

*TELA+PU*⁷⁵ is recorded by four MAP hands: Hand 207 in the **L(3)** set,⁷⁶ Hand 210 in the **L(6)** set,⁷⁷ Hand 208 in the **L(4)** set,⁷⁸ and Hand 211 in the **L(7)** set.⁷⁹ *TELA+PU* is also attested in both the RCT and the NEP. There are more than 1000 *TELA+PU* recorded in the MAP, and this demonstrates that *TELA+PU* was a major part of both the NEP and the MAP textile production.

*wehanos *146, *166+WE*

*wehanos *146*⁸⁰ is primarily attested on **M** tablets⁸¹ by Hands 103 and 140, or on **Wm** nodules by Hand 232.⁸² **166+WE*⁸³ is attested twice in the MAP.⁸⁴

*pa-we-a, pa-we-a ko-u-ra *161*

The MAP hands write the term *pa-we-a* and combine it with the neutral logogram *TELA*.⁸⁵ Thus, Hand 103 never employs the logogram *TELA+*

⁷⁴ *TELA+PU* is recorded by Hands 207-208, 210-211, and *TELA+KU* by Hands 208, 212 and perhaps 209.

⁷⁵ NOSCH 2012, 331-333.

⁷⁶ **L(3)** 455 (F3;207), 473 (F3;207), 869 (I3;207). See n. 7 and n. 13, above, for rare anomalies of hand or find-place in the NEP and MAP.

⁷⁷ **L(6)** 460 (F3;210?), 469 (F3;210), 470 (G2;210?), 472 (F3;210), 7405 (-;210?), 7414 (-;210?).

⁷⁸ **L(4)** 475 (F7;208), 480 (F6;208), 484 (F6;208), 489 (F6;208?), 501 (F7;208?), 515 (F7;208), 516 (F7;208), 7390 (-;208?), 7406 (-;208?), 7413 (-;208), 7415 (-;208?), 7416 (-;208?), 7578 (-;208?).

⁷⁹ **L(7)** 471 (F14;211), 474 (F14;211), 592 (F14;211), 5569 (-;211?), 5582 (-;211?).

⁸⁰ MELENA 1975, 62.

⁸¹ **M** 467 (F3;-), **M(1)** 559 (F10;103), **M** 719 (G1;140), **M(1)** 720 (G1;103), **M** 724 (G1;-), **M** 729 (G2;-), **M(1)** 1645 (-;103), **M** 7394 (batches II, IV;-); also attested on **Od(1)** 683 (F18;103).

⁸² **Wm** nodules are without seal impression but with a hole for a string. **Wm** 1714, 1816, 1817 (Jbis;232); **Wm** 5822, 5824, 5860, 8207 and 8490 (-;232). These nodules record 30 pieces of **146*, and 30 pieces of **146* are also attested on **Od(1)** 683. KILLEN 2002-2003.

⁸³ DUHOUX 1975, 117-124; MELENA 1975, 50-62; PERNA 2004, 33-34.

⁸⁴ **M** 1808 (G1;-) has one piece of **166+WE*. On **M** 745 (H4;140?), 22 pieces of linen (*ri*) **166+WE* occur with the Potnia of the Labyrinth.

⁸⁵ Attested in the **L(1)**, **Lc(1)**, **Lc(2)** and **Ld(1)** sets; **L** 651 *pa-we-o* (F14;103); **Ws(1)** 8499 *pa-wo* (F21;103).

PA. One piece of *pa-we-a* equals 1.67 LANA units (c. 5 kilos of wool).⁸⁶ There is documentation for hundreds of *pa-we-a* targets and deliveries, from both central⁸⁷ and western Crete.⁸⁸ Collectors⁸⁹ seem to produce more *pa-we-a* than the non-collector groups.⁹⁰ Most *pa-we-a* in the MAP are decorated with *o-nu-ke*, *onukhes*, edges or perhaps starting borders.⁹¹ *pa-we-a ko-u-ra* *161 is recorded by Hands 103 and 211 from the MAP,⁹² and is associated with many textile terms for dyes, garments, and decoration.

*158

Logogram *158 is only attested in the MAP.⁹³ In the **Ld(1)** storage set, *pa-we-a* – often in sets of 25 or 35 – are recorded with one single piece of *158, probably a textile-related item.

*162 TUN

Logogram *162 TUN is attested in the RCT, NEP and MAP, but in the MAP it is primarily recorded by Hand 103⁹⁴ and ligatured with endogram *KI*, plausibly an abbreviation of *ki-to/khiton*. There is a close connection between *pa-we-a* *161 TELA and TUN+*KI*.⁹⁵ Killen even suggests that TUN+*KI* is in fact the resulting garment made of *pa-we-a* *161, so that TUN+*KI* is the finished *khiton* garment while *ki-to(-na /-pi)* denotes that the fabric should be cut and sewn into *khitons*.⁹⁶

⁸⁶ KILLEN 1964; 1966; NOSCH 2012, 327-331.

⁸⁷ For central Crete, there is a total non-collector target of 200 *pa-we-a* on **Lc(1) 536**. On **Lc(1) 535**, Hand 103 records the total collector target of *pa-we-a*, and this would correspond to the sum of individual collector *pa-we-a* targets, which amount to more than 366 *pa-we-a*.

⁸⁸ **Lc(2) 481, 504, 581**. Probably also *pa-we-a* on **Lc(2) 483**.

⁸⁹ **Lc(1) 532**: 16 *pa-we-a* (from]*k*u-wo); **551**: 110 *pa-we-a* (from *e-me-si-jo*); **7392**: 240 *pa-we-a* (from *we-we-si-jo*).

⁹⁰ KILLEN 1979; NOSCH 2012, 327-331.

⁹¹ FIRTH & NOSCH 2002-2003, 121-142.

⁹² **Lc(1) 531, 534, 7376** (F10;103); **L 590** (G2;103), **L(2) 593** (F14;103), **L(2) 5108** (-;103), **L(7) 592** (F14; 211).

⁹³ **Ld(1) 571-573, 575-577** (F14;116), **L 578** (F3;-), **Ld 5647** (116?).

⁹⁴ **L(2) 593, 647, 5961**; **L(1) 594, 5745**; **Lc(1) 646**, all by Hand 103; **L 595** (F19;116?); **L 693** (F19;103) has *ki-to* and *e-pi-ki-to-ni-ja*.

⁹⁵ **L(2) 647** records TUN+*KI* 3 and at least TELA 20, **L(2) 593** records at least TUN+*KI* 3 and at least *161 TELA 5, and **L(1) 594** records TUN+*KI* 1 and *pa-we-a* TELA 1.

⁹⁶ KILLEN 1979, 171.

Tablet L 693 records a *ki-to* woven of *ri-no re-po-to*, fine linen, which reflects a qualitative difference in the plant fibre preparation and thus the quality and fineness of the fabric. In the L(1) set, there are records of a few linen (*ri-ta*) *pa-we-a* recorded with a tunic. Hence, *pa-we-a*₂ or TELA+PA was made of wool in the NEP, and *pa-we-a* in the MAP was made of wool or flax.

Conclusion, and the diachronic interpretation of the Knossos textile administration

This paper's argumentation is based on a small number of tablets, and hence the presence or absence of certain textiles can be explained by random preservation. However, I will here attempt to contextualise the Mycenaean textiles within the three parts of the Knossos corpus and interpret them in relation to each other. Here I follow Firth and Skelton, who argue that each of the three phases has its own characteristics and responds to certain economic and political needs in the c. 200 years span of the LM III A-B period.⁹⁷

Some textile types occur (so far) only in the RCT, such as *178 and TUN+RI. Other RCT textiles also occur in the later phases, yet with modifications: *166 in the RCT later becomes *166+WE; *pa-we-pi* and TELA+PA appear in the RCT, *pa-we-a*₂ and TELA+PA in the NEP, and *pa-we-a* in the MAP.

Since the RCT has a military focus, it is plausible that the textiles on the Sc tablets are military garments. We observe a significant change for TUN: while there are TUN, TUN+QE and TUN+RI in the RCT, there are in the NEP and MAP less types of TUN and another kind of TUN occurs: TUN+KI, a tunic, and not recorded in a military context in the NEP and MAP. We also observe the absence of *146, *tu-na-no*, *to-mi-ka* and TELA+TE/ *te-pa* in the RCT.

It can be concluded that some types of textiles are common to the RCT, NEP and MAP; but other textiles are confined to only the RCT (*178, *166), or the NEP (*to-mi-ka*), or the MAP (TELA+TE, *tu-na-no*, *po* TELA). These observations suggest that textile types may change over

⁹⁷ FIRTH & SKELTON 2016b, 209: "The Early Knossos Linear B style is used on the RCT tablets that are primarily concerned with the allocation of military equipment (...). The Late Knossian Linear B style is primarily used on tablets associated with the management of the wool and textile industry, but it is also used on tablets listing honey, herbs and spices."

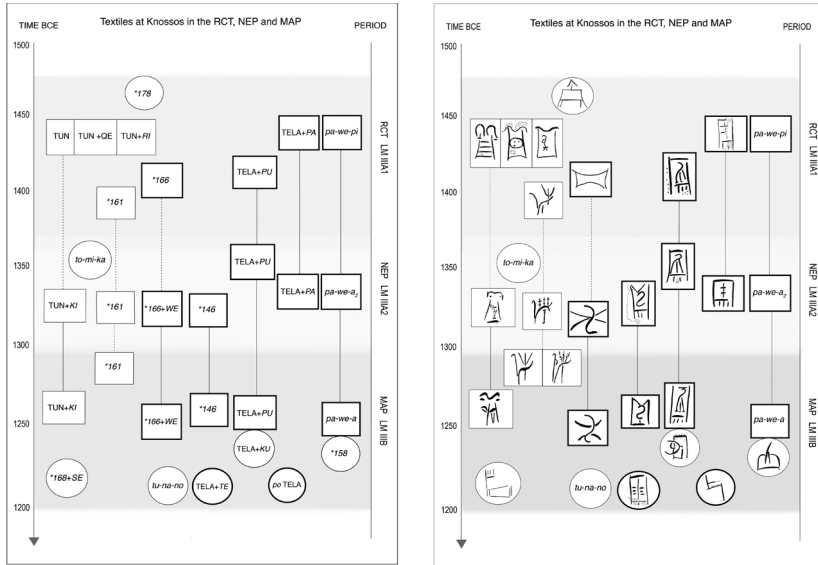


Fig. 1a-b. Textile types at Knossos in the RCT, NEP and MAP (round frame: attested on one site only; thin frame: attested in one phase only).

time, new types may appear, and older types are abandoned, and that the administration of textiles evolves over time.

The division of the Knossos corpus into the RCT, NEP and MAP can generate new suggestions for find-places and assignment to sets and series:

- The nodule **Wb 8711** with the restoration]o-a-pu-ḏo[-si] tu-na-no [demonstrates that the administration used nodules for the receipts of *tu-na-no*. The nodule has no identified hand nor find-place and is a surface find from the area of the Little Palace. However, since *tu-na-no* is only attested in the MAP and perhaps only by Hand 103, it is attractive to associate this nodule with the MAP with an origin in F1-F18.
- *168 and *168+SE are only attested in the MAP. On **U 7505** (unidentified hand and find-place) 30 pieces of *168 are recorded, suggesting that **U 7505** should be associated with the MAP.
- TELA+TE is widely attested in the MAP. However, TELA³+TE does occur on roundel **Ws 8153** (I4?;-) but since this textile is so far unattested in the NEP, it is reasonable to question the find-place and rather suggest a provenance in the MAP.

- **Le 641** with the TELA+TE producers *te-pe-ja* is from the MAP. *te-pa*[may occur on **X 1432** from J1 and perhaps on **L 5090** from E6 (Room of Niche), perhaps associating E6 and the MAP.
- TELA+PA and *pa-we-pi* are attested in the RCT and we may assume that RCT hands would write *pa-we-a*₂, since this is also how the textile is spelled in the NEP, in contrast to the MAP tablets where the textile is written *pa-we-a*.⁹⁸ There is one exception to this: **L 771** is from I4 and records *khitons* and *pa-we-a*, and this spelling would suggest the MAP and not the NEP; alternatively, the aspiration of *-a* was still in the process of disappearing in the time of the NEP.
- The logogram TELA+PA occurs in the RCT (**L 178**); in the NEP, logogram TELA+PA is attested twice.⁹⁹ In the MAP, many hands record *pa-we-a*, yet none of them write TELA+PA but always *pa-we-a*.¹⁰⁰ TELA+PA could be an older graphical tradition that was no longer in use in the MAP. However, on **L 523** and **L 7387** are two very uncertain attestations of TELA³+PA, and despite the fact that **L 523** is associated with the MAP (F8), it is tempting to associate these two tablets with the RCT or NEP, or, alternatively, to suggest that **L 523** does not record TELA³+PA but another textile more typically attested in the MAP, such as TELA+PU, TELA+TE or TELA+KU.
- TELA+KU is closely connected to TELA+PU in the **L(4)** set by Hand 208 from the MAP, where the two textile types are recorded together, first with numbers of TELA+PU, followed by numbers of TELA+KU. TELA+KU is only attested at Knossos, and so far only in the MAP.¹⁰¹ There are also TELA+KU recorded with TELA+PU in the **L(8)** set by Hand 212, yet without any find-place.¹⁰² The analogy with the **L(4)** set and the fact that TELA+KU so far only appears in the MAP, makes it attractive to associate the **L(8)** set to the MAP.¹⁰³ Other tablets recording TELA+PU cannot be assigned to a hand or find-place.¹⁰⁴

⁹⁸ Nosch 2022.

⁹⁹ **Ld(2) 786, 787** by Hand 114.

¹⁰⁰ Hands 103, 113, 116 and 211 write *pa-we-a*.

¹⁰¹ **L(4) 515-516** and **7413** (F7;208). **L 514** (F7;-). TELA+KU may also be recorded on **L(4) 475, 480, 484, 489, 501, 7390, 7415, 7416, 7578**.

¹⁰² **L(8) 1647, 7404** and probably **7411** (-;212).

¹⁰³ Moreover, the analogy with the **L(4)** set and the fact that TELA+KU so far only appears in the MAP makes it attractive to associate **L 5757** and **L 9200** with TELA+KU to the MAP as well.

¹⁰⁴ The **L(10)** set by Hand 214 records TELA+PU, and **L(10) 735** is from H2 (Bathroom, part of Throne complex). See also **L 2127, 5561, 5569, 5582, 7403, 7405, 7406, 7408, 7410, 7414, 7833**. An astonishing large number of 980 pieces of TELA+PU is recorded on **L 5561**, see KILLEN 2000-2001, 391-393; MELENA 1996-1997, 418; Nosch 2004.

Table 1 compares the textile vocabularies by Hand 114 in the NEP and Hand 116 in the MAP:

NEP Ld(2) set	Ld(2) vocabulary by Hand 114	Ld(1) vocabulary by Hand 116	MAP Ld(1) set
785	<i>ki-ri-ta</i>		
785,786,788,	<i>ke-ro-ta</i>		
785, 786, 787	<i>ki-to-na, ki-to-pi</i>		
786, 787, 8192	<i>a-*34-ka</i>		
785-787, 8192	<i>*161</i>		
786, 787,	TELA+PA		
786, 787, 788,	<i>pa-we-a₂</i>	<i>pa-we-a</i>	571-575, 579, 649, 5601
787	<i>o-re-ne-ja</i>	<i>o-re-ne-ja</i>	579, 583
785	<i>e-ru-ta-ra-pi</i>	<i>e-ru-ta-ra-pi</i>	573, 585, 649
785	<i>po-ki-ro-nu-ka</i>	<i>po-ki-ro-nu-ka</i>	579, 584, 587, 598, 5845
L 871	<i>pe-ne-we-ta</i>	<i>pe-ne-we-ta</i>	571, 572
L 871	<i>e-qe-si-ja</i>	<i>e-qe-si-ja</i>	571, 572, 575, 583
L 871	<i>te-tu-ko-wa</i>		
		<i>e-ro-pa-ke-ja</i>	595
		<i>po-ri-wa</i>	587
		<i>ko-ro-ta₂</i>	587, 598, 599
		<i>ke-se-nu-wi-ja</i>	573, 574, 585, 649
		<i>pa-ra-ku-ja/</i>	575, 587
		<i>*56-ra-ku-ja</i>	
		<i>a-ro₂-a</i>	571, 572, 583
		<i>re-u-ko-nu-ka</i>	571-574, 583, 585, 587, 591, 598, 649, 656, 5615

Table 1. Textile descriptions by Hands 114 (NEP) and 116 (MAP).

The comparison of the two **Ld** sets from the NEP and MAP, respectively, highlights the rich textile vocabularies but also demonstrates that the two sets, and the two hands, use quite different terms for describing textiles. Hand 114 in the NEP describes textiles as TELA+PA or *pa-we-a₂* while Hand 116 in the MAP calls them *pa-we-a*.¹⁰⁵ The term *a-*34-ka* only occurs in the NEP, and the syllable **34* becomes rare in the MAP.¹⁰⁶ Across the NEP and MAP, textiles are described as *o-re-ne-ja*, *e-ru-ta-ra-pi*, *po-ki-ro-nu-ka*, *pe-ne-we-ta* and *e-qe-si-ja*. It is surprising that the

¹⁰⁵ NOSCH 2022.

¹⁰⁶ See PIERINI, this volume.

description *re-u-ko-nu-ka*, very frequent in the MAP, is never attested in the NEP. *pa-we-a re-u-ko-nu-ka* is hence a marker of MAP textile production, and perhaps represents an innovation or a special situation in the MAP.

Script developments

Some textile names and logograms testify to longevity and stability from LM IIIA1 to LM IIIB, such as TUN and TELA+PU. Other textiles testify to slight changes: in the RCT, TUN is given the endograms QE and RI, but in the NEP and MAP it is given the endogram KI; in the RCT, *166 appears ‘clean,’ but is given the endogram WE in the NEP and MAP; *pa-we-a*₂ is spelled differently in the NEP and MAP. Other textiles again are unique to only one part and only occur there: *to-mi-ka* in the NEP, *tu-na-no* and TELA+TE in the MAP.

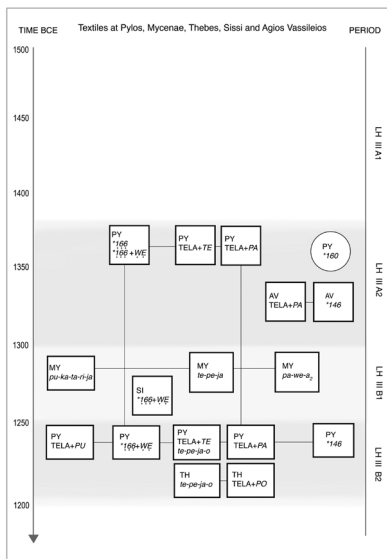


Fig. 2. Textiles at Pylos, Mycenae, Thebes, Sissi and Agios Vassileios

In contrast, *161 TELA is attested in the RCT, NEP, and MAP. The logogram is a monogram of two syllables, but these change over time: in the RCT (L 178), *161 consists of the syllables *-mi-* + *-re-* or *-i-*,¹⁰⁷ in the NEP *-mi-* + *-pu*₂- (Hand 114), and in the MAP, it appears as either *-mi-* + *-re-* by Hand 103,¹⁰⁸ or as *-mi-* + *-pu*₂- by Hand 211.

Mycenaean perspectives

The LH IIIA2 site Agios Vassileios has *146 and TELA+PA, similar to the NEP. TELA+PA appears in LH IIIA2 Pylos, it continues in use in LH IIIB2 Pylos, but it is not used in Crete in the MAP.¹⁰⁹ *pa-we-a*₂

¹⁰⁷ MELENA 1975, 97; WEILHARTNER forthcoming.

¹⁰⁸ MELENA 1975, 95.

¹⁰⁹ SKELTON 2011, 117: “Thus, the use of the ideogram TELA+PA in the Megaron tablets represents an original scribal practice which appears to have continued on the Mainland but was replaced later at Knossos by the term fully written out.” Skelton suggests that TELA+PA would disappear

is spelled with aspiration in Mycenae (Oe 127), like in the NEP. These parallels suggest a close exchange of vocabulary, spelling and logograms between the mainland sites and the NEP phase in Knossos.

*166 and *166+WE both occur at Pylos, probably both in the LH IIIA2 Megaron tablets and in the later LH IIIB2 Pylos archive.¹¹⁰ In Crete, *166 occurs first in the RCT, while *166+WE occurs later in the NEP and MAP. It is worth noticing that even if *166/*166+WE are not abundantly attested, they seem to occur in all phases both in Pylos and in Knossos, and were recently also found in LM IIIB1 Sissi, Crete.¹¹¹

TELA+TE appears both in the LH IIIA Megaron tablets and in LH IIIB2 in Pylos, and on three LH IIIB mainland sites, Mycenae, Thebes and Pylos, the terms *te-pa* and *te-pe-ja* are found.¹¹² In contrast, in Crete TELA+TE only occurs in the LM IIIB MAP. Hence TELA+TE might have a longer tradition on the mainland than in Crete; in contrast, TELA+PU appears to have a longer tradition in Crete, because it occurs first in the RCT, in the NEP, and continues in the MAP, but is not attested in the Megaron tablets though it occurs in LH IIIB1 Mycenae (*pu-ka-ta-ri-ja* on X 508) and LH IIIB2 Pylos.

Contemporary LM/LH IIIB textiles are *pa-we-a*, *146, *166+WE, TELA+PU, TELA+TE and perhaps *po* TELA if it is equal to TELA+PO at Thebes.¹¹² One type of textile, *160, occurs only on the mainland, and only in the LH IIIA2 tablets at Pylos, but *160 appears to be a variant of *146 and appears to be replaced by *146 in LH IIIB2. More textiles are so far only attested at Knossos: *158, *tu-na-no*, *164, *161, *168, *178 and *to-mi-ka*. Some of them may be Minoan textile types. Knossos hence demonstrates more variety in textiles than the mainland sites.

because it could be confused with TELA+TE.

¹¹⁰ NOSCH 2012, 343-344; SKELTON 2011.

¹¹¹ DRIESSEN *et al.* 2012, 24, Fig. 1.5.

¹¹² NOSCH 2002.

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L'administration de l'huile à Ougarit et dans le monde mycénien: aspects des procédures palatiales

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À Jean-Pierre Olivier

L'huile, d'olive ou de sésame, est l'un des produits essentiels dans les économies de la Méditerranée orientale et de la Mésopotamie.¹ La communauté de certains éléments de culture matérielle, le fait que c'était l'un des produits échangés en Méditerranée orientale,² et enfin l'intérêt partagé par les institutions palatiales de différentes régions au bronze moyen et récent pour ce produit, en ont fait un sujet d'étude commun à plusieurs disciplines, donnant lieu à des études épigraphiques comparatives.³

Dans les limites de cette contribution, nous nous concentrerons sur les archives d'Ougarit en les comparant à celles des palais mycéniens, et

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¹ AMOURETTI 1986; AMOURETTI 1992; AMOURETTI *et al.* 1993; BRUN 2004; *Docs*², 217-218; FOXHALL 2007; FRANKEL 1999; GODART 1968; 1969; 1987; HAMILAKIS 1996; HELTZER & EITAM 1987; LEJEUNE 1971; MELENA 1983; PALMER 2003; ROUGEMONT 2008; ROUGEMONT 2011; SCHNEIDER-LUDORFF 1999; STOL 2003; SUCHARSKI 2003; VIDAL 2007; WARNOCK 2007; WEILHARTNER 2003.

² Cf. PALMER 2003, avec bibliographie.

³ FAPPAS 2008; ROUGEMONT 2008; 2011; SUCHARSKI 2003.

notamment sur les procédures utilisées par le palais d'Ougarit pour se procurer de l'huile.

À Ougarit, on connaît trois mots respectivement pour l'olivier (akk. ^{gis}GI.DÌM, *serdu*), l'olive (oug. *zt*) et l'huile (oug. *šmn*, akk. Ì(.GIŠ)^(mes), *šamnu*). Près de 80 textes mentionnent l'huile, et proviennent de presque tous les endroits fouillés de la ville. La majorité sont de nature administrative, mais il existe également des rituels, des étiquettes, des lettres, des textes juridiques et des exercices de scribe. Dans le monde égéen comme à Ougarit, l'huile est documentée par des trouvailles archéologiques (presseoirs et vases de stockage et de transport,⁴ installations liées à la parfumerie,⁵ vestiges carpologiques, analyses de résidus,⁶ etc), mais aussi par de nombreux documents d'archive. Bien que les textes mycéniens n'attestent que de l'huile d'olive, ils enregistrent aussi d'autres oléagineux.⁷ Les archives attestent des mots et des logogrammes désignant l'huile et les olives: en linéaire B, le logogramme *130 OLE et le mot *e-ra₃-wo* ou *e-ra-wo /elaiwon/* pour l'huile, *122 OLIV (avec les variantes OLIV+A et OLIV+TI, respectivement pour des olives «sauvages» et «cultivées»); l'hapax *e-ra-wa* est compris comme le nom de l'olivier, */elaiwā/*.⁸ Le corpus mycénien de l'huile a déjà été bien étudié, rendant ici une présentation détaillée inutile.⁹

Le palais d'Ougarit se procurait l'huile par diverses méthodes. Tout d'abord, par l'exploitation directe d'une série de domaines agricoles appelés *gt* en ougaritique, *dimtu* en akkadien, et répartis à travers tout le royaume.¹⁰ La situation semble moins claire dans le monde mycénien. Si les textes mycéniens offrent quelques attestations relatives aux figuiers, aux oliviers et à la vigne, il n'existe à ce jour que des témoignages rares et discutés pour les oliveraies. Comme pour les autres terres cultivées, il est difficile de déterminer avec certitude s'il s'agit ou non de terres

⁴ Voir par ex. ARTZY 1987; HASKELL *et al.* 2011; KOPAKA & PLATON 1993; RILEY 2002; pour Ougarit, voir principalement CALLOT 1987; 1994.

⁵ Sur la parfumerie égéenne, voir LUPACK 2016 (avec bibliographie antérieure), mais essentiellement SHELMEERDINE 1985; 2007.

⁶ Voir par ex. DECAVALLAS 2014; NEWTON *et al.* 2014 (bibliographie non exhaustive).

⁷ Voir ROUGEMONT 2011, 355-356.

⁸ Cf. KILLEN 1987, 174-177, sur la possibilité qu'OLIV indique parfois l'arbre et non le fruit (cf. KN F(2) 841.6).

⁹ Voir en particulier BENDALL 2007; LUPACK 2016, avec bibliographie antérieure; ROUGEMONT 2008; 2011.

¹⁰ McGEOUGH 2020, 405-407; SCHLOEN 2001, 232-234.

palatiales.¹¹ De même on s'interroge sur le statut des produits agricoles enregistrés par les scribes, en particulier dans les enregistrements de moissons.¹² Il est possible que le palais ait possédé des terres agricoles, dont des vergers, et en ait récolté la production, tout comme il est possible qu'il ait recensé les arbres fruitiers et leur production (dont les olives)¹³ afin de prévoir les prélèvements qu'il pourrait effectuer dans les différentes localités.¹⁴ À Cnossos on possède quelques textes relatifs aux récoltes (*a-ma*),¹⁵ entre autres, d'olives, aussi bien «sauvages» que «cultivées» (F(2) 845 et F(2) 851, avec la ligature OLIV+A; F(2) 852, avec les ligatures OLIV+TI où TI = /tithasos/ et OLIV+A où A = /agrios/).¹⁶ Il semble donc que les administrations palatiales (du moins celle de Cnossos) aient récolté des olives ou exercé une forme de contrôle sur les récoltes d'olives sur leur territoire.¹⁷

Outre les domaines agricoles *gt*, le palais d'Ougarit se procurait de l'huile dans les différentes localités du royaume. La plupart des enregistrements d'huile due à l'administration sont dans des textes comprenant également d'autres produits. Mais il y a aussi plusieurs textes dans lesquels l'huile est le seul bien à devoir être livré, comme le texte administratif RS 17.399 (KTU 4.313; quelque 29 lignes conservées); il s'agit d'obligations personnelles:

¹¹ NAKASSIS 2021, avec bibliographie; PALMER 1999; ZURBACH 2017, 119.

¹² Cf. KILLEN 1995; ZURBACH 2017, 121: «il et tentant de voir ici [= KN F(1) 157; et F(2) 852, avec *a-ma e-pi-ke-re*] un échantillon de toutes les cultures en champ dans un village donné (...). Trois hypothèses sont envisageables: soit c'est la production entière de domaines palatiaux situés près de ces villages, soit c'est une dîme qui s'applique à toute la production de plein champ d'un village, soit c'est l'inventaire d'un entrepôt palatial qui peut confondre des produits de plusieurs origines».

¹³ Voir la suggestion de KILLEN 2015, 908-909, à propos de TH Ft 140 («It may well be, then, that OLIV here does not denote olive trees, but is a record, rather like GRA+PE, of the (taxable) productive capacity of the land, in this case in olives»).

¹⁴ La culture des arbres fruitiers est attestée par les tablettes Gv de Cnossos, qui sont d'interprétation délicate (DEL FREO 2005, 46-54, avec bibliographie; HILLER 1983, 199, y voit des terres palatiales; ZURBACH 2017, 119); y figurent des figuiers (*su-za* ARB) et des pieds de vigne (*we-je-we* et *174); quatre variantes du logogramme *176 ARB y apparaissent; on peut donc supposer que deux autres espèces étaient enregistrées, outre le figuier et la vigne. Plusieurs auteurs ont identifié, à la l. 2 de Gv 862, un olivier (SM II, 60: «In 862.2, a pictorial tree resembles the pictographic 'olive' sign [...]; cf. DEL FREO 2005, 48 et n. 282; Docs¹, 272; MELENA 1983, 103; PERPILLOU 1981, 50).

¹⁵ *a-ma*: KN E 848.1, 850, 1035; F(2) 845.a, 851.1b, 852.1; *a-ma*[: KN As(1) 608.lat.inf.; X 743.a; (a-)], 9687.

¹⁶ Voir aussi PALMER 1999.

¹⁷ Sur les textes *a-ma*, voir KILLEN 1995; ZURBACH 2017, 121.

RS 17.399 (KTU 4.313)

1	kd . šmn . ṣl . hbm . šlm ^c y ⁷	Une mesure- <i>kd</i> d'huile au compte débiteur de NP, de la ville de Šalmiya
	kd . šmn . ṭbil	une mesure- <i>kd</i> d'huile (au compte débiteur de) NP
	kd . šmn . ymtšr	une mesure- <i>kd</i> d'huile (au compte débiteur de) NP
	ārb ^s . šmn . ṣl . ṣbdn . w . --[...]	by quatre (mesures- <i>kd</i>) d'huile au compte débiteur de NP ₁ et de NP ₂

Le texte enregistre donc des quantités d'huile que différentes personnes doivent payer à l'administration palatiale.¹⁸ Il se termine par un total qui offre de nouvelles informations sur la procédure:

tgrm (tgmr) . šmn . d . bn . kwy Total d'huile qui (est pour) Kwy [= NP]
 ṣl . šlmym . ṭmn . kbd au compte débiteur des gens de Šalmiya: 68
 ṭṭm . šmn (mesures-*kd*) d'huile [ca. 748 litres].

Les quantités d'huile qu'un village devait fournir à l'administration étaient donc calculées en additionnant les quantités que devaient livrer tous les habitants du village concerné.¹⁹ C'est d'après ce contexte qu'il faut comprendre le texte RS 19.38,²⁰ avec la structure «x (mesures-DUG) d'huile (de) NP (, du village de) NG»; la ligne 5 (51 Ì.MEŠ *i-na* UGU ¹*da-na-ni* DUMU ^{1d}UTU-*<ya>-ni* «51 [mesures-DUG d'] huile au compte débiteur de Danānu fils de Šapšiyānu») montre qu'il s'agit d'une liste de personnes qui doivent fournir de l'huile à l'administration.²¹ Par contre, la ligne 7 mentionne un village: 4(?) *me* 6 Ì.MEŠ ^{uru}DINGIR-*ya-me* «406(?) (mesures-DUG): huile du (village d') Iliyamu» (soit environ 4872 litres); derrière le chiffre global de la quantité d'huile à livrer par le village d'Iliyamu se cache sans doute un calcul détaillé du type de celui présenté par RS 17.399. Le texte se termine par un total de 11.594 litres d'huile.

¹⁸ VIDAL 2007, 597; VITA 2017, 537. À cet égard, il est identique au texte akkadien RS 17.99 (PRU 6 n° 112; à l'exception de la ligne 4; cf. PRU 6 95; VIDAL *ibid.*; VITA *ibid.*).

¹⁹ VITA 2017, 538. Voir auparavant VIDAL 2007, 597; WIDBIN 1985, 230; *contra* McGEOUGH 2011, 159.

²⁰ PRU 6.144. VIDAL 2007, 597; VITA 2017, 537.

²¹ VITA 2017, 537.

Du côté mycénien, plusieurs documents enregistrent la livraison, par différentes localités, de quantités assez importantes d'huile d'olive à l'administration; ces documents sont caractérisés par le terme *a-pu-do-si /apudosis/*, «paiement», «versement» que l'on retrouve dans le domaine fiscal au sens large,²² pour désigner un paiement fait au palais (les textes attestent aussi le terme *qe-te-o*, adjectif verbal utilisé pour des paiements/versements,²³ et le terme *o-no*²⁴); *a-pu-do-si* est attesté sur plusieurs sites, associé à de l'huile (série **Fh**), des épices (série **Ga**), du personnel masculin et des épices (série **Bg**), des textiles (série **L**) et des produits divers (série fiscale **Ma**). Ces versements d'huile, à Cnossos, sont attestés avec plusieurs toponymes: *ka-ro* (KN **Fh 340**), *ru-ki-to* (**Fh 349**), et *a-mi-ni-so* sous la forme *a-mi-ni-si-ja* (**Fh 5451**); mais tous les toponymes ne sont pas conservés (cf. **Fh <374>**, **Fh <379>**, **Fh 5444**, **Fh 5459**). Il existe aussi des totaux (**Fh 366** [sans doute + **5503**] avec OLE 339 V5 soit 9771,2 litres, **Fh 5434** où les chiffres sont perdus). Les versements concernent à chaque fois des quantités de plus ou moins 1000 litres; l'administration cnossienne percevait donc des quantités d'huile importantes d'un certain nombre de localités du royaume.

À Ougarit, parfois le nom de la personne qui sert d'intermédiaire entre les villages et l'administration était également noté. On a vu comment le texte RS 17.399 note, dans le total, la présence d'un représentant.²⁵ Mais les textes utilisent plus couramment l'expression *bd* «aux bons soins de» (litt. «dans la main»), pour indiquer qu'une personne est chargée d'une certaine quantité d'huile; par exemple:

RS 94.2395 (KTU 4.854)

[t]mnym . l. mit . šmn	Cent quatre-vingts (unités d')huile
5 [b]d . ilhd	(remises) aux bons soins de 'Ilhaddu

On ne sait pas si 'Ilhaddu est un fonctionnaire du palais ou plutôt, par exemple, un marchand du palais, ni si l'huile en question avait été achetée

²² Cf. PERNA 2004, avec bibliographie.

²³ Voir par ex. PERNA 2004, 30 sq.; ROUGEMONT 2009, 419-420.

²⁴ ROUGEMONT 2008, 676, 679-680, avec bibliographie.

²⁵ TROPPEL 2012, 848.

ou plutôt prélevée à titre de taxe. Par ailleurs, l'étiquette RS 16.125 atteste l'expression sumérienne équivalente à l'ougaritique *bd*:

RS 16.125 (PRU 3, p. 187)

1 <i>me-at</i> 43 dug.ì.giš.meš	143 mesures-DUG d'huile
šu 'šeš.lugal	aux bons soins de Aḫimilku
lú ^{uru} <i>ma-ra-bá'</i>	du (village de) Ma'rabā.

Cette étiquette doit avoir accompagné un envoi de jarres d'huile du type mentionné dans la lettre RS 94.2285+,²⁶ retrouvée dans la Maison d'Ourtenou et adressée par un commerçant à un autre,²⁷ car le commerce était le troisième moyen par lequel le palais ougaritain se procurait de l'huile. La lettre reflète tous les éléments susmentionnés dans les textes administratifs lorsqu'elle enregistre (lignes 6-7) «30 jarres d'huile [pour?] le palais au compte débiteur (ugu) des gens du village de Giba'lā»²⁸ et (lignes 23-24) «111 jarres d'hui[le] au compte débiteur des gens du village de Ma'rabā».²⁹ Dans la même lettre, l'expéditeur s'adresse au destinataire comme suit: «ordonne qu'(il y ait) un représentant avec les fils de Han[ya] et qu'ils rassemblent l'huile en question»;³⁰ le dénommé Aḫimilku de l'étiquette RS 16.125 a dû jouer ce rôle de «représentant» (lú.igi) d'un des deux commerçants.

Du côté mycénien, au delà des responsables administratifs qu'étaient probablement les scribes qui rédigeaient les tablettes et peut-être des propriétaires des sceaux imprimés sur les nodules **MI Wv 1, 5**, avec **OLE**,³¹ et peut-être celui de **MY Wt 713**, avec **OLE+WE**,³² il n'est pas toujours aisé d'identifier des responsables palatiaux. Un exemple probable est le dénommé]*mu-to*, qui réceptionne (**KN Fh 370**) une grosse quantité d'huile à Cnossos; le parallèle avec d'autres enregistrements de réception incite à penser que cette huile est reçue pour le compte du

²⁶ VITA 2017, 538.

²⁷ LACKENBACHER & MALBRAN-LABAT 2016, 119-121.

²⁸ 30 'dug' ì.giš.meš [a?-na?] 'é'.gal ugu 'dumu.meš?' uru ki.^d'iškur'.

²⁹ 1 *me-at* 11 dug ì.[giš.meš] ugu dumu.meš uru *ma-ra-bá'*. Voir pour les détails VITA 2017, 536-539.

³⁰ LACKENBACHER & MALBRAN-LABAT 2016, 120.

³¹ <https://liber.cnr.it/tablet/view/4500>; <https://liber.cnr.it/tablet/view/2314>.

³² <https://liber.cnr.it/tablet/view/2393>; et *Rapport* 2006-2010, 20.

palais.³³ Un autre personnage susceptible d'avoir joué un rôle d'intermédiaire dans des transactions d'huile est *ku-pi-ri-jo*.³⁴

L'administration du palais d'Ougarit semble s'être procuré de l'huile par, au moins, trois voies différentes: a) les quantités obtenues par le contrôle de certains domaines agricoles qu'elle gérait directement (*gt/dimtu*), b) des quantités obtenues par le commerce, et c) des quantités obtenues de différents villages du royaume.

Par le biais des *gt*, l'administration ougaritaine pourrait sûrement planifier (de manière approximative) le rendement agricole annuel de chaque domaine aussi bien que de l'ensemble des domaines, et donc les quantités d'huile qu'on pourrait obtenir de ces exploitations. De son côté, le commerce permettrait également d'obtenir d'autres quantités d'huile (peut-être des huiles spéciales), mais surtout d'obtenir des revenus grâce aux taxes imposées sur les produits des marchands, comme la taxe dite *miksu*.³⁵ Dans la mesure où ce commerce était régulier, l'administration provinciale pourrait également faire des prévisions quant aux éventuelles perceptions de revenus.

Dans le cas des quantités obtenues de différents villages, au lieu d'enregistrer les quantités d'huile déjà présentes dans les magasins de l'administration, les textes administratifs ougaritiques enregistrent les quantités d'huile que des personnes spécifiques (exceptionnellement un village) doivent à l'administration. On peut en conclure que l'administration d'Ougarit notait les quantités d'huile que devaient livrer les villages, mais que le calcul était fait sur la base de l'enregistrement des villageois qui devaient livrer de l'huile. Est-ce qu'il y aurait là des éléments qui permettraient de parler d'obligations fiscales en rapport avec l'huile? Il y en a peut-être de manière indirecte. D'une part, les textes parlent d'huile que certaines personnes «doivent» à l'administration; d'autre part, ils montrent l'existence (non explicite) de circonscriptions administratives³⁶ qui, entre autres, auraient pu servir de base au calcul de certaines taxes. Compte tenu du contrôle précis que l'administration exerçait sur les villages du royaume (nombre de maisons, nombre

³³ Pour d'autres comparaisons formulaires du même type, cf. ROUGEMONT 2008, 678.

³⁴ ROUGEMONT 2008, 678-679, avec bibliographie antérieure.

³⁵ MCGEOUGH 2020, 408; MONROE 2009, 167-169, 172; WIDBIN 1985, 231.

³⁶ VAN SOLDT 2005, 144: «One may conclude that the city-state of Ugarit knew an administrative division of its territory».

d'habitants, type de produits agricoles, etc.),³⁷ il est concevable que les administrateurs aient pu utiliser une méthode par répartition pour le calcul des prélèvements, mais notre connaissance de la fiscalité d'Ougarit reste assez incertaine.³⁸

Pour le monde mycénien, l'existence de domaines agricoles exploités directement par l'administration reste une possibilité moins évidente et les textes n'offrent pas de données indubitables sur des activités de type commercial. Par contre, tout comme celle d'Ougarit, l'administration cnoossienne percevait des quantités d'huile importantes d'un certain nombre de localités du royaume, et on peut se demander si derrière le chiffre global de la quantité d'huile à livrer par les villages se cachait (dans le contexte d'une hypothèse de répartition) un calcul similaire à celui que nous venons de proposer pour Ougarit. En tout état de cause, tant dans le cas d'Ougarit que dans celui du monde mycénien, dont les procédures fiscales ont fait l'objet d'études nombreuses et complexes,³⁹ la question se pose de savoir si l'on peut vraiment parler de «procédures fiscales», et donc de procédures bien établies et de nature régulière, ou plutôt d'une collecte de produits ponctuelle répondant à une situation spécifique.

³⁷ VIDAL 2014; VITA 2018.

³⁸ Voir maintenant l'étude de McGEOUGH 2020.

³⁹ Pour l'histoire des recherches et un exposé détaillé sur la question, voir PERNA 2004, avec bibliographie, surtout 131-202; 2016.

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**Signs of the times?
Testing the chronological significance
of Linear A and B palaeography**

Ester Salgarella, Anna P. Judson*

Palaeography and chronology

Palaeographic analysis has been used to establish chronological divisions between Linear B documents whose archaeological dating is disputed, chiefly at the controversial site of Knossos: Jan Driessen's palaeographic analysis assigned the Knossos tablets to at least three different chronological phases,¹ while Richard Firth and Christina Skelton used phylogenetic systematics (a method of reconstructing evolutionary relationships) to reach similar conclusions about Knossian Linear B, as well as assigning dates to these tablets relative to those from other sites.² The comparison of tablets from Khania to Knossos Hand 115 has also been used as evidence in the debate over the dating of the final destruction of Knossos,³ while at Pylos, palaeographic features have been used to date a small number of texts to an earlier period than the main body of the tablets.⁴

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¹ DRIESSEN 1997, 130-132; 2000, 150-157.

² SKELTON 2008; 2011; FIRTH & SKELTON 2016a-c.

³ E.g. DRIESSEN 2000, 152.

⁴ This includes the 'Hand 91/Class iv' tablets (PALAIMA 1983; 1988, 111-113, 133, 172; on current attributions of these tablets, see *CoPY*) and tablets from the Megaron (MELENA 2000-2001, 367; SKELTON 2008, 171-172; 2009; 2011, 75; FIRTH & SKELTON 2016c, 223-234). None of these have a secure archaeological date: see DAVIS *et al.*, this volume.

All of these analyses start from the assumption that palaeographic variation correlates with chronological variation, and that simplification of sign-forms over time is the usual process of script development.⁵ A reliable chronological analysis, however, would first require using the available data to demonstrate these assumptions to be true. Moreover, the reasons for selecting certain variants as palaeographically ‘earlier’ or ‘later,’ or particular signs as showing chronologically significant variation, are rarely made explicit. Our recent analyses of synchronic variation within individual sites or deposits, which showed that multiple variant sign-forms are often in use contemporaneously,⁶ along with the demonstration that, contrary to the assumed transmission of archetypal ‘master signs’ from Linear A to Linear B,⁷ there is considerable continuity in variant sign-forms between the two writing systems,⁸ have showed that the situation is much more complicated. The inheritance of multiple variant sign-forms from Linear A and the persistence of many of these throughout the history of Linear B call into question the assumptions underlying the increasing use of palaeography as a chronological tool: there is no straightforward correlation between variation in sign-forms and the documents’ relative chronology.

Ultimately, only a full analysis of palaeographic variation in both Linear A and Linear B will allow us to establish the processes of development which took place in these writing systems over time, and thus which palaeographic features, if any, are likely to have a true chronological significance. This paper provides an initial exploration of these development processes, and an illustration of their complexity, via a case-study of ten signs which show significant variation in both scripts: AB 06/*na*, AB 07/*di*, AB 08/*a*, AB 13/*me*, AB 21/*qi* (also *ovis* ‘sheep’), AB 24/*ne*, AB 30/*ni*, AB 73/*mi*, AB 77/*ka*, and AB 81/*ku*.

To ensure equivalence with Linear B, the Linear A analysis is restricted to administrative documents, specifically tablets, from the most prominent sites (Haghia Triada, Khania, Zakros, Phaistos, Arkhanes, Malia, Knossos, Tylissos). Linear A evidence is treated as a single chronological unit (LM IA-B), given our limited ability to see internal

⁵ E.g. DRIESSEN 2000, 100-101, 144-145, 151; SKELTON 2008, 164.

⁶ SALGARELLA 2019; 2020; JUDSON 2020, Ch. 5.

⁷ DRIESSEN 2000, 33-34, 108-109, 112, 144-145.

⁸ SALGARELLA 2020, Ch. 4.

chronological changes within this script.⁹ For Linear B, we focus on Knossos and Pylos, which provide tablets from various time-periods: at Knossos, we analyse tablets from the Room of the Chariot Tablets [henceforth: RCT], the oldest Linear B deposit (LM IIIA1-early);¹⁰ the Northern Entrance Passage [henceforth: NEP] and the Room of the Column Bases [henceforth: RCB], which have been argued to be intermediate between the RCT and the latest Knossian tablets;¹¹ and the West Wing [henceforth: WW], which belongs to the final destruction (LM IIIA2 or IIIB1).¹² At Pylos, we include the complete corpus of tablets, most of which are dated to the palace's final destruction (early LH IIIC); those which are not securely associated with this destruction are indicated as belonging to the Hand 91/Civ or Megaron groups and treated as of unknown date.¹³

Variants of case-study signs

This section illustrates the palaeographic variation shown by each of our case-study signs in Linear A and Knossian and Pylian Linear B, along with the proportion of examples which display each variant form.¹⁴ In most cases, different features of any given sign vary independently of each other, and hence each feature will be discussed separately.¹⁵ Numbers in square brackets refer to illustrations of the most important types of variation throughout the images that follow (Figs. 1-10).

⁹ See SALGARELLA 2020, 42-49.

¹⁰ DRIESSEN 2000, 10, 220. This analysis includes all documents assigned by Driessen to the RCT.

¹¹ DRIESSEN 1999; 2000, 151; but cf. JUDSON 2020, 206-207, 216-217. This analysis includes all documents assigned to these deposits by FIRTH 1996-1997, 22; 2000-2001, 225-230.

¹² For a summary of this dating controversy, see FIRTH 2000-2001, 154-157. This analysis includes all documents assigned to the WW (Magazines II-XII, XIV-XV; B4, F19, F21, E5, G1-G2/3) by FIRTH 1996-1997, 39; 2000-2001, 172-232.

¹³ See DAVIS *et al.*, this volume, and n. 4.

¹⁴ Percentages given are of the total number of certain attestations of each sign, and hence will not add up to 100 when some examples of that sign cannot be palaeographically classified.

¹⁵ See SALGARELLA 2019.

Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB06/na	[1] HT 7a [2] ARKH 6	[7] Vc(1) 65 [8] Xd 7596	[12] E 843 [13] X 1018		[18] Lc 532 [19] M 719	[21] Sa 793 [22] En 74.2
	[3] ZA 10a [4] KH 5	[9] Vc(1) 73 [10] Vd 136	[14] V(6) 958 [15] Ra 984	[17] Fh 353		[23] Ea 480 [24] Na 1052
	[5] ZA 15a [6] MA 2c	[11] Ce 152 v.	[16] B 800		[20] Gg 717	[25] Vn 20.6 [26] Ea 480.a

Fig. 1. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 06/na (drawings not to scale; Linear A and Knossos: by Salgarella, after *SigLA* (following *GORILA*), and after *CoMIK*; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

AB 06/na

Top: (minimal) variation in number of horizontals

- Linear A: always a single horizontal (straight or curved)
- Linear B: almost always two horizontals
 - Pylos: occasionally three horizontals (three–four examples)

Centre: variation in shape and number of strokes

- Linear A: a dot (43% of examples) [1], single horizontal (31%) [2], curve (9%) [3], circle (4%) [4], double horizontal (1%) [5], or nothing (6%) [6]
- Knossos:
 - RCT: curve (86%) [7-10] or triangle (14%) [11]
 - NEP: curve (60%) [12], horizontal (22%) [13], circle (19%) [14], or nothing (one example) [15]
 - RCB: curve (one example) [17]
 - WW: oval (94%) [18], curve (6%) [19], or circle (<1%, one example) [20]
- Pylos: the most significant variation is in the number of strokes, with considerable intra-scribal variation in their shape and orientation. Two strokes: 83% (including one Megaron example) [23-26]; one stroke: 3% [21-22]

Stem: variation in number of strokes

- Linear A: one stroke (81%) [1, 4-5], two strokes (14%) [2-3], or three strokes (5%) [6]
- Knossos:
 - RCT: one stroke (17%) [7], two strokes (33%) [11], three strokes (33%) [8], four strokes (8%, one example) [9], or five strokes (8%, one example) [10]
 - NEP: one stroke (44%) [13-15], two strokes (53%) [12], or three strokes (3%, one example) [16]
 - RCB: three strokes (one example) [17]
 - WW: one stroke (94%) [18, 20], two strokes (6%) [19]
- Pylos: one stroke (76%, including one Megaron example) [21-23], two strokes (11%) [24], three strokes (<1%, one example) [25], or no stem (<1%, one example) [26]

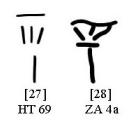
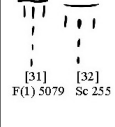
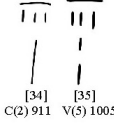
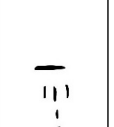
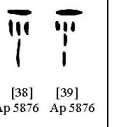
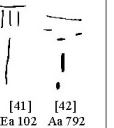
Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB07/di	 <p>[27] HT 69</p> <p>[28] ZA 4a</p> <p>[29] ZA 27</p> <p>[30] PH 2</p>	 <p>[31] F(1) 5079</p> <p>[32] Sc 255</p> <p>[33] Xd 177 v.</p>	 <p>[34] C(2) 911</p> <p>[35] V(5) 1005</p> <p>[36] B 806</p>	 <p>[37] Fp 363</p>	 <p>[38] Ap 5876</p> <p>[39] Ap 5876</p> <p>[40] Ak 624</p>	 <p>[41] Ea 102</p> <p>[42] Aa 792</p> <p>[43] Fr 1230</p> <p>[44] Xa 1419.1</p>

Fig. 2. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 07/di (drawings not to scale; Linear A and Knossos: by Salgarella, after SigLA (following GORILA), and after CoMIK; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

AB 07/di

Stem: variation in number of strokes

- Linear A: one stroke (94%) [27, 28], four strokes (1%, one example) [29], or “grape”-shaped (multiple strokes arranged in a triangle: 5%) [30]

- Knossos:
 - RCT: three strokes (31%) [31], two strokes (44%) [32], or one stroke (25%) [33]
 - NEP: one stroke (52%) [34], two strokes (35%) [35], or three strokes (13%) [36]
 - RCB: three strokes (one example) [37]
 - WW: one stroke (71%) [38], two strokes (26%) [39], or three strokes (3%, one example) [40]
- Pylos: one stroke (38%, including one Megaron and one Hand 91/Civ example) [41, 44], two strokes (46%) [42], or three strokes (1%, one example) [43]

Top: rarer variation in number/orientation of strokes

- Linear A: verticals (87%) [27] or oblique strokes (13%) [28-29]; two examples with a horizontal below the top [28]
- Knossos: only verticals [31-40]
- Pylos: horizontals (57%) [42] or verticals (35%, including one Megaron example) [41, 43]; one example with a horizontal below the top (Hand 91/Civ) [44]

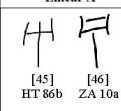
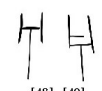
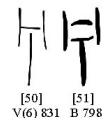

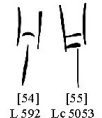
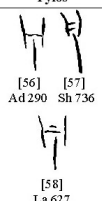
Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB08/a	 [45] HT 86b [46] ZA 10a	 [48] Ce 50 [49] Xd 82	 [50] V(6) 831 [51] B 798	 [52] Fh 347 [53] Fh 369	 [54] L 592 [55] Lc 5053	 [56] Ad 290 [57] Sh 736 [58] La 627

Fig. 3. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 08/a (drawings not to scale; Linear A and Knossos: by Salgarella, after *SigLA* (following *GORILA*), and after *CoMIK*; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

AB 08/a

Single or double horizontal:

- Linear A: single 70% [45], double 22% [46], dot 3% [47]
- Knossos:

- RCT: single 68% [48], double 32% [49]
- NEP: single 22% [50], double 78% [51]
- RCB: single 52% [52], double 43% [53]
- WW: single 11% [54], double 88% [55]
- Pylos: single 59% (including two Megaron examples) [56], double 27% [57] (including three Megaron examples, two with an unusually short upper horizontal [58])

Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB13/me						

Fig. 4. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 13/me (drawings not to scale; Linear A and Knossos: by Salgarella, after SigLA (following GORILA), and after CoMIK; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

AB 13/me

The Linear A and Linear B forms of this sign are generally quite different in construction; only a few Linear A examples, e.g. [60], appear close to the Linear B form.

Left-hand side: variation in presence/absence of strokes

- Linear A: loop present (38%) [59-60] or absent (56%) [61-62]
- Knossos:
 - RCT: vertical (40%) [63] or vertical plus horizontal/slanted stroke (60%) [64]
 - NEP: vertical (14%) [65] or vertical plus horizontal/slanted stroke (54%) [66-67]
 - RCB: vertical (one example) [68]
 - WW: nothing (58%) [69], vertical (16%) [70], or vertical plus horizontal (11%) [71]

- Pylos: vertical (<1%, one example) [72] or vertical plus horizontal (95%) [73-75]

Right-hand side: variation in shape (Linear A: loop or curve; Linear B: usually *we*-shaped curve) and number of cross-strokes:

- Linear A: one cross-stroke (13%) [59, 61] or two (81%) [60, 62]
- Knossos: all *we*-shaped:
 - RCT: one cross-stroke (27%) [63] or two (73%) [64]
 - NEP: zero cross-strokes (2%, one example) [67], one (23%) [65], or two (43%) [66]
 - RCB: two cross-strokes (one example) [68]
 - WW: zero cross-strokes (67%) [69], one (8%) [70], or two (10%) [71]
- Pylos: *we*-shaped with zero cross-strokes (87%) [72], one (1.5%) [73], or two (1.5%) [74]; or curved with a second curve inside (1%, four examples) [75]

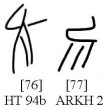
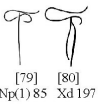
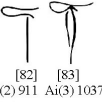

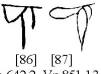



Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB21/qi						
						

Fig. 5. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 21/qi (drawings not to scale; Linear A and Knossos: by Salgarella, after *SigLA* (following *GORILA*), and after *CoMIK*; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

AB 21/qi

Variation in the number of legs (syllabograms only)¹⁶

- Linear A: three-leg (86%) [76-77] or four-leg (14%) [78]

¹⁶ At Pylos, the number of strokes in the head also varies significantly; this appears much rarer in Linear A and at Knossos, but is very difficult to identify reliably from photographs, so has not been included.

- Knossos:
 - RCT: one-leg (40%) [79], two-leg (40%) [80], or three-leg (20%, one example: only five in total) [81]
 - NEP: one-leg (9%, one example) [82], two-leg (81%) [83], or three-leg (9%, one example) [84]
 - WW: two-leg (one example) [85]
- Pylos: one-leg (76%) [86] or two-leg (24%) [87]

Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB24/ne						

Fig. 6. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 24/ne (drawings not to scale; Linear A and Knossos: by Salgarella, after *SigLA* (following *GORILA*), and after *CoMIK*; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

AB 24/ne

- Linear A: 76% simple variant (vertical crossed by top and bottom horizontals, central element straight [88] or curved [89]), 24% elaborate (two lateral arms, with left-hand loop and round central element [90-91]). This latter is the source of all Linear B variants.
- Linear B: variation in arms, centre and baseline
 - Arms: number of strokes (both arms single-stroke, vs. one single-stroke and the other – almost always the left – with two or occasionally three converging strokes)
 - RCT: 64% two-stroke left arm [92], 36% one-stroke [93-94]

- NEP: 85% one-stroke left arm [95-98, 101-102], 12% two-stroke [99]; one example with two-stroke right arm [100]
- RCB: one-stroke left arm (one example) [103]
- WW: 98% one-stroke left arm [104-105]; 2% two-stroke (one example) [106]
- Pylos: 48% one-stroke left arm [107-108], 34% two-stroke (including two Hand 91/Civ examples) [109-111], 1% three-stroke (three examples) [112]

Central element: none, single/double crossbar, circle/curve, V-shape

- RCT: 91% none [92-93], 9% single crossbar (one example) [94]
- NEP: 42% single crossbar [95], 35% none [96], 13% circle [99], 6% dot [97], 3% double crossbar [98]
- RCB: circle? (one example) [103]
- WW: 98% none [104-105], 2% circle (one example) [106]
- Pylos: 22% none [107], 62% central element present. Of these: 43% single crossbar [108], 1% double crossbar [109], 8% V-shape [110, 112], 7% circular/curved element (usually two-stroke, occasionally one/three-stroke; including two Hand 91/Civ examples) [111], one example with one slanted stroke, 2% of uncertain form

Baseline

- RCT: always present [92-94]
- NEP: 74% present [96-102], 26% absent [95]
- RCB: present (one example) [103]
- WW: 57% absent [104], 28% present [105-106]
- Pylos: 75% absent [107-109, 111], 10% present [110, 112] (including one Hand 91/Civ example of each)

AB 30/ni

Leaves: presence/absence of horizontal(s) crossing X-shaped 'leaves'

- Linear A: 37% short cross-strokes [113], 36% single long cross-stroke [114, 116], 3% none [115]



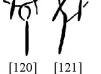








Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB30/ni	 [113] KH 5 [114] ZA 8	 [117] V(2) 337 v. [118] Ce 59	 [120] B(5) 798 [121] C 954	 [123] Fh 385	 [124] Lc 5053 [125] Gg 702	 [127] Aa 792 [128] Ea 811
	 [115] HT 114a [116] KH 79	 [119] V(2) 337	 [122] F(2) 841		 [126] Gg 705	 [129] Fh 79.3

Fig. 7. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 30/ni (drawings not to scale; Linear A and Knossos: by Salgarella, after *SigLA* (following *GORILA*), and after *CoMIK*; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

- Linear B (Knossos and Pylos): absent, except for three NEP examples (on one tablet) with short cross-strokes [122]

Stem: variation in shape and construction (straight stem, either two- or three-stroke; twisted stem, two-stroke)¹⁷

- Linear A: 82% straight stem (63% two-stroke, 19% three-stroke) [113-115], 2% twisted stem [116]
- Knossos:
 - RCT: 60% twisted stem [117], 40% straight stem (27% two-stroke [118], 13% three-stroke [119])
 - NEP: 90% twisted stem [120], 9% straight stem (two-stroke only) [121-122]
 - RCB: 100% twisted stem (17 examples) [123]
 - WW: 59% straight stem (54% two-stroke [124], 5% three-stroke [125]), 33% twisted stem [126]
- Pylos: straight stem only: 75% two-stroke (including one Hand 91/ Civ example) [127]; 8% three-stroke [128], including unique form with two-stroke left branch [129]

AB 73/mi

Central element(s): varying numbers (none to three) and forms (curve, dot, stroke)

¹⁷ OLIVIER 1967, 27 classifies these as 'simple,' 'intermediate,' and 'complex,' respectively.










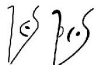



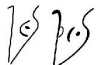



Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB73/mi	 [130] HT 6b	 [135] V(2) 337	 [138] C(2) 911	 [142] Fh 356	 [143] Ak 638	 [146] Ad 697
	 [131] ZA 14						[136] V(2) 337	[139] Am(2) 827	[144] X 459	[147] Na 248
	 [132] ZA 9	 [137] V(2) 280	 [140] E 777		 [145] K 700	 [148] Eb 839
	 [133] ZA 10a		 [141] Do 996			 [149] An 39.3
	 [134] ZA 7a					 [150] Ac 1278

Fig. 8. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 73/mi (drawings not to scale; Linear A and Knossos: by Salgarella, after SigLA (following GORILA), and after CoMIK; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

- Linear A: 61% two elements (curve enclosing dot/line) [130], 10% two elements plus additional left-hand element(s) [131], 15% one element (10% curve [132], 5% dot [133]), 3% none [134]
- RCT: 67% one element (curve) [135], 25% two elements (curve enclosing dot) [136], 8% none [137]
- NEP: 74% one element (curve) [138], 17% none [139], 4% two elements (curve enclosing dot; one example) [140], 4% three elements (curve enclosing dot plus additional left-hand element; one example) [141]
- RCB: one element (curve; one example) [142]
- WW: 76% none [143], 21% one element (curve) [144], 2% two elements (curve enclosing dot) [145]
- Pylos: 38% none [146], 45% one element (41% curve, 2% vertical, 2% horizontal) [147-148], 4% two elements (one each of curve plus













Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB77/ka	 [151] HT 9b	 [153] Ce 61	 [155] C(2) 914	 [157] Fh 344	 [159] Lc 531	 [161] Na 926
	 [152] HT 11b	 [154] F(1) 5079	 [156] Se 893	 [158] Fh 386	 [160] K 7599	 [162] Un 1321.2

Fig. 8. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 77/ka (drawings not to scale; Linear A and Knossos: by Salgarella, after SigLA (following GORILA), and after CoMIK; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

horizontal, curve plus vertical, two curves, vertical plus horizontal)
[149-150]

AB 77/ka

Internal cross-strokes: straight or wavy

- Linear A: 95% straight [151], 1% wavy (one example) [152]
- RCT: 95% wavy [153], 5% straight (one example) [154]
- NEP: 66% straight [155], 39% wavy [156]
- RCB: 83% straight [157], 17% wavy (one example) [158]
- WW: 96% straight [159], 4% wavy [160]
- Pylos: 93% straight (including two Megaron examples) [161], <1% wavy (three examples) [162]

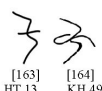
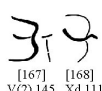

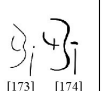


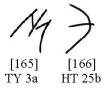
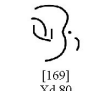
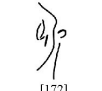



Sign	Linear A	Knossos RCT	Knossos NEP	Knossos RCB	Knossos WW	Pylos
AB81/ku	 [163] [164] HT 13 KH 49	 [167] [168] V(2) 145 Xd 111	 [170] [171] Dk(1) 945 C(2) 911	 [173] [174] Fh 367 Fh 383	 [176] [177] Ga 409 Ga 676	 [180] [181] Na 248 Ea 801
	 [165] [166] TY 3a HT 25b	 [169] Xd 80	 [172] L 870	 [175] Fh 347	 [178] [179] Od 44 Ga 465	 [182] [183] Es 644.2 La 631

Fig. 10. Linear A and Linear B sign-forms, representative examples of the most important palaeographic variants: sign AB 81/ku (drawings not to scale; Linear A and Knossos: by Salgarella, after *SigLA* (following *GORILA*), and after *CoMIK*; Pylos: by Judson, after photographs taken in the National Archaeological Museum, Athens).

AB 81/ku

Shape of body: 3-shaped vs.)-shaped

- Linear A: 94% 3-shaped [163-164] (including M-shaped variant [165]), 6%)-shape [166]
- Knossos Linear B: almost always 3-shaped,)-shaped only attested one–two times in RCB [175] and WW [179]
- Pylos: 87%)-shaped [180-181], 3% 3-shaped [182], 2% intermediate (wavy: including one Megaron example) [183]

Sides: varying number of strokes

- Linear A: 83% nothing at sides [163, 165-166], 17% loop at left [164]
- Linear B: sides vary independently. RCT, NEP and Pylos show a large amount of variation in the number (usually one to three) and shape (curve, dot, stroke) of the elements on both sides [167-175, 180-183], while the WW shows much less (maximum two elements per side) [176-179]

Patterns of palaeographic variation*Simplification over time*

As stated above, simplification – involving the creation of simpler sign-forms, the disappearance of more elaborate forms, and/or an increasing relative frequency of simpler forms – is generally assumed to be the most common process of palaeographic development over time. Examples of this process in the case-study signs include: the decrease in popularity of the multiple-stroke stem of *na* and of the right-hand cross-strokes of *me* within Linear B; the decrease in the number of legs of AB 21/*qi* in Linear B compared to Linear A; the creation of the simpler Linear B form of AB 24/*ne* from the Linear A/Linear B complex form; the almost complete absence of extra strokes on the branches of *ni* in Linear B, and the rarity/absence of the twisted-stem form in the WW/Pylos; the increasing frequency of forms of AB 73/*mi* with no or only one inner element both from Linear A to Linear B and within Linear B; and the rarity of the 3-shaped body of AB 81/*ku* at Pylos compared to Linear A and Knossos.

Elaboration over time

Elaboration – the creation of more elaborate sign-forms, the disappearance of simpler forms, and/or an increase in the relative frequency of more elaborate forms – appears to be nearly as common as simplification. Examples of this include: the increase in the usual number of top horizontals in AB 06/*na* in Linear B compared to Linear A; the increase in frequency of the multi-stroke stem of AB 07/*di* in Linear B compared to Linear A and of the double-horizontal form of AB 08/*a* over time at Knossos; the increased frequency of the form of AB 13/*me* with one-two strokes at the left from Linear A to Linear B and, with the exception of

the WW, within Linear B; the complete absence from Linear B of the highly simplified Linear A form of AB 24/*ne*; and the increased number of strokes at the sides of AB 81/*ku* in Linear B compared to Linear A.

Persistence of variation

For nearly all the signs in this case-study, at least some features have variants which coexist throughout the history of both Linear A and Linear B: AB 06/*na* in the number of strokes in the stem and the central shapes; AB 07/*di* in the number of strokes in the stem; AB 08/*a* in the number of horizontals; AB 13/*me* in the number of strokes on the left-hand side (Linear A and Knossos; minimally at Pylos) and the number of cross-strokes on the right; AB 30/*ni* in the shape of and number of strokes in the stem; AB 73/*mi* in the presence/absence of stroke(s) inside the V-shape; AB 77/*ka* in the straight vs. wavy cross (although the latter is rare in Linear A and at Pylos); and AB 81/*ku* in the shape of the body and the number/shape of strokes on each side. In addition, AB 21/*qi*'s variation between one and two legs persists throughout the history of Linear B (and Linear A similarly has variation between three and four legs), while AB 24/*ne* varies between a simple and complex form at all times, although the nature of the simpler form changes between Linear A and Linear B. Even the patterns of simplification or elaboration mentioned above are almost always changes in the frequency of particular variants rather than their complete disappearance.

Coexistence of multiple patterns of development

Most of these signs also show multiple patterns of development, whether simultaneously across different features (for instance AB 81/*ku*, whose body has undergone simplification but whose sides have undergone elaboration), at different points in their history, and/or at different sites. AB 73/*mi*, for instance, appears to simplify when comparing Linear A (where two inner elements are most common) and Knossian Linear B (one inner element most common in the RCT and NEP, zero in the WW), but at Pylos the more elaborate forms (mostly with one inner element) are slightly more common again. Conversely, the one-stroke stem of AB 06/*na* is preferred in Linear A, the WW, and Pylos, but the multi-stroke stem is the most common in the RCT and NEP; the single-horizontal form of AB 08/*a* is preferred in the Linear A, RCT, and

Pylos, but the double horizontal in the NEP and WW; and the wavy-cross form of *ka* is strongly preferred in the RCT but very rare elsewhere in both Linear A and Linear B: in all of these cases, comparing Linear A to particular Knossian deposits would show a process of elaboration, while comparing those deposits to Pylos would show simplification. Yet more complicated patterns are shown by AB 07/*di* (whose multi-stroke stem is rare in Linear A and the WW, the most common form in the RCT, and of approximately equal frequency to the single-stroke stem in the NEP and at Pylos); AB 13/*me* (whose apparent trend of increasing frequency of the form with one or two strokes at left is broken only by the WW, where zero left-hand strokes are strongly preferred); AB 30/*ni* (whose twisted-stem form is very rare in Linear A, the most common form everywhere at Knossos except for the WW, and entirely absent at Pylos – which nonetheless has the highest frequency of three-stroke-stem forms, which are rare in Linear A and Knossian Linear B); and AB 24/*ne* (whose elaborate Linear A form undergoes simplification to produce the simpler Linear B form, alongside a continuing process of elaboration – often site/deposit specific – of the more elaborate form, particularly with regards to the central element: see especially the NEP and Pylos).

How much of this is really chronological variation?

The above discussion has observed the palaeographic differences in the case-study signs between Linear A and Linear B and between Linear B tablets dating to various different time-periods: broadly speaking, the RCT is treated as ‘early Linear B,’ Pylos as ‘late Linear B,’ and the other Knossian deposits as belonging to a time-period between these two extremes (whatever the chronological relationship of the NEP and RCB to the WW). However, since Linear A and Linear B are different writing systems separated by a process of adaptation, and since we have no Linear B at Knossos contemporary with that at Pylos and only one securely-established chronological phase at the latter site, it is extremely difficult to be sure how much of this variation is in fact due (purely) to chronology: even an apparently straightforward process such as the simplification in the body of *ku* over time (3-shaped most common at Knossos,)-shaped most common at Pylos) or the stabilization of the form of *me* with two perpendicular strokes at the left (highly variable

at Knossos, almost entirely consistent at Pylos) could in principle be geographical variation – communities of writers at different sites making different choices/learning different palaeographical traditions – as much as chronological.¹⁸

Many of these signs apparently simplify in form over time at Knossos (again, comparing the RCT and WW, with the NEP and RCB as possible intermediate deposits) but then show (a greater frequency of) more complex forms again at Pylos. Examples of this pattern include the stems of *na* and *di* (only 6% and 29% of WW examples, respectively, have multiple-stroke stems, compared to 82% and 75% in the RCT, including four- and five-stroke versions in the case of *di*, and 11% and 47% at Pylos); the left-hand side of *me* (58% of examples in the WW have no left-hand strokes; this simplified form is entirely absent from the RCT and Pylos); the inner elements of *mi* (76% of WW examples have no inner elements; only 38% of Pylos examples and 8% of RCT examples lack this feature); the more complex forms of *ku*, e.g. with an additional small vertical or a loop on the left side [169-172, 174], which are never found in the WW; and the more complex forms of *ne*: 98% of WW examples have neither a double left arm nor a central element (just one example has both), while 73% of RCT examples have one of these features (none have both), and in Pylos this figure is 75% (23% with both).

This suggests that, rather than representing the outcome of chronological change, the simplification in the WW may reflect the preferences of the two writers who are predominant in this deposit, Hand 103 and Hand 115 (responsible for about half of WW texts),¹⁹ who use very few of the more complex forms of these signs. (This is not, however, the only pattern seen in the WW: both double-horizontal *a* and *qi* with two legs are more frequent in this deposit than anywhere else, and both are used by Hand 103 and Hand 115). The predominance of Hand 1 and Hand 2 at Pylos can similarly skew the results, e.g. in this site's apparent preference for the form of *di* with horizontals at the top (57% of examples, but used only by Hand 1, Hand 2, and Hand 3; the form with verticals is written by at least eight scribes but provides only 35% of examples) or *ne* with a single-stroke left arm (48% of examples, of which Hand 1 and Hand 2 are responsible for over four-fifths, with seven other scribes

¹⁸ Compare the site/deposit-specific palaeographic preferences in Linear A identified by SALGAR-ELLA 2020.

¹⁹ Based on FIRTH 2000-2001, 172-237; *KT*⁶, 460-461, 463.

also using this form; the two- or three-stroke left arms provide 35% of examples but are used by at least sixteen scribes).²⁰ Moreover, if the NEP and RCB are actually contemporary with the WW (n.11), the apparent chronological pattern at Knossos largely disappears.

Idiosyncratic variants

Variants specific to one site, deposit, or even individual writer exist at all periods of the Linear writing systems' history. For instance, in Linear A the variant of AB 08/*a* showing a dot atop the horizontal bar [47] is only attested at Haghia Triada and Khania; the grape-shaped AB 07/*di* [30] only occurs at Phaistos and Knossos, although this could be chronologically rather than geographically significant;²¹ the elaborate shape of AB 24/*ne* [90-91] is limited to Arkhanes and Zakros; AB 06 with one curved horizontal, a semicircular central element and a segmented stem [3] is unique to Zakros. In Knossian Linear B, *na* with a five-stroke stem [10] only occurs in the RCT, and *na* with an oblong oval stem [18] only in the WW; Hand 201 (NEP) uses various idiosyncratic shapes of *ne* [101-102]. Unique to Pylos are the forms of *di* with horizontals at the top ([42]: Hand 1, Hand 2, Hand 3), *me* with curves at the right instead of a *we*-shape ([75]: Hand 14, Hand 15, Hand 22), and *ne* with a three-stroke left arm ([112]: Hand 5, Hand 21), while others are unique to a single Pylian hand (e.g. *ni* with a two-stroke left branch: Hand 45 [129]; *mi* with various inner elements, e.g. [149], Hand 9A; [150], Hand 20). It is, therefore, an open question whether the Hand 91/Civ *di* ([44]), whose extra horizontal is paralleled only on TH Z 857²² and in Linear A [28], and the form of *a* on two Megaron tablets [58], whose short upper horizontal is perhaps comparable to the Linear A dot [47],²³ are rare continuations of those Linear A forms (and thus 'early' at least in palaeographic terms) or independent, idiosyncratic developments by their writers. (Far from being paralleled only at Knossos,²⁴ the Hand 91/Civ form of *ne* [Ae 995 and Xa 1419 v.1], with a central circle and two-

²⁰ Pylos scribal attributions are based on *PTT*²; on corresponding attributions in other editions, see *CoPY*.

²¹ PH 7 dates to MM IIB; PH 2 and KN 22b may be of similar date (SCHOEP 1995, 65).

²² PALAIMA 1983, 82.

²³ SKELTON 2009, 112-113.

²⁴ PALAIMA 1983, 81-82; 1988, 113.

stroke left arm, is also found at Pylos in Hand 12, Hand 15, Hand 31, Hand 32, and Hand 41 [111]).

Conclusions

This paper has shown that, in the context of the Linear writing tradition of the Bronze Age Aegean, any chronological assumption purely based on palaeographic analysis is to be taken with extreme caution. The palaeography of Aegean Linear scripts is complicated to say the least, and graphic variation often prevails over standardization. Frequently, no clear and systematic processes of development over time can be identified with certainty, even assuming that Linear A, Knossian Linear B, and Pylian Linear B straightforwardly represent different stages of chronological development. Simplified sign-forms are not necessarily a result of chronological development, while elaboration and other more complex processes of variation (which frequently affect individual features of signs independently) coexist throughout the scripts' history. Moreover, even where (for instance) simplification or elaboration does take place over time, this usually affects only the frequencies of use of sign variants: most individual variants tend to persist over time, both from Linear A to Linear B and within Linear B, while idiosyncratic forms also appear throughout the history of both scripts. Other contextual factors may also significantly alter our overall understanding of chronological stages of script development: for instance, the apparently simplified palaeography of the Knossos WW may be due to the predominance of two scribes' individual writing styles in this area, without having definite chronological implications. Therefore, any chronological analyses purely based on palaeography are to be regarded as thoroughly unreliable until further analysis, taking into account both script-internal factors (e.g. variation of whole signs and individual features) and script-external ones (e.g. variation by site or scribal hand), enables a more rigorous and nuanced understanding of palaeographic development over time.

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Gold in the Linear B tablets

Jörg Weilhartner

*Introduction**

Gold is a heavy, rare material, but easy to be worked on due to its malleability, it has a shining colour and a high resistance to corrosion.¹ Accordingly, it has attracted women and men from time immemorial and served as a symbol of status, prestige, wealth, and power: gold was used widely for conspicuous consumption² and ostentatious elite (funerary)³ display – marking social and economic differentiation – in virtually all periods and all cultures across Europe, the eastern Mediterranean and Egypt from the Final Neolithic or the Early Bronze Age respectively onwards; and this holds also true for the Mycenaean palatial period, although there is much less archaeological evidence for gold in this period (c. 1400-1200 BC) than in the preceding Shaft Grave period (1700/1600-1500 BC).⁴ Along with material evidence and pictorial representations for objects made of this precious metal, first and foremost in wall paintings, the Mycenaean palatial period also provides written evidence for gold by means of Linear B records. This written evidence is the focus of the following paper.⁵

* For reading and editing the text and for making valuable suggestions for improvement I am much indebted to Marie-Louise Nosch, John Killen and, especially, Tom Palaima.

¹ On gold in various ancient cultures, see, e.g. DEGER-JALKOTZY & SCHINDEL 2009; MELLER *et al.* 2014. On gold in the (Aegean) Bronze Age, see, e.g. ARMBRUSTER 2013; BETANCOURT 1983.

² For a good introduction into the concept of conspicuous consumption that provides further references to this topic, see LEGARRA HERRERO 2019, 110-112.

³ On the symbolic value of gold in funerary contexts of Middle and Late Helladic Greece, see WHITTAKER 2006.

⁴ Good overviews about gold in the Mycenaean world: DAVIS 1983; ZAVADIL 2009.

⁵ For a short overview of the written evidence of the Mycenaean period, ZAVADIL 2009, 110-111.

The Linear B term for gold

The Greek word for gold, χρυσός, is a loan word from a Semitic source.⁶ In the Linear B corpus this word is attested several times, both as noun (*ku-ru-so /khrusos/ χρυσός*, ‘gold,’ and various forms) and as an adjective (*ku-ru-so /khrussos/ < *khrus-yos*, ‘golden,’ and various forms).⁷ In tablets of the Pylian **Ta** series,⁸ which is arguably a list of precious items related to ceremonial feasting, gold is recorded as inlay for and part of chairs and a footstool respectively (**PY Ta 707, 714**) and, according to an interpretation recently suggested by Tom Palaima and Nicholas Blackwell, in the form of “two ceremonial gold-decorated bridle devices to control the animals during a sacrificial ritual” (**PY Ta 716**).⁹ In a tablet from Knossos, **KN K(1) 872**, *ku-ru-so* is used to specify (parts of) three Vapheio cups recorded by means of the logogram *218^{vas}.¹⁰ Since two rhyta in the shape of a bull’s head (*227^{vas}) used for libations are also listed the overall context of this tablet may be religious in nature. A clear religious context is provided by a tablet from Pylos, **PY Ae 303**, which lists ‘slaves’ of a priestess next to gold, which is modified as sacred (Gr. ἱερός), *ku-ru-so-jo i-je-ro-jo /khrusojo hijerojol*. The meaning of the phrase ‘sacred gold’ and the exact interpretation of the whole tablet, however, are under discussion.¹¹

The word for gold also forms part of the occupational designation *ku-ru-so-wo-ko /khrusoworgos/ *χρυσοφοργός*, which designates the goldsmith.¹² As there is a separate term for the smith working with cop-

⁶ WITCZAK 1994, 55, with references to various etymological dictionaries.

⁷ CHADWICK 1998-1999, 32. For a compilation of all references, see *DMic* s.v.

⁸ BENDALL 2007, 241; *Docs*¹, 332-348; *Docs*², 496-502; PALMER 1969, 338-363; WEILHARTNER 2005, 139-140. An extended bibliography on the **PY Ta** series is provided by PALAIMA & BLACKWELL 2020.

⁹ PALAIMA & BLACKWELL 2020, 77. The two ritual bridle devices/chains are also described as “with gold wrapping or plating on this side and that and perhaps overlaid on toggles or cheek pieces” (p. 67), as “with golden laminate on both sides” (p. 69) or as “gold-leaf covered” (p. 77).

¹⁰ BENDALL 2007, 243; *Docs*¹, 330; PALMER 1969, 363. On the logograms *218^{vas} and *227^{vas} as well as on matchable vessels from the archaeological record, see VANDENABEELE & OLIVIER 1979, 200-205, 268-271.

¹¹ *Docs*¹, 166; KILLEN 1992, 378; PALMER 1969, 127, 278; ZURBACH 2017, 663-668. For a summary, see BENDALL 2007, 24. NB: As regards the interpretation of *ku-ru-so-jo i-je-ro-jo* no definite decision can be made on the question which term represents the noun and which the adjective. Therefore, *ku-ru-so-jo i-je-ro-jo* may be either “sacred gold” or “gold of the sanctuary”. The first interpretation, however, is generally preferred.

¹² BENDALL 2007, 242; LINDGREN 1973, 91. In Classical Greek a goldsmith is designated as χρυσοποιός, χρυσοτέκτων or χρυσοχόος, see DALFEN 2009, 25. A parallel Mycenaean term for a

per and tin, i.e., bronze (*ka-ke-u /khalkeus/ χαλκεύς*, ‘bronzesmith’), a goldsmith can be seen as a prominent craftsperson in Mycenaean society, who has specialised in working with a valuable material and in making prestige items, grave goods and ritual objects. Due to the fact that tablet **PY An 207** lists four goldsmiths – along with some other craftsmen such as potters, bow-makers or tailors/saddlers – as being present at a single place (*a-nu-wa*), there seem to be sufficient resources in gold at the disposal for the goldsmiths to work with on the verge of the destruction of the palace of Pylos.¹³

Another term involving gold may be attested on a tablet from Knossos, **KN K(1) 740**. As it seems, *ku-ru-su-**56 is the name for a globular, two-handled vessel with three feet (**207*^{VAS}). However, whether the first part of this term really refers to *ku-ru-so*, ‘gold’ is under discussion;¹⁴ there is no parallel for a compound consisting of an adjective denoting the material and a noun representing the name of the vessel. Nevertheless, given the fact that the use of *-su-* and the syllabogram **56* in *ku-ru-su-**56 might indicate a loan word, we cannot rule out such a compound. Other vessels (*di-pa*) listed in this tablet are clearly made of bronze. This, however, is indicated by the logogram for bronze: *di-pa* AES **214*^{VAS}+DI 30[.

*The Linear B logogram for gold (*141/AUR)*

Along with the term for gold, reference to this precious metal is made by means of a logogram. The logogram **141/AUR* is attested only in Pylos and it is used either as a sign to denote the raw material/pieces of scrap (**PY Jo 438**; on this tablet see below) – just as the logogram **140/AES* denotes bronze¹⁵ in the Pylian **Jn** series – or as an annotation to logograms of vessels denoting their material (**PY Tn 316; 996**) – again like the logogram for bronze.

The inventory tablet **PY Tn 996** records vessels of gold next to vessels of bronze, and vessels, the material of which is not specified, and are

highly skilled craftsperson who creates fine objects out of another precious material is *ku-wa-no-wo-ko /kuwanoworgos/ κυφανοργός*, ‘worker of blue glass (paste)’.

¹³ Like most of the tablets from the palace of Pylos, **An 207** belongs to the destruction horizon at the end of the palatial period c. 1200 BC.

¹⁴ BENDALL 2007, 243; *Docs*¹, 327; *Docs*², 558; VANDENABEELE & OLIVIER 1979, 245.

¹⁵ On the discussion whether this logogram denotes bronze or copper, see *Docs*¹, 351; SMITH 1992-1993, 172-175.

therefore likely to be of clay.¹⁶ In line 4 the logogram for gold specifies a single bowl without handles and a small pedestal (AUR *208^{VAS}) called *po-ka-ta-ma* – as opposed to another three vessels of this type made of bronze (AES *208^{VAS}). In addition, in line 3 the logogram for gold may appear after the entry of seven vessels made of bronze (AES *205^{VAS}) called *a-te-we*; the term **a-te-u* denotes a tall jug with one handle. Since these vessels are specified as being made of bronze, it seems possible – by analogy to the entries of the *po-ka-ta-ma*-vessels made of bronze and gold respectively listed in line 4 of this tablet – that the small scratch following this entry is part of the logogram for gold referring to another entry of *a-te-we* vessels, which, however, is not preserved.

Vessels made of gold are also recorded on the famous tablet of offerings **PY Tn 316**.¹⁷ This document lists 13 vessels as gifts (*do-ra /dōra/ δῶρα*) for gods by means of three different logograms modified by the logogram for gold: eight simple bowls without handles (AUR *213^{VAS}), three cups with two small handles identified as kylikes (AUR *215^{VAS}), and two handleless conical bowls on a high cylindrical stem resembling chalices (AUR *216^{VAS}), which are, just like the kylikes, without doubt drinking cups. These 13 gold vessels are to be offered within several processions to a number of female and male divine recipients located at various shrines in the sanctuary district of *pa-ki-ja-ne* located in the vicinity of Pylos (and likely including it).

Although the shape of the logogram *141/AUR (Fig. 1), which consists of an X with two semi-circles at the point of intersection and, optionally, a small horizontal stroke at the top of the sign, bears some resemblance to syllabogram *47, the suggestion of Krzysztof Witczak, who takes this logogram as a monogram (coined of the syllabic signs *47/? and *42/*wo* and representing the (not documented) native Greek term for gold later to be replaced by the Semitic loan word χρυσός), should be abandoned.¹⁸ Up to now, there is no convincing proposal for the origin of this logogram. The same holds true for the logogram denoting bronze (*140/

¹⁶ BENDALL 2007, 241; *Docs*¹, 338-339; *Docs*², 572. On the logograms for the vessels in question, see VANDENABEELE & OLIVIER 1979, 209 fig. 137 (*208^{VAS}) and 252-253 fig. 173 (*205^{VAS}). Along with the various vessels this tablet also records three bathtubs “for bathing” (*re-wo-te-re-jo* *225).

¹⁷ On tablet **PY Tn 316**, see BENDALL 2007, 22-23, 241-242 and WEILHARTNER 2013, 152-153 with further references. On the logograms, see VANDENABEELE & OLIVIER 1979, 183-185 fig. 116 (*213^{VAS}), 210-212 fig. 138 (*215^{VAS}), and 212-216 fig. 140 (*216^{VAS}). For arguments of a LH IIIIB date of the production of these vessels, see WEILHARTNER 2013, 163-167 figs. 6-12.

¹⁸ WITCZAK 1994, 56.

AES), which, on present evidence, is the only other metal recorded on Linear B tablets by means of a logogram.¹⁹

Ever since the decipherment of Linear B, sign *141/AUR has been viewed to denote gold,²⁰ and even before the decipherment Emmett Bennett wrote that “the small quantities with this ideogram in Kn01 [= PY Jo 438] would indicate a material of considerable intrinsic value.”²¹ Although far from certain, the small amounts of some entries (about 60 g) and the use of the logogram to indicate the material of vessels strongly speak in favour of this interpretation.

It was Louis Godart who proposed that two variant forms of this logogram, which were up to then viewed as graphic variants not reflecting any difference in meaning, represent in fact two different metals. He views variant A (Fig. 1a) as a reference to gold and the more simplified variant B (Fig. 1b) as a reference to silver.²² Subsequently, Anna Sacconi, and then Jean-Pierre Olivier and Maurizio Del Frio adopted this proposal: in their recently published text editions of the Pylos tablets they all differentiate between *141/AUR (for gold) and *141bis/ARG (for silver).²³ In turn, José Melena makes a similar differentiation and uses AURb for the more simplified variant, which he views to denote either silver or electrum (an alloy of gold).²⁴ Unfortunately, none of the authors pay to the resolutions of the Signary Committee as published in the proceedings of the Colloquium on Mycenaean Studies at Copenhagen, where it was suggested to suppress *141bis acknowledging the need for a further in-depth discussion.²⁵

¹⁹ See below, Fig. 6.

²⁰ See, e.g. FURUMARK 1953, 116 fig. 5 (Gold?); DEROY 1962, 38; *Docs*, 351.

²¹ BENNETT 1950, 218.

²² GODART 2009. See also, FRANCESCHETTI 2012, 252-253, 256-257.

²³ ARN 206-210, 393; *PTT*² IX, 239-240.

²⁴ *PT*³.

²⁵ *Aegean Scripts* 2015, 837: “Finally, after a presentation of the data by Dr. Vassilis Petrakis and considered discussion, it was suggested to reverse the decision of the 13th colloquium in Paris to create a variant transliteration for *141 (i.e. *141bis), since there could be actually three variant signs on the tablet [sc. PY Tn 316] not distributed by scribal hand. Possible scribal variation should not be given as an ideogram variant but rather discussed in interpretation or apparatus. It was therefore suggested to suppress *141bis. This suggestion, however, has been subsequently criticized by some CIPEM members. The Committee therefore acknowledges that there is need for a further in-depth discussion, and suggests that the next colloquium makes the final decision on *141 and *141bis.”



Fig. 1. Variant forms of the Linear B logogram for gold (AUR) at Pylos: a. AUR on **PY Tn 316v.3/5** (after ARN 208); b. AUR on **PY Tn 316v.6/.9** (after ARN 208); c. AUR on **PY Tn 316.4** (after ARN 206); d. AUR on **PY Jo 438.23** (after ARN 39); e. AUR on **PY Jo 438.27** (after ARN 39); f. AUR on **PY Jo 438.15** (after ARN 39).

Looking at the variant forms in detail one notes that the variations are restricted to the top of the sign: the variants viewed by Godart as gold (Fig. 1a) have a short horizontal stroke at the top of the sign, whereas the variants viewed as silver do not have this stroke (Fig. 1b). The assumption that this minor variation should result in two different logograms referring to different materials has, to the best of my knowledge, no parallels within the whole Linear B corpus. Aside from that, some examples on **PY Tn 316** and most examples on **PY Jo 438** show the first variant with two additional small vertical strokes, which are added within the triangle (Fig. 1c).²⁶ Moreover, in the lower half of tablet **PY Jo 438** even more variants appear: a variant with only one additional small vertical stroke added within the triangle (Fig. 1d), a variant, where the horizontal stroke is clearly abbreviated (Fig. 1e), and a variant, which has the two additional small vertical strokes but is written seemingly without the horizontal stroke, as this sign (nearly) touches the line above (Fig. 1f).²⁷ This compilation of all variants – and especially the variant on **Jo 438** without the horizontal stroke (Fig. 1f) – seems to speak against the differentiation made by Godart. In addition, as Tom Palaima kindly reminds me, **Tn 316** is a tablet that was formatted and written hurriedly in an exceptionally complicated way on a tablet surface that was not conducive to writing perfect forms of individual signs. It has a good many instances where standard elements of signs are omitted (see, e.g., the various forms of the syllabogram *-qe-*) as the scribe rushed through writing the text.

As I tried to show in my paper at the last Mycenological colloquium, there is good evidence to view variant forms of logograms as a

²⁶ This led Petrakis at the last Mycenological colloquium at Copenhagen to consider the existence of actually three variants, see n. 25.

²⁷ In *PT II*, 49, the sign on line .15 is drawn without the two additional vertical strokes. However, the horizontal stroke is clearly missing. This is also true for the sign on line .17.

reflection of scribal idiosyncracies and/or chronological developments, and to consider them insignificant in terms of meaning.²⁸ To repeat one example, I refer to the logogram of wool, which documents a remarkable diversity of shapes.²⁹ The various parts of the logogram display significant differences in shape, size, and internal relation of proportions; some parts have even been omitted (Fig. 2a-c). Nevertheless, the morphological diversity of this sign does not imply any difference in meaning. And this statement holds true both for abstract and pictorial logograms.³⁰

Even more, there are clear examples of variant forms of logograms written by the same scribe on the same tablet. The various logograms of olive oil as written within the tablets **KN Fp(1) 1** and **Fp(1) 48** clearly demonstrate that variant forms written by one and the same scribe on the same tablet are mere graphic variants (Fig. 3a-b). Another example is provided by tablet **KN Ak(2) 616**, which shows two logograms for woman (Fig. 4a-b), the first with dots (indicating breasts), the second without dots (which is the more usual way how scribes drew this sign). As has been made clear by Emmett Bennett (for the logogram for olive oil/OLE) and John Chadwick respectively (for the logogram for woman/MUL) a long time ago, there is no valid basis to postulate any difference in meaning of the variants in question.³¹



Fig. 3. Variant forms of the Linear B logogram for olive oil (OLE) written by scribal Hand 138 at Knossos: a. OLE on **KN Fp(1) 1.5** (after *CoMIK I, 1*); b. OLE on **KN Fp(1) 1.9** (after *CoMIK I, 1*).



Fig. 4. Variant forms of the Linear B logogram for woman (MUL) written by scribal Hand 108 at Knossos: a. MUL on **KN Ak(2) 616.1** (after *CoMIK I, 227*); b. MUL on **KN Ak(2) 616.1** (after *CoMIK I, 227*).

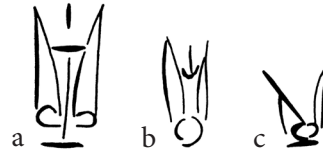


Fig. 2. Variant forms of the Linear B logogram for wool (LANA) at Knossos: a. LANA on **KN Dk(1) 5733** (after *CoMIK III, 123*); b. LANA on **KN Lc(1) 525** (after *CoMIK I, 190*); c. LANA on **KN Od(4) 485** (after *CoMIK I, 176*).

²⁸ WEILHARTNER 2017a.

²⁹ For details, see NOSCH 2007, 15-21; WEILHARTNER forthcoming.

³⁰ For more examples see WEILHARTNER 2017a.

³¹ BENNETT 1966, 17; CHADWICK 1963, 124-125.

As it seems, during the process of repeating logograms on the same tablet, scribes usually failed to produce exact images, either through carelessness or to save time or space. The scribes were not bound to strictly standardized sign-forms, as long as the text was comprehensible to those persons who were involved in the transactions recorded or who would consult it later. Therefore, for the time being, I would suggest to maintain the traditional interpretation of all variant forms of the sign *141/AUR as gold (Fig. 1). The omission of the small horizontal stroke may be due to carelessness or simplification caused, at times, by the fact that the logogram (nearly) touches the line above it. A similar minor variation is to be observed, for example, among the logograms for wool (Fig. 2) or woman (Fig. 5): some variants show a small horizontal stroke (albeit at the bottom of the sign and not at the top), some variants do not. As in the case with the logogram for gold, at times both variations appear among signs written by the same scribe (Fig. 5). Furthermore, a comparable minor variation is attested in the logogram for bronze, which consists of a straight, single, vertical line and a small second element of rectangular shape near the middle of the vertical stroke (Fig. 6). Within the **PY Jn** series the sign as drawn by scribal Hand 2 usually shows an additional horizontal stroke within the small rectangle, whereas scribal Hand 21, like his colleagues at the palace of Knossos, omits this option. However, on occasion both variants appear on the same tablet written by the same scribe (Fig. 6a-b). And this, again, seems to speak in favour of viewing all variant forms of *141 as referring to a single metal i.e. gold.

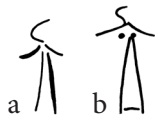


Fig. 5. Variant forms of the Linear B logogram for woman (MUL) written by scribal Hand 103 at Knossos: a. MUL on KN Ak(1) 610.1 (after *CoMIK* I, 224); b. MUL on KN Ak(1) 612.A (after *CoMIK* I, 225).

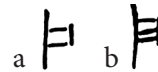


Fig. 6. Variant forms of the Linear B logogram for bronze (AES) written by scribal Hand 2 at Pylos: a. AES on PY Jn 478.2 (after ARN 18); b. AES on PY Jn 478.3 (after ARN 18)

PY Jo 438: Evidence for non-palatial acquisition of gold?

Archaeological evidence of highly valued prestige goods made of exotic materials in the Greek mainland leaves no doubt that Mycenaean kingdoms participated in the international networks of exchange of the

Late Bronze Age eastern Mediterranean and Egypt.³² Workshops dealing with precious materials are concentrated in palatial centres and written sources provide clear evidence for palatial craft specialists working with non-local materials such as ivory (*e-re-pa /elephas/* ἑλέφας), blue glass (*ku-wa-no /kuwanos/* κύανος) or gold (*ku-ru-so /khrusos/* χρυσός).³³ This evidence hints at a strong desire for palatial centres to control access to long-distance exchange and production of prestige items made of exotic materials. The composite nature of some objects, combining different foreign materials on the same product, clearly reflects palatial elite self-definition and conspicuous consumption typical for palace-sponsored production. It has therefore been suggested that the palaces dominated, if not monopolised, commerce in high-valued materials that were not locally available assuming that they were “the only organizations with sufficient capital and political authority to acquire [...] high-value commodities and raw materials” from abroad.³⁴ On the basis of the location of workshops dealing with precious raw materials (which are documented only at palatial sites) on the entire Greek mainland as well as of the patterns of deposition of valuable items in tombs and settlements in the Argolid Sofia Voutsaki suggests that in the Mycenaean palatial period (LH III A2-LH III B) palatial centres controlled the production, circulation and consumption of prestige items made of ivory, faience, semi-precious stones and precious metals.³⁵ Consequently, she assumes that palatial centres exerted full control over external supplies. By contrast, Sue Sherratt takes a rather different position arguing (at the same conference) that palatial centres neither had the means nor the desire to exert overall control over long-distance exchange (which she envisions as organized along a series of interlinked and overlapping chains of longer-distance route networks involving different carriers and systems rather than operated by single carriers traversing the entire distance).³⁶

³² CLINE 1994; VAN WIJNGAARDEN 2016, 353-356.

³³ BENNET 2007, 200; BERNABÉ & LUJÁN 2008, 203-204, 211-213, 227; DE FIDIO 2001, 20.

³⁴ BENNET 2007, 191. See also p. 200.

³⁵ VOUTSAKI 2001; 2010.

³⁶ SHERRATT 2001, esp. 238. On the discussion whether the acquisition of exotic raw materials and finished prestige items was administered and controlled exclusively by palatial centres or whether local elites in various places were able to acquire imported materials and luxury products independently of the palace via independent merchants, see, e.g., DE FIDIO 2001, 20; VAN WIJNGAARDEN 2016, 349-350.

Gold, which is not readily available in the south Aegean and has to be imported from external sources, was clearly part of high-level diplomatic (gift)-exchange between rulers of different regions of the eastern Mediterranean and Egypt as is demonstrated by the Late Bronze Age Amarna letters.³⁷ Even though there is no direct evidence in these correspondences it seems highly likely that the rulers of Mycenaean kingdoms were among the recipients in such an exchange network. However, a page-shaped Linear B tablet from Pylos, **PY Jo 438**, on which 29 entries dealing with various amounts of gold are listed by means of the recurring logogram *AUR*,³⁸ seems to suggest that (raw/unworked) gold or scrap pieces of gold reached the Greek mainland also by ‘private’ trade mechanisms, driven by agents who were not attached to the palatial economic system. Although the poorly preserved heading line – which is lost apart from the last word, *ko-re-te* – does not make its purpose clear, the layout of the text, the parallels of the bronze requisition text **PY Jn 829**, the nominative case of the entries (whether place names, personal names, titles or a combination of them) and the regularity of the quantities point to an interpretation as a record of quantities of gold to be paid by local officials to the palace;³⁹ this tablet may be viewed as a “special taxation record.”⁴⁰ As it seems, the palatial administration takes a close interest in recording considerable quantities of gold, which range from *P* 3 [63 g] via *N* 1 [250 g] to *M* 1 [1 kg] and which add up to 5-6 kg of this material.⁴¹ These quantities are to be sent in the form of contributions by a large number of local officials – among them *ko-re-te*, *po-ro-ko-re-te*, *mo-ro-qa*, *qa-si-re-u*, and, probably, *du-ma*. Whether this happened in the context of raising funds to finance foreign mercenaries to assist in the defence of the kingdom, as suggested by John Chadwick,⁴² or on an

³⁷ CLINE 1994, 35; LEGARRA HERRERO 2019, 108; VAN WIJNGAARDEN 2016, 356.

³⁸ CHADWICK 1998-1999, 31-34.

³⁹ If (some of) the local officials are viewed as local representatives of the palace they would collect the taxes rather than pay them from their own holdings. On the differentiation between locally based officials and palatial appointees, see NAKASSIS 2013, 8-14 with further references.

⁴⁰ BENDALL 2007, 242; CHADWICK 1998-1999, 33; *Docs*!, 359. See also KILLEN 2006, 85 n. 18: “The evidence of **Jo 438**, however, which records contributions of gold by local officials to the palace, makes it clear that some gold at least was available in the districts.”

⁴¹ BENDALL 2007, 242; CHADWICK 1998-1999, 33. In this context it seems interesting to note that all gold objects from the Shaft Graves taken together weigh about 15kg, see ZAVADIL 2009, 99.

⁴² CHADWICK 1998-1999, 37.

other special yet unclear occasion,⁴³ this tablet provides strong positive evidence for the assumption that the local officials of the districts, which make up the territory controlled by the palace of Pylos, had gold at their disposal. Whatever the purpose for sending all this gold to the palace, it seems rather unlikely that this gold, which was sent to the palace as a compulsory levy, should have been originally obtained via the palace.

Further evidence for the view that local elites were able to acquire gold independently of the palace may be provided by the (comparatively frequent) deposition of gold items in chamber tombs of LH IIIA2-B date of the site Antheia/Ellinika.⁴⁴ On present evidence there is no straight-forward link between (the various settlements of) this site located near the eastern border of Messenia and the palace of Pylos.

In addition, investigations (by means of non-invasive measurements) on the composition of alloys of more than 400 gold artefacts of Messenia point to different origins of the gold used.⁴⁵ The great heterogeneity of the data speaks against the hypothesis of acquisition of gold from a single source but rather points to a multiplicity of sources, even for a single artefact. This, in turn, may be another argument for the view that gold arrived in Mycenaean Greece through different forms of exchange, taking place at the same time and overlapping with each other. Consequently, I doubt that the authorities of Mycenaean palaces had complete control over external trade in gold or internal distribution of gold. In any event, two tablets from Pylos (**PY An 35; Un 443**), which record *tu-ru-pte-ri-ja /struptēria/* cf. στρυπτήρια and are likely to reflect extraterritorial trade in alum (which is not available in Messenia) taking place independently of the palace, clearly point to the existence of multiple mechanisms of exchange.⁴⁶ On balance, allowing for archaeological as well as written data, I argue in favour for a non-palatial sector acting not only in regional economic affairs of Mycenaean polities⁴⁷ but also in the mechanisms of external exchange and acquisition of high-valued exotic materials.

⁴³ In any event, the total quantity of gold recorded on this tablet seems to be too high to be viewed as a transaction to be delivered on a regular basis, see CHADWICK 1998-1999, 33.

⁴⁴ ZAVADIL 2013, 274-287.

⁴⁵ GIGANTE & RIDOLFI 2020, 546-548.

⁴⁶ On these tablets, see BENNET 2007, 201; HALSTEAD 1992, 71 f. See also WEILHARTNER 2017b, 206 with further references.

⁴⁷ For the non-palatial sector of Mycenaean economy, see HALSTEAD 1992 and various papers in VOUTSAKI & KILLEN 2001. For a summary of this topic, see BENNET 2007, 195-196. See also WEILHARTNER 2017b, 203-207, 219 fig. 1 with further references.

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4



𐎠𐎵𐎲𐎠𐎧𐎺𐎠

Linear B vocabulary



Mycenaean *to-ko*

Alberto Bernabé

The word *to-ko* has received very little attention from researchers.* It is found in two documents: **KN As(3) 1518** and **PY Xa 412**. The aim of the paper is to propose a reading and interpretation of the term for both documents.

In **KN As (3) 1518** *to-ko* appears four times.

- .1] VIR 5 to-ko[we-e-]wi-ja 1 .[
.2]VIR 5 we-e[-wi-ja] , to-ko 1 .[
.3] VIR 5 we[-e-]wi-ja to-ko 1 .[
.4]rē-we VIR 5 wē-e-wi-ja , to-ko 1 .[
.5] vac. [] vac.].
 .3 Perhaps]rē-wē (but very faint).

In a previous paper,¹ following a proposal by Ruijgh,² I argued in favour of interpreting *we-e-wi-ja* (also documented in **PY Ub 1318.4, .6, .6**) as $\text{few}\eta\text{fi}\bar{\alpha}$, a derivative in *-iā* of a trade name in $-\epsilon\upsilon\varsigma$, * $\text{few}\epsilon\upsilon\varsigma$ ‘tailor,’ which would derive in turn from the root **wes-* ‘to dress’ (cf. $\xi\nu\nu\upsilon\mu$). $\text{few}\eta\text{fi}\bar{\alpha}$ would mean both ‘tailor’s trade, tailoring’ and ‘product(s) manufactured by a tailor, dress(es).’³

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¹ BERNABÉ 2014, 9, 17.

² RUIJGH 1966, 144-145; 1967, 124-125.

³ Cf. *LGM*, 204. For alternative interpretations see *DMic* 416, s. v. *we-e-wi-ja*.

As for *to-ko*, the interpretations τόκος, τοῖχος or στοῖχος have all been proposed.⁴ However, τόκος is not congruent with the context in the sense of ‘breeding,’ ‘gestation,’ nor is it if interpreted as ‘childbirth,’ or in the economic sense of ‘interest.’ τοῖχος ‘wall’ is not acceptable, either.⁵ It is, therefore, preferable to interpret *to-ko* as στοῖχος.⁶

As for its formation, στοῖχος is a noun related to the verb στείχω, a variant with *o*-grade of the zero-grade form στίχος. στείχω means ‘march in line or order, walk, march, go or come towards a determinate direction.’ The noun refers to a row in an ascending series (Hdt. 2.125); especially to a row of persons marching one behind another, as in a procession (Ar. Ec. 756); or a row of soldiers (Th. 4.47). In **KN As (3) 1518**, which deals with dresses, it would mean ‘series, fixed number.’ Each group of five men (‘VIR 5’) would be responsible for making a ‘series’ of dresses (φεηφιῖᾱς στοῖχος), which would involve a certain quantity or an outfit of various sizes as a whole.

The Pylos tablet in which the word reoccurs, **PY Xa 412**, is a very peculiar document.

PY Xa 412

Recto

to-κ̄ϝ : : : : vest. [7

Verso

di-we ṣi-po-ro ti-m̄i-to-qo⁸

to-κ̄ϝ is found in the *recto*, which is divided into five or more sections by vertical ruling; there is trace of sign after the last rule.

In the *verso* of this tablet a mysterious sequence *di-we ṣi-po-ro ti-m̄i-to-qo* appears, which is repeated with few differences in **Aq 218 v.**, and

⁴ *DMic s. v. to-ko.*

⁵ *Docs¹ 410; Docs² 586.*

⁶ *LGM, 428-429; RUIJGH 1966, 150; 1967, 125; SACCONI 1967, 123 n. 109.*

⁷ “r. sans doute palimpseste; divisée en au moins cinq compartiments par des lignes verticales transcrites par un double point:” *ARN, PTT²* “Ruled into 5 or more compartments by vertical ruling, transcribed by semicolons (:):” *PT³* ([[]]) [instead *vest.*].

⁸ “Division en mots par comparaison avec **Aq 218 v.** et **Tn 316 r.** ... traces après le *-go* non incompatibles avec un *ma* (mais plus petit et avec une autre inclinaison):” *ARN, PTT²*. “Word division by comparison with **Aq 218 verso**, and **Tn 316 recto**.” *PT³*.

Tn 316 r. bottom right. The position of this sequence in the documents, its apparent lack of relationship with the text of the tablets on which it occurs, and the difficulties in segmenting it and making sense of it have led to the proposal that it is a school calligraphic exercise reflecting a mnemotechnic order of the elements of the syllabary – as in the *iroha* order of the Japanese *kana* script – that is, the standard order of the first signs of the Linear B syllabary.⁹

Given this interpretation of the *verso* of **PY Xa 412**, which I find quite acceptable, *to-ko* could be precisely interpreted as the designation of this sequence of graphic signs.¹⁰ This is why I also propose to read it as *στοῖχος* ‘row,’ but in the sense of ‘series (of signs).’ We have related forms derived from the same root in alphabetic Greek, as *στοιχείον* ‘letter’ (Pl. *Cra.* 424d), *κατὰ στοιχείον* ‘in alphabetical order’ (*AP* 11.15). In 1st millennium Greek we find several attempts to differentiate *στοιχείον* ‘a simple sound of speech’ from *γράμματα* ‘written letters,’ but the two terms usually alternate.¹¹ The etymology of *στοιχεῖα* and the use of *to-ko* in Mycenaean suggest that the distinction would be between *γράμματα*, which would refer to ‘signs that are written’ (*γράφω*), and *στοιχεῖα*, which would refer to ‘letters or sounds as a sequence,’ both when writing words and learning by heart their fixed sequence. However, such distinction must not have been too evident to the speakers.

If this is so, it is curious that the ‘row’ metaphor would have already been applied in the 2nd millennium BC to the graphic signs, in order to refer to their fixed sequence.

⁹ BERNABÉ & LUJÁN 2020, 41 n. 13; DEL FREO 1996-1997, 158; DUHOUX 2008, 327; MELENA 2014, 89-91, 163; PALAIMA 2011, 51-52, n. 30; RUIPÉREZ & MELENA 1990, 110.

¹⁰ The vertical lines in **Xa 412 r.** could symbolise the ‘established’ order of the syllabic signs.

¹¹ Instances in *LSJ* online, s. v. *στοιχείον*.

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**Linguistic evidence for animal husbandry
in the Linear B tablets:
occupational terms, titles and personal names***

Elena Džukeska

Linear B livestock records have been analysed exhaustively over the years, and various issues regarding their interpretation have been discussed. The aim of this paper is to examine animal husbandry vocabulary, as attested on the Linear B tablets, with focus on occupational terms, titles and personal names derived from them, used to designate agents performing actions pertaining to domestic animals. For the purposes of the analysis, Mycenaean linguistic evidence was compared with literary and epigraphic sources from the post-Mycenaean period, and in the present paper an attempt shall be made to establish the differences and similarities between Mycenaean and post-Mycenaean data in order to expand our understanding of the development of this category of appellatives in Greek.

Occupational terms derived from words for domestic animals

Occupational terms associated with animal husbandry in Greek are typically derived from words for domestic animals. Given the important role of nominal composition in Greek, it is not surprising that verbal governing compounds with a word for domestic animal as first member represent a significant group among these appellatives. The verbal second member is most frequently a verbal noun in *-oç* in the *o*-grade

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as in βου-κόλος 'ox-herd,' or an agent noun in -της (< -τᾶς) as in βου-βότης 'ox-herd.' With regards to their meaning, these compounds correspond to object-verb phrases, cf. ὁ δ' ὄφρα μὲν εἰλίποδας βοῦς βόσκει ἐν Περκώτῃ ... (Hom. *Il.* 15.547-548).

Occupational terms related to animal husbandry can also be simplicia, derived from words for domestic animals by means of suffixes typical for agent nouns such as -τᾶ-, -ευ-, cf. βού-της (< βοῦς) 'ox-herd,' μελλισ-εύς 'bee-keeper' (< μέλισσα), προβατ-ευ-τής (< πρόβατον) 'shepherd.'

The examination of Greek language dictionaries, indexes and etymological dictionaries reveals that in the literary and epigraphic sources from the post-Mycenaean period of Greek language there are occupational terms derived from the nouns βοῦς 'cow, ox,' αἶξ 'goat,' ἵππος 'horse,' ὄνος 'donkey, ass,' μέλισσα 'bee,' σῦς/ῦς 'swine, pig,' χοῖρος 'young pig,' οἶς 'sheep,' πρόβατον 'sheep,' ἀρήν 'lamb,' χήν 'goose,' ἀλεκτρυών 'cock,' ὄρτυξ 'quail,' κάμηλος 'camel.' Words for 'flock,' 'herd of animals' such as ἀγέλη and μῆλον also served as first members of compound appellatives that indicate agents in the area of animal husbandry. However, not all words for domestic animals were equally productive and frequently used. The words for 'ox' and 'horse' occur as first members in compounds with various verbal roots, cf. ἵππο-βώτης, ἵππο-κόμος, ἵππο-δαμαστής, ἵππο-νώμας, ἵππο-τρόφος, ἵππο-φορβός, ἵππο-σκόπος and βου-κόλος, βου-βότης, βου-τρόφος, βου-φορβός, βου-μολγός, βου-τύπος, βοο-βοσκός, βο-ώνης, covering different aspects of animal husbandry (feeding, rearing, tending, grazing, taming, milking, slaying, trading, managing). These animal words even served to form three-member compounds such as ἵππο-βου-κόλος or ἐπι-βου-κόλος. The word for 'goat,' on the other hand, was used to form compounds with only a few verbal roots with similar meaning, cf. αἰ-πόλος, αἰγι-νομεύς, αἰγο-βοσκός 'goat-herd.' As it is to be expected, the use of words for domestic animals in the derivation of occupational terms had changed with time. Appellatives derived from the words for 'ox,' 'pig,' 'goat,' 'flock' such as βου-κόλος, συ-βώτης, συ-φορβός, αἰ-πόλος, μῆλο-βοτήρ are attested in Homer the earliest, whereas an isolated compound with the word for 'camel' such as καμηλο-βοσκός is found only in later Greek, in a specific context.

As to the verbal second members of these compounds, nouns derived from the verbal roots meaning 'to feed,' 'to graze,' 'to rear,' 'to tend' and 'to trade,' cf. βόσκω, φέρβω, νέμω, τρέφω, πέλω/πέλομαι and πωλέω

were frequently used to form occupational terms, with different words for domestic animals. And the verbal and agent nouns βότης, βοτήρ, βοσκός from βόσκω ‘feed, graze, tend’ had the greatest productivity, cf. βου-βότης, συ-βώτης, ίππο-βώτης, μηλο-βότης, μηλο-βοτήρ and αίγο-βοσκός, προβατο-βοσκός, άρηνο-βοσκός, χηνο-βοσκός, καμηλο-βοσκός. Although the verbal elements -πόλος / -κολος, -νομος, -βοσκος, -φορβος, -τροφος, -κομος differ in their specific meanings, the compounds they formed have the same meaning – ‘the one who tends cattle,’ cf. Poll. 1.249; Plat. *Tht.* 174d3-6; *Pol.* 268a5-b6.

Compound appellatives that designate agents performing particular actions pertaining to livestock were also used as personal names, cf. *Αίπολος*, *Αίγίνομος*, *Βούκολος* etc., as adjectives or epithets with an active meaning, cf. *ἐφ’ ίπποπόλων Θρηκῶν* (Hom. *Il.* 13.4); *Τρώων ίπποδάμων* (Hom. *Il.* 2.230) and as titles, cf. *Μελισσονόμοι*, *αί*, priestesses of Artemis (Aristoph. *Ra.* 1273-1274).

The number of occupational terms, compounds or simplicia derived from different words for domestic animals, attested in the post-Mycenaean literary and epigraphic sources, indicates that the specialisation of labour with respect to the animal species was of primary importance. The evidence from the Linear B tablets points to the same conclusion.

On the Linear B tablets there are records of sheep, oxen, goats, pigs, horses, donkeys, foals. And in accordance with these livestock records,¹ compound appellatives derived from the words for ‘ox,’ ‘horse,’ ‘pig’ and ‘goat’ have been found, with certain correspondences or close parallels in later Greek. The word for ox βούς, spelt *qo-* and *qo-u-*,² is attested in the compounds *qo-u-ko-ro* and *qo-(u)-qo-ta*, which correspond to *βουκόλος* and *βουβότης* ‘ox-herd.’ The word for horse *ίππος*, spelt *i-qo*

¹ For an account of the domestic animals and livestock records see *Docs*², 195-196; *DMic* I, II, Supl. s.v.; DUHOUX 2021, 327-331; ROUGEMONT 2016, 313-314; WAANDERS 2012, 295-300. The interpretation of the forms *ka-no* and *ka-si*, *e-mi-jo-no-i*, *ko-ro* found on the Theban Ft and Gp tablets as words for ‘goose,’ ‘mule,’ ‘young pig’ provoked considerable discussion. Whether or not we agree that these words were names of animals or personal names, place names, occupational terms, or designations of groups of people dressed as animals, the possibility that at least some of them are etymologically related to zoonyms cannot be excluded (DUHOUX 2008, 231-250; *FdCI*, 319-321; WAANDERS 2012, 301-302; WEILHARTNER 2021, 337).

² The spelling without *u*, if not a result of dissimilation or alternative spelling of the diphthong *ou*, may be evidence for the use of two different stem-forms *g^wou-* and *g^wō-*, cf. acc. βῶν, Myc. plur. *qo-o*, cf. Dor. βωκόλος (*Docs*² 577; RUIJGH 1985, 152, n. 168; RUIPEREZ 1957, 192). If so, it is of significance that it is attested only in Pylos and only for *qo-qo-ta*.

and *i-po*³ is attested in the compound *i-ḡo-po-ḡo*, ἵπποφορβός ‘horse-herd,’ and the word for pig *ḡs* in the compound *su-ḡo-ta*, *σὺβώτης* ‘swine-herd.’⁴ Phonological differences and peculiarities left aside, these compounds show the same pattern of nominal composition as their correspondences in later Greek.

The verbal and agent nouns derived from the roots **k^wel-/k^wol-/k^wl-* ‘to turn, move around, dwell,’ **ḡ^weH₃-/*ḡ^woH₃-/*ḡ^wH₃-* ‘to feed, graze’ and **b^herg^w-/*b^horg^w-* ‘to feed, nourish’ are attested as second members in other Mycenaean compounds as well, cf. *a-pi-ḡo-ro* (ἄμφίπολος), *pa-ḡo-ta* (Παμβούτας), *ra-wo-po-ḡo* (Λεώφορβος). However, their productivity in the composition of appellatives with words for animals seems to be significantly low compared to later Greek, cf. *βουκόλος* and *αἰπόλος*; ἵπποφορβός and *συφορβός*, *ὄνοφορβός*; *βουβότης*, *σὺβώτης* and *μηλοβότης*, *ἵπποβώτης*.

Bearing this in mind, as well as the antiquity of the Linear B tablets, one might wonder whether the specific meaning of these verbal elements was still preserved in the Mycenaean compounds they formed, and whether the only two compounds with the same first member *βoṽs*, *ḡo-u-ko-ro* and *ḡo-(u)-ḡo-ta* had different meanings.⁵

The following observation should be taken into consideration. The terms *ḡo-u-ko-ro* and *i-ḡo(po)-po-ḡo* are never accompanied by a personal name, and are used in plural or in dual in most of the cases, cf. *βουκόλοι ἄνδρες* (Hom. *Il.* 13.571).⁶ The terms *ḡo-ḡo-ta* and *su-ḡo-ta*, on the other hand, are attested only in the singular and in the Pylos **Ea** series, and they are used as designations of landholders, identified as individuals whose social status was not low. If they were tending cattle, they were probably those who were managing, rather than literally feeding the cattle in terms of day-to-day care.⁷

³ The spelling *i-po-* instead of the usual *i-ḡo-* (<*-*ekw-o-*) in the Pylos dat. plur. form *i-po-po-ḡo-i* (PY Fn(1) 79.10) is probably a result of dissimilation (LEJEUNE 1972, 47, n. 3; MILANI 2008, 543).

⁴ For the instances and bibliography, see *DMic* I, II, Supl. s.v.; GSCHNITZER 1979, 123; LEUKART 1994, 49, 50 and n. 6, 9; MEISSNER & TRIBULATO 2002, 307, 309; MORPURGO DAVIES 1979, 102-103; WAANDERS 2008, 33, 35, 42; 2012, 297.

⁵ Cf. the different interpretations of *ḡo-u-ko-ro* vs *ḡo-(u)-ḡo-ta*: herdsmen of any domestic livestock vs. herdsmen of oxen (PALMER 1969, 133, 451); men who yoke the oxen and use the plough vs ox-herds, men who feed and graze oxen (PALAIMA 1989, 115; WEILHARTNER 2021, 339); peasants, ordinary men with one or two oxen used as draught animals to work on land vs. chief ox-herds and similarly *su-ḡo-ta* ‘chief swine-herd’ (RUIJGH 1987, 307, 320).

⁶ On the role of the groups of ox-herds in Pylos see PALAIMA 1989, 85-124.

⁷ NAKASSIS 2013, 90, 101, 132, 337.

It should also be noted that there is a significant difference in the frequency of the use of *qo-u-ko-ro* and *qo-(u)-qo-ta* in Mycenaean and *βουκόλος* and *βουβότης* in later Greek. While *βουκόλος* is regularly used by different authors, starting with Homer, the use of *βουβότης* is isolated, cf. Pind. *Isth.* 6.32. On the other hand, in Mycenaean both compounds seem to be equally common, cf. eight instances of *qo-u-ko-ro* in Pylos and one in Tyrins,⁸ and four instances of *qo-qo-ta* in Pylos and one instance of *qo-u-qo-ta* in Knossos.

In view of the above, it may not be fortuitous that only one occupational term for each animal species is attested on the tablets, except for oxen. The overall meaning of these appellatives was ‘to tend, raise cattle’ irrespectively of the second verbal member, but the distribution of the different verbal elements was perhaps initially related to how each animal species is provided with food.⁹ Oxen were obviously the most important animals, and the specialisation of labour was of primary importance in their case. Considering the productivity and the semantics of the verb *βόσκω* in Mycenaean and in later Greek, it is not surprising that the agent noun *-qo-ta* served to form an additional occupational term with a broader meaning compared to the one formed with the agent noun *-qo-ro*.

Similarly, there is only one compound appellative, *a₃-ki-pa-ta*, derived from the word for goat, *αἴξ*, and formed with a verbal member, that is not found in the other Mycenaean occupational terms associated with animal care, and is not attested in any of the later Greek words for ‘goat-herd.’ It has been interpreted as an agent noun derived from a verbal root meaning ‘to graze, feed’ such as **pH₂-t-*, cf. *πατέομαι* ‘eat, drink, taste,’¹⁰ or even better simply from the root **peH₂-/*pH₂-* ‘to watch over, protect, graze,’ from which **pH₂-t-* itself originated with the enlargement *-t-*,¹¹ or as an agent noun related to *παπταίνω* ‘to look around, glance at sth.’¹² That the meaning of this verbal element is related to pro-

⁸ In Knossos possibly *Ju-ko-ro* (KN As 5609.2; Xe 8546.1) may be reconstructed as *qo-u-ko-ro*. Cf. also *o-pi qo-u-* (KN Od(1) 691.2) for *qo-u-ko-ro* or *qo-u-qo-ta* (DMic Supl.s.v.).

⁹ On the need to have specialised herders for each animal species and the different words for flocks in Greek, see BENVENISTE 1969, 41. On the importance of feeding and nourishing reflected in the composition and semantics of Mycenaean occupational terms and titles, see PALAIMA 2021, 385-389.

¹⁰ EDG II, 1158; DELG III, 863. Cf. also PALAIMA 2021, 386; WEILHARTNER 2021, 338.

¹¹ BADER 1976, 18, 22-27; LEUKART 1994, 82-84; MEISNER & TRIBULATO 2002, 321, n. 91.

¹² EDG II, 1150-1151; DELG I, 36; III, 856, 863. Cf. also HEUBECK 1963, 13-21, for a different interpretation: *Aig-iptās*, ‘der die Ziegen (im Pferch) zusammendrängt.’

tection can be guessed from the context of Pylos **Ae** tablets, where a_3 -*ki-pa-ta* is used to describe someone who is watching over quadrupeds, cf. *o-pi*, *ta-ra-ma-ta-o*, *qe[-to-ro-po-pi]* *o-ro-me[-no* (**PY Ae(1) 108**) and *o-pi ta-ra-ma-ta-o qe-to-ro-po-pi* (**PY Ae(1) 489**). A semantical parallel in Homer, cf. ἐνθάδε τ' αἰπόλια πλατέ' αἰγῶν ἔνδεκα πάντα, ἐσχατιῇ βόσκοντ', ἐπὶ δ' ἀνέρες ἐσθλοὶ ὄρονται (Hom. *Od.* 14.103-104), indicates how it is related with feeding. Goats move in search for their food the farthest and consequently need to be watched and protected carefully.

As to the sheep, a compound formed with the word for sheep *ῶις* is probably *o-wi-de-ta*, cf. dat. plur. *o-wi-de-ta-i* (**PY Un 718.2**). Its second member could be related to the verb *δέρω* 'skin, flay', or *δέω* 'bind, tie.' However, this word is not an occupational term, but rather a religious title, derived from a compound which reflected the activity of flaying or binding sheep, **/owidertās/*, cf. *ῶιν ἄργυρον ὠκύς Ἀχιλλεύς σφάξ'. ἔταροι δ' ἔδερὸν τε καὶ ἄμφεπον* (Hom. *Il.* 24.621-622) or **/owidetās/*.¹³ There is no exact correspondence for */-dertās/* in later Greek, but a verbal noun *-doroσ* is attested in the adjective *βου-δόρος* 'flaying oxen,' cf. *Μῆνα δὲ Ληναιῶνα, κάκ' ἤματα, βουδόρα πάντα* (Hes. *Op.* 504) and *-doras* in *Προβατο-δόρας, Αἰγιο-δόρας*, alternative names of the month *Ληναιῶν* (Procl. *ad Hes. Op.* 502). Whereas, the verbal agent noun *-detης* is found in *ἵππο-δέτης* 'binding horses,' cf. *δύο δ' ἀργίποδας κριοὺς ἀνελῶν, ... τὸν δ' ὄρθον ἄνω κίονι δήσας, / μέγαν ἵπποδέτην ῥυτήρα λαβῶν* (Soph. *Aj.* 237-241).

Finally, the dat. loc. plur. form *po-ro-po-i* (**MY Oi 701.4**) might be possibly reconsidered as an occupational term composed from the word for foal, *πῶλος*, cf. Myc. *po-ro*, and the verbal noun in the *o*-grade of the verb *ἔπω*, cf. Myc. *o-pa*, meaning 'foal-carer' as it has been proposed by Hugo Mühlestein,¹⁴ cf. *δι-οπος*, 'ruler, commander' (Aesch. *Pers.* 44) and the use of *ἀμφίεπω* 'go about, be busy, tend' in relation to animals in Homer, cf. *ἵππους ἀμφιέποντες ζεύγνυον* (Hom. *Il.* 19.392-393).

Appellatives indicating professions in Mycenaean records were also used as personal names or as sole designations of individuals. Such is the case with *qo-u-ko-ro* on **PY Ea 781; Ti Ef 2** and *qo-qo-ta* in the **PY Ea** series, mentioned on four tablets, but accompanied with the per-

¹³ LEUKART 1994, 87-88; MEISNER & TRIBULATO 2002, 309; MÜHLESTEIN 1968, 114-115; RUIJGH 1967, 265 n. 147; 342; WAANDERS 2008, 40.

¹⁴ MÜHLESTEIN 1968, 115. For alternative interpretations, see *DMic II* s.v.

sonal name *pe-re-qa-no* only once on **PY Ea 270**.¹⁵ In view of this, two compound personal names should be mentioned as possible evidence for appellatives related to animal husbandry not recorded otherwise on the Linear B tablets.

The name *qa-wa-ke-se-u* (**KN As 602.4**) < */G^wowāgos/, a compound with βούς and ἄγω,¹⁶ cf. βοηγός, ‘ox-driver in a procession, title of religious official’ could be interpreted ‘the one who drives oxen,’ or maybe ‘the one who seizes oxen,’ cf. ὡς ὅτε βούς τόν τ’ οὔρει βουκόλοι ἄνδρες ἰλλάσιν οὐκ ἐθέλοντα βίη δήσαντες ἄγουσιν (Hom. *Il.* 13.571-572).¹⁷

The name *we-re-na-ko* (**TH Fq 240.5**, dat.sing.) is probably derived from the word for sheep, lamb ἀρήν. If not a hypocoristic in -ακος, it might be a compound with ἄγω, ‘the one who takes lambs (sheep) to pasture,’¹⁸ cf. Ἄρναγος or ἄρχω, ‘the one who is responsible for the sheep;’¹⁹ cf. also ἵππαρχος, ‘ruling the horse, commander of cavalry,’ Ἴππαρχος, Μυς. *po-ta-ko*.

Occupational terms derived from words that do not designate domestic animals

A smaller group of appellatives designating agents involved with domestic animals are simplicia derived from verbal roots by means of suffixes typical of agent nouns, such as -τά-, -τηρ-, -μην-, -ευ-. Derivatives of the verbs βόσκω and νέμω are attested from Homer onwards, cf. νομεύς, βο-τήρ, βώ-τωρ. All these terms are used to express the meaning ‘herdsman’ as a generic term, or ‘herder of mixed flocks’ in opposition to terms specialised for other animal species, cf. τόσσα συῶν συβόσια, τόσ’ αἰπόλια πλατέ’ αἰγῶν / βόσκουσι ξεινοί τε καὶ αὐτοῦ βώτορες ἄνδρες (Hom. *Od.* 14.101-102).

The term ποι-μην comes from the *o*-grade of the root *peH₂- ‘protect,’ with the enlargement *-i- (cf. Lith. *piemuō*), meaning ‘shepherd’ or ‘herdsman (of sheep, goats, oxen)’ in Homer and only ‘shepherd’ later on. As early as in Homer, it was also used with its metaphorical

¹⁵ BUZALKOVSKA ALEKSOVA 1999, 177; ILIEVSKI 1983, 209-210; NAKASSIS 2013, 337, 359; WAANDERS 1992, 595.

¹⁶ ILIEVSKI 1983, 209; LEUKART 1994, 246; PERPILLOU 1973, 222; RUIJGH 1967, 292, n. 17; WAANDERS 2008, 42.

¹⁷ PLATH 1999, 515-516.

¹⁸ *DMic Supl.* s.v.; GARCÍA RAMÓN 2005, 91-96; KÖLLIGAN 2017, 606.

¹⁹ DŽUKESKA 2006, 335-342.

meaning ‘guardian, leader, master,’ cf. *ποιμήν λαῶν*. These agent nouns formed compounds not only with words for domestic animals as their first members, but also with prepositions, cf. *ἐπι-βώτωρ*, *βου-ποίμην*, *ἐπι-ποιμήν* ‘shepherd, herdsman’.

Other appellatives with various meanings were formed as simplia or compounds from verbal and nominal stems, such as *ἐλάτης* (< *ἐλαύνω*) ‘driver,’ cf. *κινουῖσιν ποιμένας ἐλάται* (Eur. fr. 773.28); *φερβήτης* (< *φέρβω*) ‘herdsman,’ cf. *φέρβηται νομεῖς* (Hsch.); *πεκτήρ* (< *πέκω*) ‘shearer,’ cf. *πεκτήρες: οἱ τὸ δέρμα τίλλοντες*. (Sud.); *νακοτίλης* ‘wool-plucker, shearer’ (< *νάκος* ‘fleece’ and *τίλλω* ‘pluck, pull out’).

On the Linear B tablets there are no correspondences to later Greek generic terms derived from the roots of the verbs *βόσκω* or *νέμω*. At the same time, the use of the word for shepherd *ποιμήν* is well attested in Knossos, Pylos and Thebes, cf. *po-me* (nom.sing.), *po-me-no* (gen.sing.), *po-me-ne* (dat.sing.).²⁰ It seems that the Mycenaean instances testify not only to its meaning ‘shepherd,’ but also to its metaphorical meaning, cf. *i-je[-re-]u po-me* (KN Am(2) 821.2), and to its use as a personal name, cf. KN Dd 1376.B.

Apart from KN Dd 1376.B, there are no other instances of this appellative in documents that are records of livestock, in terms of the usage of appropriate logograms. But on PY Ae 134, *po-me* is used as a designation of a man, named *ke-ro-wo*, who was engaged in watching over *ta-ra-ma-ta*’s quadrupeds, *o-pi qe-to-ro-po-pi o-ro-me-no*.²¹ The phraseology, which is the same as in the case of *qo-te-ro a₃-ki-pa-ta* on PY Ae 108, corresponds to the etymological relation between *po-me* and *-pa-ta* and the semantics of the root **peH₂-/*pH₂-* ‘to watch over, protect, graze.’ The use of the word *τετράποδα* instead of a specific word for goat or sheep is equally noticeable, and so is the absence of any other occupational term meaning ‘shepherd’ from the Linear B tablets.

Other instances of *po-me* in Pylos Ea and Eo series in relation to landholders confirm that shepherds, just like ox-herds and swine-herds, were not individuals with a low status, and were probably the ones who were managing, rather than literally watching over the cattle.

²⁰ For the instances and bibliography see *DMic* II; Supl. s.v. See also BADER 1976, 17-18; GSCHNITZER 1979, 123; MORPURGO DAVIES 1979, 102-103; PALAIMA 2021, 386, 389; WEILHARTNER 2021, 338-339.

²¹ On the identification of this man as a shepherd in the Cn series, see NAKASSIS 2013, 105-106, 286-287.

A different formation, in comparison to later Greek, is observable in *me-ri-te-wo*, probably a genitive of the word for ‘bee-keeper,’ attested in the Pylos **Ea** series. This Mycenaean term is derived from the word for honey *me-ri*, μέλι (< *PIE *melit-*), whereas its semantic equivalent in *-ευς*, μελισσεύς, comes from the word for bee μέλισσα.²²

Another word that is most likely an occupational term in the domain of animal husbandry is *po-ku-ta*. It is attested in Knossos **Bo**, **C** and **L** series and in the Pylos **An** series. The Knossos **C** series contains livestock records, and *po-ku-ta* is used once in relation to goats (KN **C(2)** 911.7) and five times in relation to sheep (KN **C(2)** 911.8.10; 912.2.3). There are no parallels for this appellative in later Greek. It has been interpreted as a compound, ‘fleece plucker,’²³ with the root PIE **peḱ-/ *poḱ-* ‘pluck, card’ (cf. *πέκω* ‘comb, card, shear,’ *πόκος* ‘sheep’s wool, fleece,’ Myc. *po-ka*, ‘shorn wool’),²⁴ and the zero grade **ur-* of PIE **wer-* ‘draw, tear’ (cf. Gr. *ἀπό(φ)ερσε* ‘swept away,’ *ἀπούρας* ‘taking away, pulling out’ < *PIE *wer/ur-s-* ‘to wipe’), or as a derivative in *-τᾱς* of a stem **poḱ-u-* ‘small cattle,’ ‘the one who owns or takes care of small cattle (goats or sheep).’²⁵

The form *ta-te-re*, nom. plur. of an agent noun in *-τηρ* possibly derived from PIE **steH₂-/stH₂-* (cf. *ἵστημι*), and used as a designation of individuals listed on **PY An 209**, might be related to Myc. *ta-to-mo*, *σταθμός* ‘standing place for animals.’²⁶ If so, the corresponding later Greek *στατήρ* must have had a different meaning on the Mycenaean tablets, such as ‘the one who is stationed in a *σταθμός*.’

The nom. sing. *po-qa-te-u* (**PY Qa 1295**) might be a derivative from *φορβή*, Myc. *po-qa* ‘fodder,’ meaning ‘the one who is responsible for the fodder,’ cf. post-Mycenaean *φερβήτης* ‘herdsman.’²⁷

In addition to these words, *pe-re-ke-u*, attested in Pylos, Mycenae and Thebes, has been interpreted by Michael Lane as */plekeus/* ‘shearer,’ cf. *pe-re-ke*, */pleken/*, 3 pers.plur. aor.pas. from a verb **/plēkō/* (< PIE **pleH₁-ḱ-/ *plH₁-ḱ-* ‘flay, strip, tear’) ‘strip, shear thoroughly,’ post-Myc.

²² DELG III, 681-682; DMic I s.v.; EDG I, 925-926; GSCHNITZER 1979, 123; MORPURGO DAVIES 1979, 103 n. 61; PERPILLOU 1973, 282-283, 317.

²³ MELENA 1987, 443-456.

²⁴ EDG II 1164; DELG III 872; EDL 454; MELENA 1987, 138-139.

²⁵ RUIJGH 1992, 543-544.

²⁶ DELG II, 471; DMic II s.v.; NAKASSIS 2013, 47 n.73, 108.

²⁷ DMic II s.v.; MILANI 2005, 174; NAKASSIS 2013, 356.

πλέκωμα ‘what results from cutting.’²⁸

The appellative *su-ra-te* is mentioned twice in Pylos, on the tablets **Ae(1) 72** and **264** as a subject of the phrases *du-ni-jo-jo*, *me-tu-ra*, *su-ra-se* and *du-ni-jo*, *me-tu-ra*, *su-ra-se* respectively. Two individuals are involved in the activity described with this phrase, one of them being the goat-herd *pi-ra-jo*, Φιλαῖος. A third instance is attested on the tablet **Ae(1) 8**, but without the appellative *su-ra-te*. There is a formal correspondence between *su-ra-te*, *su-ra-se* and post-Myc. *συλάω* ‘strip off, take off, carry off’, *συλήτωρ* ‘plunderer’. The Mycenaean spelling with the *s*-series reflects the absence of Indo-European etymology of these words.²⁹ However, the interpretation of the three **Ae** tablets as records of plundering, compensation, or seizure is questionable,³⁰ because the logogram VIR clearly shows they are personnel records. The phrase *me-tu-ra su-ra-se* is comparable with the phrase *o-pi qe-to-ro-ro-pi o-ro-me-no* ‘watching over the quadrupeds (goats and sheep?)’, used in the records of another goat-herd and a shepherd, cf. **Ae(1) 108, 134**. Accordingly, the word *me-tu-ra* probably corresponds to later Greek *μίτυλος* ‘hornless’, and perhaps means ‘young, year-old goats’, cf. *μιτύλαν ... αἶγα* (Theoc. 8.86), as argued by Ernst Risch.³¹ With respect to this, the interpretation of the appellative *su-ra-te* and the verbal form *su-ra-se* (3rd. pers. sing.) as terms for an activity related to animal husbandry seems far more reasonable.³²

Perhaps the verb *σύλαω* on the Mycenaean tablets had a different meaning ‘strip off, flay’ that later developed into ‘take off armour, seize, plunder.’ A similar semantic shift is observed in the verb *δέρω*, cf. *βοῦν ... τὸν δέρον ἀμφί θ’ ἔπον* (Hom. *Il.* 7.314-316) and *Δερῶ σε θύλακον κλοπῆς* (Aristoph. *Eq.* 370) and in other languages. If this is acceptable, then *su-ra-te* would be ‘the one who strips off the skin (of an animal)’.

Finally, two personal names might be mentioned. If the name *ko-pe-re-u* attested in Knossos and Pylos has its equivalent in *Κοπρέυς* (< *κόπρος*

²⁸ LANE 2011, 92-95. For other interpretations, such as *πλοκεύς* ‘weaver’, see *DMic II* s.v.

²⁹ *EDG II*, 1422. The word is probably Pre-Greek or a borrowing. Cf. MILANI 2005, 179-180: Hebr. *šll* ‘take away’, *šālāl* ‘robbery’, Acad. *šalālu* ‘seize, steal’.

³⁰ *Docs²* 169; MILANI 2005, 172-181; MORPURGO DAVIES 1960, 44.

³¹ RISCH 1981, 29-36.

³² Cf. Separating young animals from their mothers for weaning (JIMÉNEZ DELGADO 2016, 71, f. 86, 167).

‘manure, dung’ < PIE **kok^w-*),³³ it might be a hypocoristic of a compound **ko-ko-ko-ro* meaning ‘the one who is engaged in collection of dung,’ cf. *κοπροφόρος*, *κοπροβόλος* and Paus. 5.1.9.1-5.1.10.3. The spelling of the labiovelar with labial might be ascribed to a dissimilation as in *ko-u-ko-ro*, *i-ro-ro-ko*.

The personal name *po-ta-ko* (PY Cn 45.13), nom. sing., probably corresponding to *Ποίμαρχος* (IG IV 757 B 32), is derived from a compound appellative with *ποιμήν* and *ἄρχω*, meaning ‘the chief of the shepherds.’³⁴

To sum up, the examination of the Linear B tablets and the later sources shows that the specialisation of labour with respect to the animal species was of primary importance, and it was accordingly reflected in the composition and derivation of occupational terms associated with animal husbandry both in Mycenaean and in Post-Mycenaean Greek. Furthermore, Mycenaean evidence indicates that the original specialisation of labour with respect to the different types of feeding is perhaps reflected in the use of only one appellative concerning each animal species and in the choice of different verbal elements for the composition and derivation: *βουκόλος*, *σβώτης*, *ίπποφορβός*, **αίγιπᾶτᾶς*, *ποιμήν*. By analogy with these compounds others were created already in Mycenaean. The analysis also shows that religious titles were often derived from compounds expressing usual human activities pertaining to animals, such as ‘binding, putting a yoke, flaying.’ Occupational terms served to form personal names both in Mycenaean and in later Greek. The evidence of the Linear B tablets is particularly unique with regard to appellatives derived from words not related to domestic animals, which have specific technical meanings. These terms show formal and semantic differences in comparison to later Greek and indicate activities obviously not included in the job description of a herder.

³³ Docs² 555; LEUKART 1994, 240; PERPILLOU 1973, 207, 214; RUIJGH 1967, 366-367. On a different interpretation, **Σκοπελεύς* < *σκόπελος*, see CHANTRAINE 1972, 201.

³⁴ *DMic* II s.v.

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The supposed thematic genitive in *-(C)o* in Mycenaean: a mirage

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I.*

A series of forms of the *-o*-stems in *-o*, properly *-(C)o* (so in what follows), are often attested where one would expect a gen.sg. *-(C)o-jo*. Both can even co-occur by the same scribe and without any recognisable difference, e.g.:

KN Da 1156

- .a we-we-si-jo ovis^m 100 (J1; 117)
.b a-re-ke-se-u , / pa-i-to

KN Db 1159

- .a we-we-si-jo-jo ovis^m 144 ovis^f 55[(J1; 117)
.b du-ta-so , / pa-i-to

The evidence for the ‘genitives’ in *-(C)o*, as masterly discussed by Anna Morpurgo Davies,¹ has been enlarged by the texts from Thebes,² which provide us with decisive evidence for forms in *-(C)o* of man’s names before *i-jo*, *i-**65 ‘son’ and variants.

* It is a pleasant duty to thank Artemis Karnava (Rhethymno), Torsten Meisner (Cambridge), H. Craig Melchert (North Carolina) and José L. Melena (Vitoria) for their suggestions, remarks and criticism.

¹ MORPURGO DAVIES 1960.

² *FdCI*, 2001.

The dossier of the assumed thematic ‘genitive’ in $-(C)o$ is not universally agreed:³ some of the instances may be explained as scribal errors, or as haplography (as is the case of the stems in $*-i\dot{i}o-$, cf. 2.), others are not necessarily genitives, and others, which should be taken into account (e.g. $si-to^o$ in $si-to-po-ti-ni-ja$, 6) are not. On the other hand, it does not seem possible to state a chronological evolution or relevant differences between the different centres for the use of $-(C)o$ or $-(C)o-jo$.⁴ The major question remains, in any case, how the form underlying $-(C)o$ may be accounted for: either as a proper case ending, namely a variant of the genitive (for which imaginary correspondences with Hittite gen. $-aš$ and Hispano-Celtic gen.sg. $-o$ have been invoked, cf. 3.), or that of a different case (namely an early ablative $*-ōd$, as already proposed by Morpurgo Davies and, with partly different views, by Ivo Hajnal,⁵ even if $-(C)o$ and $-(C)o-jo$ appear as interchangeable), or as mere occasional forms raised under conditions which may vary from one instance to the other – and must be accounted for case by case. The *vexata quaestio* defies any attempt at a definitive interpretation, as two recent overviews and their respective proposals make evident.⁶

Whether a real genitive ending spelled as $-(C)o$ does actually exist remains an open question.⁷ It is well possible that $-(C)o$ does not conceal any ending, not even an asyntactic nominative of rubric, but simply the bare stem in $/-o-/$ of the different terms, simply because the context is transparent and the ending becomes unnecessary. This point was made *en passant* by John Chadwick *à propos* the syntactic incoherences in the D-tablets of Cnossos (“since the role of this person is sufficiently indicated by the position of his name in the tablet, it is of little consequence whether its syntax is fully expressed or not ...”)⁸ or by Duhoux on $ka-ra-e-ri-jo me-no$ (“simple yuxtaposition de termes, non accordés syntaxiquement... ”

³ The figures in THOMPSON 2017, 583 (dossier, 586-587), namely 25 stems (36 tokens), of which 14 stems (24 tokens) are in $*-i\dot{i}o-$, are only indicative, and depend on the interpretations of the individual forms, which are not always compelling.

⁴ MORPURGO DAVIES 1960, 53. There is apparently no direct connection between $-(C)o$ and any scribe in particular (cf. 2., 5.).

⁵ HAJNAL 1995.

⁶ DUHOUX 2017; THOMPSON 2017.

⁷ Recte LEJEUNE 1972a, 17-18: “...dans la mesure où il existerait authentiquement de tels génitifs en ...o.”

⁸ CHADWICK 1958, 287 (“an alternation of this kind is not only possible; it is natural”); DUHOUX 2017, 168 and n. 82 (on $we-we-si-jo$).

cf. 4.).⁹ This approach is surely right, as this paper will try to show.

The present contribution will not get into the discussion of the forms which remain obscure, and/or have been explained otherwise or simply as scribal errors by earlier research (cf. 2.), to which I have nothing to add. There will be no attempt at a doxography or at a discussion of the different interpretations proposed for *-(C)o*, which are indeed all incompatible with that proposed here.¹⁰ Only some egregious misunderstandings, which periodically reappear, will be briefly pointed out (cf. 3.). I shall focus on the evidence for *-(C)o* in specific formulas, namely those with month names (with or without *me-no*, cf. 5.) and with personal names governed by substantives of the type *o-pa* (cf. 6.), where gen. *-(C)o-jo* is attested as well, and those with father's name and *i-jo*, *i-**65 and variants in Thebes (cf. 7.).

2.

The instances of *-(C)i-jo* for the genitive of stems in **-i̯o-* (mostly proper names), which are otherwise attested as *-(C)i-jo-jo* even by the same scribe (e.g. *we-we-si-jo* and *we-we-si-jo-jo* cf. 1.) are not conclusive by themselves, as they may reflect haplography, e.g. *ka-ra-e-ri-jo*, 'me-no' (of *ka-ra-e-ri-jo**) beside *de-u-ki-jo-jo*, *me-no* or *di-wi-jo-jo*, *me-no* (KN: all Hand 219), or *wo-de-wi-jo*, *me-no* (KN: Hand 138) beside *wo-de-wi-jo-jo*, *me-ṛo* (KN: Hand 219) of *wo-de-wi-jo** /*wrdēwio-*/ ' (month) of roses' (cf. 5.), among others. The same applies to *-(C)a-jo* instead of **-(C)a-jo-jo* of nouns in **-ai̯o-*,¹¹ e.g. *e-te-wa-jo*, *wo-ka* beside *e-te-wa-jo-jo*, *wo-ka* (PY, both Hand 26) of the MN *e-te-wa-jo** /*Etewaios*/ (cf. 6.) or the MN *u-ta-jo* beside *u-ta-jo-jo* (KN; both Hand 117).

Haplography is surely plausible, and supported by several instances, but does not obviously apply to other **-o-*stems. In any case, that the supposed 'genitives' in *-(C)o* rely on a generalisation starting from the

⁹ DUHOUX 1968, 784 (also 781-782 on *ka-ke-we*, *a-ke-te* [PY Jn(1) 832.9, as against .1 *ka-ke-we-te*, *a-ke-te-re*).

¹⁰ Reference is made once and for all to the overviews by DUHOUX 2017, 157-161; THOMPSON 2017, 576-579.

¹¹ The occurrence of *-(C)i-jo* for **-(C)i-jo-jo* in father's mentions preceding *i-jo* 'son' might reflect a haplography (as *-(C)a-jo* for **-(C)a-jo-jo*), as well as the bare stem form (cf. 6.).

stems in **-iĵo-* is hardly conceivable.¹² The possibility of haplogy remains valid, even if one admits that the ending is superfluous in some contexts (cf. 5.-7.), but indemonstrable.

3.

On the assumption that *-(C)o* conceals, at least in some instances, a proper case ending, which must be elucidated, the interpretation as the outcome of the inherited ablative **-ōd* (: Ved. *-ād*) perfectly fits into what we can assume for the prehistory of Greek. The fact that no functional difference may be stated between *-(C)o* and *-(C)o-jo*,¹³ and that both endings are interchangeable as are e.g. *-οισ(ι) ~ -οις* in Homer, may suggest that the ablative had undergone syncretism with the genitive (**-osĵo*) already in Mycenaean times, as shown by Morpurgo Davies, or, in the alternative proposal by Hajnal, that it has partially merged with instrumental **-ō* (**-oh*), and lives on only in the separative and partitive uses of genitive and the expressions of time,¹⁴ where it is concurred by gen. *-(C)o-jo*. These possibilities, which are in many respects complementary, are of major interest for the prehistory of Greek, but do not necessarily apply to the Mycenaean facts. It is certainly possible that some forms in *-(C)o* still conceal ablative */-ō/* or even */-ōd/*, and that the syncretism of genitive and ablative is not yet complete in Mycenaean.¹⁵ Anyway, attempts to explain the use of forms in *-(C)o* for the expression of time (with month names) or of filiation (with father's name followed by a term for 'son')¹⁶ as the reflexes of the pre-syncretic separative ab-

¹² Pace THOMPSON 2017, 586 ("the *-o* genitives arise by a number of kinds of scribal errors, one of which, haplography, is very likely to affect stems in *-io-*").

¹³ Cf. MORPURGO DAVIES 1960: 42-3 ("due forme di genitivo"), 54 ("che ... l'ablative sia ancora vitale come caso a sé non sembra possibile" (54) this indication is not clear in quei nessi sintattici per cui la grammatica comparata ricostruisce determinazioni di ablative ... da un esame risulta che ciò non si verifica").

¹⁴ HAJNAL 1995, 260; already in MORPURGO DAVIES 1960, 53-54.

¹⁵ GARCÍA RAMÓN 2016, 225. Full syncretism would indeed imply the use of *-o-jo* in ablative function, which is not the case (HETTRICH 1985, 116).

¹⁶ That the forms in *-(C)o* in patronymic formulas may conceal a former ablative (MORPURGO DAVIES 1960, 55 n. 60; DUHOUX 2008, 353-360; 2017, 154-156 ["usage virtuellement isolé"]) with reference to J. S. SPEIJER and his 1886 *Sanskrit syntax*, 16) is not supported by comparison: the case for the expression of filiation in Vedic is actually the genitive, cf. the onomastic formulas with *putrá-* (*rudrásya* RV 6.66.3a, *asurásya* 10.10.2c) and *sūnú-* (*indrásya* 4.37.4c). The ablative occurs only with 'born (from)' (e.g. *Manu* 10.64 *sūdrāyām brāhmaṇāj jātaḥ*), and the occasional occurrence of abl. *amuṣmāt* for gen. **amuṣya* in the formula *amuṣmāt putram* 'one's son' (*amum amuṣyām amuṣyāyanam amuṣmāt putram* MS 3.3.5) is of no relevance for Mycenaean.

lative are unnecessary: the tablets do not allow to state a difference between separative-instrumental uses (-(C)o) and adnominal (-(C)o-jo), and the overall situation in Mycenaean, regardless of the instances of unexpected -(C)o, is so similar to that of 1st-millennium Greek as to let assume that comparison might help.

On the other hand, the assumption that the forms in -(C)o have correspondences in other Indo-European languages are untenable. The supposed thematic 'genitive' in -(C)o of Mycenaean has been assumed to reflect Proto-Indo-European *-o-s,¹⁷ and to have a perfect match in gen.sg. -aš in Hittite, in Palaic and partly in Hieroglyphic Luvian.¹⁸ This is far from compelling. It is true that Hitt.-Pal.-HLuv. gen.sg. -aš may be traced back to *-os, this being the genitive of the synchronic paradigm of inherited *-o-stems (e.g. *antuḥša-* c. 'human being, man:' **en-d^huh₂-s-ó-* 'one who has spirit in himself'): the form is synchronically identical to those of the nominative singular commune (*-o-s) and of the dative-locative plural (PIE *-os, previous to Core Indo-European *-b^h-os/*-m-os), but this 'homonymie fâcheuse,' which may be partly modified by the effect of accentuation rules in Hittite, is possible in a paradigm and may be avoided within the phrase syntax.¹⁹ However, Hitt. -aš conceals not only the outcome of a putative PIE gen.sg. *-o-s, but also that of gen.sg. *-éh₂-es (or earlier *-éh₂-s) after the merging of the inherited *-o- and *-eh₂- stems in the new, synchronically uniform -a-stems of the Anatolian languages (with the exception of Lycian), subsequent to the remodeling of the PIE nominal inflection in Anatolian.²⁰ The inherited *-eh₂- stems, e.g. *ḫāšša-* 'hearth, fire-place' (: lat. *āra* 'id.'), ^{GIS}*ḫišša-* 'carriage pole' (: Ved. *īṣā́-* 'id.') are remodelled within the new -a-inflection in several respects: adoption of /-s/ from the *-o-stems in nom.sg. -aš (noted -(C)a-aš <(C)a-aš), elimination of -ḫ(h)- (*-h₂-) in the oblique cases (gen. -aš, dat.-loc. -i instead of expected gen. *-aḫḫaš, dat.-loc. *-aḫḫi) by remaking after nom. -aš, acc.sg. -an. The original

¹⁷ The case ending is assumed to underlie alph.Gk. Θεός-δοτος, Λυκός-ουρα (cf. BADER 1992, 4-10; DUHOUX 2017, 166 with n. 55).

¹⁸ The genitive is expressed by reflexes of *-osio and *-e/oso (with nouns) in 'Luvic' dialects and/or has been replaced in some uses by an inflected possessive adjective (CLUV. -ašša/i-), which lives on residually in some lexicalized items in Hittite, in Palaic and Hieroglyphic Luvian (MELCHERT 2012, 274-275).

¹⁹ The same applies, for instance, to Lat. *domī*, *humī*, which conceal gen.sg. *-ī, as well as nom.pl. *-oī and loc.sg. *-o-i.

²⁰ This crucial point is already pointed out by MORPURGO DAVIES 1960, 52.

difference between gen.*/-*ās*/ (*-*o*-stems, athematic stems) and */-*ās*/ (*-*eh*₂-stems) is concealed by Hittite accentuation rules. Alternatively, an extension of the outcomes of athematic gen. *-*os* (and *-*s*) to the synchronically unitary *-*a*-stems is equally possible,²¹ as it is the case with dat.-loc.sg. -*i*, abl. -*az*, or allat. -*a*. Hitt.-Pal. (partly Luv.) -*aš* may thus be explained as an Anatolian innovation after the merging of *-*o*- and *-*eh*₂-stems.

Hispano-Celtic -*o* /-*ō*/, actually attested in personal names, is surely a specific innovation, against other branches of Continental Celtic, which has nothing to do with Hittite -*aš* nor with Mycenaean.²² The creation of gen.sg. /-*ō*/ goes back to a proportional analogy based upon (a) the genitive singular of the -*ā*- stems (PCelt. *-*ās*) or (b) the pronominal genitive plural (PCelt. *-*oīsōm*, cf. *Hispano-Celt. soisum*) in syntagms where (a) and (b) coexist with the thematic gen.sg. *-*oīsō* (created after gen.pl. *-*oīsōm*).²³

As to (a): gen.sg. **soiās bnās* analyzed as **soiās.s bnās*
 gen.sg. **soiō uīr-ī* analyzed as **s.oīs.o uīr-ī*, whence
 → *uīr.o*

As to (b): gen.pl. **soiōm uīrōm* analyzed as **s.oīs.ōm uīr.ōm*
 gen.sg. **soiō uīr-ī* analyzed as **s.oīs.o uīr.ī*, whence
 → *uīr.o*,²⁴

or simply (a) **soiās bnās* :: **soiō uīr-ī* → *uīr-o*, (b) pl. **soiōm uīrōm* ::
 sg. **soiō uīr-ī*, whence *uīr-ī* → *uīr-o*.²⁵

In conclusion, the gen.sg. *Hispano-Celt. -o* /-*ō*/ is an innovation that cannot even be traced back to continental Celtic.

²¹ Cf. LEJEUNE 1972a, 18, with the reservation “sans parallèles dans ce que nous connaissons du grec ultérieur.”

²² ESKA 1995, 37-40 (against an inherited ablative singular in *-*ōd*, with discussion of other views).

²³ As demonstrated by ESKA 1995, 42 (“crossing with the descendants of *-*oīsōm*”).

²⁴ Originally (a) as per ESKA 1995, 40, (b) as per WATKINS in 1999 (*apud* 2001, 222). Both (a) and (b) are accepted in ESKA-WALLACE 2001, 90-91 and WATKINS 2001, 222-223 (2008, 3.999-1000).

²⁵ (a) as per PROSDOCIMI 1991, 158-159; (b) as per WATKINS 2001, 223 (2008, 3.1000).

4.

In my opinion, attempts to explain the alleged forms of gen.sg. in -(C)o in terms of case-form are hopeless. Leaving aside those which are unsure or simply scribal errors and the instances of stems in *-i \dot{y} o-, which may be due to haplography (cf. 2.), the evidence is limited to constructions and formulas (with month names and temporal expressions, with terms with an indication in genitive, and with filiation formulas) where the context is so transparent as to make the case ending not imprescindible. In what follows an attempt will be made to show that this applies to the occasional spellings in -(C)o for expected -(C)o-jo. This is perfectly understandable in Linear B, in which abbreviations and economic spellings are more than frequent, as happens in syllabic scripts and cuneiform traditions of other languages as well.²⁶

5.

Some forms of month names in -(C)o (followed or not by *me-no* gen. /*mēnnos*/ often in smaller characters and/or raised signs, and separated by a word divider) are attested in Cnossos, namely *ka-ra-e-ri-jo* and *wo-de-wi-jo* (beside *ka-]ra-e-ri-jo-jo* and *wo-de-wi-jo-jo*), as well as *ra-pa-to*, *me-no*, and *a-ma-ko-to*, *me-no*, which have no counterpart in -(C)o-jo. The forms in -(C)o may be understood as an alternative to the genitive forms in -(C)o-jo.²⁷

The different possibilities are attested for at least two Cnossian month-names, namely *ka-ra-e-ri-jo** /*krā^herio-/* ‘(month) at the Head’²⁸ and *wo-de-wi-jo* /*Wṛdēwio-/* ‘(month [or ‘festival’]) of the Roses’:

Fp(1) 7.1 *ka-ra-e-ri-jo*, ‘me-no’ (also 18 A.1) and **Fp(1) 6.1** *ka-ra-e-ri-jo / pa-si-te-o-i* ... (all Hand 138) beside **M(1) 1645.1** *ka-]ra-e-ri-jo-jo*, *me-no* [(Hand 103).

Fp(1) 16.1 *wo-de-wi-jo*, ‘me-no’ (A; 138) and **V(2) 280.1** *wo-de-wi-jo* ... (C; 124) beside **Ga(4) 953.1** *wo-de-wi-jo-jo*, / *me-no* [(I 3; 219).

²⁶ This is the case in Hittite, where the ‘Accadographic’ spellings, i.e. the use of bare stem forms, are regular in some contexts, e.g. with proper names or after numerals in listings (HOFFNER & MELCHERT 2008, 250-257).

²⁷ MORPURGO DAVIES 1960, 41-43; HAJNAL 1995, 247-253; GARCÍA RAMÓN 2023.

²⁸ GARCÍA RAMÓN 2023: 342-344: /*Krā^herio-/* is an *-i \dot{y} o-derivative from **krā^hero-* (**kṛh₂s-ero-* ‘at the head’, cf. ὄρθος :: ὄρθος; *aliter* Ruijgh 1967: 112 with fn. 66 “lieu pourvu d’une cime”) beside locative **krā^her-* (**kṛh₂s-(o/e)r-* ‘horn’, cf. Myc. instr. °*ka-ra-o-re* /°*krā^horēl*, pl. °*ka-ra-a-pi* /°*krā^hap^hil*) as per NUSSBAUM 1986, 220-247.

The choice between *-(C)o-jo* and *-(C)o-* seems not to be connected with scribal (or dialectal) variants, as seen in Hand 138, that coherently writes *ka-ra-e-ri-jo*, *wo-de-wi-jo* as well as *a-ma-ko-to* (Fp[1] 14), *ra-pa-to* (Fp[1] 13), but also *de-u-ki-jo-jo* (Fp[1] 1.1), *di-wi-jo-jo* (Fp[1] 5.1). Attempts to interpret the forms in *-(C)o* as asyntactic nominatives, i.e. */-(C)os/*, beside *me-no* ‘monthly, per month’, or as gen.pl. */-(C)ōn/* (e.g. *wo-de-wi-jo* /*Wrđēwiōn/* of an eortonym /*Wrđēwia/** besides *me-no* as sg. */mēnnos/*²⁹ or even pl. */mēnnōn/*) are unnecessary.³⁰

Given that *me-no* is often an addition, the possibility that the month name in *-(C)o* conceals a nominative of rubric or, better, simply the bare stem, remains open.³¹ However, once accepted that for the time reference the norm (or one of the norms) is the formula [MONTH-NAME_{GEN} – (gen.) *me-no*]³² with the variant without *me-no* [MONTH-NAME_{GEN}], an endless variant of the month name is perfectly conceivable, as the context and its position in the tablet make further details unnecessary. In other words, *ka-ra-e-ri-jo* and *wo-de-wi-jo* (KN) reflect the bare stems of the month names (which match the outcome of a possible haplography, cf. 2.) as against *ka-ra-e-ri-jo-jo* (*me-no*) /*krā^herioio* (*mēnnos*)/ and *wo-de-wi-jo-jo* (*me-no*) /*Wrđēwioio* (*mēnnos*)/. The same applies to *ra-pa-to me-no*, and *a-ma-ko-to me-no*, for which haplography is excluded.

6.

A bare stem in **-o-* may equally be assumed for appurtenance formulas consisting of a personal name (in genitive) and an institutional term of the type *o-pa* /*h^hopā/* ‘work (to be performed)’ as per José L. Melena), *qa-si-re-wi-ja* /*g^wasilēwiā/* ‘area or group controlled by a *qa-si-re-u*’, or *wo-ka* /*wok^hā/* ([*i-qi-ja*] *wo-ka* ‘[horse-drawn] chariot’ rather than

²⁹ HAJNAL 1995, 252 (“ältere Ausdrucksweise”); THOMPSON 2017, 585 (“during the month of the *Wordēwia*”).

³⁰ Unnecessarily complicated is the hypothesis of two syntagms - and two different forms underlying *-(C)o* and *me-no*: either nom. -ιος μήνας beside gen.pl. -ίων μηνών (RISCH 1959, 223 n.34 : *Kl.Schr.* 446), or *wo-de-wi-jo*, *me-no* /*wordēwiōn mēnnós/* and *wo-de-wi-jo-jo*, *me-no* /*wordēwioio mēnnós/* (HAJNAL 1995, 252).

³¹ CHADWICK 1958, 290 (“not to be construed in every case with the name ... *me-no* afterthought addition since sometimes omitted”); THOMPSON 2017, 581, 585 (“... may indicate a lack of syntax ... the month name ... may be a nominative of rubric ... *me-no* meaning ‘during the month’”). *Aliter*, hardly convincing, JIMÉNEZ DELGADO 2013 (*me-no* as nom. */mēn/*).

³² *de-u-ki-jo-jo*, ‘me-no’ (KN Fp[1] 1.1), *di-wi-jo-jo*, ‘me-no’ (Fp[1] 5.1); *pa-ki-ja-ni-jo-jo*, ‘me-no’ (PY Fr[1] 1224).

/worgā/ ‘manufacture’,³³ i.e. [NAME_{GEN} - o-pa] (so conventionally in what follows). In formulas of this type, the genitive of the name is actually the rule, cf. *e-ta-wo-ne-wo*, *o-pa* (KN L 695: gen. /ēwos/), *su-ke-re-o*, *qa-si-re-wi-ja* (KN As[2] 1516: gen. /-ehos/, cf. nom. *su-ke-re*) or *po-ru-we-wo*, *wo-ka* (PY Sa[1] 796: gen. /-ēwos/), *e-pi-wo-qa-ta-o*, *wo-ka* (PY Sa[1] 1266).

As to the thematic names, genitives in -(C)o-jo are well attested: *a-re-ki-si-to-jo*, *o-pa* /Aleksitoio/ (KN Sf[2] 4420.a), *pe-qe-ro-jo wo-ka* (PY Sa[1] 793 r.), *e-ti-ra-wo-jo*, *wo-ka* /Ertilāwoio/ (Sa[1] 1264). Beside them, some instances in -(C)o depending on *o-pa* (*a-me-ja-to*, *o-we-to*, *ra-mi-jo*), on *qa[-]sī-re-wi-ja* (*a-nu-to*) and on *wo-ka* (*a-me-ja-to*, *e-te-wa-jo*) may be understood as -(C)o-variants only if they turn out to belong to thematic stems, as is the case in:

a-nu-to, in KN As(2) 1516.12]-ti-jo, *a-nu-to qa[-]sī-re-wi-ja*, VIR 1 *su-ki-ri-to* VIR 1, occurs instead of the expected genitive **a-nu-to-jo* (actually attested KN X 697.1), as proved by the gen. *su-ke-re-o* in .20 *se-to-i-ja su-ke-re-o*, *qa-si-re-wi-ja* VIR 1 *ku-to* VIR 1. The form *a-nu-to* can only belong to MN /^(h)Anutos/ (: ἄνυτος), which is actually attested (nom. *a-nu-to* KN, TH), and may easily be understood as a scribal error.³⁴

e-te-wa-jo, *wo-ka* beside regular *e-te-wa-jo-jo*, *wo-ka* of */Etewaio-/ (cf. Ἐτεω°, *Ἐτέας, see 2.) in the same formula and series (PY Sa[1] 7, 755, 758, 760, 763, 766, 767, 768, 769, 774: all Hand 26).

ra-mi-jo, *o-pa* in TH Wu 88.b *ra-mi-jo*, *o-pa* (in a lacunary text) may conceal a derivative (/Lamio-/) of the place-name *ra-mo** (cf. allative *ra-mo-de* TH Of 38.1). If *ra-mi-jo* is really depending on *o-pa* it may reflect a haplography for **ra-mi-jo-jo*.

Two other forms may be left out of consideration for different reasons: *a-me-ja-to*, which occurs with both *o-pa* and *wo-ka* (PY Sh 736 *a-me-ja-to*, *o-pa*, Sa[1] 834 *a-me-ja-to*, *wo-ka*), is a genitive in /-antos/ (/Ameiantos/),³⁵ cf. nom. *a-me-ja** /-ānt-s/ (KNF 153); *o-we-to* (*o-we-to*,

³³ Cf. MELENA 1983 (on *o-pa*); 2001, 62, 64; 2014a, 151 (on *wo-ka*).

³⁴ Recte MORPURGO DAVIES 1960, 43 (“una forma anormale di genitivo”). The appurtenance to /^(h)Anuto-/ is more than certain (pace HAJNAL 1995, 256: /^(h)Anu-s, -(s)tos/; THOMPSON 2017, 584: “not certain ... an -o-stem”).

³⁵ MELENA 1983, 277; 2001, 64-65.

o-pa KN Dm 1184) defies any attempt at interpretation in terms of Greek.

In [NAME_{GEN} – *o-pa*] the appurtenance relation between the two members is more than evident, and makes indeed the case ending *-(C) o-jo* unnecessary (albeit used sometimes): this may explain the occurrence of endingless *-(C)o-* in this very formula.

The same explanation may apply to the formula *ko-ki-da*, *o-pa* (KN Sd 4403.b in small signs; So[1] 4430.a: inventories of chariots and wheels) which does not directly concern the subject treated here. It seems clear that *ko-ki-da* is a man's name and, in view of the normal structure of the formula, only a genitive is expected:³⁶ whether *ko-ki-da* is a scribal error, or conceals a gen. in */(C)ās/* (i.e. an archaism, previous to regular *-(C)a-o /-(C)ā^(h)o/*), or simply the bare stem of the *-ā*-masculine (like the forms in *-(C)o-* for *-(C)o-jo*) remains open.³⁷

An instance of endingless *-(C)o* alternating with gen. *-(C)o-jo*, which has probably not been paid the attention it deserves, is the theonym *si-to-po-ti-ni-ja* 'Lady of Corn' (MY Oi 701.3; cf. Στρώ: Demeter in Sicily) as against *da-pu₂-ri-to-jo*, *po-ti-ni-ja* 'Lady of the Labyrinth' (*/Dap^hurint^hoiol/*) (KN Gg[1] 702.2): *si-to^o* can hardly be the first member of a compound, which would have no parallel in alphabetic Greek. The absence of word-divider simply indicates the close connection of the two members of the syntagm and *si-to^o* is simply the bare stem, as is e.g. *a-ta-na^o /At^hānā-/* in *a-ta-na-po-ti-ni-ja* 'Lady of Athana' (KN V 52).

7.

We turn now to the filiation formulas with *-(C)o* followed by a term for 'son.' The filiation may be expressed in Mycenaean by means of the patronymic adjective of the type *a-re-ku-tu-ru-wo*, *e-te-wo-ke-re-we-i-jo* (*/Alektrowōn Etewoklewe^hios/*), or by the father's name in the genitive (formula [NAME – FATHER'S NAME_{GEN}], which may be enlarged by ['son']). For the patronymic adjective formula³⁸ there is no conclusive evidence: a border-line case would be *i-je-re-wi-jo-* in the formula *i-je-re-*

³⁶ *Aliter* LEJEUNE 1972b, 301: *ko-ki-da* locative, *o-pa* final dative ("chez K. pour fabrication"); HAJNAL 1995, 258-259 (*ko-ki-da* "Dativ der betroffenen Person").

³⁷ Cf. MORPURGO DAVIES 1960, 48 ("aplografia"); MELENA 1983, 273.

³⁸ The formula is well attested in Homer (where it may be enlarged by 'son': cf. Αἴαντα προσέφη Τελαμώνιον υἱόν # [Il.11.367], equivalent to τόν ῥ' υἱός Τελαμώνος [13.177 *et al.*]), and lives on, at different scales, in the Aeolic dialects of the 1st millennium.

wi-jo-*65 (Thebes, cf. 7.3.). By way of contrast, the formula with father's name in the genitive (cf. Τυδέος υἱός *Il.* 5.335),³⁹ which is regular in alphabetic Greek, provides us with instances of -(C)o. In what follows, I shall try to show that -(C)o does not conceal an ending, but merely the bare stem of the name (conventionally [FATHER'S NAME_o] in what follows).

7.1.

Let us remember the essentials of the formula [NAME_{NOM} – FATHER'S NAME_o] and the variant with mention of 'son' (in what follows: ['son' (*i-jo*...)] meaning *i-jo*, *i*-*65, *u-jo* [: υἱός], as well as *65 /*ju*/ used as the abbreviation */^huiu-/ as per Melena, cf. 7.3), which occurs both with and without word-divider.⁴⁰

The formula [NAME – FATHER'S NAME_{GEN}] (cf. Πρόθοος Τενθηρηδόνο υἱός *Il.* 2.756), e.g. *di-ri-mi-jo*, *di-wo*, *i-je-we* /*Drīmiōi*, *Diwos* ^{hi}*ewei* / 'to Drimios, the son of Zeus' (PY Tn 316.r10, cf. Αητοῦς καὶ Διὸς υἱός *Il.* 1.9) might be attested with thematic names only in a unique variant [FATHER'S NAME_{GEN} – DAUGHTER'S NAME_{NOM}], which occurs twice in a list of feminine personnel (PY Vn 34): *a-ta-o-jo*, *pi-ro-pa-ta-ra* .5, *qa-ko-jo*, *ma-ra-me-na* .6. The names *a-ta-o-jo* and *qa-ko-jo* have the same function as the genitives of man's names in other lines of identical structure.⁴¹ However, they remain both unanalysable, as it is impossible to determine whether they belong to an *-o-stem (and conceal /-(C)oiol/) or to an *-i_o-stem (and may be analysed as forms in -(C)o).

7.2.

The formula [(NAME_{NOM}) – FATHER'S NAME_o – 'son' (*i-jo*...)] is attested with thematic names only in the type [FATHER'S NAME_o – 'son' (*i-jo*...)]:⁴²

pi-ma-ṇa-ro, *zo-wi-jo i-jo* 'son of *zo-wi-jo* (prob. /*D^zōwio*-/: Ζῳῖος) (KN Vs[2] 1523.4.5: 2x).

³⁹ With reverse word order cf. υἱός Τελαμώνος (*Il.* 13.177; 17.284, 293), υἱός Πετεῶο Μενεσθεύς # (2.552 = 12.331; 13.690).

⁴⁰ Cf. the accurate dossier by DUHOUX 2017, 154-156; also 2008, 357-360.

⁴¹ Cf. *me-ti-ja-no-ro*.1 /*Mē(s)tiānoros*/, *ka-e-sa-me-no-jo* .2 /*Ka^hēsamenoiol*, *e-to-mo-jo* .3 /^(h)*Etoi-moiol*?, *de-ki-si-wo-jo* .4 /*Deksiwoiol*/).

⁴² With stems other than in -o-, namely in /-ēw-/ (e.g. *qo-te-wo*, *i*-*65 PY Aq 218.16), in /-n-/ (*ku-no*-*65 TH Fq 236.5), in /-es-/ (*pe-ri-me-de-o*, *i*-*65 PY Aq 64.7).

pi-ro-wo-na, *wi-do-wo-i-jo*, *i*-*65 VIR 1 (PY Ae 344) /*P^hilo-woinā(s)*
Widwo^hio(-)^huios/.⁴³

A variant with no mention of the name of the son is also attested:⁴⁴

ra-]ke-da-mo-ni-jo-u-jo V 1 [(TH Gp 227.2, without word-divider)
 /*Lakedaimonio(-)^huios*/.

7.3.

The same formula may be assumed for a variant with ‘son’ expressed by *65, an abbreviation for /*h*u/ (**ju*/)⁴⁵ in the Theban series **Fq** (Hand 305), as rightly pointed out by Melena, who invokes the striking parallel of <*tu*> for *tu-ka-te* ‘daughter’ at Knossos (e.g. **Ap 639.4** *tu* MUL 2).⁴⁶

[NAME – FATHER’S NAME_o – SON (*65)]:]*a-me-ro*, *qe-da-do-ro*-*65 **TH Gp 215.1**

[FATHER’S NAME_o – SON (*65)] : *a-]ko-ro-da-mo*-*65 **TH Gp 215.2**
 (/Akrodāmo-/: Ἀκρόδάμος)

a-ra-o-*65 ? (2x **TH Fq 214.3**, 254[+]255.7

ka-wi-jo-*65 **Fq 123.1** (5x) (/Gāwio-/: Γάιος)

o-to-ro-no-*65 **TH Fq 214.7**

ra-ke-da-mi-ni-jo-*65 [**Fq229.4** (5x) (/Lakedamnio-/)]

ra-ke-mi-ni-jo-*65 V 2 (**TH Fq 229.13** +) (variant spelling of the precedent)

In the case of *i-je-re-wi-jo*-*65 (**TH Gp 303.1**), surely /*h*erēwio-*65/, i.e. **h*erēw-io-/, it is impossible to elucidate whether it is the genitive in -(C)o of a name or the nominative in /(-C)io-/ of a patronymic (cf. Hom. Αἴαντα ... Τελαμώνιον υἱόν) of a stem in *-ēμ-. The absence of Ἱερεῦς, Ἱερεῖος, Ἱερήμιος in the onomastics of alphabetic Greek makes a decision impossible.

A variant with *ko-wo*/korwo-/ ‘son’ occurs twice: *pa-se-ri-jo ko-wo* (**MY Oe 121.2** *ka-ke-wi* LANA 2 *pa-se-ri-jo ko-wo* LANA 2.), *u-wa-si-jo*, *ko-wo*

⁴³ *Aliter* HAJNAL 1995, 257 (*pi-ro-wo-na* feminine /^owoinā/, *wi-do-wo-i-jo*, *i*-*65 as ‘*uἰδουῖος* junior’).

⁴⁴ In the case of *a-tu-qa-te-ra-to*, *i-jo* † (**KN Vs[2] 1523.4**) the father’s name remains opaque, and a thematic name remains hypothetical.

⁴⁵ *65 /*ju*/ and *i*-*65 /*hju*-/ (cf. pl. υἱέες Hom.) according to HEUBECK 1971; MELENA 2014b, 75-79.

⁴⁶ MELENA 2014b, 78 (and *per litteras*, 6.5.2002, with reference to the logogrammatic use of *KO* for /*khoiros*/, *WE* for /*wetaloni*/, *PO* for /*pōlos*/ or *E* for /*erip^hos*/); also *apud* PALAIMA 2006, 148. On the Theban evidence for ‘son’ cf. HAJNAL 2006, 64-66.

(KN Ai[1] 115 pa-ro , u-wa-si-jo , ko-wo []). The names could be thematic, namely *pa-se-ri-jo* /^P*asēlios*/ (: Φασήλιος) and *u-wa-si-jo* /*Uwāsio-*/ or /*Uwansio-*/ (cf. MN *u-wa-ta* KN, PY /^h*Uwātās*/ or /^h*Uwantās*/).

7.4.

It must be stressed that in the formula *pi-ro-wo-na* , *wi-do-wo-i-jo* , *i-**65 (PY Ae 344) an interpretation of *wi-do-wo-i-jo* , *i-**65 as ‘*wi-do-wo-i-jo* junior’ is excluded,⁴⁷ and that the same applies to *pa-se-ri-jo* , *ko-wo* and *u-wa-si-jo* , *ko-wo* (cf. 7.3.). A very different position takes the formula with enclitic *-qe*, namely [NAME_{NOM} – *i-jo-qe* / *i-**65-*qe*]: copulative *-qe* makes it evident that the formula refers to two persons [FATHER &(-*qe*) ‘son’ (*i-jo...*)], cf. *wa-ra-pi-si-ro* , *i-jo-qe* VIR 2 (MY Au 102.1) and *wa-ti-ko-ro* 1 , *i-**65-*qe* 1 (PY Jn[1] 725.8).

7.5.

In summa: The evidence for putative ‘genitives’ in -(C)o of the father’s name in the filiation formulas of the type [(NAME) – FATHER’S NAME -(C)o – ‘son’ (*i-jo...*)] is relatively limited, but has no counterevidence: the genitive in -(C)o-*jo*, which would be *a priori* expected, does not occur. This statement is crucial for our purpose: the father’s name in -(C)o, followed by *i-jo* (and variants) may be understood as the bare stem of the name, i.e. as a non-inflected form. The absence of a recognisable genitive ending is easy to explain in the framework of the spelling conventions of Linear B, in which mere juxtaposition and abbreviations are normal.⁴⁸ The context and the formula (with occasional univerbation, as shown by the absence of word-divider) do not leave any doubt about the genitival function (: appurtenance) of the father’s name, even if not marked by the specific ending.

The use of -(C)o may certainly have been triggered by special factors, especially by the haplography of **(C)i-jo-jo* as *-(C)i-jo* in the stems in **-i-jo-* (see 2.), and of *-(C)o-jo-jo* in *(C)o-jo* in immediate contiguity before *i-jo* ‘son’ (and variants): this is the case of *pi-ro-wo-na* , *wi-do-wo-i-jo* , *i-**65, of *ra-]ke-da-mo-ni-jo-u-jo*, and of *wi-do-wo-i-jo* , *i-**65. However, this may apply only to a reduced number of instances.

⁴⁷ Pace RUIJGH 1967, 207 n. 545; HAJNAL 1995, 257 (‘*υιδυο^hios* junior’); THOMPSON 2017, 584.

⁴⁸ Cf. CHADWICK 1958, 287; DUHOX 1968, 782-783.

8.

A short reflection on one, or two, form(s) in $-(C)a$ of masculine names instead of expected $-(C)a-o$ in the patronymic formula (in close parallel with $-(C)o$ for $-(C)o-jo$), as perhaps *ko-ki-da* depending on *o-pa* also in Cnossos (cf. 6.), may be in order at this point. One instance is sure, namely *pi-ro-i-ta* (MN /*P^hiloi^{tās}/*: Φιλοίτης)⁴⁹ in *pi-ma-na-ro*, *pi-ro-i-ta* ‘*i-jo*’ (KN Vs[2] 1523.5): *pi-ro-i-ta* has the same position (and function) as *zo-wi-jo* in *pi-ma-na-ro*, *zo-wi-jo*, *i-jo*.4 (followed by an obscure *a-tu-qo-te-ra-to* 1[*i-jo* in the same line) and may thus be ‘(*pi-ma-na-ro*) son of Philoi^{tās}. Whether *pi-ro-i-ta* conceals a gen.sg. in */-ās/* previous to the generalization of $-(C)a-o$ or merely the bare stem, as is the case of the **-o*-stems (cf. 7.) must remain open. Less clear is the case of the MN *a-e-ri-qo-ta* (*ke-ki-jo*, *a-e-ri-qo-ta*) in PY An[3] 657.1 *me-ta-qe*, *pe-i*, *e-qe-ta*, *ke-ki-jo*, / .12 *a-e-ri-qo-ta*, *e-ra-po*, *ri-me-ne*. A transliteration */meta-k^we sp^heⁱ h^{ek}wetās Kerkios* (or *Kerkion*) *A^{herik^{wh}ontās elaph^hōn lime-neil}* would imply the occurrence of two *e-qe-ta*. Alternatively, if *a-e-ri-qo-ta* is the father of *ke-ki-jo*, *a-e-ri-qo-ta* would conceal an old genitive */°k^{wh}ontās/*⁵⁰ or simply the bare stem of the name. *Non liquet*.

9. In conclusion

The supposed ‘genitives’ in $-(C)o$ of month names (with or without indication *me-no*, cf. 5.), with appurtenance formulas (cf. 6.) and with filiation formulas (cf. 7.) are manifestations of the same procedure and may be interpreted in the same way: the spelling $-(C)o$ does not conceal a real genitive ending, not even a nominative of rubric, but simply the bare stem, since the context is transparent, and renders the ending unnecessary. Thus, its omission turns into a trivial matter. In other words, the forms in $-(C)o$ reflect the simplest available graphic form as the result of what one could call, paraphrasing Paul Kiparsky’s linguistic ‘conjunction reduction,’ a *marking reduction*, for which there are typological parallels in cuneiform traditions, and may well apply to other aspects of Mycenaean writing and to the overall structure of the tablets. The interpretation proposed for $-(C)o$ fits into the conventions of Linear B, and is, in my opinion, surely preferable to explanations in terms of an old ablative **-ōd*, which are certainly coherent, but probably do not apply at the time of the tablets.

⁴⁹ Cf. the Cyprian MN *pi-lo-ta* /*P^hilōtās/*, gen. *o-pi-lo-ta-o-se* (text: *o-pi-lo-ta-o-se-mi* /^(h)*o* *Philōtaos ēmi*, ca. 600-475, see IG XV 1, 70), as Artemis Karnava kindly points out to me. The name is richly attested in alphabetic Greek (Φιλότας).

⁵⁰ For */A^{herik^{wh}ontās/}* cf. MELENA 2001, 24; for */°k^{wh}ontās/* cf. DUHOUX 2017, 163.

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Mycenaean names in *-to*: the Minoan component in the 2nd millennium BC through the lens of anthroponymy

José Miguel Jiménez Delgado

Introduction

This article offers an analysis of the pre-Greek proper names in *-to* attested in Linear B. The majority of these names are concentrated in documents from Knossos. More importantly, they reveal certain morphological features which are relatively homogeneous with those of other pre-Greek names. As we shall see, it is often difficult to determine the origin of the proper names with this ending in Linear B, although the non-Indo-European nature of several of them is hardly questionable.¹ The importance of the Mycenaean evidence is due both to the higher frequency of these names compared to alphabetic Greek and to the greater interaction of Greek with the pre-Greek linguistic world in the 2nd millennium.

The survey begins with a brief section on the possible interpretations of *-to* in the light of the alphabetic evidence. It should be noted that the group formed by the terms in *-nt^ho-*, which also have a pre-Greek origin, is excluded from the study, as no anthroponyms with this suffix have been identified. The second section discusses the non-Indo-European proper names in *-to* which appear in Linear B and do not belong to the aforementioned group, and distinguishes between toponyms and anthroponyms. In the third section, these names are compared to those found in Linear A and to other pre-Greek names attested in Linear B. Finally, relevant conclusions are drawn at the end of the article.

¹ On the methodological problems concerning the identification and interpretation of Greek and non-Greek names in the Linear B corpus, see MEIGNER 2019.

The pre-Greek suffixes related to Mycenaean -to

The ending *-to* reflects different phonetic realities in Linear B, since the syllabograms of the *t*-series denote both the voiceless dental /t/ and the voiceless aspirated dental /t^h/. In addition, *n*, *r* and *s* in syllabic coda, as well as *i* in several cases, are not represented before the dental consonant.² Thus, there is a group of proper and common nouns in which *-to* can represent the pre-Greek suffix *-nt^ho-*.³ These are mainly toponyms, cf. *a-ma-ru-to* (TH Of 25.2, Wu 58.γ) Ἀμάρυνθος; *da-*22-to* (EL Z 1, KN *passim*), which Melena interprets as *Λάβινθος,⁴ although it could be a toponym in *-t^(h)o-* instead of *-nt^ho-*; *e-ro-ma-to* (PY An 172.3-7) *Ερόμανθος; *ko-ri-to* (PY Ad 921) Κόρινθος; *o-ru-ma-to* (PY Cn 3.6) *Ορύμανθος; *ra-sa-to* (KN B(3) 808) *Λάσανθος?; *ra-su-to* (KN *passim*) *Λάσυνθος? The suffix is also attested in some common nouns, cf. *a-sa-mi-to* /asamint^hos/ ‘bathtub’ (KN Ws 8497.γ); *da-pu₂-ri-to* ‘labyrinth’ (KN Gg(1) 702.2, Oa 745.2; *da-pu-ri-ṭo* [in Xd 140.1]);⁵ *ti-mi-to* /tirmint^hos/ ‘terebinth’ in the compound toponym *ti-mi-to a-ke-e* (PY Cn 600.7.8.11-15, Jn 829.13, Ma 123.1, Na 361; *ti-mi-ṭo a-ke-i* in PY An 661.10) – see also *mi-ta* /mint^hǎ/ ‘mint’ (MY Ge 602.5B, 603.1, 605.2A.6B, 606.6).⁶ This group of pre-Greek terms has already been studied in detail and will not be considered here.⁷ The suffix *-nt^ho*, although also spelled *-to* in Linear B, has not been identified in anthroponyms. Only in the case of *pa-ra-to* (KN Db 1373) it is possible to interpret the anthroponym as related to the adjective φάλανθος ‘white-haired, bald’,⁸ although the readings Πλάτων and *Πάλαστος have also

² On the spelling rules of Linear B, see MELENA 2014, 91-128.

³ I have used the inverted index of *DMic*, and the database *DĀMOS* to search for Mycenaean terms.

⁴ Melena 1987, 229.

⁵ The term denotes a female divinity, *da-pu₂-ri-to-jo po-ti-ni-ja* ‘the lady of the Labyrinth’ (Myc. /dap^hurint^hos/).

⁶ For the different interpretations of the Mycenaean terms, see *DMic*.

⁷ See, for example, MORESCHINI 1984, a monograph specific to the suffix.

⁸ The adjective seems to be a compound of φαλός ‘white’ and ἄνθος in the sense of ‘hair’ cf. *DELG s. v.* Anthroponyms in *-vθo-* are also rare in alphabetic Greek and generally correspond to place names and/or common nouns, cf. MORESCHINI 1984, 99-100. *LGNP* includes 69 anthroponyms in *-vθos*; slightly more than a third of them are Thracian, mostly ending in *-κενθος*, cf. Αὐζάκενθος, Ἐπταίκενθος, Μουκάκενθος; a substantial number are compounds with ἄνθος ‘flower’, cf. Ἴππανθος, Πύρρανθος, Ῥόδανθος, or are related to other common nouns or place names, cf. Ἄκανθος, Ζάκυνθος, Ξάνθος. It is difficult to find among them anthroponyms of pre-Greek origin that cannot be considered to belong to either of these two groups, cf. Κάλυνθος, Μόλυνθος, Σέανθος.

been proposed. It is therefore preferable to omit it from our analysis, as it is anthroponyms that display the most interesting morphological features, as will be seen below.

The Mycenaean ending *-to* can also represent *-to-* and *-tho-*. The first of these suffixes is characteristic of the Indo-European language family as **-to/eh₂-*,⁹ but is also attested in pre-Greek words, both in tree names, cf. ἄκαστος ‘maple,’ πλατάνιστος ‘plane,’ and in toponyms such as Καίρατος (Cretan river), Σύβριτα (Cretan city), Ταῦγετον (mountain in the Peloponnese). The suffix *-tho-* is also found in words with Indo-European etymology, mainly with an expressive quality, such as ἄχθος, βρῖθος, πλήθος, although it is not productive.¹⁰ Moreover, it is characteristic of some pre-Greek terms, names of vessels such as κύαθος ‘ladle,’ λήκυθος ‘flask,’ *myc. qe-to = πίθος* ‘jar,’ plants such as ἀσπάλαθος ‘thorny shrub,’ λάπαθον ‘monk’s rhubarb, dock,’ and toponyms such as Κάνηθος (mountain in Euboea), Κικύνηθος (Aegean island), Σίμαιθα / Σύμαιθα (city in Thessaly), Σκίαθος (Aegean island).¹¹

This article examines the Mycenaean proper names of possible or probable pre-Greek origin ending in *-to* except for those that can be identified as terms in *-ntho-*. As will be demonstrated, they form a relatively homogeneous group, although in most cases we cannot know exactly the phonetic nature of *-to*. In what follows, the proper names in *-to* under study are identified and distinguished into toponyms and anthroponyms.

Names in -to

The Mycenaean proper names in *-to* which have a more or less likely pre-Greek origin and do not belong to the terms in *-ntho-* are divided into two large groups: toponyms and anthroponyms. To these should be added the name of a month, *ra-pa-to* (KN Fp(1) 13.1), which apparently shows continuity in Arcadia, cf. gen. sg. Λαπάτω (SEG 33 319.3, Orcomenus, 3rd century BC). To my knowledge, there is only one common noun, *qe-to* /k^het^hos/ ‘jar’ (MY Ue 611.4, PY Ta 641.2), corresponding to alph. Gr. πίθος, of which a neut. pl. diminutive *qe-ti-ja* (MY Ue 611.3, Wt 504.β) is attested.

⁹ Cf. CHANTRAINE 1933, 299-309.

¹⁰ Cf. CHANTRAINE 1933, 365-368.

¹¹ Cf. LINDNER 1995, 697-698.

All the toponyms are Cretan (nine toponyms), with the exception of *me-te-to-* in Pylos (see Table 1). Among the Cretan toponyms, *wa-to* is attested on painted vases found in Thebes besides Knossian tablets, which indicates the Cretan provenance of the vases.¹² More than half of the toponyms have more or less likely counterparts in alphabetic Greek: *pa-i-to* is clearly identifiable with Φαιστός, while *wi-na-to* can easily be identified with Ἰνατός through the dropping of *w-*; *ra-to* is identified with Λᾶτώ but is interpreted as thematic *Λατός, from the corresponding adjective *ra-ti-jo* (KN E 668.2), a more complicated question being that of the quantity of the first vowel, since in its alphabetic form it is usually understood as long by analogy with the theonym Λητώ; *ku-ta-i-to* is identified with Κύταιον, which would imply the dissimilation of the second dental; *ru-ki-to* has been related to both Λύκαστος and Λύκτος, despite the *i* of the Mycenaean toponym; *ti-ri-to* with the Cretan hydronym Τρίτων and the toponym Τρίττα, which according to Hesychius designated Knossos (τ 1434 Τρίτ[τ]α· οὕτως ἡ Κνωσσοῦς ὠνομάζετο). To my knowledge, *me-te-to-*, *qa-na-no-to*, *sa-na-to-*, and *wa-to* remain unidentified, and therefore one cannot exclude the possibility that some of them belong to the group of toponyms in *-ntho-*.

These toponyms are all thematic, as can be deduced not only from their counterparts in alphabetic Greek but also from the adjectives derived from them: *ku-ta-ti-jo/-ja* (KN G 820.3, Ga 419.1.2, 673.1, Wb 5662, X 7897.b), *pa-i-ti-jo/-ja* (KN *passim*), *ra-ti-jo* (KN E 668.2), *ru-ki-ti-jo/-ja* (KN *passim*), *ti-ri-ti-jo/-ja* (KN E 749.3, Og 833.3, X 1385), *wa-ti-jo* (KH Ar 4.1). Their thematic nature is compatible with the semantic function of location which they fulfill in the texts in which they appear, since the ending *-to* can be understood as a nominative of rubric or dative-locative. In the case of *me-te-to-* (PY An 35.2) and *sa-na-to-*, the toponym is in the accusative constructed with the allative postposition *-de*.

¹² Cf. JUDSON 2013.

Toponym	Documentation	Alphabetic interpretation
ku-ta-to / ku-ta-i-to	KN <i>passim</i>	Κύται(τ)οῦ
me-te-to	PY An 35.2, Mn 456.5, Na 337, Vn 130.11.13	?
pa-i-to	KN <i>passim</i>	Φαιστός
qa-na-no-to	KN Da 1351, Db 7118.B, Dv <i>passim</i>	?
ra-to	KN D- <i>passim</i> , Xd 58	*Λατός
ru-ki-to	KN D- <i>passim</i>	*Λύκι(σ)τος
sa-na-to-	KN Fs 2.B	?
ti-ri-to	KN <i>passim</i>	*Τρί(τ)ος
wa-to	KN C 902.3.12, Co 903.1, Np(1) 7423, TH Z <i>passim</i>	?
wi-na-to	KN As(1) 604.2.3	*Φίνατος

Table 1. Pre-Greek toponyms in *-to* included in the study.

There are numerous examples of anthroponyms in *-to* in the Mycenaean texts. A large proportion of these names can be interpreted as Indo-European, for example, *a-ka-to* (KN Dv 5256, Sc 256) ἄγαθος or Ἀγάθων; *a-pi-wa-to* and *a-ke-wa-to*, compounds of */-wastos/*;¹³ and *ne-ri-to* (PY Cn 131.4), probably a compound of ἔρις and the negative prefix **ne-*.¹⁴ Another clear case is that of *ra-wi-to* (TH Fq 194.3), which would correspond to Hom. Λήϊτος, the name of a Homeric hero (*Il.* 2.494, etc.), cf. λήϊτον ‘communal house,’ although its similarity to *ra-wi-to* (KN Db 1245.B), a clearly pre-Greek name, might indicate that the former etymology is a misinterpretation. Similarly, *qi-ja-to* (KN Db 1140.B) could derive from the root of βία ‘bodily force, violence’ (< IE **g^hieh₂-* ‘to conquer, force’), but could also alternate with another pre-Greek anthroponym *qi-ja-to* (KN Dv 1500.b, Xe 5899.1). Finally, *]wo-ro-to* (KN Dv 7863.B; *wō-rō-tō* in Do 5010.B) could be related to ῥόθος ‘noise (of waves)’ or be a derivative of ῥωννυμι ‘to fortify, reinforce.’ For this reason, it has not been included on the list, although it might also be the case that the etyma of these two terms begin with **sr-* and not **wr-*.

¹³ Cf. GARCÍA RAMÓN 1990-1991.

¹⁴ GARCÍA RAMÓN 2022.

The anthroponyms in *-to* that can be classified as pre-Greek are listed in Table 2. All of them occur at Knossos (42 anthroponyms), except for *au-ja-to*, *au-wi-ja-to*, *i-ku-to* (MY), *e-^{*}65-to*, *pi-wa-to* (PY), and *ke-wa-to* (TH). Two of these, *ke-ka-to* and *ku-ri-sa-to*, are found at both Knossos and Pylos. The anthroponymic nature of *a-mi-ke-te-to* and *]ma-qa-to* is undetermined, although it is certain that they are proper names. Some of the anthroponyms which appear on the list could have an Indo-European etymology, cf. *a-ke-e-to*, if interpreted as **Ἀλκει-ήητωρ* (-ήητωρ < ἦμι?); *a-nu-wa-to*, *ke-wa-to*, *pi-wa-to*, possible compounds of *l-wastos*/?; *au-ja-to* and *au-wi-ja-to*, two ways of writing the same name, which was interpreted by Lejeune¹⁵ as a compound of *ἄ(το)-* and *ἰᾶτωρ* ‘physician’ with regressive dissimilation; *ka-ma-to*, if it is read **Κάματος* and interpreted as a derivative formed to the root of *κάμνω* – note that this anthroponym could alternate with another clearly pre-Greek *ka-ma-so* (cf. *infra*); *ka-mi-ni-to*, if it is a derivative of *κάμινος* ‘oven,’ cf. *καμινίτης* ‘(bread) baked in oven;’ *ke-ka-to*, if it is a derivative of the perfect *κέκασμαι* ‘to excel;’ *mi-ka-to*, if it is a derivative of *μείγνυμι* ‘to mix.’ Even less certain is the possible Indo-European etymology of *se-wo-to*, which has been related to *σεῦω* ‘to set in motion, lead,’ although the Mycenaean anthroponym should then begin with *ze-* (< **kjeu-*), as well as that of *ta-ra-me-to*, perhaps related to *θάλαμος* ‘room,’ a noun with unclear etymology. Similarly, *i-ku-to* might be a derivative of *ἰσχύς* ‘strength,’ although this noun also lacks a convincing Indo-European etymology. An interesting case is that of *ru-da-to*, which has been linked to the ethnonym *Λυδός* from *Λυδία*, an equation that would contradict the etymology proposed by Beekes: **Luwiy-a-* > **Luwd-* > **Lūd-* > *Λυδία*,¹⁶ according to which the toponym *Lydia* derives from the toponym *Luwiya* recorded in Anatolian cuneiform texts of the 2nd millennium.

The pre-Greek character of some of these names is fairly certain, e.g., *su-ja-to* and *su-ki-ri-to*, two masculine anthroponyms related, respectively, to the Cretan place names *Συῖα*, an ancient city in the southwest of the island, and *su-ki-ri-ta* (KN Db 1324.B, 1327, Df 1325.B, Dn 1092.2, Dv 5232.B; *su-ki-ri-ta-pi* in KN DI 47.2).¹⁷ Note that the second

¹⁵ Cf. LEJEUNE 1972, 197.

¹⁶ BEEKES 2003.

¹⁷ The Mycenaean form would read **Σύγριτα*, which must correspond to *Σύβριτα* (*Scyl.* 47.25), an ancient city located in the valley of Amari on Crete.

place name is also found in Linear A SU-KI-RI-TA (PH Wa 32). The name *ku-pa-nu-we-to* could be related to KU-PA₃-NA-TU (HT 67a.1-2, 119.3) or KU-PA₃-NU (HT 1.3-4, 49a.6-7, 88.5, 117a.3, 122a.6.7, PH 31a.3); *i-ku-to* to I-KU-TA (HT 35.1-2). Furthermore, *]ma-qa-to* has been linked to Μάρπησος, the name of a city in the Troad, see also Μάρπησσσα, name of a mountain in Paros. This relationship is obscure, but the name could derive from μάρπτω ‘to grasp, seize, take,’ a verb without a clear Indo-European etymology,¹⁸ cf. μάρπτις ‘thief’ (suffix *-τις*). Finally, *si-ja-ma-to* could be a Minoan theonym, as it is attested in KN Fp(1) 48.1, where quantities of oil for various divinities are recorded. In any case, *si-ja-ma-to* contains a first element *si-ja-* which also appears in two proper names of pre-Greek origin, *si-ja-ma* (KN V(7) 1526.2) and *si-ja-pu₂-ro* (KN As(2) 1516.11; *si-ja-pu₂-[* in Xf 4492).

With regard to morphology, most of these names are found in the nominative. However, the prepositional phrase *pa-ro wi-sa-to* (PY Vn 130.10) partially confirms that the masculine names are thematic, since the preposition *pa-ro* is constructed in Mycenaean with the locative dative.¹⁹ Three of the anthroponyms are feminine, from which it can be inferred that they are nouns in *-ó*:²⁰ *a-nu-wa-to*, *o-sa-po-to*, and *sa-ti-qi-tø*. In *ka-^{*}56-na-to*, it is possible that *-to* functions as a derivational suffix, cf. *ka-^{*}56-no* (KN Df 1219.B), another masculine anthroponym, in the same way that the apparent theonym *si-ja-ma-to* could be formed to the anthroponym *si-ja-ma* (cf. *supra*). Thus, *-to* seems to alternate with *-so* on the basis of pairs such as the following: *ka-ma-to* : *ka-ma-so* (KN Mc 4460.B); *ku-ke-to* : *ku-ke-so* (KN Dd 1306.B); *pu-na-to* : *pu-na-so* (KN C(3) 967, 979, D- *passim*, E 843.6, X 7556.B; toponym); see also the toponyms *ru-ki-to* : *ru-ki-so* (KN Db 1297.B). It may also be noted that a pre-Greek prefix *te-* might be identified in the masculine anthroponym *te-ki-ri-ne-to*, cf. *ki-ri-ne-to*.

Finally, some of the pre-Greek names in *-to* could be formed on more complex suffixes. A clear example is that of the Cretan toponym

¹⁸ Quite recently, NIKOLAEV 2022 has argued that it is related to Tocharian A *märk-* ‘to take away’ and possibly to Latin *merx* ‘commodity’.

¹⁹ It is likewise possible that *si-ja-ma-to* is in the dative singular in KN Fp(1) 48.1, cf. *pa-si-te-o-i* ‘to all the gods’ in lines 2 and 3, although the theonym *pa-de* in line 2 is a nominative of rubric.

²⁰ Another possibility is to interpret these names as diminutives in *-(i)ov* but this is fairly remote given that the creation of such women’s names is post-Homeric, cf. STRIANO 2017, 460-461. Furthermore, pre-Greek thematic toponyms and common nouns can also be feminine: see, for example, KOBER 1942 on names ending in *-ivθoc*.

pa-i-to Φαιστός (KN *passim*), which would contain the suffix *-sto-*. The same ending could be present in the masculine anthroponym *ka-da-i-to*, which, as we have seen, apparently alternates with the pre-Greek masculine anthroponym *ka-da-i-so*. However, nothing can be said with certainty, as *ka-da-i-to* could be a name in *-to-*, *-t^ho-* or *-aisto-*. Whatever the case, it is likely that *-to* is added to a consonant in other names on the list, cf. *a-du-po-to* and *o-sa-po-to* (*/-p^(h)t^(h)o-?*), as well as *di-ko-to*, *i-ra-ko-to*, *]ka-mu-ko-to*, and *ta-wa-ko-to* (*-k^(h)t^(h)o-?*).

Anthroponym	Documentation	Gender
a-du-po-to	KN C(4) 911.5	VIR
a-ke-e-to	KN Da 1195	VIR
a-mi-ke-te-to	KN Od(1) 687.b	VIR?
a-nu-wa-to	KN Ap 639.14	MUL
a-tu-qo-te-ra-to	KN Vs(2) 1523.4b	VIR
au-ja-to	MY Au 102.5	VIR
au-wi-ja-to	MY Au 653.4, 657.2	VIR
di-ko-to	KN D 411	VIR
e-*65-to	PY En 74.9, 609.7, Eo 211.4, 276.8	VIR
ï-ku-to	MY Oi 705.1	VIR
i-ra-ko-to	KN V(3) 466.2	VIR
i-ro-to	KN C(4) 912.6	VIR
ja-ra-to	KN De 1424.B	VIR
ka-da-i-to	KN Uf 5726.2	VIR
ka-ma-to	KN Da 1275.B	VIR
ka-mi-ni-to	KN De 1260.B, Dk(2) 1073.B	VIR
]ka-mu-ko-to	KN V(6) 831.2	VIR
ka-*56-na-to	KN As(2) 1516.16	VIR
ke-ka-to	KN As(2) 1517.10, PY Pn 30.3	VIR
ke-wa-to	TH Gp 153.1	VIR
]ki-ma-to	KN V(3) 7620.2	VIR
ki-ri-ne-to	KN Dv 1248.B	VIR
ku-ke-to	KN Da 1392.B	VIR

ku-ma-ṭo[	KN V(3) 7512.2	VIR
ku-pa-nu-we-to	KN As(2) 1517.8	VIR
ku-ri-sa-to	KN Xf 8101.1, PY An 5.7, Cn 4.2, Jn 706.4	VIR
]ma-qa-to	KN Fh 378	VIR?
mi-ka-to	KN Vc(1) 67	VIR
na-su-to	MY Au 102.2, 657.8, 660.1	VIR
ne-o-to	KN As(2) 1519.3	VIR
o-sa-po-to	KN Ap 5748.3	MUL
pi-wa-to	PY An 31.4	VIR
pu-na-to	KN C(4) 912.5	VIR
qa-*83-to	KN Sc 257.2	VIR
re-me-to	KN Dd 1106.B, Pp 495	VIR
ru-da-to	KN X 7677	VIR
sa-ti-qj-ṭo	KN Ap 639.9	MUL
se-wo-to	KN Da 1268.B	VIR
si-ja-ma-to ²¹	KN Fp(1) 48.1, U 4478.1, X 451.1	VIR
si-ni-to	KN Dg 1280.B	VIR
su-ja-to	KN M 719.2	VIR
su-ki-ri-to	KN As(2) 1516.12	VIR
ta-ra-me-to	KN Ce 59.2a	VIR
ta-wa-ko-to	KN Od(2) 715.b	VIR
te-ki-ri-ne-to	KN Dq(4) 686.b	VIR
wa-du-[•]-to	KN As(2) 1516.8	VIR
wi-sa-to	PY Cn 328.12, Vn 130.10	VIR
*56-ri-to	KN Db 1423.B, Xe 6020	VIR

Table 2. Anthroponyms in *-to* classifiable as pre-Greek*Linear A -TO and -TU: the Minoan origin of -to*

As we have just seen, the names in *-to* attested in Linear B form a large group of toponyms and anthroponyms. In some cases, a relationship can be established between these names and certain sequences in Linear A, which, in all likelihood, represent proper names. Before proceeding

²¹ The reconstruction *si-ja-ma[-to]* is plausible in KN Fp(2) 5472.2.

further, it should be remembered that the group of terms in *-nt^ho-* found in Linear B, about whose pre-Greek origin there can be little doubt,²² is not included in our analysis, despite the fact that they are also written with *-to*. The main reason is that no anthroponyms have been identified among these terms. Furthermore, as will become apparent, it is in this type of proper nouns that the most striking features are clearly visible, especially the feminine variant in *-ó*, the vocalic variants *-to/-tu/-ta*, and the alternation with other pre-Greek suffixes on the same base.

We have direct evidence of the pre-Greek languages in various writing systems, generally from the islands of Crete and Cyprus.²³ Here we are interested in Crete and, in particular, in the texts written in Linear A, since the evidence in Cretan Hieroglyphic is difficult to interpret from a linguistic point of view, as is the evidence in the Greek alphabet which represents a language called 'Eteocretan' spoken in the 1st millennium.²⁴ The Linear B script derives directly from Linear A, and their similarities are so many that it is generally accepted that the Linear A signs with correspondences in Linear B had phonetic values similar to those of the respective Linear B signs.²⁵ If we accept this equivalence, we find the following sequences ending in *-TO* and *-TU* in texts written in Linear A, which could be related to the Mycenaean names in non-Indo-European *-to*:²⁶

→ In *-TO*

]DÜ-WA-TÖ (KN **Za 10.b**), PA-I-TÖ (HT **97a.3**; PA-I-TÖ in HT **120.6**), QA-RE-TO (HT **137.1-2**)

→ In *-TU*

A-RA-[•]-A-TU (HT **87.5**), A-RA-TU (ZA **7a.1-2**), DÄ-NA-TU (ARKH **6.1**), DA-TU (HT **123+124a.6-7**), JA-DI-KI-TU (IO **Za 2.1**), JA-SU-MA-TU (SY **Za 2a**), KU-PA₃-NA-TU (HT **67a.1-2**, **119.3**),]QE-TU (HT **41a.2**), MI-TU (HT **117a.2**),]-MI-TU (HT **135a.2**),]PÄ-NA-

²² In fact, the name for labyrinth, Myc. *da-pu₂-ri-to*, alph. Gr. λαβύρινθος, has been associated with the Linear A sequence DU-PU₂-RE (HT **Zb 160**, PK **Za 15**), which could be a common noun. See VALÉRIO 2007.

²³ Cf. DAVIS 2010.

²⁴ Cf. DUHOUX 1982.

²⁵ Cf. STEELE & MEISNER 2017.

²⁶ I have searched for the terms in Linear A on <http://people.ku.edu/~jyounger/LinearA/>.

TU (KH 7b.2-3), SE-KU-TU (HT 115a.3), SI-TE-TU (ZA 20.2), SI-TU (HT Wa 1019 γ, ZA 20.3), TE-TU (HT 7a.5, 13.3; TE-TU[] in HT 85b.2-3), *306-TU (HT 9a.2-3, 119.4, 122a.6; *306-ṬU in HT 9b.3).

It should be noted that Linear A syllabograms with the vowel *o* are very rare, which might explain the disparity observed between the two endings.²⁷ Besides that, it can be assumed from the structure of the texts that most of the words written in Linear A are proper names, whether toponyms or anthroponyms. In any case, there is a clear correspondence with the list of pre-Greek names in *-to* found in Linear B: PA-I-ṬQ = *pa-i-to*.

In addition to the names in *-to*, pre-Greek anthroponyms in *-tu* are also attested in the Mycenaean texts from Knossos, which could represent an intermediate stage in their inclusion in the Greek declension. I refer to]*wi-ja-na-tu* (KN Ap 769.2), a feminine anthroponym, and]*sa-tu* (KN Ak 640.1), an anthroponym of indeterminate gender, as well as]*me-tu* (KN X 5962), a proper name, although it is hard to know whether it is an anthroponym or a toponym given the fragmentary state of the tablet. Much more striking is the feminine anthroponym in the dative *ma-tu-we* (KN Ln 1568.lat. inf.b), cf. *infra*. Likewise, a masculine anthroponym *o-tu* (PY An 5.5) is recorded in the texts from Pylos, which has been associated with the name of a Paphlagonian king Ὀτυς mentioned by Xenophon (X. HG 4.1.3). Be that as it may, pre-Greek names in *-u* are both masculine and feminine. Among the feminine anthroponyms there are clear cases such as *i-du* (KN Ap 639.7),]*ja-mi-nu* (KN Ap 5547.1), *ke-pu* (KN Ap 639.13; *Κῆπυς?, *Κῆβυς?), *ma-ku* (KN Ap 639.3; *Μάχυς?), *pi-ja-mu-nu* (KN Ap 5748.2), *ru-nu* (KN Ln 1564.4), *ta-su* (KN Ln 1568.2; *Θάρσυς?), in addition to]*wi-ja-na-tu*. With respect to the masculine names, we possess doublets which are important for understanding the adaptation of the names in *-u* to the thematic declension, cf. *a-qi-ru* / *a-qi-ro* (KN Ce 50.1a.v. 1a / Da 1123), *ki-mu-ku* / *ki-mu-ko* (KN Db 1327 / Dv 1085.b), *u-su* / *u-ṣo* (KN V(3) 7512.1 / KH Z 22), as well as names in Linear A which are adapted as thematic masculine anthroponyms in Linear B, cf. DI-DE-RU (HT 86a.3, 95a.4, b.4) : *di-de-ro* (KN DI 9016.B, Dv 1504.B), KA-SA-RU (HT 10b.3) : *ka-sa-ro* (KN C(4) 912.B, Dv 1450.B), MA-SI-DU (HT 43.1-2) : *ma-si-dwo*

²⁷ STEELE & MEISNER 2017, 102-108.

(KN Fh 360.b), QA-QA-RU (HT 93a.4-5, 118.2-3, 122b.3-4) : *qa-qa-ro* (KN As(1) 604.3).

In the case of feminine names in *-to*, we have already seen that they are adapted as nouns in *-ó* in Mycenaean, but an example such as the dat. sg. *ma-tu-wo* would indicate two alternative possibilities, which is somewhat surprising in alphabetic Greek where feminine anthroponyms in *-u-* are rare if not nonexistent.²⁸ The fact that pre-Greek feminine anthroponyms in *-to/u* are adapted in Mycenaean as nouns in *-ó* or *-u-* can be compared to the relatively numerous presence of masculine anthroponyms of the same origin in *-a*. If we focus on the examples ending in *-ta*, among the clearest might be *da-i-pi-ta* (KN B(5) 799.1), *i-da-ra-ta* (KN Xd 154.4), *ka-ne-u-ta* (KN Da 1350.B, X 7559), *ki-ma-ta* (KN As(2) 1520.4), *ku-wa-ta* (KN Ws 8754.β), *ne-o-ta* (KN As(2) 1516.13),]*su*-*56-*ta* (KN As(1) 5932.lat. inf.), *ta-ta-ta* (KN Ce 152.3), *to-u-na-ta* (KN Dm 1182, Dv 1479), *wi-du-ru-ta* (KN Ch 5754), *56-*ni-sa-ta* (KN As(1) 607.3). The adaptation of these names as masculine in *-ā-* is relatively straightforward in Greek, given the existence of a particularly productive masculine suffix *-τᾱ-*. In fact, some of them might be Greek derivatives with this suffix from a pre-Greek toponym *vel sim*. The possibility that in some of them *-ta-* represents *-θᾱ-* cannot be ruled out either. Finally, feminine anthroponyms in *-ta* of probable pre-Greek origin are very rare, cf. *ka*-*56-*so-ta* (KN Ap 769.1) and]*ja*-*mu-ṭa* (KN Ap 5864.5).

Be that as it may, the existence of masculine anthroponyms in *-TA* in Linear A cannot be doubted, cf. *DA-I-PI-TA* (ZA 8.5, 10a.4-5), possibly adapted in Mycenaean as *da-i-pi-ta* (KN B(5) 799.1). Some of them have probably been thematised, for example, *i-ku-to* : *I-KU-TA* (HT 35.1-2) – *i-ku-to* is attested at Mycenae –, see also *ku-ma-ṭo* :]*KU-ME-TA* (HT 51b.1) with differing vocalism, while the pairs *ki-ma-to* : *ki-ma-ta* and *ne-o-to* : *ne-o-ta* could reflect two possibilities. A different but nonetheless significant example is also that of the masculine anthroponym *su-ki-ri-to*, which is related to the toponym *su-ki-ri-ta* / *SU-KI-RI-TA*.

It should be emphasised that other groups of pre-Greek anthroponyms, namely those ending in *-so* and *-zo*, were adapted in the same way, i.e. masculine in the thematic declension and feminine as nouns in *-ó*, alongside the case of a feminine anthroponym in *-u-*, cf. *ta-su* (see

²⁸ Cf. STRIANO 2017, 453.

above), and several possible examples of masculine anthroponyms in *-a*, cf. *ke-u-sa* (KN DI(1) 946.B), *te-ru-sa* (KN Dv 1308.B), *si-za* (KN As(2) 1520.6), *ti-mi-za* (KN Df 1121.B, Dk(2) 1076.B).²⁹

Finally, the pre-Greek character of *-to* becomes obvious when it alternates with other pre-Greek endings such as *-so* (= $-\sigma(\sigma)o-$): *ka-da-i-to* : *ka-da-i-so*; *ka-ma-to* : *ka-ma-so*; *ku-ke-to* : *ku-ke-so*; *pu-na-to* : *pu-na-so*; *ru-ki-to* : *ru-ki-so*. One could add to the pair *ku-ke-to* : *ku-ke-so* a third element *ku-ke-ṃo*[(KN V(4) 5946.2), with a suffix *-mo* characteristic of the pre-Greek proper names found at Knossos, cf. the masculine *a-nu-mo* (KN Da 5204.b, De 1362.B, V(3) 503.1), *da-na-mo* (KN E 847.2), *ki-sa-nu-mo* (KN Da 1485), *ku-ke-ṃo*[(KN V(4) 5946.2), *ru-na-mo* (KN Da 1098.B, 1277), and *wi-je-mo* (KN As 609.2, Dv 1266.B), the feminine *o-ri-mo* (KN Ap 5748.2)³⁰, and the toponyms *da-ta-ra-mo* (KN DI(1) 935.B), *ka-mo* (KN As(1) 604.1), *ma-so-mo* (KN DI(1) 932.B, 7721.B), *qa-mo* (KN *passim*), *su-ri-mo* (KN *passim*), and *u-qa-mo* (KN Mc 4454.B). Outside Knossos one finds the anthroponyms *re-ta-mo* (PY Cn 285.3), *wo-to-mo* (PY Un 1314.2), and the toponym *ra-mo-* (TH Of 38.1), thus far without Indo-European etymology. There is less certainty about the pairs *qi-ja-to* : *qi-ja-zo* and *ra-wi-to* : *ra-wi-zo*, since *qi-ja-to* and *ra-wi-to* are possibly names of Indo-European origin, as seen above. Overall, the importance of *-mo*, *-so* and *-to* in pre-Greek names attested at Knossos and their alternation point to a language(s) which can be qualified as Minoan, and of which only slight traces survived in the Greek of the 1st millennium.

Conclusions

The number of proper names in Mycenaean texts which end in *-to* and have a possible pre-Greek origin is fairly extensive. This pre-Greek ending *-to* coexists with the Indo-European suffix $^*to/eh_2-$. However, an element such as *-to* is open to different interpretations in Linear B, with regard to both the dental consonant (*t*, t^h) and to the presence of a possible preceding *n*, *r*, *s* or *i* in syllabic coda. Thus, we can also mark off a group of also pre-Greek toponyms and common nouns in $-nt^ho-$ which,

²⁹ On the pre-Greek names in *-so* and *-zo*, see JIMÉNEZ DELGADO 2022.

³⁰ If not to be interpreted as $^*\Omega\rho\mu\acute{o}$. There are also pre-Greek anthroponyms in *-ma*, probably related to the series in *-mo*, both masculine, cf. *si-ja-ma* (KN V 1526.2), and feminine, cf. *ru-sa-ma* (KN Ln 1568.3). Linear A includes both names in *-MU*, cf. *KU-RA-MU* (HT 117a.2-3), and *-MA*, cf. *TU-JU-MA* (HT 117a.3-4). No syllabogram has been identified for *MO* in Linear A.

as far as we know, do not exhibit the morphological features of the anthroponyms in *-to*, i.e. the main subject of this study. On the other hand, the continuity of the suffix *-to* in the 1st millennium is rather limited, whether it is in the form of *-το-* or *-θο-*.

The pre-Greek ending *-to* is characteristic of toponyms and anthroponyms found at Knossos and could have a counterpart in some sequences written in Linear A, the clearest example being *pa-i-to*: PA-I-TŪ. Moreover, this group of proper names presents specific morphological features, the most relevant of which is their inclusion in the Greek declension as thematic nouns, in the case of the masculine names, and as nouns in *-ῶ*, in the case of the feminine. However, this pattern of adaptation was not entirely fixed, as there are also feminine forms in *-u* and masculine in *-a* which seem to reflect a Minoan language(s). Additionally, the suffix seems to alternate with other clearly pre-Greek suffixes, for instance *-so* and *-mo*, with which it shares morphological features such as the feminines in *-ῶ* and the vocalic variants in *o/u/a*.

It should be noted that, despite the problems of interpreting *-to* in Linear B, there is some sparse evidence suggesting that the suffix read */-to-/* in proper names, cf. *pa-i-to* = Φαιστός; *ra-pa-to* = Λάπατος; *su-ki-ri-to*, anthroponym derived from the toponym *Σύγγριτα; *wi-na-to* = (F)Ἴνατος (in alphabetic Greek only Ἴνατος is attested without digamma); and, less certain, *]ma-qa-to*, if related, in some way, to μάρπτis, μάρπτω. It should be stressed, however, that we cannot rule out the possibility that *-to* also represents other suffixes such as */-t^ho-/*, cf. the common noun *qe-to* /k^uet^hos/ 'jar', or even for more complex forms such as */-st^(h)o-/*, */-k^(h)t^(h)o-/* or */-p^(h)t^(h)o-/*.

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Historical reflections on the Pylos Ta series: putting *te-ke* in its place

Thomas G. Palaima

The Pylos **Ta** series is arguably the single most studied and restudied set of tablets in the Linear B corpus. Michael Ventris, in his famous letter to Emmett Bennett, Jr. dated June 18, 1952,¹ gives Bennett, in tablet-number order, samples of the clear or highly probable readings in Greek of sign sequences that Ventris's decipherment had then produced in the then known Knossos and Pylos tablets. Of course, there was as yet nothing so probative and handy as the sequence

PY Ta 641.1 ti-ri-po-de , a₃-ke-u , ke-re-si-jo , we-ke *201^{VAS} 2.

And probably just as well, given how resistant to definitive interpretation the phrase *a₃-ke-u* , *ke-re-si-jo* , *we-ke* and the related phrases *ke-re-si-jo* , *we-ke* , *34-*ke-u* and *ke-re-si-jo* , *we-ke* , *o-pi-ki-wi-ri-je-u* , both also associated with *201^{VAS} on **PY Ta 709 + 712 + fr.**, have proved to be.

It was not too long afterwards that the **Ta** tablets made their appearance on the stage of Mycenaean research. As Stephen Tracy has traced the chronology for us,² Carl Blegen, working from the end of March to mid-May 1953 on new tablet finds from the 1952 excavation season at Pylos, focused on **PY Ta 641** and the clear correlation between what the Ventris decipherment made it possible to read as *ti-*

¹ <https://repositories.lib.utexas.edu/handle/2152/20898> [last accessed March 14, 2023].

² TRACY 2018, 2.

ri-po(-de) and the ideogram now identified as *201^{VAS}. Blegen realized that the text of **Ta 641** offered singular support of the strong probability that the Ventris decipherment was more than essentially correct. He, therefore, made sure that **Ta 641** was published swiftly in January 1954.³ This permitted Ventris to make the evidence of **Ta 641** widely known. He presented the key phrase here (the first entry on **Ta 641.1**) as: *t-ri-po-de, Ai-ge-us K-re-si-jos we-chei*⁴ making it more readily ‘readable’ by the general readership of *Archaeology* than the phonetic transcription in our strict system: *ti-ri-po-de, ai-ke-u, ke-re-si-jo, we-ke*. Our system represents dummy vowels in consonant clusters, makes no distinction in the palatal stops between voiced and unvoiced, has no marking of aspiration and no representation of word-terminal /s/—and there is no capitalization of proper nouns or adjectives.

For almost seventy years now, the full **Ta** series of thirteen tablets is hardly ever not under discussion. The contents of the **Ta** tablets are diverse, significant, and puzzling, for research in many aspects of Aegean cultural history. They record: a. clearly drawn ideograms of ceremonial vessels with phonetic rendering of their names (*qe-ra-na, pi-je-ra*₃); b. the materials used to construct and decorate pieces of furniture (*ku-te-se-jo/-ja, e-ra-pe-te-jo/-ja* and *ra-e-ja, ku-ru-so*); c. descriptions of the abstract or figural motifs of decoration (*a-di-ri-ja-pi, re-wo-pi* and *to-qi-de*); d. observations on the state of repair of specific objects (*a-pu, ke-ka-u-me-ṛo[, ke-re-a*₂); e. the region of manufacture of particular items (*ke-re-si-jo*); f. entries referring none too clearly, for us now, to implements connected with sacrificial actions (*pa-sa-ro, wa-o* and *qi-si-pe-e*) and equipment used in connection with fire (*au-te, pu-ra-u-to-ro, qa-ra-to-ro* and *e-ka-ra*). We should add that all this information was registered explicitly as g. the results of an inspection inventory involving a person named *pu₂-ke-qi-ri*, whose status as an elite functionary, perhaps even a collector, is undebatable, although whether he is the actual tablet-writer of the **Ta** series and other important tablets that are identified as the work of Hand 2 is still being discussed.⁵

The header line for the **Ta** set specifies that the records were written h. on the occasion when the king (*wa-na-ka*) did something important

³ BLEGEN 1953-1954.

⁴ VENTRIS 1954, 18.

⁵ BENNET 2001, 31-33; DUHOUX 2008, 314-318; GARCÍA RAMÓN 2009, 10-23; NAKASSIS 2013, 354; OLIVIER 2001, 151, 155; VARIAS GARCÍA 2016, 552-553.

(*te-ke*) with regards to an individual named *au-ke-wa* and the significant office of *da-mo-ko-ro*. Finally, i. other important socio-political terms are embedded in the descriptions of individual items: for example, *wa-na-se-wi-ja* and *a-mo-te-wi-ja*.⁶

I have been working with and thinking about the **Ta** set periodically since autumn of 1974 when I was writing my MA thesis at the University of Wisconsin Madison under the guidance of Bennett, who took little convincing when I proposed to try to ‘prove’ that Pylos Hand 2 was in reality the same tablet-writer as Hand 1. I tried my best, working from the Emile Seraf black and white photographs, as an *advocatus diaboli*. I was not able to prove this radical proposition. However, then and throughout my association with Bennett from Spring 1974 until December 2011, I learned a lot about open-mindedness, about testing hypotheses, about his pure enjoyment of new ideas, even or especially those that contradicted his own past or current ways of thinking, and about scholarship being a wonderful ongoing polite conversation with the dead, whom he has now joined, and with the still living—and, among the living, particularly with younger scholars of the next generation who will carry research in our field forward in new ways. My MA exercise did confirm for me that Bennett’s assignments of scribal hands were made on a sound basis. Jean-Pierre Olivier working in collaboration with Bennett confirmed this at approximately the same time.⁷

I have taken up different aspects of the **Ta** series on a number of occasions.⁸ It is not my objective here to ‘prove’ any particular view on significant points that we have been questioning and answering in different ways since 1954. On many issues that have been long debated we should begin to speak of probabilities for alternative interpretations and hypotheses that we might consider reasonably tenable. We should also not judge arguments only as they pertain to particular points at hand within the **Ta** series, but also consider the ramifications that alternative proposals have for interpreting the contents of other documents upon which particular interpretations of **Ta** texts might have an effect.

⁶ For what the term **a-mo-te-u* (cf. attested genitive singular *a-mo-te-wo*) underlying the adjectival form *a-mo-te-wi-ja* signifies and implies, see PALAIMA 2020 §§19-35; PALAIMA 2021 §§1-12.

⁷ PTT I-II.

⁸ PALAIMA 1999; 2000; 2003; 2004a; 2004b; 2004c; 2008; 2011; and more recently 2019; 2020; 2021; 2022. See PALAIMA in bibliography for references. For many references within PALAIMA 2011, 318 (index).

Take, for instance, the well-known heading phrase of **Ta 711** (and of the entire **Ta** series), to which I referred above: *o-wi-de*, *pu₂-ke-qi-ri*, *o-te*, *wa-na-ka*, *te-ke*, *au-ke-wa*, *da-mo-ko-ro*. Olivier identified *pu₂-ke-qi-ri* here in the Pylos **Ta** series header document as among high status ‘collectors’ (cf. **TH Of 27** *pu₂-ke-qi-ri-ne-ja*)⁹ whose names are inter-regionally linked.¹⁰

There has been considerable debate on the status of ‘tablet-writers.’ I still hold to the reasonable ‘compromise’ position that “that neither Driessen’s nor Bennet’s suggestion can be universally applied: ‘scribe’ and ‘elite administrator in charge’ were in some cases different persons.”¹¹ Was the ‘tablet-writer’ of the **Ta** series (PY Hand 2) a high-status ‘collector’ named *pu₂-ke-qi-ri* or an unnamed ‘tablet-writer’ (PY Hand 2) assisting the ‘collector’ named *pu₂-ke-qi-ri* in the inventory process?

This is significant when we turn to records in other series. Take, for example, **PY Pn 30**, which is also written by Hand 2. It specifies that an individual named *a-ko-so-ta*, one of four notable collectors at Pylos (*a-ke-o*, *we-da-ne-u*, *a-ko-so-ta*, and *a-pi-me-de*), ‘received’ (*o-de-ka-sa-to*) 62 ‘stools’ (*169) from three named individuals and was ‘owed’ at least 19 others. Is this tablet record generated by a process whereby *pu₂-ke-qi-ri*, acting partly as a high-level administrative record-keeper, interacted anonymously with a social peer, a fellow collector named *a-ko-so-ta*? Or is this the ‘scribe’ known as Hand 2 recording here the activities of yet another high-status individual as he recorded *pu₂-ke-qi-ri* making an inventory inspection in the **Ta** series? Note also that on **Eq 213** (recorded by Hand 1) *a-ko-so-ta* does the ‘field inspection tour’ (*o-wi-de*, *a-ko-so-ta*, *to-ro-qe-jo-me-no*, *a-ro-u-ra*, *a₂-ri-sa*) and on **Un 267** (again Hand 1) he is recorded as giving aromatic substances to an unguent-boiler. And *a-ko-so-ta* appears elsewhere in other activities recorded by other hands. How we answer these questions of the identification of high-status agents and record-keepers certainly affects the premise upon which our follow-up questions are based. But right now neither I nor anyone else has definitive answers. But Maurizio del Freo lays out the options succinctly and precisely.¹²

⁹ OLIVIER 2001, 151, 155.

¹⁰ KILLEN 1979, 176-179.

¹¹ BENNET 2001; DRIESSEN 1994-1995; DUHOUX 2011, 113, 115; PALAIMA 2003, 175-177 and n. 39; PLUTA 2011, 281-284; STEELE 2011, 120-121.

¹² DEL FREO 2016, 203.

New perspectives about the **Ta** tablets have been offered in many recent publications.¹³ I will take up here one particular point because it is unresolvable and, therefore, a good example of when we should not use a categorical either-or switch, but speak in terms of probabilities without rejecting any not improbable option. Moreover, these smaller points require much deeper thought about the pieces of evidence that are brought into consideration than we usually can give to them when addressing them in the context of larger arguments.

Here I will discuss the meaning of *te-ke* and how we read the phrase that defines the occasion for the inspection inventory by *pu₂-ke-qi-ri*. My recent work with Nicholas Blackwell on the interpretation of the items on **PY Ta 716** and their relationship to the full **Ta** series and with Rachele Pierini on the MAST@chs quarterly seminars has made me more inclined than ever not to rule out the option originally advanced by Leonard Palmer that *te-ke* here could be taken to have the meaning ‘buried.’¹⁴ (I should make clear that I am focusing in this paper on *te-ke* on **Ta 711.1**, not on the related form *-te-to* which occurs on **TH Fq 126.1**: *o-te*, *tu-wo-te-to*. The interpretation arrived at by Bernabé and Pierini by careful criticism of proposals by other scholars strikes me as sound: ὅτε θύος θέντο.)¹⁵

Regarding *te-ke* on **Ta 711.1** meaning ‘buried,’ I wish to highlight two significant points.

First, it is interesting that (1) the best iconographical evidence for the sacrificial stunning axe (*wa-o* *232 on **Ta 716**) being used in ritual is a funerary scene of the *prothesis* of a corpse on a bier on an LH III C Middle pictorial krater from Agia Triada (Elis);¹⁶ and (2) that the only good iconographical evidence for the restraining bridle device (the ideogram-less *pa-sa-ro* on **Ta 716**) used to control the sacrificial animal victim in ritual slaughter is from the famous Mycenaeanized LM III A2 Hagia Triada sarcophagus.¹⁷ These two pictorial representations at least link the use of the instruments on **Ta 716** with sacrificial practices

¹³ AURA JORRO 2021; BERNABÉ 2021; BERNABÉ & PIERINI 2017; BLACKWELL & PALAIMA 2021; DEL FREO 2016; FARMER & LANE 2016; KELDER & POELWIJK 2016; PALAIMA & BLACKWELL 2020; PIERINI 2021; VARIAS GARCÍA 2016; and no doubt others I have missed during the last six years.

¹⁴ PALMER 1957; 1969, 340-363 and 493-494.

¹⁵ BERNABÉ & PIERINI 2017, 526-527.

¹⁶ PALAIMA & BLACKWELL 2020, 83-84 fig. 13.

¹⁷ BLACKWELL & PALAIMA 2021.

performed during burial rituals and thus involve the associated ritual paraphernalia of the **Ta** series at least in principle with funeral activities.

Second, recent discoveries in the proximity of the Palace of Nestor confirm that ritual burials of notables from the LH II period onwards had a constant importance in maintaining the ideology of the late-forming Pylian state.¹⁸ In this context, burial ceremonies for key elite figures would have had serious and relatively long-lasting socio-political and no doubt religious significance.¹⁹ Given that the two provinces of the whole palatial territory documented in our Linear B archives from LH III C were late in unifying, transitions in the principal offices of state (*wa-na-ka*, *ra-wa-ke-ta*, and especially the heads of the two provinces *da-mo-ko-ro*) whether caused by the death of the current office-holder or by inauguration of the new one, would have been critical. Such transitional periods are when state communities are acutely unstable and vulnerable.²⁰

If such a ceremony were taking place, a 'scribe' in giving brief contextual information about a tablet or series of tablets written mainly for the internal record-keeping mnemonic purposes of the tablet-writers themselves would not have had to be expansive in providing information. A burial of an elite office-holder or the inauguration of his or her replacement would have been a 'national event,' news of which would have been spread along social networks throughout the united territory of Pylos. Large-scale feasts are held to bring or reinforce cohesion during such critical periods.²¹ Unfortunately for us 3,200 years later, we do not know the background circumstances in detail and find the tachygraphic brevity of the tablet headings cryptic.

¹⁸ NAKASSIS 2013, 181-183 with further citations in n. 114 and n. 122.

¹⁹ DAVIS 2022, 80-86. See also MURPHY 2014; MURPHY *et al.* 2020. Reverence for the dead and the 'communal immortalization' in the social memory of those males who had conducted themselves in warfare in selfless devotion to their 'states,' clans, families, wives and children underlie the heroization of the noble 'enemy' war leader Hector in the *Iliad*. Collective 'immortal' reverence by members in the enduring community is a repeated message in the poems of Archilochus, Tyrtaeus and Callinus and is chief among the main notes sounded in Pericles' funeral oration. Even if conspicuous tombs near the Palace of Nestor went out of use much earlier than the destruction of the palace in early III C, the sizeable number of male elites of each generation (20-25 years?) would have been ceremonially honored and socially remembered in burials somewhere in the region.

²⁰ PALAIMA 2012, on the preoccupation with security in the ideology of Mycenaean palatial territories.

²¹ PALAIMA 2004a; STOCKER & DAVIS 2004.

Here is an analogy. On November 24, 1963, a memorandum note is created in the Congressional office of a US senator. On it are written a list of items or things to do. The heading states simply ‘ceremony for president’ or ‘JFK tomorrow.’ Few further specifics would have been required. Those with access to the memorandum would have known the information written in the memorandum was related to the assassinated President John F. Kennedy and to the ceremonies involving his corpse that were taking place on Sunday and Monday, November 24 and 25, in the Capitol Rotunda, in the White House, at St. Matthew’s Cathedral, and at Arlington National Cemetery.²²

Many significant scholarly voices, mine excluded, now explicitly propose that the interpretation of the verb *te-ke* aorist of τίθημι as ‘buried’ should itself be ‘laid to rest.’²³ Ruling out *te-ke* = ‘buried’ has some seriously distorting consequences when it comes to interpreting the Linear B evidence for larger purposes. To cite one example, Jorit Kelder and Marco Poelwijk translate **Ta 711.1** as “Thus *Pu₂-ke-qi-ri* witnessed (the following) when the wanax appointed *Au-ke-wa* as *da-mo-ko-ro*.”²⁴ They make no mention of any possible alternative interpretation in further claiming, “This text has received considerable scholarly attention, primarily because it represents the *sole unambiguous* proof for the wanax’s position as head of the state, in the act of appointing an official, rather than (as has been suggested in the past) a figurehead or religious leader.” (Italics mine.) This so-called proof is only unambiguous if we discard the alternative interpretation of the verb as ‘buried’ as completely untenable and leave it out of our reconstructions.

There is really only one counter voice, Yves Duhoux’s,²⁵ joined with mine. Aura Jorro does a good job of laying out fairly the alternative possibilities for why and how the thirteen-tablet **Ta** inventory record came into being and how it relates to the somewhat enigmatic heading on **Ta 711**. And he gives a concise history of Palmer’s ideas, how they

²² <https://www.whitehousehistory.org/john-f-kennedy-funeral> [last accessed March 14, 2023].

²³ AURA JORRO 2021, 20; BERNABÉ & PIERINI 2017, 524-526; VARIAS GARCÍA 2016, 552-553. NAKASSIS 2013, 226 and PIERINI 2021, 108-109, take as certain the reading of **Ta 711** as the king making an appointment of *au-ke-wa* to the position of *da-mo-ko-ro*. This is even so in *LSJ-RS*, 293, who follow the growing orthodoxy after *Docs*²: “τίθημι B II 1, at end add ‘Myc. 3 aor. *te-ke* (in sense B I 1),’ i.e., “put in a certain state or condition, make one something, with predicate in apposition.”

²⁴ KELDER & POELWIJK 2016, 572-573.

²⁵ DUHOUX 2002-2003; 2008, 316-317.

were received and what small modifications Palmer later made.²⁶ Accepting Palmer's view of *te-ke per se* as 'buried' was made difficult right at the start because, a. Palmer proposed that the many, many pieces of exquisitely manufactured furniture, ceramic and metallic ceremonial vessels and practical implements used in making and cooking with a fire were part of a tomb inventory; and b. Palmer interpreted *da-mo-ko-ro* "no como un título sino como un patronímico." In addition, Aura Jorro discusses Palmer's criticism of Ventris's ideas (and by extension later of Chadwick's ideas) as deriving from Palmer's view that Ventris, as an 'outsider,' lacked validated scholarly training and the tools for close textual interpretation. Varias, too, lays out multiple options for how to understand the nature of the inventory in relationship to the heading phrase.²⁷

Removing the background noise from Palmer's claim, let us take up the *teke* = 'buried' equation.

I believe we need to rethink what now prevails as the basis for objecting to interpreting *te-ke* ἔθηκε as 'buried.' I cite three major recent 'refutations' of the Palmer-Duhoux-Palaima position by scholars whom I have just cited and whose scholarly work we all consider of the highest quality: ingenious, insightful, clear, logical and both essential to our collective progress and invitingly collaborative, i.e., fully in keeping with the cordiality we Mycenologists know as *l'esprit de Gif*. They all share amiably in our collective pursuit of scholarly truth, in Mycenology an apple of Tantalus swaying in the boughs just out of reach above us.

- a. τίθημι, con este significado ('enterrar') rige, *siempre* de manera explícita, el complemento circunstancial del lugar del enterramiento ('en...'). (Italics mine.)²⁸
- b. Diversi autori, tuttavia, hanno obiettato a ragione che in greco τίθημι, quando significa 'seppellire' regge *sempre* in forma esplicita il complemento di stato in luogo ('in...') (Italics mine.)²⁹
- c. Chadwick's criticism³⁰ of Palmer's interpretation is *indisputable*: in order for τίθημι to mean 'to bury' there needs to be an indication of

²⁶ AURA JORRO 2021, 19-21.

²⁷ VARIAS GARCÍA 2016, 552-553.

²⁸ AURA JORRO 2021, 20.

²⁹ VARIAS GARCÍA 2016, 553.

³⁰ *Docs*², 584.

what is being buried (bones or a corpse) or where it is happening (in a tomb, in the soil). Duhoux offers a counter example to reject criticism: *TAM* 2.1.51.15-16 ὁ θεὸς τινα ἀσεβῆς ἔστω ‘whoever will bury somebody will be sacrilegious.’ However, this is unacceptable since it is presented without its context: *TAM* 2.1.51.11-16 ἀλλῶ δὲ μηδενὶ ἐν τῷ πυργίσκῳ τεθῆναι μετὰ τὸ ἐνταφῆναι αὐτήν· ἐπεὶ ὁ θεὸς τινα ἀσεβῆς ἔστω [θεοῖς καταχθονίοις]. The section cited by Duhoux implies elements from the previous sentence, where not only does the required dative of the tomb ἐν τῷ πυργίσκῳ appear, but ἐνταφῆναι is also used as a synonym of τεθῆναι.³¹

This line of argumentation, including the Chadwick citation embedded in *c.*, seems to be dependent entirely on the *LSJ* entry for τίθημι (*s.v.* p. 1791). The *LSJ* entry is the source for Duhoux’s citation of part of the inscription *TAM* 2.1.51, 15-16 and for Bernabé’s and Pierini’s citation of the fuller text of this part of the tomb inscription (*TAM* 2.1.52, 11-16). We should note, however, that neither the *LSJ* nor Chadwick say that “in order for τίθημι to mean ‘to bury’ there *needs to be* [*italics mine*] an indication of what is being buried (bones or a corpse) or where it is happening (in a tomb, in the soil).” Neither Chadwick nor the *LSJ* claims that when τίθημι means ‘bury,’ it *always* has specification of place.

Chadwick, because he is relying on the *LSJ* and because he himself had a passionate interest in lexicography, knows the limitations of particular citations. What Chadwick says is “The sense ‘buried’ *normally* [*italics mine*] requires a mention of earth, bones, etc.”³² Likewise, the *LSJ* entry 1791 A11 gives as a particular meaning of the verb “*lay in the grave, bury, ἐμὰ σῶν ἀπάνευθε τιθήμεναι ὅστέα* 23.83 (*freq.* [*italics mine*] with words added, ἐν τάφοισι, ἐς ταφάς, etc., *v. supr.* 1b)” and 1b cites *Iliad* 24.793 and 797 ἐς λάρνακα, ἐς κάπετον and Sophocles, *Ajax* 1110 ἐς ταφάς and with middle voice ἐν τάφοισι θέσθε *Oedipus at Colonus* 1410.

Neither the *LSJ* nor Chadwick gives an example of the default, the use of a form of τίθημι meaning ‘bury’ without explicit written mention of place or of what is being buried. But both sources observe caution. They do not say categorically that τίθημι *te-ke* cannot (or can never) mean ‘bury’ or ‘buried’ unless accompanied, a. by specification of what

³¹ BERNABÉ & PIERINI 2017, 526.

³² *Docs*², 584.

is being buried (the objection for accepting the personal name *au-ke-wa* as *what* is being buried), and b. by explicit reference to the place of burial, which is absent from our **Ta 711.1** text. Chadwick's 'normally' and the LSJ's 'frequently' leave open that the meaning of *te-ke* here is disputable and is not unambiguous. That is to say, we still have two options: 'appoint' and 'bury.'

If we think about this further, we will understand our dilemma as more than quibbling over *minutiae*. We should ask ourselves how or why mentions of place of burial and item being buried are made in the kinds of poetical texts that we have (Homeric epic and Greek tragedy) and why such mentions may occur in inscriptions on Roman-imperial-period tombs in Asia Minor. Likewise, we all know that the Linear B texts have a telegraphic brevity because they are largely ways of keeping short-term notes of internal information for use by the 'scribes' themselves. This is taken to extreme in the Thebes **Fq** series, where, as Bernabé and Pierini astutely observe, the four-word sequence *o-te*, *tu-wo-te-to*, *ma-ka* 'they placed (= celebrated) the burnt offering' 'for kneading' is sufficient in the header of **Fq 126** to explain the occasion and purpose that required this long tablet of allotments of **HORD** to be created.³³

Let us pose now two basic questions. As we reviewed at the start, the tablet-writer (Hand 2) connected with inventorying the items in the **Ta** series at Pylos was either himself a member of the socio-political elite or intimately connected with the affairs of such elites. How would he or his record-keeping peers not know—or remember within the limited annual life span of the tablets (the current 'administrative year' of the palatial center)—when later reading or re-reading *te-ke* in **Ta 711.1** whether *au-ke-wa*, the *da-mo-ko-ro*, was a. dead and buried after a large-scale ritual sacrifice and commensal funerary ceremony or b. alive and serving as *da-mo-ko-ro* of the Hither Province after being inaugurated and having a large-scale banquet involving animal sacrifice held in celebration of his political promotion? Would the phrasing on **Ta 711.1** really have been ambiguous to contemporaries?

The tablet-writers also were *not* trying to present vivid images in oral songs set to a metrical rhythm (hexameter) that was not 'natural' to Greek speakers,³⁴ nor were they using formulaic building blocks to

³³ BERNABÉ & PIERINI 2017, 527, 531-534.

³⁴ RUIJGH 2004, 527, 531 for arguments in favor of Meillet's theory that dactylic hexameter was taken over by the Greek-speakers from Minoan culture.

instantiate song creatively and not via rote memorization. The mere mechanics of oral verse composition would call readily into play, and encourage singers to maintain, a large repertory of phrases that specify corpses and bones, tombs, graves and fires. Likewise, authors of lines from tragedies as sung verses need to be aware of line structures and sometimes to overemphasize details. We should keep in mind that not only for Aeschylus were our surviving plays scraps from the banquet of Homer.

Regarding Homeric citations we should remember that formulaic phrases and epithets were “building blocks used by oral performers” and had a twofold purpose in performance: a. operating as compositional tools for the singers; and b. having “a very practical purpose, similar to techniques used by radio broadcasters to catch the listener’s ear” and to assure that listeners do not miss key aspects of the contents of the song as it is being performed.³⁵ The Mycenaean tablet-writers have no such needs in writing records that they themselves would later consult.

Let us take one oft-cited passage used to support the idea that in order for τίθημι to mean ‘bury’ we need specification of the ‘object’ buried. In *Iliad* 23.83 the dream ghost of the dead Patroklos comes from Hades and speaks to Achilles. Two-thirds of the way through his speech, he declares:

μη̄ ἐμὰ σῶν ἀπάνευθε τιθήμεναι ὅστ’ Ἄχιλλεῦ *Iliad* 23.83

This follows immediately upon his prediction that Achilles, too, will die at Troy:

καὶ δὲ σοὶ αὐτῷ μοῖρα, θεοῖς ἐπιείκελ’ Ἄχιλλεῦ,
τείχει ὕπο Τρώων εὐηφενέων ἀπολέσθαι. *Iliad* 23.80-81

And it precedes his final wish that both Achilles’ and his bones be concealed (ἀμφικαλύπτει) in one container (σορός) that is a golden amphora that Achilles’ mother gave to him (Achilles).

ὣς δὲ καὶ ὅστ’ ἐὰν νῶϊν ὀμῆ σορός ἀμφικαλύπτει

χρῦσεος ἀμφιφορέως, τὸν τοι πόρε πότνια μήτηρ. *Iliad* 23.91-92

³⁵ DRAPER 2002, 48.

Patroklos refers to burial of his bones (ὄστέα) in 23.83 because he himself now resides in Hades and what is left of him on the earth are his ὄστέα. Likewise, in 23.91-92 he again uses ὄστέα and uses another word ἀμφικαλύπτοι, rather than a form of τίθημι or θάπτω, to mean effectively ‘bury.’ The oral poets have him speak this way here because all that will remain of Achilles and Patroklos after Achilles is killed is their ὄστέα. The poet singer also is playing with his building blocks to achieve a pleasant-sounding effect ἀμφικαλύπτοι ... ἀμφιφορέυς. My point is that phrase usage of this kind operates in poetry under much different constraints and for much different purposes than those connected with our non-verbose Linear B tablet records. Remember Bernabé’s and Pierini’s truly brilliant explication of **TH Fq 126** as our poster child for compressed notation of the when and why in the heading of Linear B records.³⁶

The tomb inscription from Telmessus is likewise formulaic, as we see when we review the fuller corpus of such texts. These kinds of inscriptions are formulaic. They often make reference at the start to what is called a ‘tomb’ or ‘heroon’ or in the text from Telmessus cited by the LSJ a πυργίσκος ‘little tower.’ Why? Because the opening sections of such inscriptions generally contain proud proclamations that the individual builders/dedicators of such tomb structures have built them for the use of their spouses or extended families, often explicitly stipulated, and themselves. A second section, often omitted, then prohibits use by outsiders. It then further specifies penalties for violators. Indeed, this provides the context for understanding that the generic ὁ θεὸς τινα means “If anyone [other than the prior specified family members] ‘sets’ anyone [to rest herein, i.e., effectively ‘buries’] let them be accursed.”

I would suggest that if this tomb inscription were fragmentary, and only the phrase ἐπεὶ ὁ θεὸς τινα ἀσεβῆς ἔστω θεοῖς καταχθονίοις were preserved, it would be perfectly readable. The introductory section is not a *sine qua non* for understanding θεὸς here as ‘buried’ in the second part. In some real sense, it is not even connected with the second part.

I would also suggest that ἐνταφῆναι is not, strictly speaking, “used as a synonym of τεθῆναι.” What we have here is a public legal document

³⁶ BERNABÉ & PIERINI 2017, 526-527, 531-534.

that not only invokes curses upon those who illegally use the tombs of others to bury their own dead, but also further specifies penalties that the community in whose territory the tomb is located must exact from such perpetrators. In such a case, there is a genuine and meaningful difference between the dedicator saying μετὰ τὸ ἐνταφῆναι αὐτήν ‘after she has been buried’ properly and with every full legal right *stricto sensu* and τεθῆναι to ‘set to rest,’ i.e., place in the tomb physically, *vid.* ‘bury,’ but without proper burial rights.

As for having to specify the burial as thing or things buried (e.g., ὄστέα or νέκυς), many tomb inscriptions refer to the individual, often pronominally of an aforementioned party, while using only a form of τίθημι. One example will suffice.³⁷

- 1 Ἀντικράτης Εὐκλεία τῇ ἑαυτοῦ
 γυναικὶ μνείας χάριν· ἥρωσ χρηστὲ χαῖρε.
 ἐνέχομαι μηδένα ἕτερον τεθῆναι χωρὶς
 ἐμοῦ ἢ γ<ο>νεὺς Λονγίνος. ἐὰν δέ τις
 5 ἕτερος τολμήσῃ, δώσει ἐς τὸ ταμεῖον (δηνάρια) βφ’.

IG IX.2.931 Pelasgiotis Larisa, Roman period

In this inscription (lines 1-2) Antikrates declares, without even mentioning the tomb on which the inscription is made, that [it] is for his wife Eukleia and for the sake of her memory. He then specifies that he has made it legally binding upon himself (ἐνέχομαι) to τεθῆναι ‘set,’ i.e., ‘bury,’ μηδένα ἕτερον τεθῆναι χωρὶς ἐμοῦ ἢ γ<ο>νεὺς Λονγίνος ‘no other except me or my father Longinus.’ And then comes the abbreviated curse and penalty stipulation: “If any other dares, he will give into the treasury” (ἐὰν δέ τις ἕτερος τολμήσῃ, δώσει ἐς τὸ ταμεῖον (δηνάρια) βφ’) a specified sum. Here τεθῆναι clearly means ‘to bury.’ There is no explicit mention of the place, which is understood from context. And the parties to be buried are referred to either by personal name or by indefinite pronoun. And all of this is clearly understandable in context.

I hope the reason for careful wording by the *LSJ* and John Chadwick is now clear. Understanding the context of historical inscriptions is all.

³⁷ <https://epigraphy.packhum.org/text/148876?hs=138-146> [last accessed January 31, 2022].

The late Eugene Vanderpool put it this way to me during my graduate student days, when we were looking at historical inscriptions: “An inscription is easy to read if you know what it says.” This surely applies even more so to our Linear B proto-historical inscriptions.

In conclusion, I politely request that we keep *te-ke* = ‘buried’ in **Ta 711.1** on the table for future interesting discussions of the implications of the **Ta** series.

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Linguistic idiosyncrasies and chronology of Linear B tablets from the Room of the Chariot Tablets and the North Entrance Passage at Knossos*

Rachele Pierini

Knossos Linear B tablets belong to different chronological periods, as studies in archaeology, epigraphy, palaeography, phylogenetic systematics, and prosopography have demonstrated.¹ In particular, these inquiries have proved that the documents in Mycenaean Greek from the *Room of the Chariot Tablets* [henceforth: RCT] and the *North Entrance Passage* [henceforth: NEP] are more archaic than the rest of the Knossos Linear B tablets. Although Mycenaean studies have not yet investigated fully the linguistic implications of such a diachronic perspective, early terminological and morphophonological research on RCT and NEP tablets has shown a connection between linguistic idiosyncrasies and Linear B chronology.² In this context, a diachronic analysis of linguistic idiosyncrasies, historically read as errors, abnormalities, or mere variant spellings,³ can shed new light on their interpretation. This paper (i) applies the diachronic approach to a selection of idiosyncrasies from RCT and NEP tablets; (ii) explores how chronological gaps impact lin-

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¹ DRIESSEN 1990; FIRTH & SKELTON 2016a-c; LANDENIUS ENEGREN 2008; TOMAS 2017.

² DRIESSEN 2000 preliminarily lists RCT peculiar words and spellings; NOSCH 2022, and PIERINI 2014 and 2018, analyse diachronically the complete dossier of particular Linear B morphophonological and vocabulary elements.

³ CHADWICK 1958.

guistic interpretations; (iii) argues that the selected idiosyncrasies are 'non-Greek' elements, archaic features not appearing in later Linear B texts, or Linear B innovations.

Knossos find-spots

The identification of the Knossos find-spots is problematic due to the unsystematic and contradictory nature of the primary sources.⁴ After a first classification attempt,⁵ a thorough palaeographical study singled out two particular Linear B tablet deposits for their idiosyncratic features, namely RCT and NEP.⁶ Further in-depth palaeographical analyses, along with probative archaeological, epigraphical, and pinacological evidence demonstrated two key points.⁷ First, RCT and NEP do not show strong links to other Knossos deposits.⁸ Second, RCT is the earliest Linear B archive in Crete, possibly preceding mainland archives as well, and NEP is dated slightly later than the RCT but before all the other Knossos deposits. Corroborating this second point, the application of the phylogenetic systematics method to Mycenaean palaeography has confirmed the isolation of RCT and NEP.⁹ Furthermore, follow-up inquiries agree that tablets from RCT are the closest in shape and physical characteristics to the Linear A documents.¹⁰ Finally, in terms of relative chronology, RCT is currently datable to LM II-III A1 and NEP to LM III A2, while the absolute chronology of the Bronze Age Aegean is yet difficult to establish.¹¹

In addition to Jan Driessen's works mentioned above, the reconstruction of the Knossos find-spots also relies on two robustly argued works by Richard Firth.¹² Firth and Driessen's reconstructions differ regarding whether to consider NEP an agglomerate of different deposits or a single deposit, while they agree on acknowledging a strong relation between the sub-areas *Spiral Cornice Room* and *Area of the Bull Relief*.

⁴ DEL FREO 2016.

⁵ PALMER & BOARDMAN 1963.

⁶ OLIVIER 1967.

⁷ DRIESSEN 1990; 1999; 2000.

⁸ Albeit with some *caveats*: DRIESSEN 1999; SALGARELLA 2020.

⁹ FIRTH & SKELTON 2016a-c.

¹⁰ TOMAS 2017.

¹¹ KARNAVA 2005.

¹² FIRTH 1996-1997; 2000-2001.

Identifying the corpora and defining the dataset

According to the latest Knossos edition,¹³ the tablets from section C of the Palace of Minos, i.e. the RCT, are 281. Possibly 282 if we add **V 52**, tentatively related to RCT.¹⁴ However, the total number increases significantly when also including the “124”-related documents, given that this graphic style, typical of RCT tablets, is also found on tablets of unknown provenance.¹⁵

Here, we analyse morphophonological idiosyncrasies that appear on RCT tablets and no longer show up on tablets from later deposits. These idiosyncrasies and the RCT tablets recording them read as follow: **Ai 213**:]a₂-ta; **B(2) 101**: a₃-te-re; **Ce 50**: a-qi-ru and ro-ru; **Np (1) 49**: ri-*65-no; **Sc 103**: ki-ra₂-i-jo; **Sc 238**: me-nu-wa; **Vc 94**: ki-je-u; **Vc 201**: ta-ra-sa-ta; **V(2) 60**: me-nu-wa (and a-ni-o-ko); **V 118**: a₂-ke-te-re; **V 145**: u-du-ru-wo; **V 280**: wo-de-wi-jo and i-ku-wo-i-pi; **Xd 149**: ri-u-no. By broadening the inquiry to the “124”-related documents, we can also add **Xd 7702** to the dataset, which bears another attestation of *me-nu-wa*.

Other considerations ensue for NEP and NEP tablets due to two differences: the involvement of sub-areas and the slightly later chronology. As a result, the analysis of NEP tablets requires another approach since they do not show idiosyncrasies that are exclusive of NEP. However, NEP tablets do provide a peculiar example, which also has a strong connection with RCT tablets: sign *34 and the corresponding logogram LUNA. Additionally, we will show further examples of relevant connections between data from RCT and NEP tablets and their differences with later documents.

In the next sections, we will analyse the above-mentioned RCT and NEP selected idiosyncrasies. First, we will describe them according to the following criteria: (i) vowel alternations, (ii) consonant alternations, (iii) glide alternations, (iv) morphological alternations, (v) ‘extra signs’ inherited from Linear A, (vi) ‘extra signs’ that are Linear B innovations, (vii) *hapax*. Next, we will group these idiosyncrasies into the relevant typologies.

¹³ KT⁶.

¹⁴ GULIZIO *et al.* 2001.

¹⁵ Lists and classifications in PIERINI 2020a.

Vowel alternations

The anthroponym *a-qi-ru* and the toponym *u-du-ru-wo* present variant spellings that show an *o* instead of the *u*, in the last and first syllable respectively. Specifically, (i) the anthroponym appears twice as *a-qi-ru* on the RCT tablet **Ce 50** and as *a-qi-ro* on **KN Da 1123**, a tablet from the East-West Corridor; (ii) the toponym appears as *u-du-ru-wo* (genitive) on the RCT tablet **V 145** and as *o-du-ru-we* (dat.-loc.) on **KN C 902**, a tablet from NEP (specifically, *Area of Bull Relief*).¹⁶ In addition, the ethnic adjective *o-du-ru-wi-jo/-ja* appears on the NEP tablets **Ai 982** and **C 902** (both from the *Area of Bull Relief*) and on the Thebes jar **Z 839**.

Due to the *o/u* alternance, *a-qi-ru* is considered a Pre-Hellenic anthroponym.¹⁷ We add that the RCT tablet attesting *a-qi-ru* also records *ro-ru*. Although *ro-ru* has no variant spellings,¹⁸ the fact that it is an anthroponym and on the same tablet as *a-qi-ru* makes it plausible that *ro-ru* too is the *-u* spelling of a Pre-Hellenic name. Additionally, the fact that *ro-ru* is a disyllable and the first syllable ends in *-o* suggests that the dissimilation principle played a role in maintaining the final *-u*.

Consonant alternations

The RCT tablet **V(2) 280** records *i-ku-wo-i-pi*, an obscure noun most likely related to the word for ‘horse’.¹⁹ To show its uniqueness, let us compare *i-ku-wo-i-pi* with the other spellings for ‘horse,’ namely *i-qo*, which appears in all the other Linear B attestations, and the alphabetic Greek *hippos*.

The noun *hippos* stems from **ekwo-*,²⁰ an Indo-European [henceforth: IE] root showing an original cluster **kw*. As Michel Lejeune has observed,²¹ Linear B does show evidence for a graphic differentiation between (i) labiovelars like **k^w* and original clusters like **kw*, and (ii) secondary clusters like **k+w*. As a result, in Linear B the signs of the

¹⁶ On the NEP tablet **KN Co 910**, the spelling *o-]du-ru-wo* is reconstructed.

¹⁷ MELENA 1983, 260.

¹⁸ In Knossos, **Ce 50** (RCT) records *ro-ru* twice, **Dq(2) 1234** (from the East-West Corridor) has *]ro-ru* with the “texts certainly complete at left” according to *CoMIK*, and **Fh 5443** (unknown provenance) shows *ro-ru*[without mention of missing elements in *CoMIK*; in Thebes, **Gp 179** shows a dotted and fragmentary *ro-ru*].

¹⁹ *DMic. s.v.*

²⁰ The root is reconstructed as **ekwo-* in *DELG s.v. hippos* and as **h₁ek_wo-* in *EDG s.v. hippos*.

²¹ LEJEUNE 1958.

q-series are to be found in words of the former group (e.g. *e-qe-ta* < **sek^w*), whereas the signs of the *k*-series followed by signs of the *w*-series are to be found in words of the latter group. This distribution also reflects the word formation and the morpheme boundary, as examples like the adjectives in *-*went* (e.g. *o-da-ke-we-ta/o-da-ku-we-ta*) and the perfect participles in *-*wos* (e.g. *te-tu-ko-wo-a*) illustrate.

Building on this, we highlight four observations. First, secondary clusters do not appear on RCT tablets and the earliest evidence for **k+w* comes from NEP tablets, which attest examples like *o-da-ku-we-ta* on **L 870** and *te-tu-ko-wo-a* on **L 871**. Second, the first certain attestation of the Mycenaean words for 'horse' outside RCT is on the NEP tablet **Ca 895**, which shows the spelling *i-qo*. Third, the RCT tablet **V(1) 56** records the anthroponym *e-qe-a-o*, tentatively related to **ekwo*.²² However, this interpretation is problematic due to the initial *e-* instead of *i-*, and other proposals have been put forward instead.²³ Fourth, on RCT tablets the signs of the *q*-series are attested in several anthroponyms and in one toponym,²⁴ but it is challenging to establish whether tablets from this deposit also provide evidence for signs of the *q*-series in vocabulary terms due to lack of context,²⁵ fragmentary status of the word,²⁶ and uncertain interpretation.²⁷

In light of this succinct overview on chronology, labiovelars, and original and secondary **kw* clusters, two explanations are possible for *i-ku-wo-i-pi*. The first is that it is a peculiar spelling since original clusters **kw* are written with the *q*-signs. Hence, the common understanding that *i-ku-wo-i-pi* is an idiosyncrasy. However, another explanation

²² MELENA 2014, 40.

²³ *DMic. s.v.*

²⁴ **Og 1804** records the toponym *qa-ra-o*. The following tablets record anthroponyms with a sign of the *q*-series: **Ce 50, 166; F(1) 51, 148, 153; Np 294; Sc 135, 226, 233, 246, 257; Uf(1) 121; Vc 54, 173, 181, 290, 303; Vd 7545; V 60, 145, 147; Xd 122, 154, 296, 300**. Possibly **Sc 197** has to be added to this list, but the lack of context does not allow to identify the fragmentary *wo-no-qi-* as an anthroponym.

²⁵ **Vc 123** records]-*qe-wa*, **Xd 307** *do-qi*], and **Xd 309**]*pa-no, qa*]. These three cases show a fragmentary word that is also (almost) the only text on the tablet.

²⁶ **Uc 160.3** reads *qi*[] **V 1 Z 1 VIN S 1 V 3 Z 2**. The fragmentary state of the tablet prevents us from establishing whether *qi*] is the beginning of an anthroponym or a vocabulary word. In the latter case, it might be a commodity.

²⁷ **V(1) 56** records *e-qe-a-o a-to-mo*, which lacks an agreed interpretation but is generally understood as an occupational name, with *e-qe-a-o* tentatively related to *e-qe-ta* 'follower' (<**sekw-*). **Xd 140.2a** records *pa-ze-qe*, perhaps to be read as the anthroponym *pa-ze* and the enclitic *-qe* 'and' (<**kwe*), cf. *DMic. s.vv.*

is possible. We propose that *i-ku-wo-i-pi* closely reflects a differentiation of the IE phonetics that subsequently got lost, possibly due to the appearance of secondary clusters $*k+w$. We argue this in view of the following considerations. First, the spelling *k-sign+w-sign* transcribes an original cluster $*kw$ on the RCT word *i-ku-wo-i-pi* and secondary clusters $*k+w$ from NEP tablets onwards. Moreover, secondary clusters $*k+w$ do not appear on RCT tablets and are only attested on later deposits, starting with NEP. Further, the earliest attestations of the *q*-signs to write the original clusters $*kw$ are found on NEP tablets, e.g. *i-qo* on **Ca 895**. Finally, the earliest attestations of secondary clusters $*k+w$ are located on NEP tablets as well. On this basis, we hypothesise that (i) the earliest Mycenaean attestations, namely RCT tablets, closely reflect the IE phonetics by maintaining the differentiation between labiovelars $*k^w$ (*q*-signs) and original clusters $*kw$ (*k*-signs+*w*-signs, e.g. *i-ku-wo-i-pi*); (ii) the original clusters $*kw$ are subsequently written by means of the *q*-signs, thus merging with labiovelars after the era of RCT tablets; (iii) the secondary clusters $*k+w$ appeared after the era of RCT tablets since these clusters are attested from NEP tablets on, and this might have propelled the fusion, at least in the writing practice, between labiovelars $*k^w$ and original clusters $*kw$ since the group *k-sign+w-sign* was used for the secondary clusters $*k+w$ by this point.

Glide alternations

The anthroponym *ki-je-u* appears on the RCT tablet **KN Vc 94**, while the variant spelling *ki-e-u* is attested in Pylos (**PY An 724**). Likewise, the anthroponym *me-nu-wa* appears as such on the RCT tablets **Sc 238** and **V(2) 60** and, in addition, on **Xd 7702**, which is by “124”. This anthroponym also appears in Pylos, once with the spelling *me-nu-wa* and three times written as *me-nu-a₂*. The chronology of the variant spellings is consistent with the chronology of the evolution into *-h-* of $*-y-$ and $*-w-$, which underwent changes at different stages of the Greek language. In fact, RCT tablets display the retention of $*-y-$ and $*-w-$ in intervocalic position by attesting the forms *ki-je-u* and *me-nu-wa*, whereas tablets from later deposits show that the evolution of intervocalic $*-y-$ and $*-w-$ into an aspiration *-h-* was an *in fieri* process during the Mycenaean era by attesting the forms *ki-e-u*, *me-nu-wa*, and *me-nu-a₂*.²⁸

²⁸ LEJEUNE 1972a, 90 n. §81-1, in analysing the variant spellings *me-nu-wa* and *me-nu-a₂*, affirms:

Morphological alternations

The *o*-stem singular genitives in *-Xo* have long been considered scribal errors, namely haplographies. However, by crosschecking the chronology of Linear B tablets with linguistic data, a different perspective emerges.²⁹ Below, we highlight the main points.

The RCT tablet **V 280** record *wo-de-wi-jo*, which is followed by the genitive *me-no* and the expression means ‘in the month of the rose.’ Traditionally, *wo-de-wi-jo* is interpreted as a haplography and *wo-de-wi-jo-jo me-no* on **KN Ga(4) 953** is used to corroborate the hypothesis. However, **Ga(4) 953** is a NEP tablet, thus it chronologically follows the RCT attestation of *wo-de-wi-jo*.

We summarize the linguistic considerations as follows. First, the ending **-osyo* might be heteromorphemic (i.e. **-os-yo*) or monomorphemic (i.e. **-o-syo*). Comparative data point toward the former possibility. Accordingly, the earliest stage **-os* is expected to be found in archaic places, like the earliest tablets of the Linear B corpus, and conservative names, such as toponyms, anthroponyms, month markers. If we assume the change **-os* > **-osyo*, a recharacterization propelled by the homophony and homography with the nominative case, we can also hypothesise that words already ending in *-yo* resisted (at least initially) the addition of a further *-yo*. Therefore, the *o*-stem singular genitives in *-Xo* are not scribal errors. Rather, they are either attestations of the earliest stage **-os* of the genitive ending or haplogologies.

Extra signs inherited from Linear A

Here we examine the variant spellings related to **65* and **34*, which Linear B inherited from Linear A.

Although the phonetic value of **65* is still debated, it is agreed that it is related to the sound *u*. Two RCT tablets support this connection by providing different spellings of one toponym: **Np(1) 49** records *ri-^{*}65-no* and **Xd 149** *ri-u-no*. The toponym is also spelled *ri-jo-no* in later

“lorsqu’une voyelle de timbre *a* suit une syllabe de timbre *i* ou *u*, et que la semi-voyelle transitoire *y* ou *w* fait défaut, c’est le signe *-a₂-* (non le signe *-a-*) que l’on trouve presque toujours; il est tentant de supposer: que l’‘aspiration’ intervocalique était débile à date mycénienne; que, là où elle est notée (en l’espace, par *-a₂-*), elle exclut les semi-voyelles de transition; enfin que, inversement, là où les semi-voyelles de transition font défaut, la présence d’une ‘aspiration’ (même non notée) en est cause.”

²⁹ PIERINI 2018; 2020b with further references and details; VINE 2020 for a different perspective.

attestations, starting with the NEP tablet **C 902**, which also show the above-mentioned *o-du-ru-we*. Thus far, data about *ri-**65-*no* confirm the considerations we provided about *a-qi-ru* and *u-du-ru-wo* (and those we will explore below, too).

The phonetic value of **34* is not established either, despite the strong points in José Luis Melena's interpretation *hai*.³⁰ A former proposal by Mabel Lang, Yves Duhoux, and Cornelis Ruijgh reads **34* as *lu*.³¹ In particular, Ruijgh hypothesises a relationship between (i) alphabetic Greek $\lambda\upsilon\gamma\alpha\iota\alpha$ and a meaning related to sleeves for the textile terms *a-**34-*ka* and **34-ka* in light of the gloss explaining $\lambda\upsilon\gamma\alpha\iota\alpha$ as 'the little circles around the hands',³² and (ii) the Pre-Hellenic word $\lambda\upsilon\kappa\acute{\alpha}\beta\alpha\varsigma$ 'month' and the use of **34* as the logogram indicating the 'month,' i.e. LUNA.

Here, we highlight a datum that has gone unnoticed thus far, namely the close link between **34* and NEP tablets. First, *a-**34-*ka* only appears on **Ld(2) 786** and **787**, both from NEP and by Hand 114, and **34-ka* only on **Ld(2) 8192**, of unknown provenance but by Hand 114.³³ Secondly, ten out of the 13 tablets attesting LUNA are from NEP.

Data from RCT corroborate the link between **34* and the earliest stages of the Mycenaean language as reflected on the earliest Linear B tablets. Here, **34* appears on **Sc(2) 235** in the anthroponym *po-**34-*wi-do*, on **Sc(3) 255** in *po-**34[, probably another attestation of the anthroponym, and on **Xd 328** in the fragmentary word]*pa-**34-*so*[.

The meagre number of Knossos attestations for **34* and LUNA outside RCT and NEP substantiates the hypothesis that **34* is a Linear A inherited element, the use of which becomes increasingly restricted. Future research assessing the phonetic value of **34* has to address the impact of Knossos data and diachrony on its interpretation.

Extra signs that are Linear B innovations

Linear B created 'doublets' and 'complexes' signs,³⁴ perhaps to address phonetic differences not expressed in the Linear A script. The RCT examples are a_2 , a_3 , and ra_2 , and, given the focus on the sound *a*, the un-

³⁰ MELENA 2013.

³¹ DUHOUX 1983; LANG in PALMER 1969; RUIJGH 1979.

³² Hesychius λ 1324 L.-Cunn.

³³ See NOSCH, this volume, for the relationship between Knossos deposits and textile terms.

³⁴ See LEJEUNE 1972b, for a distinction between 'doublets' and 'complexes.'

derlying question is whether the abundance of *a*-signs in Linear A (see below) may have influenced the process, at least in its earliest stages.

The RCT tablet **B(2) 101** shows the ‘doublet’ a_3 in a_3 -*te-re* ‘inlayer,’ an occupational noun also appearing on a Pylos tablet without spelling variations. This Linear B innovation seems to be consistent throughout the Mycenaean archives. The RCT tablet **Sc 103** shows the ‘complex’ sign ra_2 in the anthroponym *ki-ra₂-i-jo*, which also appears once in Pylos as *ki-ri-ja-i-jo*. Here, the chronological gap highlights a development on the cluster pronunciation (and graphic rendition).³⁵

The ‘doublet’ a_2 appears on the RCT tablets **Ai 213**, in the fragmentary word] a_2 -*ta*, and **V 188**, in a_2 -*ke-te-re* ‘restorer?’. Although a_2 is commonly read *ha*, recent analyses evidence two elements:³⁶ etymological connections with a cluster of *s/j/w* + vocalized resonant ($\eta, \nu, \iota, \rho > \tilde{a}$), and links with Linear B geographical and chronological elements. The former point is consistent with the absence of a_2 in spellings that are considered ‘exceptions’ or given alternative etymological explanations, like *a-ni-o-ko* ‘charioteer’ from the RCT tablet **V(2) 60**. It is a compound of *a-ni-ja* ‘reins’ and $\xi\chi\omega$ ‘to hold,’ and *a-ni-ja* stems from a root with a long vowel (and not a vocalized resonant): **ānsia*.³⁷

Hapax

Finally, the RCT tablet **Vc (7) 201** attests the anthroponym *ta-ra-sa-ta*, its only occurrence in the Mycenaean corpus. We observe that its origin is uncertain and that the individuals recorded on RCT tablets are unrelated to the other Knossos anthroponyms according to statistical analyses.³⁸ Further, *ta-ra-sa-ta* shows a consistency of the vocalism *a*, which is not a common sound in Proto-Indo-European [henceforth: PIE] as we will see below, and this can reflect its non-Greek origin or pronunciation.

³⁵ GARCÍA RAMÓN 1984, for *ra*, and *ri-ja* as *allegro* and *lento* variants of the same cluster.

³⁶ NOSCH 2022; PIERINI 2014.

³⁷ DELG; EDG s.vv.; in light of the RCT spelling, VINE 2020 suggests that the “aspiration-anticipation” is post-Mycenaean.

³⁸ LANDENIUS ENEGREN 2008.

Categorising the idiosyncrasies: non-Greek elements, archaisms, innovations

This survey on the linguistic idiosyncrasies from RCT and NEP tablets illustrates that these elements are external influences on the Linear B phonetics, archaisms that later deposits no longer show, or Linear B innovations. Accordingly, we group these idiosyncrasies into three typologies: (i) non-Greek elements, e.g. ‘Minoan’ words or sounds; (ii) archaisms, e.g. PIE features, unattested in later deposits; (iii) Linear B innovations, i.e. new Linear B signs for specific sounds.

In analysing the non-Greek elements from RCT tablets *a-qi-ru*, *ro-ru*, *u-du-ru-wo*, *ri-^{*}65-no* and *ri-u-no*, and *ta-ra-sa-ta*, we observe that the alternation between *u* and *o* is not only found in comparing Linear A and Linear B forms—such as Linear A QA-QA-RU and Linear B QA-QA-RU—but also within the Linear B corpus itself, specifically between tablets from RCT and later deposits. Alternations like *qa-qa-ru* and *qa-qa-ro* can reflect two scenarios: (i) Linear A -U encoded the actual sound U and Linear B adapted it to its own phonetics and declension by changing it with an *-o*; or (ii) the sound was the same, but in Linear A it is expressed through an *-u* and in Linear B through an *-o*. The Linear B alternation between *a-qi-ru* (from RCT) and *a-qi-ro* (from a later deposit) might reflect a similar situation, i.e. that the *-u* ending in the former reflects Minoan phonetics or that the ending *-o* in the latter is a phonetic adaptation of a Minoan name to Mycenaean phonetics and declension. The final *-u* in *ro-ru* (from RCT) corroborates the hypothesis of a non-Greek anthroponym reflecting Minoan phonetics, if we accept that the first syllable in *-o* maintained the final *-u* in the disyllable due to dissimilation. The *u/o* alternation also takes place in initial and central positions, as the variant spellings of *u-du-ru-wo* and *ri-^{*}65-no* show. RCT toponyms *u-du-ru-wo*, *ri-^{*}65-no*, and *ri-u-no* appear as *o-]du-ru-wo* and *ri-jo-no* already on NEP tablets. Moreover, Ὀθρὺς is a Cretan mount according to Hesychius (o 163 L.-Cunn.). Although the location of *u-du-ru-wo* is yet to be established, the gloss confirms that it was a Minoan site and the presence of *u-du-ru-wo* on RCT and NEP tablets but not in later Knossos deposits substantiates the hypothesis. Additionally, a diachronic reading of the Linear B data evidences that the Minoan centre lost its prominence once Mycenaean took over on the island.

Although the language that Linear A encodes is still poorly under-

stood, prior research confirms that about 72% of signs have a shared phonetic value in Linear A and Linear B.³⁹ The application of these shared values to Linear A texts evidences ‘abundance’ of *a*, *i*, and *u* and ‘scarcity’ of *e* and *o*. Although the reconstruction of the vowel system is problematic in the Linear A script (or the language it encodes)⁴⁰ and in IE,⁴¹ this datum and Linear B words like the RCT anthroponym *ta-ra-sa-ta* confirm the hypothesis of a non-IE origin of Minoan,⁴² since the consistency of the vocalism *a*, not common and hard to reconstruct in PIE,⁴³ underline non-Greek origins or pronunciations.

Similar considerations ensue for *34. In Knossos it mostly appears in RCT and NEP tablets and almost exclusively in NEP as a logogram. This decreased use in later tablets is also consistent with the different use of logograms in Linear A and Linear B, widespread in Linear A and with a more defined function as cataloguing element in Linear B. These data confirm the impact of chronology on the use of the sign. Additionally, they corroborate the interpretation of *34 as *lu* since (i) the proposal to relate *a*-*34-*ka* and *34-*ka* to the sleeves makes sense semantically, phonetically, and chronologically;⁴⁴ and (ii) the interpretation of LUNA as a non-Greek word meaning ‘month’ and beginning with *lu* makes sense in the contexts of the NEP tablets with this logogram. In light of this analysis, it is even more interesting that *34-*ke-u* on the Pylos tablet Ta 709.3 describes a tripod that is *ke-re-si-jo we-ke* ‘of Cretan manufacture’—a Cretan influence on the spelling, too?⁴⁵

RCT tablets evidence morphological and phonological archaisms. The *o*-stem singular genitive *wo-de-wi-jo* belongs to the former category and appears as such in RCT and as *wo-de-wi-jo-jo* on NEP tablets. Phonological archaisms are the RCT spellings *i-ku-wo-i-pi*, *ki-je-u*, and *me-nu-wa*. The *k*- and *w*- signs in *i-ku-wo-i-pi* render the original cluster **kw*, whereas in words from later deposits they render secondary clusters **k+w* and the *q*-series render the original cluster **kw*, which appears in *i-qo* and further ‘horse’-related words. The anthroponyms *ki-je-u* and

³⁹ PALAIMA & SIKKENGGA 1999; STEELE & MEISNER 2017.

⁴⁰ DAVIS 2014.

⁴¹ VILLAR 1993.

⁴² DUHOUX 1978.

⁴³ KROONEN 2012.

⁴⁴ NOSCH, in this volume, connects Knossos textiles and deposits.

⁴⁵ On *ke-re-si-jo we-ke*, see PIERINI & ROSAMILIA 2022; RUSSOTTI 2021.

me-nu-wa show the retention of *-y-* and *-w-* in intervocalic position, which will later evolve into an aspiration *-h-*, as the variant spellings *ki-e-u* and *me-nu-a₂* on tablets from later deposits evidence.

Linear B innovations from RCT are the ‘doublets’ and ‘complexes’ of the *a*-series $]a_2$ -*ta*, *a₂-ke-te-re*, *a₃-te-re*, and *ki-ra₂-i-jo*. Although the phonetic value of *a₂* is debated, it is hard to deny the relationship between *a₂* and the chronology of Mycenaean tablets. Different is the case of *a₃* since its phonetic value is *ai* and, furthermore, *a₃-te-re* appears as such on RCT and later tablets too—thus showing consistency in the spelling, regardless of external elements. Finally, *ki-ra₂-i-jo* has a variant spelling *ki-ri-ja-i-jo* in Pylos, suggesting that the spelling (and, possibly, the pronunciation too) underwent changes.

Linguistic idiosyncrasies on the RCT tablets		
Non-Greek Elements	Archaisms	Linear B Innovations
Alternations between RCT and later deposits, not only between LA and LB: LA <i>qa-qa-ru</i> vs LB <i>qa-qa-ro</i>	RCT <i>wo-de-wi-jo</i> vs Later <i>wo-de-wi-jo-jo</i>	RCT $]a_2$ - <i>ta</i> RCT <i>a₂-ke-te-re</i>
RCT <i>a-qi-ru</i> vs Later <i>a-qi-ro</i>	RCT <i>i-ku-wo-i-pi</i> vs Later <i>i-qo</i>	RCT <i>a₃-te-re</i> and Later <i>a₃-te-re</i>
RCT <i>ro-ru</i> RCT <i>u-du-ru-wo</i> vs Later <i>o-du-ru-we</i> and <i>o-du-ro-wi-jo</i>	RCT <i>ki-je-u</i> vs Later <i>ki-e-u</i>	RCT <i>ki-ra₂-i-jo</i> and Later <i>ki-ri-ja-jo</i>
RCT <i>ri-^{*65}no</i> and <i>ri-u-no</i> vs Later <i>ri-jo-no</i>	RCT <i>me-nu-wa</i> vs Later <i>me-nu-a₂</i>	
RCT <i>ta-ra-sa-ta</i> RCT <i>po-^{*34}wi-do</i> and <i>pa-^{*34}so</i> and NEP a- ^{*34} <i>ka</i> and ^{*34} <i>ka</i> and LUNA		

Table 1. The new categorization of RCT linguistic idiosyncrasies.

Conclusion

This diachronic analysis of selected features throughout the Linear B corpus show that the so-called idiosyncrasies are not errors or abnormalities but, rather, elements that are consistent with the development

of the Greek language. In particular, the focus on RCT and NEP tablets allows us to identify the crucial steps of this evolution, given that RCT tablets bridge Linear A and Linear B attestations and NEP tablets bridge RCT documents with later Mycenaean text. This way, we obtain a coherent picture of linguistic changes, seamlessly connecting the most archaic non-Greek and PIE elements with the latest developments the Greek language underwent in the 2nd millennium BCE. From this perspective, a major implication of this work is that the linguistic material from RCT tablets represents a firm basis for establishing a relative chronology of the Mycenaean texts in particular and the Greek language as a whole. It is also important to note that the earliest stages in RCT and NEP tablets show a particularly vivid *milieu* for change to happen, given the truly unique combination of similarities and differences, and continuity and hiatus that the two deposits allow us to explore. This is especially relevant, considering the relatively short amount of time that separates Linear A from RCT, and the RCT from NEP. Such a diachronic approach can truly pave the way for ground-breaking research on the Greek language.

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Mycenaean *qe-te-o* and Greek adjectives in -τέος and *-eyo-

Rupert J. E. Thompson

Since the earliest days of the decipherment the general consensus has been that the forms variously spelt *qe-te-a*₍₂₎, *qe-te-(j)o* are somehow to be understood as semantically the equivalent of a classical verbal adjective in -τέος with a sense 'to be paid' or similar, either from *g^{wh}ed^h- (cf. θέσσασθαι),¹ or *k^wei- (cf. τίω).² Michael Ventris and John Chadwick accepted the sense but saw the missing /w/ as an insurmountable problem.³ They interpreted *qe-te-a*₍₂₎ as an *s*-stem neuter plural in /-e(h)a/, with *qe-te-o* a genitive singular in /-ehos/ or plural in /-ehōn/, comparing τέλθος 'debt, payment due;' the spelling *qe-te-jo*, which is difficult to square with an *s*-stem formation,⁴ was not then known.⁵

After the publication of the *qe-te-jo* forms the prevailing view, following Michel Lejeune, is that they represent an adjective in *-teyo- built to the root *k^wei- in the *e*-grade.⁶ For Lejeune this is a parallel formation to classical -τέος based on the verbal noun in *-ti-, *-tei- rather than that in *-tu-, *-teu-. Leonard Palmer agrees,⁷ but sees classical -τέος too as

¹ FURUMARK 1954, 42.

² MÜHLESTEIN 1955, 131 n. 60, noting the missing /w/ in a form traditionally derived from *-tewo, and seeing the spelling *qe-* (for expected *Ø*-grade *kwi-) as part of a larger phenomenon of *qe* standing for *qi*.

³ *Docs*², 220-221, 410.

⁴ LEJEUNE 1964, 90 and see below, p. 486-487.

⁵ The two examples from Pylos, **Fr 1206** and **Fr 1241**, were published in BENNETT 1958; the three examples from Thebes, **Gp 109** and **Gp 147** (twice) are in *FdC* I.

⁶ LEJEUNE 1964, 89-92 and then e.g. *Docs*², 577; DUHOUX 1976, 139-146; 2008, 266-267; *FdC* I, 278; HEUBECK 1985, 68; KILLEN 1979, 151-179; RUIJGH 1967, 267.

⁷ PALMER 1969, 260-261.

going back to *-teyo- not *-tewo-. Ernst Risch imagines a more complex situation,⁸ in which *qe-te-jo*, *qe-te-a₂* (he sees *a₂* as a spelling of /ya/) and classical -τέος all go back to *-tewyo- (Skt. -tavya), while *qe-te-o* and *qe-te-a* either come from Lejeune's *-teyo-, or from this same *-tewyo- with a special development *-ewyo- > *-eyyo- > -eo- at Knossos.⁹

Christos Piteros, Jean-Pierre Olivier and José Melena observe that the sense 'to be paid' is not compelling for the attestations of *qe-te-a₂* and *qe-te-o* on the sealings from Thebes, reject the interpretation as a verbal adjective altogether and decline to give a specific meaning.¹⁰

We can perhaps pass over the implausible suggestion that *qe-te-o* is /k^weitēon/, an adjective (but not of obligation) meaning 'costly'.¹¹ While not, perhaps, utterly impossible on KN L 693, the sense is scarcely appropriate elsewhere.

William Hutton was the first to systematically question the orthodoxy.¹² He rightly observes that nothing in the dossier of *qe-te-jo* requires it to be the equivalent of an adjective in -τέος, with sense 'to be paid' or otherwise, and that the various difficulties with such an interpretation militate against it. Instead, he sees in *qe-te-a₂* the plural of an *s*-stem neuter meaning 'fine.' The spelling *qe-te-jo*, which cannot be from an *s*-stem noun, he sees as a derived adjective, 'resulting from fines.' The forms *qe-te-a* and *qe-te-o* could be respectively an alternative spelling of *qe-te-a₂* and its genitive; but they could also, he claims, be from the adjective; and in support of this latter view he suggests that *qe-te-a₂* is used in contexts where goods are transferred to the palace, while records of outgoing use *qe-te-(j)o*, *qe-te-a*.

There is nothing in the dossier which requires a sense 'to be paid.' There are no occasions where quantities of goods described as *qe-te-o* are clearly shortfalls. Contrast the case of the term *o-pe-ro* and its abbreviation *o*, /op^helos/ 'debt, deficit,' which clearly do record shortfalls. In the Pylos taxation record Ma 222, for example, the quantities of the com-

⁸ RISCH 1976, 316.

⁹ This latter possibility is self-evidently special pleading. It is in any case rendered obsolete by the presence of both *qe-te-jo* and *qe-te-o* at Thebes.

¹⁰ PITEROS *et al.* 1990, 152-153, followed by HAJNAL 1992, 292.

¹¹ HAMP 1985.

¹² HUTTON 1990-1991.

modities in the assessment (line 1) equal the sums of the *o* and non-*o* entries in the *a-pu-do-si* /apudosis/ ‘payment’ (line 2): 10 units of *146 + 13 units *o(-pe-ro)* = 23 units in the assessment; 22 M-units of *RI* + one M-unit *o(-pe-ro)* = 23 M-units in the assessment. There is no such equation for *qe-te-o*.

PY Ma 222

(S90–H2)

.1 a-ke-re-wa *146 23 RI M 23 KE M 7 *152 10 O M 5 ME 500
 .2 a-pu-do-si *146 10 o 13 RI M 22 o M 1 KE M 7 *152 8 o 2 O M 5 ME 500 [
 .3 vac.]

The Knossos **L(5)** cloth records are superficially similar to the personnel records of the Pylos **Ac** series which record numbers of men present and missing (*o-pe-ro*) at various locations, and the Knossos **Do** lambing records where the shortfall in breeding targets are recorded as *o ovis^m*.

PY Ac 1275

(S1272–H20)

pe-ti-ni-jo VIR 25 o-pe-ro VIR 1

KN Do 927

(106)

.A] pe ovis^m 19
 .B]sę ovis^f 100 ki za ovis^m 30 o ovis^m 31

On the **Ld(5)** tablets quantities of cloth in the second line are contrasted to quantities of the same type of cloth labelled *qe-te-o* in the first. John Killen plausibly interprets these tablets as records of cloth undergoing finishing, the entries in the lower lines denoting disbursements of cloth already made to the finishers, the *qe-te-o* disbursements which are yet to be made; and he suggests that *qe-te-o* elsewhere also indicates a ‘shortfall in an issue or payment by the palace,’ contrasting with *o(-pe-ro)* which indicates a ‘shortfall in a contribution or payment to the palace.’¹³ Such an interpretation is consistent with but not required by the tablets he discusses. There are no totals recorded on the **Ld(5)** tablets to which the quantities of *qe-te-o* and non-*qe-te-o* cloth add up, nor do the sums on the two tablets where the quantities of both types are known add up to round numbers which could cogently be interpreted

¹³ KILLEN 1979.

as targets. Compare the lambing records, e.g. **KN Do 927** above, where the numbers of lambs present and missing add up to a multiple of ten.

Nor is Killen's suggestion compatible with the Thebes sealings. Three of these, **Wu 51, 65** and **96**, explicitly record animals being sent *te-qa-de* /T^hēg^wans=de/ 'to Thebes,' and each of the sealings records a contribution of a single animal or quantity of produce to the palace for consumption at a state banquet.¹⁴ Since they concern contributions to rather than payments from the palace, 'shortfall in an issue or payment by the palace' is impossible.

Furthermore, any kind of shortfall or deficit is unlikely. First, *qe-te-o* and *o-pe-ro* would indicate the same kind of deficit, viz. in a contribution to the palace. Second, **Wu 51, 65** and **96** would then record the non-contribution of animals which were to be paid later. They would be in modern parlance 'IOU's.' This is perhaps not utterly impossible; but it is hard to reconcile with **PY Un(3) 138** which, as Piteros *et al.* show, records the same commodities in similar quantities and is likely to have been compiled from a similar set of sealings for a similar purpose. For here all of the animals and products—or, at least, all of those in lines 1-4, are described as *qe-te-a*₂. **Un(3) 138** would not then record the ingredients for a state banquet, but the *absence* of those ingredients.

The difficulties besetting a connection of *qe-te-o* etc. and the -τέος verbal adjective are well known, but it is worth rehearsing them here as they are too-often simply side-stepped. In a nutshell, none of the spellings of the *qe-te-o* word shows any trace of a /w/, but the traditional etymology of -τέος is < *-tewo-, connecting it (as discussed below) to Skt. -tave. Conversely, the spelling *qe-te-jo* suggests the presence originally of a /y/—the spellings *qe-te-a*₂, *qe-te-a* and *qe-te-o* are compatible with this, on the likely assumption that intervocalic /y/ passed to /h/—which is not to be found in -τέος.

The -τέος adjective expresses obligation and is used only predicatively.¹⁵ With transitive verbs it is passive in sense and can, like the Latin gerundive, agree with the patient of the action it denotes, but it is more

¹⁴ PITEROS *et al.* 1990, 171-183.

¹⁵ On the attributive use of φατεῖός see below, p. 488.

frequently used impersonally. This is the only possibility with intransitives, either strict intransitives or with verbs taking a non-accusative complement, but it is also the most common construction with transitive verbs. In this construction the verbal adjective stands in the neuter singular (more rarely plural) with any object in the appropriate case.

To account for these peculiarities, Schwyzler argues that *-τέος* is derived from an infinitive in **-tewai* or **-tewei* from the verbal noun in **-tu-* (Latin *cantus* and the supines), seen in the Sanskrit dative infinitive in *-tave*.¹⁶ It generally has a final sense (*ā no nāvā matīnām yātām pārāya gāntave*, ‘come to us with the boat of hymns to go to the further shore,’ *RV* 1.46.11; *īndram codaya dātave maghām*, ‘urge Indra to give bounty,’ *RV* 9.75),¹⁷ while the predicative use expressing obligation is regular after the negative *ná*.¹⁸ In this respect it looks very *unlike* Greek *-τέος* which is predominantly in affirmative contexts.¹⁹

Nor is the pathway from an infinitive in **-tewai* or **-tewei* to an adjective in *-τέος* easy to imagine. If it were in the form **-tewai* used predicatively with a plural feminine noun in the nominative it might, after the remodelling of the *a*-stem nom. pl. as *-ai*, be misanalysed as an adjective (e.g. **πᾶσαι κολακεῖαι φευκτέαι*). But such instances must have been marginal and unlikely to trigger a wholesale reanalysis of both grammatical category and syntax.

A connection between *-τέος* and *-tave* is thus neither straightforward nor necessary. A further consideration is the relatively late date from which *-τέος* adjectives are attested. The earliest literary example would be Theognis 689 (οὐ χρὴ πημαίνειν ὅτε μὴ πημαντέον εἶη), if that were genuinely written by Theognis. Otherwise it is Pindar *Olympian* 2.5–6 (Θήρωνα δὲ τετραορίας ἔνεκα νικαφόρου | γεγωνητέον.) celebrating a victory won in 476 BC. The earliest inscriptional example I have been able to find is in a business letter inscribed on lead found in the Phocaeon colony of Emporion, *SEG* 37:838, which the editors date epigraphically to the first quarter of the 5th century.²⁰ The letter is fragmentary but contains in line 7 the phrase τί τούτων ποητέον.

¹⁶ SCHWYZLER 1959, 1, 810-811.

¹⁷ WHITNEY 2003, 352.

¹⁸ MACDONELL 1916, 335.

¹⁹ BISHOP 1899, 9.

²⁰ SANMARTÍ & SANTIAGO 1987.

Hesiod has οὐ τι φατειόν describing Cerberus at *Theogony* 310, in the nominative describing Φόβος at *Shield* 144 and in the genitive plural qualifying ὀφίων at *Shield* 160. If this were a -τέος adjective (the -ει- would have to be by metrical lengthening) it would push back the date of our earliest example considerably. But the accent (to the extent that it can be trusted) is in the wrong place, and it is used attributively, not predicatively. Tempting as it is to see it as an attributive precursor to the classical forms, it is far from clear that we should. It is worth noting too that one scholiast (ad *Theog.* 310) glosses φατειόν as λεκτόν rather than λεκτέον, another οὐ τι φατειόν as οἶον οὐ ῥητὸν κατὰ ἀξίαν, ἢ οὐ φονεύσιμον. Eustathius (*Commentarii ad Homeri Iliadem* 1.70) derives it from φατός by ‘πλεονασμός.’ The ancient commentators saw it, then, as the equivalent of a -τός rather than of a -τέος adjective.

So, if Hesiod’s φατειός is not a -τέος adjective in disguise, the earliest attestation in the inscriptional record will be the early in 5th century, and the earliest literary attestation in the 6th (if Theognis) or early 5th (if Pindar). It is of course possible that these adjectives were circulating in sub-literary registers before the earliest evidence available to us. This is quite likely, I think, given that their syntax is fully developed when we first see them—Aeschylus for example has both the impersonal construction (τοιουῶδε φωτὸς πεῖραν εὖ φυλακτέον, *Seven against Thebes* 499) and the personal (καρπὸς οὐ κομιστέος, *ibid.* 600). But their total absence from epic is suspicious. The earliest literary examples are poetic, and in verse which sits squarely in the Ionic tradition (Theognis) or is influenced by it (Pindar, Aeschylus).²¹ Add to this that the second earliest inscriptional example (indeed the only other inscriptional example I have found before the 3rd century) is in a verse epigram consisting of two hexameters and a pentameter quoted in an inscription from Epidaurus (*IG IV*², 1 121, second half of the 4th century) commemorating the miraculous cure of one Cleo, who having been pregnant for five years, finally gave birth through the intervention of the god:

οὐ μέγε[θο]ς πίνακος θαυμαστέον, ἀλλὰ τὸ θεῖον,
πένθ’ ἔτη ὡς ἐκήησε ἐγ γαστρὶ Κλεῶ βάρους ἔσσε

²¹ *pace* DUHOUX 2000, 314 who sees it as “une forme typique de prose [qui] ne se soit diffusée que lentement en poésie.” It is true that in the 4th century it has found its *floruit* in essentially technical prose (philosophy, the Hippocratic corpus), but if anything it seems to have spread *to* prose, and literary prose at that.

ἐγκατεκοιμάθη καί μιν ἔθηκε ὕγιῃ.

A truly early (i.e. Proto-Indo-European) date is thus far from certain, and one cannot help but wonder, with Duhoux,²² whether the *-τέος* verbal adjective is a development internal to Greek. But if so, it looks like it must have arisen reasonably early in order to have been inherited by, or spread to, Doric, Attic and Ionic by the 5th century. This is suggested, too, by the fact that the feminine is in *-εᾶ* in Attic (πεῖρά τις ζητήεα, Sophocles *Ajax* 571) and *-έη* in Ionic (οὐ σφι περιοπτέη ἐστὶ ἡ Ἑλλάς ἀπολλυμένη, Herodotus 7.168), since this implies that it was present in both dialects at an earlier stage with final vowel [æ:] < *ā. The hiatus in Attic, for expected *-εο-* > *-ου-*, must be due to the presence of some segment between the two vowels which was lost after the contraction ceased to operate and before the split of [æ:] > [ɛ:] ~ [a:] in Attic, and the only candidate is *w. Thus *-τέος* must go back to **-tewos* whether or not it is related to Vedic *-tave*.

One other etymology which has sometimes been pressed into service²³ can be quickly dismissed. Sanskrit has a gerund in *-tavya* which appears to be a **-yo-* derivative of the **-teu-* stem of the *-tave* infinitive. Now **-tewyo-* could underlie Hesiod's φατειός from a phonological perspective;²⁴ but *-tavya* appears to be an internal Sanskrit development which post-dates the *Rig Veda*. In any event, it could not underlie either Attic *-τέος* (we would expect **-τεῖος*), or Mycenaean *qe-te-jo* etc. which would show *w*.

Looking from the other direction *qe-te-jo*, at least, suggests a derivation from **-teyo-* which, *contra* Palmer²⁵, cannot underlie Attic *-τέος* since the change of **y* > **h* > \emptyset predates the contraction of *-εο-* to *-ου-*.

In summary, *qe-te-jo* and its variants cannot be the 2nd millennium precursor to classical *-τέος* verbal adjectives of obligation.

What of Lejeune's suggestion that *qe-te-jo* is an alternative adjective of obligation based on the verbal noun stem **-ti-* (with *e*-grade and thema-

²² DUHOUX 2000, 314.

²³ e.g. RISCH 1976, 316.

²⁴ LEJEUNE 1964, 89-92.

²⁵ PALMER 1969, 260-261.

tisation), as $-\tau\acute{\epsilon}\omicron\varsigma$ is to $*-tu-$?²⁶ The connection of $-\tau\acute{\epsilon}\omicron\varsigma$ and $*-tus$ presupposes that $-\tau\acute{\epsilon}\omicron\varsigma$ is old, as it requires ablauting $*-tu-/-teu-$, which, as we have seen, is far from clear. Lejeune himself admits that the semantics of the $*-tis$ nouns are less suited to the derivation of (passive) adjectives of obligation than those of $*-tus$;²⁷ and that this idea is simply a way of squaring *qe-te-jo* as being such an adjective with the impossibility of deriving it from $*-tewo-$.²⁸

We have seen, then, that *qe-te-jo* etc. cannot be connected with classical Greek $-\tau\acute{\epsilon}\omicron\varsigma$; that an (unparalleled) adjectival derivation from $*-tis$ nominals is simply a way of rescuing its interpretation as an adjective of obligation; but that nothing in the dossier requires such an interpretation and several things argue against it.

The most obvious feature of the *qe-te-jo* family is the variety of forms $-e-a$, $-e-a_2$, $-e-jo$ and $-e-o$. Of these $-e-a$, $-e-jo$ and $-e-o$ all resemble forms of an adjective in $*-eyo-$. It is standardly assumed that the spelling alternation between $-e-jo$ and $-e-o$ in such adjectives reflects the weakening and subsequently the possible loss of intervocalic $*y$. Whether this weakening is ongoing at the time of the tablets or has already taken place (the $-j-$ being then a historical spelling) is immaterial for the present discussion. If correct then $-e-a_2$, too, could be a spelling of such an adjective.

Hutton²⁹ rejects any connection with the $*-eyo-$ suffix on the following grounds: (i) the spelling $-e-a_2$ would entail a change $*y > /h/$ in intervocalic as well as initial position, for which there is no evidence; and (ii) 'almost all the identifiable words ending in $-a_2$ are plurals of s -stem nouns or adjectives'.³⁰ For this reason he prefers to see *qe-te-a₂* as an s -stem plural $/k^{w(h)}et^h\acute{e}ha/$ 'fines' while *qe-te-jo* (which cannot be a case-form of an s -stem noun), *qe-te-o* and *qe-te-a* are adjectives derived from the same stem. In support of this he argues that *qe-te-a₂* occurs in

²⁶ LEJEUNE 1964, 89-92.

²⁷ LEJEUNE 1964, 105 n. 81.

²⁸ LEJEUNE 1964, 91.

²⁹ HUTTON 1990-1991, 129.

³⁰ He also notes *en passant* that there is no form *qe-te-ja* corresponding to the frequent $-e-ja$ in adjectives of material. If this were used against *qe-te-jo* containing the $*-eyo-$ suffix it would of course be an *argumentum ex silentio* and the numbers of tokens we are dealing with are small.

contexts which ‘definitely or possibly record the transfer of goods to the palace,’ while the other spellings occur in contexts ‘recording the movement of goods from the palace.’ Now while *qe-te-jo* could be a spelling of a derivative **k^wet^hes-yo-*, it is much less plausible that *qe-te-o* and *qe-te-a* could do so since the outcome of intervocalic **sy* is always spelt *-j-*. The semantic distinction between the spellings is also not clear cut, since on **TH Wu 49, 50, 53** and **63** *qe-te-o* is used in the context of animals being sent to the palace, not from it. This objection could be overcome if here *qe-te-o* could somehow be seen as */k^wet^hehos/*, the gen. sg. of *qe-te-a₂*, although the motivation would not be at all clear.

More significantly, however, it is unlikely that **k^wet^hes-* would form a derived adjective in **-yo-*. While this suffix is of good Indo-European origin and is certainly attested in Greek, it is found only in very ancient formations which are mostly morphologically opaque, e.g. μέσ(σ)ος < **med^hyo-*. In productive usage it has in Greek been supplanted by its variant **-iyo-*.³¹ But from an *s*-stem this suffix would derive a form in **-esiyo-* > */-e(h)i(y)o-* which in this case would give **qe-te-i-jo* rather than *qe-te-jo*, and certainly not *qe-te-o*. Taking these as adjectival derivatives of an *s*-stem noun seems implausible.³² It seems equally implausible that *qe-te-a₂* and *qe-te-o* are different formations (an *s*-stem noun and an adjective from a different lexeme) when both are found in the same context on the Thebes sealings.

Are Hutton’s objections to *qe-te-a₂* being from the **-eyo-* suffix cogent? Not really. While it is true that evidence for **y* > */h/* medially is scant, this should hardly come as a surprise.

We know that **y* underwent lenition, both initially and medially. In initial position the outcome in non-psilotic dialects of later Greek is */h/*, as is the outcome of lenition of initial **s*. Although the lenition of **s*, both medially and initially, looks earlier than that of **y*—of which traces remain in Mycenaean spelling, at least—there is no reason to suppose that the pathways were different (viz., **s/y* > */h/* > \emptyset).

Otherwise, the only clear evidence for intervocalic **y* giving */h/* in Mycenaean would come from the use of *a₂* from **ya*, and the only

³¹ CHANTRAINE 1933, 33–34.

³² Examples of **-iyo-* adjectives from *s*-stem nouns in Mycenaean include *e-ke-i-ja* /enke(h)ia/ ‘for spears,’ *e-ra-te-i-jo* /elate(h)ios/ (ethnic adjective of **e-ra-to*, dat.loc. *e-ra-te-i*, acc. seen in *e-ra-to-de* /elatos=de/); *e-te-wo-ke-re-we-i-jo* /etewoklewe(h)ios/ ‘son of Eteocles,’ **56-ko-we-i-jo* (ethnic adjective of **56-ko-we* whose dat.-loc. is **56-ko-we-e*, **56-ko-we-i*).

clear forms in which this might occur (discounting the *qe-te-jo* family) are the feminines and neuters of adjectives of material. Meißner³³ has shown that where it results from *s, intervocalic /h/ has almost certainly been lost already at Knossos—where *a*₂, both medial and initial, is restricted to the Room of the Chariot Tablets and the Northern Entrance Passage, which might well be earlier than the rest of the deposit,³⁴ and to the theonym *ε-ma-a*₂[on KN X 9669. Even if /h/ < *y has not been lost at Knossos—and the co-existence of spellings with and without *j* would suggest not—it is clear that the tradition of using *a*₂ to write /h/ has not lasted there. We would not, therefore, expect to find *a*₂ in forms of adjectives of material which lack *j*.

At Pylos, on the other hand, intervocalic /y/ is almost totally consistently written.³⁵ Other than the *qe-te-jo* family, the relevant forms are the participle *to-ro-qe-jo-me-no* /trok^weyomenos/ (Hand 1) and the adjectives of material. Of the latter, 44—the vast majority—are by Hand 2, all with *j* written. Hand 26 has written one form, with *j*. Hand 32 has written four with *j*. I have argued elsewhere³⁶ that Hands 1 and 2 are linguistically conservative, and it comes as no surprise, then, that they write the *j* in these words, nor that Hand 2 writes *qe-te-jo* twice.

Hand 6, however, in PY Un(2) 853 has written]-we-e-*a*₂[which has plausibly been identified as *we*]-we-e-*a*₂, an alternative spelling of *we-we-e-a* = /werwehe(h)a/ < **werwes-eyo-* ‘woollen’.³⁷

It is interesting then that Hand 42 at Pylos writes *qe-te-a*₂ (once—this is the only example of the *qe-te-jo* family other than the two in Hand 2).

What emerges from the preceding discussion is that it is overly bold to claim that *-e-a*₂ cannot be the spelling of an outcome of **-eyā*. We would not expect to see such a spelling at Knossos, where for various reasons *a*₂ is marginal. At Pylos the majority of the adjectives of material (88%) are written by a scribe who always writes the *j*, and so here, too, our chances of seeing an adjective of material in *-e-a*₂ are low. There are simply no grounds for asserting that *qe-te-a*₂ would not be a licit spelling for a form in /-eha/ < **-eyā*. Indeed, if Hand 6’s]-we-e-*a*₂[is /werwehe-

³³ MEISSNER 2007.

³⁴ DRIESSEN 1990; 1999; 2008.

³⁵ DUHOUX 1987, 107-108.

³⁶ THOMPSON 1996-1997.

³⁷ Docs², 411, s.v. *we-we-e-a*. It remains the case that *we-we-e-a* is the only other word containing the sequence *we-e* followed by an /a/ vowel.

ha/ then there is an example of such a spelling. In fact, the attested spellings of the *qe-te-jo* family align perfectly with the spellings of adjectives of material at Knossos and Pylos.³⁸

Hutton's objections to *-e-a₂* being a spelling of /-eha/ < **-eyā* are thus not compelling, and while *qe-te-a₂*, *qe-te-a* and *qe-te-o* could be forms of an *s*-stem noun, *qe-te-jo* could not be, nor an adjective derived from it. On the other hand all forms of the *qe-te-jo* family could be analysed as adjectives in **-eyo-* and fit with the attested distribution of spellings of such adjectives by site and by scribe. The most economical route, then, at least from a morphological perspective, is to see them as adjectives in **-eyo-*.

An obvious objection to such an interpretation is on semantic grounds: **-eyo-* forms adjectives of material, a sense which is scarcely appropriate for the dossier of *qe-te-jo*. Yet this need not be insurmountable. **PY Ta 722.2** records a footstool decorated *ka-ra-a-pi*, *re-wo-te-jo* /krā(h)app^{hi} lewonteyois/ 'with lion heads,' while **PY Tn 996.1** has a pair of bathtubs described as *re-wo-te-re-jo* /lewotreyō/ 'for bathing.' Neither of these **-eyo-* adjectives is of material, suggesting that the suffix had undergone some semantic extension.

As to the lexeme to which the adjective is built, there is still little to go on. The idea that the commodities so designated might have been levied by fines which were 'earmarked for religious purposes'³⁹ is certainly attractive. Hutton compares the statues at Olympia which were paid for out of fines imposed upon cheats in the games; and given the obvious connection with feasting of many of our examples, the present author is reminded of the 'fines' levied in bottles of port against those presenting candidates at graduation in Cambridge whose charges commit misdemeanours of dress, and which are then consumed at a dinner by the ceremonial officers. That is, of course, only speculation. But if right, one might wonder whether there was, after all, some connection with the verbal adjective, not in *-τέος*, but in *-τός*, and with the root **k^wei-*. That is to say, might we be dealing with a form **k^weitōn* 'paid'

³⁸ From Thebes we have *qe-te-a₂*, *qe-te-jo* and *qe-te-o* but no adjectives of material. From Mycenae we have one adjective of material (*wo-ro-ne-ja*) but no forms of *qe-te-jo*.

³⁹ HUTTON 1990-1991, 130-131.

perhaps substantivised as ‘fine,’ from which a secondary **k^weiteyos* ‘comprised of fines’ was derived? The semantics of the root are suitable (compare τίνω, ‘pay a penalty’), and *qe-ja-me-no*, if /k^wei(h)amenos/ ‘receiving compensation’ (KN Og 8532.1, PY Eb 294.1, Ep 704.1), would show the same lexeme with the same sense in Mycenaean. The *e*-grade is not overly problematic. Although the \emptyset -grade appears to be original in the *-tos* adjective there was a tendency to replace it with the *e*-grade.⁴⁰ That this may have started already in Mycenaean is suggested by *re-po-to* /lepton/ ‘fine’ (KN L 693.1, PY Un(4) 1322.5), formally the **-tos* adjective from λέπω ‘strip, peel.’ The *e*-grade has certainly spread at the expense of the \emptyset -grade in this root in other forms such as Ion. (ἐκ)τεισις, Arc. (ἐσ)τεισις,⁴¹ and Arcadian has a present imperative (ἀπυ)τειετω in IG V,2 6.43.

⁴⁰ CHANTRAINE 1991, 283.

⁴¹ LEJEUNE 1964, 91.

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o-u-ka, o-u-ko and the Mycenae Oe tablets revisited

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The Linear B terms *o-u-ka* and *o-u-ko* only appear in three tablets from Mycenae:¹ **Oe 108.2**, Hand 54, **Oe 111.1.3**, Hand 51, and **Oe 120**, Hand 55. These texts are the following:

Oe 108

- | | | |
|----|--------------|--------------|
| .0 | <i>vacat</i> | |
| .1 | sa-pa , o-no | LANA 4 |
| .2 | o-u-ko | LANA 3 |
| .3 | we[] | <i>vacat</i> |

Oe 111 + 136

- | | | |
|----|--------------------------------------|-----------|
| .1 | pe-ru-si-nwa , o-u-ka[| |
| .2 | wo-ro-ne-ja pa-we-si / [•]-me-‘jo-i’ | LANA[|
| .3 | ne[-wa]o-u-ka | LANA[|
| .4 |] -k̄i -ni- *56 | LANA 100[|
| .5 |] o-ta-pa-ro-te-wa-ro | LANA 200[|
| .6 |] <i>vacat</i> | |

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¹ Another record could be on tablet **Oe 113**, Hand 54, according to the critical apparatus of *TITHEMY*, 65, where Melena suggests *o-u-k̄o* before LANA 1 at the beginning of line 1, but this reading is uncertain.

Oe 120

o-u-ko

LANA 2

Although each tablet has been written by a different scribe, all three belong to the **Oe** series, formed by 29 tablets coming from Room 2 of the House of the Oil Merchant [henceforth: HOM], which record mainly wool allotments to textile workers or wool intended for specific fabrics.²

Scholars unanimously accept that *o-u-ka* and *o-u-ko* belong to the same lexeme. This is generally interpreted as an adjective derived from /*owis*/ ‘sheep’, namely, /*owikos*, -a, -on/ ‘of sheep’, referring to the wool.³ *o-u-ka* is taken in the neuter nominative plural in **Oe 111.1.3**, in agreement with the not preserved wool units, and *o-u-ko* in the neuter nominative singular, which would not be in agreement with the wool units (three in **Oe 108.2** and two in **Oe 120**), but with the word for wool (probably the predecessor of Greek εἶρος, which is neuter) implicit in the logogram: see, for parallels, the entries *ne-wo* LANA 4, in **KN Od(1) 689.a.b**, by scribe 103, or *to-so o* LANA 14, in **KN Od 666.a**, by scribe 115.

However, there is a spelling problem in this interpretation: /*owikal*/ should be written ***o-wi-ka* in Mycenaean Greek, as the noun *o-wi-de-ta-i* in **PY Un 718.2** and **Wa 731.B**, if its interpretation as /*owidertā^{hi}*/ ‘to the sheepskinners’ is right,⁴ and the personal name *o-wi-ro* in **KN Dd 1218.B**, probably /*Owilos*/,⁵ make evident. The parallels quoted by Pierre Chantraine for the spelling *o-u-ka* instead of ***o-wi-ka*, the alternative spellings *di-wi-ja* (**PY An 607.5**) / *di-u-ja* (**PY Cn 1287.6**, **Tn 316.v.6**) and *me-wi-jo* (**KN Ak 611.2**, etc.) / *me-u-jo* (**KN Ak 612.B**, etc.), are not valid, because in these words there is a jod after vowel /*i*/, while in *o-u-ka* there is a velar stop.⁶ One could think that this spelling without vowel

² See VARIAS GARCÍA 2012, 156-159 for a complete description of the contents of this series.

³ Original interpretation by PALMER 1969, 439, followed by most scholars (see references in *DMic* II, 56 and *LGM*, 355; the same interpretation is found in NOSCH 2014, 373, 376 (with doubts), 379).

⁴ For this interpretation see *DMic* II, 58 and *LGM*, 355-356.

⁵ *DMic* II, 58. A Greek personal name Οἶλος appears in an inscription from Sardes of the 4th century BC.

⁶ CHANTRAINE 1966, 177; in note 1 of this page he admits this different phonetic situation, but adds: “mais une influence du premier type, au moins dans la graphie, est plausible.” A similar objection can be made to LUJÁN 1999, 127-128 and notes 2 and 3, who follows Palmer’s interpretation and proposes for *o-u-ka* a phenomenon parallel to the term *ko-u-ra*, if this is a doublet of ***ko-wi-ra* (cf. *ko-wi-ro-wo-ko* /*kowilo-worgos*/, a specialised worker, in **KN B 101.1**), Classical Greek κοῖλα: as Luján says, this Greek interpretation of *ko-u-ra* is not certain (see *DMic* I, 394), and, even if it were right, there is here a liquid after vowel /*i*/, not a stop like in *o-u-ka*.

/i/ of a word derived from *owis was specific to Mycenae and different from Pylos and other Mycenaean sites, but there is no justification for it.

Apart from this linguistic difficulty, there is a problem in the meaning of *o-u-ka/o-u-ko* as a wool adjective ‘of sheep:’ why is it written only four times in the wool tablets? Does it mean that most of the wool recorded in the HOM, which is not qualified as *o-u-ka* or *o-u-ko*, is not ‘of sheep?’ *Non liquet*. The common explanation is that *o-u-ka* is written in **Oe 111.1** because it is opposed to the term *wo-ro-ne-ja* in **Oe 111.2**, which is interpreted as ‘of lamb;’ besides, **Oe 111** is thought to be a summing up document of all the wool recorded by scribe 51 (and perhaps of most of the wool recorded in the HOM), because of the opposition between *pe-ru-si-nwa* /*perusinwa*/ ‘of last year’ on line 1, and *ne-wa/newa*/ ‘of this year’ on line 3, wool (LANA), and then the adjective *o-u-ka* should be implied in the rest of the tablets. Even if this is accepted, the writing of *o-u-ko* in **Oe 108.2** and **Oe 120** is not explained: in **Oe 108** *o-u-ko* is applied only to the wool recorded on line 2 (three units), not to that on line 1 (four units), which is preceded by the transaction term *o-no/onon*/ ‘benefit’ (see below), so that if *o-u-ko* were the adjective ‘of sheep,’ we would have to deduce that the wool recorded on **Oe 108.1** would be not ‘of sheep,’ without any indication of the animal it comes from, which is unlikely.

The best approach to this question is to consider that the opposition between *pe-ru-si-nwa o-u-ka* and *ne[-wa o-u-ka* in **Oe 111** could be similar to that found in Knossos between *ne-wa po-ka*, which appears with the sheep’s logogram in the totaling tablet **KN Dp 997.b** (*]to-sa* is written at the beginning of the tablet), and the possible *?pe-ru-si-]nwa po-ka* in **KN Dp 7742.1**. These are the only two occurrences of the term *po-ka* in Mycenaean Greek, so perhaps *o-u-ka* at Mycenae is analogous to *po-ka* at Knossos, although the latter refers to sheep, not to wool. For *po-ka* there are two interpretations: the most widely accepted one takes the word as the nominative plural /*pokai*/, a variant of Classical Greece πόκος ‘fleece,’⁷ but Melena proposes a *nomen actionis* in *-ā*: /*pokā*/ ‘standing either for the clipping or for the clip or wool yield,’⁸ considering that the Knossian tablets refer to last year’s and current year’s shearing. Those following the first interpretation see in the pair of tablets **KN**

⁷ See references in *DMic* II, 133 and *LGM*, 393.

⁸ MELENA 1987, 443, who mentions in note 206 a similar observation of LEJEUNE 1997, 57 and n. 10.

Dp 997 and **Dp 7742** similar records to **MY Oe 111**, namely, totaling records of sheep wool (because of the appearance of logogram **OVIS^f** after *po-ka* in **Dp 997.b**) of the previous and the current year. On the other hand, if Melena's proposal is accepted, one would see in *o-u-ka* an action noun in *-ā* like *po-ka*.

Leaving aside the interpretation of *po-ka*, there are in Mycenaean Greek some certain *nomina actionis* in *-ā* with *o*-grade in their roots corresponding to verbs in *e*-grade, describing different types of production in the Mycenaean economy: thus *o-pa* /*hopā*/ 'preparing or refurbishment work' (cf. ἔπω 'to make ready'), *to-u-ka* /*touk^hā*/ 'finishing work' (cf. τεύχω 'to prepare, to fully produce') and perhaps *wo-ka* /*worgā*/ 'task' (cf. (Ϝ)ἔργω 'to work').⁹ Along this line Hugo Mühlestein¹⁰ interpreted *o-u-ka* as an action noun corresponding to verb εὔχομαι, attested in Mycenaean in the 3rd person singular of the present indicative: *e-u-ke-to* 'she declares solemnly' in **PY Eb 297.1** and **Ep 704.5**; *o-u-ka* is rendered /*ouk^hā*/ 'declaration' or 'vow,' hence 'vow of delivery' as solemn heading of tablet **Oe 111**, which would make this the introductory tablet of this series.

Also, Mühlestein interpreted *o-u-ko* as /*ouk^hos*/ with the same meaning as *o-u-ka* /*ouk^hā*/ "im Ablaut zu εὔχομαι (vgl. *e-u-ke-to*) wie φόρος und φορά zu φέρω, πλόκος und πλοκή zu πλέκω u. a. m.; εὐχή ist an εὔχομαι angeglichen," adding that "*o-u-ko* und *o-u-ka* gehören verschiedenen Schreibern und können nach ihrer Bildungsweise Synonyma sein."¹¹ The main problem to this morphologically irreproachable interpretation of *o-u-ko* as /*ouk^hos*/ 'vow of delivery' is the content and shape of the tablets where this term appears: **Oe 108.2** and **120**, which are simple index cards, very different from **Oe 111**; a solemn noun /*ouk^hos*/ 'vow of delivery' does not seem suitable for both tablets. The fact that each tablet has been written by a different scribe: 51 (**Oe 111**), 54 (**Oe 108**) and 55 (**Oe 120**), as Mühlestein himself stressed, could indicate

⁹ The other proposed interpretation for *wo-ka* is /*wok^hā*/ 'chair' (cf. (Ϝ)ἔχω 'to transport'). See the discussion in *DMic* II, 441 and *LGM*, 217-218.

¹⁰ MÜHLESTEIN 1968, 114; see *DMic* II, 56 note 6 for the authors who follow Mühlestein's interpretation, also accepted by MELENA 2014, 33, 165.

¹¹ MÜHLESTEIN 1968, 114. García Ramón points out to me *per litteras* that a Greek thematic substantive *οὔχος would perfectly correspond to Vedic *óha-* (**h₁óu^{gh}-o-*); also, there is in both languages a neuter in *-o/es-* εὔχος 'boast; vow, votive offering': Vedic *óhas-* 'fame' (**h₁éu^{gh}-es-*). Other Greek parallels to the coexistence of both forms *οὔχος: *οὔχά are τόμος: τομή, or σκόπος: σκοπή.

that each scribe wrote this notable term only on one tablet each though it is to be understood in the rest of his records as well; however, this is not certain.

Tablet **Oe 108** might give us the key to interpret the term *o-u-ko*. Line 1 of this tablet records four units of wool preceded by the terms *sa-pa* and *o-no*. As it is well known, the transaction term *o-no* /*onon*/ ‘benefit’ refers to a delivery of raw material by the palace to individuals as payment for the supply of a commodity, which in **Oe 108.1** is *sa-pa*, probably a textile item.¹² Differently from most of the records where *o-no* appears, like **PY An 35.5**, **Un 443.1**, **Un 1322.4.5**, **KN Fh 347.2** or **Fh 372**, no recipient of this payment is recorded on **Oe 108**; although an interpretation of *o-u-ko* as a personal name is theoretically possible,¹³ the fact that this term is recorded on line 2 in another entry of wool (three units), different from that of *o-no* on line 1, excludes it as denoting the recipient of this payment.

In **Oe 108.1**, as in the other inscription from Mycenae where *o-no* appears, **Oe 109**, both tablets by scribe 54, the payment in raw material is wool. These two records of wool are different from most of the **Oe** tablets, where wool is allocated by the palace to textile workers to make several types of fabrics in the *ta-ra-si-ja* system of production, as tablet **Oe 110**, which records the term *ta-ra-si-ja* on line 1, shows.¹⁴ If the three units of wool of **Oe 108.2** are not recorded as *o-no*, but as *o-u-ko*, and this term does not stand for an adjective ‘of sheep’ or for a personal name, but it is similar to the term *o-u-ka* recorded on **Oe 111.1.3**, everything indicates that *o-u-ko* is an administrative term contrasting with *o-no*.

An important common fact of the four records of *o-u-ka* and *o-u-ko* LANA is that there is no recipient of this wool, contrary to the great majority of records of wool in the **Oe** series, where wool is allocated either to textile workers designated by their personal names (women: *a-pi-do-ra*, *a-qi-ti-ta*, etc., or men: *ka-sa-to*, *di-du-mo*, etc.) or by their

¹² On the meaning of the transaction term *o-no* in all its occurrences in the Mycenaean inscriptions, see ultimately BENNET & HALSTEAD 2014. I do not discuss here the interpretation of the term *sa-pa*, for which see *DMic* II, 280.

¹³ A personal name Εὔχος is attested in an inscription from Epidamnos-Dyrrhachion of the Hellenistic-Imperial period (see *LGPV* III.A), so a variant *Οὔχος of the same lexeme is plausible as personal name in Mycenaean times.

¹⁴ See VARIAS GARCÍA 2012, 157-159 for the two types of palatial economic control, the *ta-ra-si-ja* system and the *o-no* system, in the **Oe** series.

occupations (*a-ke-ti-ri[-ja-i /askētriā^hi/* ‘to the (female) decorators;’ *ka-na-pe-we /knap^hēwei/* ‘to the fuller’), or to other workers (*a-to-po-qo-i /artopok^woi^hi/* ‘to the bakers;’ *ke-ra-me-wi /keramēwi/* ‘to the potter’). Therefore, it seems that the wool recorded as *o-u-ka* and *o-u-ko* in the **Oe** tablets, kept in Room 2 of the HOM, which functions as a temporary wool storeroom, is still waiting to be supplied to different individuals, and hence its record as */ouk^hā/* or */ouk^hos/* ‘vow of delivery’, to confirm its necessary allocation. Given that **Oe 111** records wool to make *pa-we-a* cloth on line 2, and the whole tablet belongs to the *ta-ra-si-ja* system, a very attractive interpretation of *o-u-ka* and *o-u-ko* in the **Oe** series could be ‘vow of delivery’ of wool to make cloths in the *ta-ra-si-ja* system.

Oe 111 is certainly the most important tablet by Hand 51 who is the main scribe responsible for the bookkeeping of the textile industry at Mycenae.¹⁵ The tablet arrangement, with an entry for the first part of *pe-ru-si-nwa*, *o-u-ka* [LANA (line 1) ‘last year’s wool’ opposed to the entry for the second part of *ne[-wa]* *o-u-ka* LANA [(line 3) ‘wool of this year’, suggests that **Oe 111** is chronologically earlier than the current year’s tablets in the **Oe** series, as evidence for the annual accounting of which Hand 51 was in charge. Also, **Oe 111** is the tablet with the largest amount of wool recorded at Mycenae by far: at least 100 units (= c. 300kg) in line 4 and 200 units (= c. 600kg) in line 5, to which the not preserved quantities of the first three lines must be added. All this fits with the interpretation of *o-u-ka* and *o-u-ko* as referring to wool which has not yet been allocated: the *o-u-ka* LANA of **Oe 111.1.3** is probably a big amount of wool obtained in two different years to make *pa-we-a*, the plain type of cloth recorded on line 2 and perhaps understood in lines 4 and 5.

The record of two different systems of acquisition of commodities by the palace, *o-no* and *o-u-ko*, if the second is inside the *ta-ra-si-ja* system, on a single tablet, **Oe 108**, is not a problem, because there are other Mycenaean tablets in which a completely different entry is recorded besides an *o-no* transaction: thus **PY An 35** records the dispatch of builders to different places on lines 1-3, while it notes an *o-no* payment of several raw materials for alum on lines 5-6, or **PY Un 443** records an *o-no* payment on line 1 and a different allocation to another individual on line 3. This fact could actually indicate that *o-u-ko* on line 2 of **Oe**

¹⁵ See VARIAS GARCÍA 2012, 156-157 for a detailed analysis of tablet **Oe 111**.

108 is only applied to this entry of three units of wool, and is not to be understood in the other tablets written by scribe 54,¹⁶ and the same is valid for the entry *o-u-ko* LANA 2 of **Oe 120** by Hand 55. The latter is a brief inscription which, according to the editors of the tablet,¹⁷ is cut at bottom, originally being the upper part of page tablet, which strengthens the idea that *o-u-ko* is applied only to these two units of wool and that **Oe 120** is different from the other tablets written by scribe 55, four of them records of wool allocated to different individuals and a fifth one recording *pa-we-a* cloth.

The main civilisations of the ancient Near East record the administrative management of wool in a similar way to the Mycenaean administration, because in all of them wool is the main raw material to make textiles. For instance, the Neo-Babylonian texts mention the '*lubuštu* / *sig-ba*' allocation to refer to the direct wool allocation to the temple workers or to the royal palace workers.¹⁸ In the Neo-Sumerian texts of the Third Dynasty of Ur (c. 2150-2000 BC) the term *mu-ku*_x 'delivery' is recorded in a heading of a list of textiles from several places on line 5 of the obverse of tablet BM 110453 (*túg mu-ku*_x -*ensik* 'textiles: delivery of governor:'),¹⁹ and it appears also in a record of wool for their manufacture on column II, line 2, of the reverse of tablet BM 110320 (*sig-kur-ra mu-ku*_x 'mountain (sheep) wool delivered').²⁰

But it is the Akkadian term *sattukku* which best corresponds to the Mycenaean terms *o-u-ka* and *o-u-ko* as they have been interpreted here. The meaning of *sattukku* is 'regular delivery, regular offering,' and while in Mari this designates '(non-cultic) deliveries,' in the other ancient Near Eastern archives it mostly refers to temple offerings.²¹ Thus in the Neo-Babylonian documentation one qualification of the wool was '*sattukku*'s wool,' which, according to Francis Joannès, "was probably reserved for the manufacture of the gods' clothes."²² If the Mycenaean terms *o-u-ka* and *o-u-ko* 'vow of delivery' correspond to Akkadian *sat-*

¹⁶ Additionally, this conclusion would be confirmed if the reading *o-u-ko* before LANA 1 on **Oe 113.1**, another tablet in Hand 54, were assured (see note 1).

¹⁷ *TITHEMY*, 66.

¹⁸ See JOANNÈS 2010, 401.

¹⁹ Tablet transliterated and translated by POMPONIO 2010, 188.

²⁰ Tablet transliterated and translated by POMPONIO 2010, 194.

²¹ See BLACK *et al.* 2000, 319 for this distinction in the meaning of *sattukku*, with some examples.

²² JOANNÈS 2010, 401.

tukku and can qualify wool, the question immediately arises whether *o-u-ka* and *o-u-ko* have a meaning similar to the one most frequently attested in the ancient Near Eastern texts, except in Mari, that is, whether *o-u-ka* and *o-u-ko* do not refer to a secular vow of wool delivery in the context of the *ta-ra-si-ja* system of textile production, but to a 'cultic' vow of wool delivery to deities or in a religious context.

There are several Mycenaean texts from different sites, Knossos, Pylos, Thebes, which record cloth and wool in a religious context, as offerings to deities or allocated to sanctuary workers, which shows the importance of the religious sector in the Mycenaean textile industry.²³ For example, three **Od** tablets from Knossos, **Od(2) 714, 715** and **716**, record three small wool offerings to the goddess *e-re-u-ti-ja* /*Eileithyia*/ Hom. Εἰλειθυῖα, Classical Greek Ἐλευθιά, two of LANA 1 (c. three kg) and one of LANA 4 (c. 12kg); three **Of** tablets from Thebes record wool allocations to workers dealing with deities, of Hera (**Of 28.2**), Hermes (**Of 31.3**) and *Potnia* (**Of 36.2**), and tablet **Un 6.6** from Pylos records an allocation of five units of wool (c. 15kg) to the female deity *pe-re-**82 in a banqueting context.

Therefore, it would appear plausible to interpret the records of *o-u-ko* LANA on tablets **Oe 108.2** and **120** from Mycenae like the abovementioned religious wool tablets from Knossos and Thebes as two vows of offerings of small quantities of wool, three and two units, respectively, although neither of them records any deity. However, this religious interpretation does not fit well with the term *o-u-ka* in **Oe 111**, given the large quantities of wool recorded on this tablet, and the fact that at least on line two the wool is destined to make *pa-we-a* cloth.

In conclusion, the Linear B terms *o-u-ka* /*ouk^hā*/ and *o-u-ko* /*ouk^hos*/, following Mühlestein's interpretation (see above), are two substantives with the same meaning: 'vow of delivery,' an administrative term appearing only four times in the **Oe** series from Mycenae to refer to quantities of wool which are still in the storeroom Room 2 of the HOM and have to be allocated (to individuals or workshops). It is also suggested here that both terms can correspond to the Akkadian term *sattukku*, which mostly (but not always!) refer to cultic deliveries in the ancient

²³ For a commentary of the Linear B tablets recording wool and textiles in a religious context see BENDALL 2007, 221-241, who does not include the Mycenae **Oe** series among them. For a good description of the use of cloth in the Mycenaean cult on the basis of the textual evidence, see NOSCH & PERNA 2001.

Near Eastern texts. That *o-u-ka* and *o-u-ko* could also have a religious meaning is by no means clear; in that case, the Mycenae **Oe** series would cover a great variety of contents, like the Knossos **Od** tablets: wool records in the *ta-ra-si-ja* system of textile production, wool payments as *o-no*, vows of wool allocations to workshops connected with deities. But even if *o-u-ka* and *o-u-ko* have nothing to do with a religious delivery, and refer only to a plain vow of delivery, their exclusive record in the **Oe** tablets from Mycenae is an evidence of the complexity of this series, much less uniform than has been thought in scholarship so far, with records of several phases in the *ta-ra-si-ja* textile production (storage of wool to be allocated, wool allocation to textile workers, to make or to finish textiles) and of payments in wool to other workers. This would explain better why there are five scribes: 51, 52, 54, 55, and 56, involved in this wool department, if we consider that only a very small portion of this series has been preserved.

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5



𐎗𐎠𐎶𐎵𐎫𐎠𐎶

**Scripts
and archaeology**



Comparing Cretan Hieroglyphic and Linear A seal stones: a preliminary assessment of forms, materials, sequences, uses

Matilde Civitillo

As is well known, the use of inscribed seals is traditionally considered as one of the most important ‘divides’ between the partially contemporary Cretan Hieroglyphic and Linear A writing traditions and administrations in Protopalatial Crete. Of a total of 331 Cretan Hieroglyphic documents published in *CHIC*, the bulk consists of seals and seal impressions, i.e. 136 seals and 57 seal impressions. An additional 122 documents are written on various clay formats and 16 on other media, a picture not altered by the discoveries of new texts after *CHIC*’s 1996 publication. While seals are distributed across central and north-eastern Crete, most of the other documents come from Knossos, Malia and Petras, and are dated to MMII; in fact, only four seals have been dated to MMIA¹ and few are judged more recent.²

Conversely, the extant Linear A inscriptions, ca. 1400 in *GORILA*, mostly consist of administrative documents that, along with non-administrative ones, were prevalently recovered at Haghia Triada, Zakros and Khania and dated to MMII³ but, especially, LMIB.⁴ Among this documentation, only four more or less dubious seals are listed:⁵ **CR (?) Zg 4**,

¹ #202; #203; #252; #315.

² #134, #138 and #205 are dated to MM II-III; #177 and #204 are dated to LM I.

³ A tablet fragment from the SW House at Knossos (KN 49) and a painted larnax rim from Tholos E at Archanes (ARKH Zc 8).

⁴ Only a few inscriptions can be assigned to LM II, LM IIIA and LM IIIB: ARM Zg 1; KH 94; KH Wc 2117-2118; KH Zc 106; KN Zb 40; KN Ze 16; PO Zg 1.

⁵ Among the seals in the forthcoming *GORILA* supplement, DEL FREO & ZURBACH 2011 deem ARM Zg 1 as very conjectural, and CR (?) Zg 3 possible, but uncertain; CR (?) Zg 4 and KN Zg 55 seem more certain.

KN Zg 55, ARM Zg 1 and CR (?) Zg 3.

This marginal use of seals in Linear A administrative practices and the choice of writing supports different from those selected by Cretan Hieroglyphic users is generally stressed to highlight either the difference between these two writing traditions⁶ or, on the contrary and more recently, to minimize the gap between them. Even if sporadic, in fact, the four mentioned seals would actually demonstrate the use of this scriptorial support in the Linear A writing tradition.⁷ In this scenario, therefore, we think that an assessment and a more in-depth analysis of this issue is necessary. Even if Linear A seals have been periodically listed by Jean-Pierre Olivier and Maurizio Del Freo⁸ and, in two cases, have been the subject of more detailed papers,⁹ no specific study has been carried out with the aim of an overall analysis of these objects, neither on their own nor in comparison with Cretan Hieroglyphic seals. Notwithstanding the extremely poor documentation we have, it would, in fact, be of interest to examine both their textual contents and palaeographic peculiarities and all the ‘external factors’ attached to them. In our opinion, the concomitant evaluation of these elements is a key factor for the understanding of any writing act in any writing system.

Therefore, in what follows, we will try to make an analysis of the aforementioned Linear A seals: the forms and materials used for their manufacture, the typology of signs and sequences inscribed, the formatting of the texts on their surfaces and their possible uses in the administration. We will then compare all these elements with the Cretan Hieroglyphic seal material, with the aim to begin assessing their interpretation in a more structured frame of reference.

Analysis of the seals

The first seal that we will analyse, **CR (?) Zg 4** (Fig. 1.1), is a slightly convex spool of unknown provenance.¹⁰ Its first editor Victor Kenna assigned it to MM IIIB/LM IA,¹¹ while Maria Anastasiadou convinc-

⁶ OLIVIER 2010, 291; PERNA 2016, 96.

⁷ ANASTASIADOU 2016; DEL FREO 2005, 664; GODART 1999.

⁸ OLIVIER 2010; *Rapport* 1991-1995; *Rapport* 1996-2000; *Rapport* 2006-2010; *Rapport* 2011-2015.

⁹ PERNA 2014; 2019.

¹⁰ CMS XII, no. 96.

¹¹ CMS XII, 162-163, no. 96; KENNA 1963, 4, Fig. 2.d-f; 1964: 9, *sub* MMNY 26.31.158, Pls. I.26, 2.12 and 3.21.

ingly proposes a MM IB/II date, based on the contextualization of its form and material (chlorite, not serpentine as reported by Kenna) in the broader production of Minoan glyptics.¹² These two elements suggest this seal comes from south-central Crete, where round-faced black chlorite seals were very commonly produced in the early Protopalatial period and reels were frequent.¹³ The seal is engraved on both sides, divided into two registers. On face *a*,¹⁴ in the lower register, a papyrus flower is incised and, in the top register, there are three signs of writing. On face *b*, the upper register presents an architectural motive and the lower one three signs. Architectural (or tectonic) motives¹⁵ are technical virtuosités firmly belonging to MM II-III glyptic production, well-established in hard stone and emulated by soft stone engravers. The date of their inception is provided by seal impressions from *Vano 25* at Phaiastos, with a *terminus post quem non* of MM IIB. Geographically, seals with these motives come in similar quantities from central and eastern (but not from northern) Crete. The sign sequences incised on the two seal faces were first interpreted as Linear A signs by Kenna,¹⁶ Raison and Pope (*sub* KT[?] Z 2),¹⁷ and John Younger,¹⁸ but Louis Godart and Olivier did not include the seal in *GORILA* since they judged it as bearing a pseudo-inscription.¹⁹

However, the seal has been recently re-admitted among Linear A inscriptions by Del Freo,²⁰ following a new examination by Massimo Perna in 2010.²¹ Hence, the sequences written on the seal's two faces must be read (using, for ease of presentation, Linear B phonetic values) as follows: *a*. AB 28-01-01 (I-DA-DA), hapax; *b*. AB 08-02-04 (A-RO-TE), hapax, both intended to have been readable on impressions of the seal. The only perplexity lies in the identification of the sign AB 02 on face *b*, rendered

¹² ANASTASIADOU 2016, 176; cf. 63-67, 167.

¹³ ANASTASIADOU 2011, 120-37; 2016: 167 n. 59.

¹⁴ PERNA 2014, 256-257, adopts an inverse numbering of seal faces with respect to *CMS*, *Rapport* 2006-2010, 14-15, and *Rapport* 2011-2015, 17-18.

¹⁵ KRZYSZKOWSKA 2005, 86-87; 132.

¹⁶ *CMS* XII, 162-163.

¹⁷ RAISON & POPE 1994.

¹⁸ Linear A inscriptions, YOUNGER [last accessed 11/11/2022].

¹⁹ *GORILA* IV, xxi; for a more positive position: OLIVIER 2010, 291, n. 16.

²⁰ Cf. DEL FREO & ZURBACH 2011, 86, n. 42-43; *Rapport* 2006-2010, 14-15; *Rapport* 2011-2015, 17-18.

²¹ PERNA 2014, 256-257.











1) CR (?) Zg 4 = CMS XII, 96				Find place and dating:	Find place unknown; MM II
				Form:	Spool, slightly convex
				Material and technique:	Black chlorite; scraped, cut
				Inscription:	a. AB 28-01-01 b. AB 08-02-04
				Museum:	New York, USA, Metropolitan Museum of Art, inv. n°. 26.31.158, Seager collection
				Dimensions:	length: 1.45, width: 1.45, thickness: 1.15
2) KN Zg 55 = CMS II.2 no. 213				Find place and dating:	Knossos, temenos; MM II- MM III?
				Form:	Discoid, biconvex
				Material and technique:	Black chlorite; scraped
				Inscription:	b. AB 57-31-57
				Museum:	Heraklion Museum, inv. n°. HM 621
				Dimensions:	length: 1.4, width: 1.4; thickness: 0.6
3) CMS VII no. 31				Find place and dating:	provenance unknown; MM II?
				Form:	Pierce-grip seal
				Material and technique:	Chlorite (Anastasiadou 2016: 176); scraped, drilled
				Inscription:	AB 08-31 (Anastasiadou 2016, 178); Cretan Hieroglyphic? (Perna 2019)
				Museum:	British Museum, inv. n° 1947.9-26.13
				Dimensions:	length: 1.7, width: 1.6; thickness: 0.8
4) CR (?) Zg 3 = CMS XI, no. 311				Find place and dating:	Provenance and dating unknown
				Form:	Amygdaloid seal
				Material and technique:	White limestone; scraped?
				Inscription:	a. A 131c + AB 60 b. AB 30
				Museum:	Ermitage Museum, inv. n°. 511; acquired in 1865, Collection Ross
				Dimensions:	length: 1.75, width: 1.55; thickness: 0.8
5) ARM Zg 1 = CMS V Suppl. 1B, no. 310				Find place and dating:	Armeni, Necropole. Tholos tomb no. 200; Context dating: LM II-LM IIIA2; Stylistic dating: MM I?
				Form:	Pendant, cono-pyramidoid; green steatite
				Material and technique:	Green steatite; filed, drilled
				Inscription:	A 606
				Museum:	Rethymno museum inv. n°. Σ 179
				Dimensions:	length: 1.3, width: 0.91; thickness: 1.11

Fig. 1. Linear A seals (drawings and photographs, courtesy of CMS-Heidelberg).

more like a star than a cross, but, as Del Freo observes,²² the ductus of this sign could have been influenced by the rhomboids on the upper register as well as by the preceding sign AB 08. The sequence on face *a*, AB 28-01-01 (I-DA-DA), is perhaps not an hapax *stricto sensu*, being related to the word AB 28-01 (I-DA), recurrent with other derivatives on clay tablets, libation tables and gold artefacts. The connection of this sequence with the (or with a) toponym *Ida* seems to be suggested by its contextual attestation on clay tablets, where, in at least one case (ZA 24a.1) it seems interpretable as a place name, as well as by its position on Minoan ‘libation formula’ (on IO Za 2.2; KO Za 1b-c; SY Za 1). From a palaeographic point of view Perna observes that the most interesting parallels for signs 08, 04 and 28 are to be found on stone libation tables from Mont Iouktas (Fig. 2),²³ generally ascribable to a MM III-LM I horizon. Based on these parallels, therefore, Del Freo suggests that «il est donc possible que l’origine du sceau soit à chercher dans la région de Cnossos.»²⁴
















	AB 04 (𐀔)								
		-	-	-	-	-	-	-	-
CR Zg 4.b	IO Za 2	IO Za 3	IO Za 5	IO Za 6	IO Za 7	IO Za 8	IO Za 11	IO Za 13	
	AB 08 (𐀘)								
			-	-			-	-	-
CR Zg 4.b	IO Za 2	IO Za 3	IO Za 5	IO Za 6	IO Za 7	IO Za 8	IO Za 11	IO Za 13	
	AB 28 (𐀙)								
						-			
CR Zg 4.a	IO Za 2	IO Za 3	IO Za 5	IO Za 6	IO Za 7	IO Za 8	IO Za 11	IO Za 13	

Fig. 2. Palaeographic variations of signs AB 04, 04 and 028 in Iouktas inscriptions (after KARETSOU *et al.* 1985).

However, these resemblances should perhaps not be understood as a precise correspondence among our seal and the Iouktas inscriptions. Linear A signs appearing on these libation tablets, in fact, show a certain degree of internal graphic variability, in contrast to some recurrent, technical peculiarities of execution. Moreover, the most common (but not mandatory) characteristic in the rendering of AB 028 on the Iouktas attestations, consisting in the central part of the sign drawn as a circle

²² Rapport 2006-2010, 15.

²³ PERNA 2014, 257.

²⁴ Rapport 2006-2010, 15.

and not as a horizontal trait,²⁵ does not seem to compare to its ductus on **CR (?) Zg 4**. In addition, the differences in the size of the tools used for engraving inscriptions on stone libation tables and on (very small) seal stones cannot but have had an impact in the rendering of the written signs, preventing an automatic comparison among signs engraved on different supports. The similarities evoked by Del Freo and Perna, therefore, could be perhaps more broadly attributed to the very accurate rendering of Linear A signs on a stone seal, with strong symbolic value. Consequently, there seems to be no reason to discard a dating hypothesis for our seal to MM II and a provenance from central Crete. However, given the absence of any contextual, chronological and provenance indication for **CR (?) Zg 4**, all comments should be understood as conjectural.

Our second Linear A seal, **KN Zg 55** (Fig. 1.2),²⁶ again in black chlorite, with round faces (a biconvex discoid) and manufactured with the same technique as **CR (?) Zg 4**, is assigned to a MM II-III date. We have already seen the circulation of chlorite seals in Protopalatial south-central Crete; as for the seal form, biconvex discoids are the MM II-III shape *par excellence*. On face *a*, the seal carries a boar's head surmounted by a dagger, while on face *b* three script signs are incised. Since on face *b* the signs are to be read as AB 57-31-57 (JA-SA-JA), an hapax, the hypothesis suggested by Younger is intriguing, even if not provable: he interprets the sequence as a palindromic abbreviation of AB 57-31-31-60-13 (JA-SA-SA-RA-ME), i.e. the already mentioned 'libation formula'.²⁷ On Linear A libation tables this sequence is attested, along with its variant AB 08-31-31-60-13 (A-SA-SA-RA-ME),²⁸ as a middle component in the *formule principale* and as a final component in the *formule secondaire*,²⁹ and also recurs on an altar fragment (**IO Zb 10**), on ritual vessels (**PK Za 4**; **IO Za 6**; **TL Za 1b**), on a silver pin (**PL Zf 1**) and on a clay figurine (**PO Zg 1**). However, the first part is never attested alone in Linear A, while the Cretan Hieroglyphic sequence A-SA (042-019) – its possible

²⁵ KARETSOU *et al.* 1985, 118, 125-126.

²⁶ *CHIC* 12, n. 17; *CMS* II.2, no. 213; cf. DEL FREO & ZURBACH 2011, 89; MATZ 1928, 14, *sub* E 132; OLIVIER 2010, 291 n. 16; XANTHOUDIDIS 1907, 164 no. 40 and Pl. 6; YOUNGER 1996-1997, 385.

²⁷ Linear A inscriptions, YOUNGER [last accessed 11/11/2022].

²⁸ AB 08-31-31-60-13 (A-SA-SA-RA-ME): **PK Za 11b-c**; **PR Za 1c**; AB 57-31-31-60-13 (JA-SA-SA-RA-ME): **IO Za 9**, **Za 12**, **Za 16**; **PK Za 14a-b**; **PS Za 2.2**.

²⁹ KARETSOU *et al.* 1985, 134.

but debated ‘counterpart’ in the Cretan Hieroglyphic writing system – is known from some impressions (**#134-137bis**). That the first part of the inscription is an independent word in the Cretan Hieroglyphic documentation³⁰ seems to be sufficiently proved not only by the previously mentioned impressions, but also by its possible ‘inflected’ form (042-019-031) with syllabogram 031 in final position, a sign also used in the formation of other inflected ‘words.’³¹ This sequence is always attested on Cretan Hieroglyphic seal forms different to the more frequent prisms (engraved with at least a ‘formula’) or *Petschafte* (most inscribed with hapax sign-groups). If Younger’s hypothesis were confirmed, it would be interesting that, even in a different writing tradition (Linear A), this inscription was engraved on selected (two-faced) seal forms. It may be perhaps not by chance that, searching for formal comparanda for **KN Zg 55**, the only two discoids in the entire Cretan Hieroglyphic corpus are **#202** and **#203**, inscribed with the ‘Archanes inscription’. However, unlike **KN Zg 55** (if written with the first part of the ‘Archanes inscription’ in the form JA-SA), Cretan Hieroglyphic seals bearing this sequence were always inscribed with the entire inscription, which is regularly written on two different sides of the seal (**#202-#203**; **#251-#252**; **#292**; **#313**; **#315**), or split in two registers on the same seal face (**#205**; **#179**). Finally, a connection with ritual contexts for Cretan Hieroglyphic seals inscribed with this sequence cannot be excluded³² and, in the case of **KN Zg 55**, it could be enhanced by the boar’s head surmounted by a dagger, that could allude to the sphere of sacrifice, as seems to be suggested by same motive incised on a dagger found at the Anemospilia sanctuary.³³ However, in the absence of any comparison, Younger’s hypothesis must be considered as a suggestion and the sequence AB 57-31-57 (JA-SA-JA) could be just an hapax.

The discussion on the recurrence of the A-SA-SA-RA-NE/ME sequence in the Cretan Hieroglyphic and Linear A relates to another seal recently interpreted by Anastasiadou as having been written in this latter script.³⁴ This is CMS VII, no. 31 (Fig. 1.3), a chlorite (?) pierce-grip

³⁰ KARNAVA 2000, 197.

³¹ 036-092/036-092-031; 038-10/038-010-031; 047-070 ></047-070-031; 076-013/076-013-031 ><.

³² CIVITILLO 2016; cf. WEINGARTEN 1995, 303.

³³ SAKELLARAKIS & SAPOUNA-SAKELLARAKI 1997, 137-156.

³⁴ ANASTASIADOU 2016, 178, 179, Fig. 12.c.

seal of unknown provenance stylistically dated to MM II.³⁵ If written in Linear A, the two-sign sequence it bears would be legible as AB 08-31 (A-SA). However, Perna has recently suggested that the seal is written, instead, in the Cretan Hieroglyphic script; in this case, the two signs it bears, readable on the cast, would be 042-019 (again, A-SA). In order to prove his hypothesis, Perna focuses on the presence of a dot at the lower end of the central bar of 042,³⁶ and highlights palaeographic parallels with a three-sided prism from Andromili (#293.γ) for sign 042 and with a disc from Archanes (#202.β) for 019 (Fig. 3).



Fig. 3. Signs 042 and 019 in #293.γ, #202.α and CMS VII, no. 3 (#293, #202 and CMS VII, no. 31 are courtesy of CMS-Heidelberg; the drawing of #068 is courtesy of L. Godart).

But, in our opinion, if written in the Cretan Hieroglyphic, the sign 042 on CMS VII, no. 31 seems not have been ‘canonically’ carved. In fact, examining its all attestations (Fig. 4), it can be observed that the contour of the two opposite blades of the double axe is always rendered with two triangles facing each other, except once in #068r.A recovered in Knossos. The latter is considered a very dubious Cretan Hieroglyphic tablet because of the unusual appearance of signs on its surface:³⁷ in fact, this is the only instance in the entire Cretan Hieroglyphic corpus of 042 (used as logogram, *175) written in a form very close to its Linear A counterpart (AB 08). Therefore, we wonder if its occurrence on our seal should be interpreted as a second exceptional rendering of the sign, or if the seal itself could be preferably attributed to this very writing tradition. Furthermore, it is uncertain whether the small globular depression at the lower end of the vertical bar of the double axe was conceived as a distinctive trait of the sign itself or was a part of the decoration (comprising six dots) of the seal surface.

³⁵ CMS VII, no. 60.

³⁶ PERNA 2019, 51.

³⁷ CHIC, 18; KARNAVA 2000, 154-155.

Therefore, we may conclude that CMS VII, no. 31 is a decidedly uncanonical seal, mixing some decisive features typical of Linear A (the ductus of the first sign) with some peculiarities of the Cretan Hieroglyphic writing tradition, like the presence of decorative fillers and the graphic arrangement of the inscription.

The next Linear A seal, **CR (?) Zg 3** (Fig. 1.4),³⁹ is of unknown provenance and dating and is a limestone amygdaloid seal, a form that appears for the first time in Protopalatial Crete (cf. #204). It was first published in CMS as engraved with linear motifs,⁴⁰ but Olivier cautiously interpreted it as written in Linear A.⁴¹ In fact, face β was judged to have been inscribed with a variant of AB 131 VIN, i.e. A 131c in ligature with A 60, that in the forms A 594 and A 595 surmounts the logogram (cf. ZA 6b.2; ZA 15b.3 and A 595). Face α «pourrait évoquer le logogramme FIG des écritures crétoises (*155, AB 30)». Olivier proposes an interesting parallel between this seal and #206, an agate (or onyx) cushion seal carved with the same logograms as **CR (?) Zg 3**. A more general problem arises about the function and the use of seals written with logograms, very rarely attested in the Cretan Hieroglyphic seal corpus. Probably, the bureaucratic function of a Cretan Hieroglyphic seal would have been to ‘authenticate’⁴² an economic transaction with the impression of the name and/or the title of its owner and/or a series of administrative ‘formulae’ (from one up to four). In this sense, Hieroglyphic seals seem to have a ‘universal’ use, not being connected with a specific product, but able to be used for different transactions connected to a variety of subjects. On the contrary, the presence of a logogram on a seal surface seems to limit its use to the specific product indicated on its face. On Cretan Hieroglyphic seals logograms appear in two contexts: on standard prisms, in direct (#145; #274.a) or indirect (#305.δ) association with ‘formulae’, or on seals with peculiar form and text formatting (#206; #291), where they are attested with klasmatograms and seem interchangeable with the ‘Archanes inscription’⁴³ (#292; KN S (4/4) 01) (Fig. 5).

³⁹ CMS XI, no. 311.

⁴⁰ CMS XI, no. 326.

⁴¹ OLIVIER 2010, 291, n. 16; *Rapport* 1991-1995, 423.

⁴² YOUNGER 1996-1997, 391-392.

⁴³ Cf. the alternation in the Minoan ‘libation formula’, of the word A-SA-SA-RA-ME with logogram OLIV in SY Za 2.

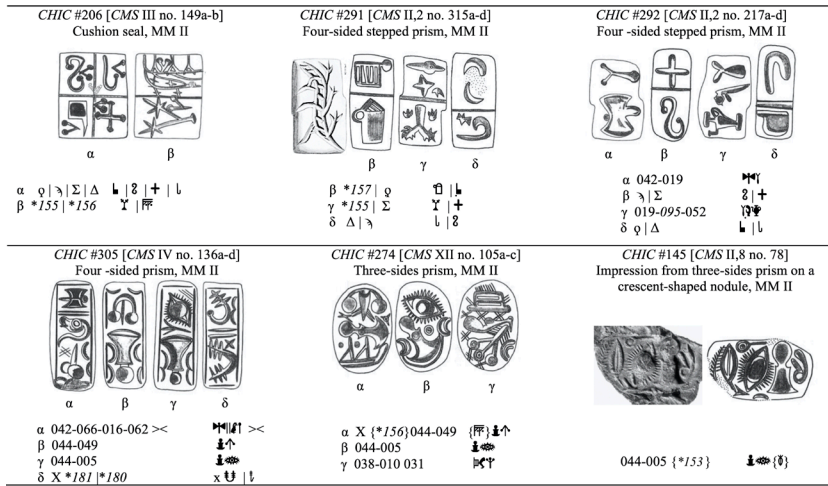


Fig. 5. Logograms and klasmatograms on Cretan Hieroglyphic seals (drawings and photographs after CHIC; courtesy of L. Godart).

It seems evident that this recurrent association of logograms and klasmatograms with seals with a peculiar form (stepped prisms, with a sign for each ‘step’: #291-#292) is hardly a coincidence, nor it is a coincidence that, when recurring on other seal types with flat surfaces, these signs are engraved in precisely delimited registers (#206; KN S (4/4) 01). Therefore, having these special and recurrent associations in mind, we could venture to suggest that if the bulk of Cretan Hieroglyphic seals were meant to ‘authenticate,’ ‘certify’ etc. a transaction, the few seals we are examining could have been possibly meant for ‘counting’ something, with klasmatograms used not as ‘decorations,’ as supposed by CHIC editors, but for their mathematic function. As the parallels discussed above show, this ‘something’ could have been the quantities of products indicated by logograms or, when these latter were absent, the object of A-SA-SA-RA-NE/ME,⁴⁴ indicating perhaps the act of offering or the offered object,⁴⁵ i.e. something that could have been counted in specific fractions of a given amount. So, it is interesting to observe,

⁴⁴ This sequence is associated with numerals and fractions also in the Mikro Vouni dome nodulus SA Wa I, that has a face impressed by a Cretan Hieroglyphic cushion seal with the first part of the ‘Archanes formula’ (#137 = CMS VS 1B, no. 327) and the second incised with three Linear A signs: the numeral ‘10,’ the fraction A 708 and the sign AB 04, possibly used as countermark: MATSAS 1995, 240-241, Pl. XXXVIIa-c.

⁴⁵ CIVITILLO 2016, with previous bibliography.

among Linear A seals, the presence of this ‘minoritarian’ typology of seals with logograms, already known in the Cretan Hieroglyphic corpus but using different seal forms, text formatting and sign associations – on Linear A seals, logograms appear alone. In fact, another logogram would be attested on the last seal we are dealing with, **ARM Zg 1**⁴⁶ (Fig. 1.5),⁴⁷ a green steatite cono-pyramidoid seal stylistically dated to MM I, but found in a LM II-LM IIIA2 context, thus possibly an heirloom. The seal is deemed as very conjectural by Del Freo and Zurbach,⁴⁸ and Perna,⁴⁹ but Olivier⁵⁰ identifies signs A301+311 on its surface, forming the logogram A 606, attested nine times on the roundels from Chania (**KH Wc 2046-2053; 2113**). Even if the disposition of the signs is different, according to Olivier one can be sure of the rapprochement; however, the reading is conjectural.

Discussion

For Cretan Hieroglyphic seals, despite the limitations of our documentation, a series of consistent and recurring choices can be detected in the selection of seal materials and formats, in the internal syntagmatic, orientation and directionality of the inscriptions they bear, all related with different textual contents.⁵¹ In many of these semiologically significant features, the seals we reviewed here seem to be different in many respects from their Cretan Hieroglyphic counterparts. For instance, regarding forms, documents with one or two circular inscribed surfaces are the rule, while the most used forms for Cretan Hieroglyphic seals are, instead, 3- and 4-sided prisms (more than 100), *Petshafte* (14), and a dozen of other 1- or 2-sided seals. Only two seal form matches the two repertories, discoids (*supra*) and the amygdaloid seal **CR (?) Zg 3**, comparable with #204, made of soft stone as well (serpentine), inscribed on one face (or two?) and possibly dating to LM I. As to materials, the seals examined are all made of soft materials and, as for the execution techniques, they are drilled, scraped and cut. Particularly interesting is **CR (?) Zg 4**; in fact, on a total of the 136 Cretan Hieroglyphic seals published in *CHIC* not one is made of chlorite and reels are completely

⁴⁶ OLIVIER 2010, 291 n. 16; *Rapport* 1991-1995, 422-423; *Rapport* 1996-2000, 189.

⁴⁷ CMS VS 1B, no. 310.

⁴⁸ DEL FREO & ZURBACH 2011, 86.

⁴⁹ PERNA 2014, 256.

⁵⁰ OLIVIER 2010, 291 n. 16; *Rapport* 1991-1995, 422-423 and n. 19.

⁵¹ CIVITILLO 2021.

unknown, pointing perhaps to a distinct writing tradition and maybe to a different use of this typology of seals. On the other hand, if **KN Zg 55** is inscribed with the first part of the 'Archanes inscription,' it is interesting to note that this sequence is inscribed on discoid seals in the Cretan Hieroglyphic repertory as well, perhaps pointing to the conservation of some seal forms for specific textual contents (and uses?). As for textual contents, Linear A seals include one or two hapax (A-RO-TE on **CR (?) Zg 4.b** and JA-SA-JA in **KN Zg 55**), a likely derivative of a toponym – in any case identifiable on Cretan Hieroglyphic seals – already attested in Linear A documentation (I-DA-DA in **CR (?) Zg 4.a**), the first part of the 'Archanes inscription' (certainly on *CMS VII*, no. 31, if inscribed in Linear A) and logograms – rarely attested on Cretan Hieroglyphic glyptics – (in **CR (?) Zg 3** and perhaps in **ARM Zg 1**). As to the formatting of the texts, except *CMS VII*, no. 31, they are characterized by greater regularity in their general appearance than Cretan Hieroglyphic seals: in fact, they tend to develop in a linear configuration even when they recur on circular surfaces (cf., for instance, **CR (?) Zg 4**). In some cases, Linear A signs are accompanied, on seals, by decorative fillers (*CMS VII*, no. 31), more complex motives (**CR (?) Zg 4**, side a and b) and by a boar head surmounted by a dagger (**KN Zg 55**, side a). Except in *CMS VII*, no. 31, these are not directly associated with the text (as often on Cretan Hieroglyphic seals) but are engraved on another seal face or inserted in delimited registers. The dating of most Linear A seals, MM II or II-III (**CR (?) Zg 4**; **KN Zg 55**; *CMS VII*; no. 31), is contemporary to the use of seals in Cretan Hieroglyphic administration. **ARM Zg 1** (if it bears script signs) is dated to MM I and no dating is proposed for **CR (?) Zg 3**. As for their network of circulation, the exact provenance is only known for **ARM Zg 1**, namely tomb no. 200 of the necropolis at Armenoi. As for their use, given that the texts they bear were intended to be read on the cast (except **KN Zg 55**), an administrative use through impression can be envisaged, but also a use as amulets cannot be discarded.

At this point, some questions arise: how to discern site (or area)-specific document formats which may have influenced different writing traditions,⁵² and formats specifically belonging to a particular writing system, with a codified and consistent use in a specific administration?

⁵² We point to the use of some Cretan Hieroglyphic 'tablets' from Malia (**#119**; **#120**) hugely influenced, in respect of their format (thicker than any other tablet) and the way they are written (on three sides), by 4-sided bars, conceivably because of the strong Cretan Hieroglyphic tradition established on this site.

As regards Linear A seals, two scenarios are, in theory, possible: the first is that in some archives where the Cretan Hieroglyphic tradition on seals was very strong (like in northern and eastern Crete) some writers occasionally engraved a few seals in Linear A but giving them, perhaps, uses and functions different (or even inconsistent) from their consolidated uses in Cretan Hieroglyphic. But, to date, we have no evidence of the use of Linear A inscribed seals from eastern Crete and the pertinence to northern Crete of **CR (?) Zg 4** is not at all certain. The second is that, on the contrary, in archives where the Linear A tradition was stronger (like in central Crete), the use of this writing system spread to the glyptic surface as well, with seals receiving codified uses in this specific administration, in part using the same (i.e. amygdaloid and discoid seals) and in part renewing the repertoire of seal forms for different intended purposes; partly by assigning the same contents to seals and partly by adding other word categories (like toponym derivatives). In the first scenario, we could interpret Linear A seals as ‘intrusive’ document formats, very rarely employed (if ever) in this administration. In the second (more probable), instead, we should presume the existence of a Linear A seal documentation with its rules and its codification, very difficult to reconstruct based on the evidence at our disposal but broadly suggested by the preceding discussion on some ‘choices’ that seems to distinguish Linear A seals from their Cretan Hieroglyphic counterpart, even if there may be a series of ‘overlaps’ among these writing traditions (notably, in *CMS VII*, no. 31). This idea could be perhaps further reinforced by the fact that Linear A seals do not seem to be the work of improvisers but are incised by craftsmen well acquainted with engraving script signs. However, in this case we would find ourselves with a quite completely (but selectively) lost written tradition, in contrast with the high number (in respect to other document formats) of Cretan Hieroglyphic seals that have survived. What is certain is that the two writing traditions we are referring to were connected to each other during the Prepalatial period, both in their evolution and in bureaucratic practices, and cannot be considered as two monolithic entities. Therefore, based on the very scanty (and controversial) documentation we have, it does not seem possible to resolve, at present, the problem posed by these seals but, thanks to recent discussions,⁵³ in the wake of which stands the analysis we have tried to offer in this paper, we think that future reflections on this topic can start from a more analytic frame of reference.

⁵³ Cf., for instance, ANASTASIADOU 2016.

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The date of the final destruction of the Palace of Nestor at Pylos

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John Bennet, Hariclia Brecolaki, Anna P. Judson**

*Dedicated to the memories of Mervyn Popham
and Lisa French*

The recent publication by Louis Godart and Anna Sacconi of the Linear B tablets from Pylos, first excavated in 1939 and then in the 1950s and 1960s by a team from the University of Cincinnati under the direction of Carl Blegen, may raise doubts about their date, and the time of the destruction of the Palace of Nestor.* If correct, Godart's conclusions would require a fundamental reimagining of Mycenaean prehistory in Late Helladic III.

In the Introduction to his and Sacconi's work, Godart states: "La question de la datation des archives de Pylos est tout autre que résolue," suggesting that both the destruction of the palace and its tablets should be dated around 1250 BC, i.e. around the middle of LH IIIB1, rather than to LH IIIC Early 1, early in the 12th century, the date now gener-

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ally accepted by Aegean prehistorians.¹ In his view, an earlier date explains “les éléments archaïques associés à bien des objets (en particulier les meubles de la série *Ta*, les vases et leur décoration, les sceaux et les fresques).”² He further speculates that the same Cretan artists painted wall paintings in the throne rooms at both Knossos and Pylos.

One linchpin in Godart’s argument is his claim that one scribe wrote tablets found in the Archives Complex of the Palace of Nestor and others supposedly found in LH IIIA2 contexts. Godart also depends heavily on an outdated paper where Patrick Thomas once argued that later LH IIIB elements are missing from the destruction levels of the palace.³

The authors of this paper have a deep knowledge of the constructional history of the palace, the stratigraphy of the site, the stylistic development of its arts and crafts, and of the pottery found in the destruction layers. We individually present evidence in support of a date in LH IIIC Early 1 for the destruction of the palace and its Archives.

We conclude that Godart’s arguments for re-dating cannot be substantiated. Nor do we find supportable the arguments for earlier dates by Mervyn Popham, Elizabeth French, or Patrick Thomas, which run the gamut from early LH IIIB1 to LH IIIB2 Early.⁴ It should be noted that not all those who have proposed early dates have proposed the same date.

Here we address points most critical to Godart’s case for an earlier dating, beginning with a re-examination by Sharon Stocker and Jack Davis of Popham’s and French’s concerns about the stratigraphy of Hall 46, the so-called Queen’s Hall. Salvatore Vitale then discusses the ceramic chronology of the palace, as we now understand it in light of recent research. Hariklia Brecolaki next rebuts Godart’s idea that the character of the Pylos wall paintings testifies to an earlier date for the palace’s final destruction. Finally, Anna Judson and John Bennet find no conclusive evidence for dating any Linear B tablets before the final destruction.

¹ ARN, xvii.

² ARN, xvii.

³ THOMAS 2004.

⁴ VITALE 2006, 190-191.

Hall 46 of the Palace of Nestor

By S. R. Stocker & J. L. Davis

Popham suggested that, if one vase, no. 677 (Fig. 1a), could be removed from the destruction deposit of Hall 46, nothing would remain in the palace that points to a destruction date later than early LH IIIB.⁵ He considered no. 677 stylistically to be significantly later than LH IIIB. Here we demonstrate that the stratigraphy of Hall 46 does not allow no. 677 to be separated from the destruction deposit as a whole. In the next section, Vitale argues that there is also no compelling stylistic reason to seek to do so.

Popham proposed a “detailed re-examination of the excavation notebooks and of the surviving Iron Age pottery.” Davis and Kathleen Lynch followed his advice and studied the post-Bronze Age pottery. They concluded that, although small-scale activities continued in and around the ruins of the palace after its destruction, the evidence did not attest to an extensive reoccupation phase, nor to the existence of a later hero cult.⁶

In 2011, Stocker and Davis examined the context of no. 677 shortly after a meeting with Elizabeth French in Cambridge. French also thought that Blegen might have made an error. In 1970, she wrote Blegen a letter in which she wondered then if no. 677 belonged to a reoccupation phase and had somehow fallen into a cavity left by the chimney over the hearth in Hall 46. She believed that the destruction of the Palace of Nestor was contemporary with the catastrophes that marked the end of Phase VII at Mycenae, i.e., in LH IIIB2 Early.

We wrote to French on July 17, 2011:

“[We] had a look at the stratigraphy in Hall 46 ... as you know, whole pots, #677 among them, were found in clumps around the edge of the room. All of those presented in [the first volume of the *Palace of Nestor*] were similarly burnt, #677 among them ... The preceding factors make it difficult for us to figure out a way to extract [#677] from the remainder of the burnt finds...”

⁵ See BLEGEN & RAWSON 1966, 203; POPHAM 1991.

⁶ DAVIS & LYNCH 2017. The existence of a cult was suggested by several scholars: see DAVIS 2017, for a critique of arguments in COOPER & FORTENBERRY 2017.

In the summer of 2021, we again reviewed the stratigraphy of the room even more systematically and confirmed our earlier observation. Hall 46 was excavated in 1956 by Marion Rawson, an architect and an admirably careful and accurate excavator. Rawson found seven clusters of pottery on the floor of the room, most around its edges. The locations of the clusters were documented in a plan of the room and in photographs, and her notebook confirms that all the pottery from these clusters was highly burnt—as can be observed today in the Museum of Chora. No. 677 was found in cluster 4, at the edge of the room, not in its centre, where the chimney fell.

Ceramic Chronology

By S. Vitale

The present discussion of the pottery from the Palace of Nestor begins from the floor deposit in Hall 46, the importance of which is addressed above. Vessel no. 677, the crucial component of this context, is a dark-ground deep bowl with a monochrome interior and dashed semicircles in a narrow window in the handle zone (Fig. 1a). There is no published Mycenaean vase showing this syntax type before the LH IIIB-LH IIIC Early transition. Known examples include a stemmed bowl from Kos (LH IIIB2 Late), a deep bowl from Attica (LH IIIB2 Late/LH IIIC Early 1), and an amphoriskos from Laconia (LH IIIC Early), all exhibiting monochrome interiors.⁷

Dark-ground decoration becomes more common during LH IIIC Middle-Late and continues in Messenia throughout the Early Iron Age [henceforth: EIA].⁸ This explains why Popham hypothesized that Hall 46 was reoccupied in advanced LH IIIC or the EIA, and that Blegen had incorrectly assigned vessels from this context to the palace destruction.⁹ In addition to the stratigraphy of Hall 46 already discussed by Davis and Stocker, Popham's speculation is also not supported by ceramic evidence.

Vessel no. 677 cannot date to advanced LH IIIC, as this phase is not represented at the Palace of Nestor, except for two fragmentary LH IIIC

⁷ MOUNTJOY 1999, 282, 560, 1087, Figs. 95:180, 205:292, 448:61.

⁸ COULSON 1986; MOUNTJOY 1999.

⁹ POPHAM 1991.

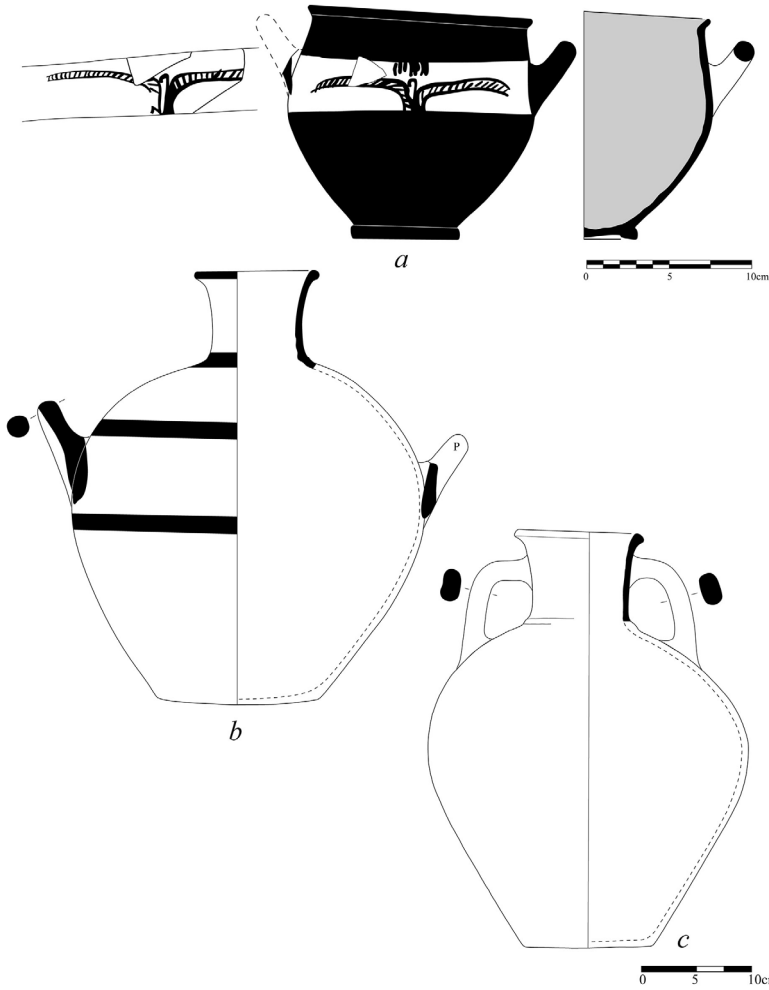


Fig. 1. LH IIIC Early 1 vessels from Hall 46. a: Patterned darkground deep bowl FS 284 with dashed semicircles FM 43, no. 677; b: Linear belly-handled amphora FS 58, no. 1141; c: Plain neck-handled amphora FS 70, no. 675 (drawings: T. Ross, courtesy of the Department of Classics, University of Cincinnati).

Late vessels from Court 3, a jug or hydria and a hydria.¹⁰ The partial preservation of these vessels implies that, while sporadic visits to the palace ruins occurred during LH IIIC Late, no reoccupation of the Main Building happened at that time. Moreover, at least the jug or hydria from

¹⁰ VITALE *et al.* 2022, 129-130 and n. 36.

Court 3 has a distinctive soft white fabric, which is noticeably different from that of vessel no. 677.

Recent re-examinations of EIA ceramics from the palace area suggest that these materials date between William Coulson's Dark Age II and the Late Geometric period.¹¹ The deep bowl no. 677 is incompatible with such a late time span, based on its 6mm wall thickness, its lightly burnished surface, and its dull paint decoration.¹² If advanced LH IIIC and the EIA are excluded, considering the parallels outlined above, vessel no. 677 can only date to the LH IIIB-LH IIIC Early transition. This conclusion is supported by the everted rim of this shape, which makes it a classical Transitional Type 2 deep bowl.¹³

Most of the other vessels from Hall 46 can be assigned to either LH IIIB or LH IIIC Early 1.¹⁴ At least two of them, however, are best at home in LH IIIC Early 1, including a linear belly-handled and a plain neck-handled amphora (nos. 675, 1141; Fig. 1b-c). The occurrence in the same context of these specimens and vessel no. 677 demonstrates that the deposit from Hall 46 dates to LH IIIC Early 1.

More generally, besides Hall 46, the pottery from the destruction layers of the palace can be sub-divided into four distinct groups, which include: non-diagnostic; LH IIIB; LH IIIB/LH IIIC Early 1; and LH IIIC Early 1 vessels. Quantitative analysis of painted shapes demonstrates that LH IIIC Early 1 specimens are the most prominent component in this assemblage (Fig. 2). Moreover, some of the stylistically most advanced specimens from the palace are absent or rare on the Greek mainland before the LH IIIB-LH IIIC Early transition or LH IIIC Early 1. In addition to the types represented in Hall 46, these features include linear juglets and mugs, a patterned collar-necked jar, and patterned or monochrome Transitional Type 1 and 2 deep bowls.¹⁵ The stylistically latest vessels in the plain pottery fraction are also consistent with a LH IIIC Early 1 date, as indicated by shallow cups, kylikes, and shallow angular bowls with beaded, lipless, and/or flaring lipless rims.¹⁶

¹¹ DAVIS & LYNCH 2017; VITALE *et al.* 2022, 129-130.

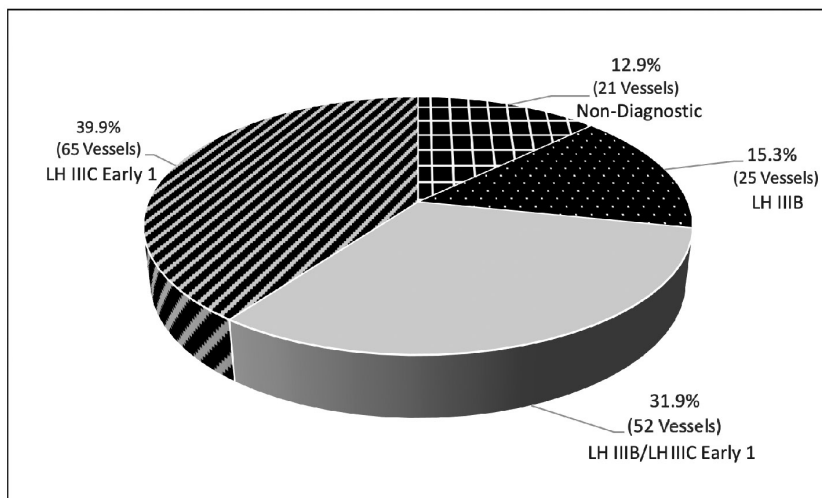
¹² For diagnostic features of Dark Age II-Late Geometric Messenian pottery, see COULSON 1986, 28-78.

¹³ MOUNTJOY 1999, 37.

¹⁴ BLEGEN & RAWSON 1966, 197-203, figs. 332-333.

¹⁵ VITALE *et al.* 2022, 131-133, tables 8-9.

¹⁶ VITALE *et al.* 2022, 131-133, Figs. 11-12. For a review of all proposed dates for the Pylos destruction, see VITALE 2006, 190; VITALE *et al.* 2022, 128-130.



Non-Diagnostic: Blegen & Rawson 1966, Shapes 9, 19, 42, 45, 50, 54:a-b, 56, 57, 65:e;
 LH IIIB: Blegen & Rawson 1966, Shapes 44, 52, 53, 63, 64, 65:c-d;
 LH IIIB/LH IIC Early 1: Blegen & Rawson 1966, Shapes 20, 21, 38, 43, 45, 52, 60, 65:a-b, f;
 LH IIC Early 1: Blegen & Rawson 1966, Shapes 1, 33, 34, 37, 45, 49, 52, 60, 63, 68.

Fig. 2. Stylistic trends in the painted vessels from the destruction layer of the Palace of Nestor (S. Vitale).

In 2004, following in the footsteps of Popham, Thomas also argued for a destruction date of the palace very early in LH IIIB1.¹⁷ According to Thomas, if vessel no. 677 was removed from the picture (something that stratigraphy does not permit, as noted above), such a dating would be supported by three features: the occurrence of shapes stylistically assignable to LH IIIB1; the absence of Zygouries kylikes (FS 258A); and the absence of LH IIIB2 shapes, such as Group B deep bowls.

This argument overlooks the fact that the deep bowl is the most common painted drinking shape present in the palace destruction deposits. Should the absence of decorated kylikes at Pylos imply an early LH IIIB1 destruction date, then one would also expect to find no deep bowls.¹⁸ Furthermore, new excavations in areas around the palace have uncovered several examples of the decorated kylix (FS 258B) (Fig. 3a-d), a type which chronologically overlaps with Zygouries kylikes. The absence of Zygouries kylikes thus has no chronological meaning at Py-

¹⁷ THOMAS 2004.

¹⁸ By definition, a closed context with abundant *in situ* materials, characterized by the absence of decorated kylikes and the occurrence of deep bowls, cannot be earlier than LH IIIB2 Early, see VITALE & VAN DE MOORTELE 2020, 30-33.

los, but represents a deliberate rejection of Argive drinking fashions, nicely paralleled by the dearth of Ephyraean goblets at the site during LH IIB.¹⁹ Finally, recent studies of unpublished materials from Blegen's excavations in the Megaron area of the palace show that, prior to the final destruction, Group B deep bowls were, indeed, used at Pylos during LH IIIB2 (Fig. 3e).²⁰

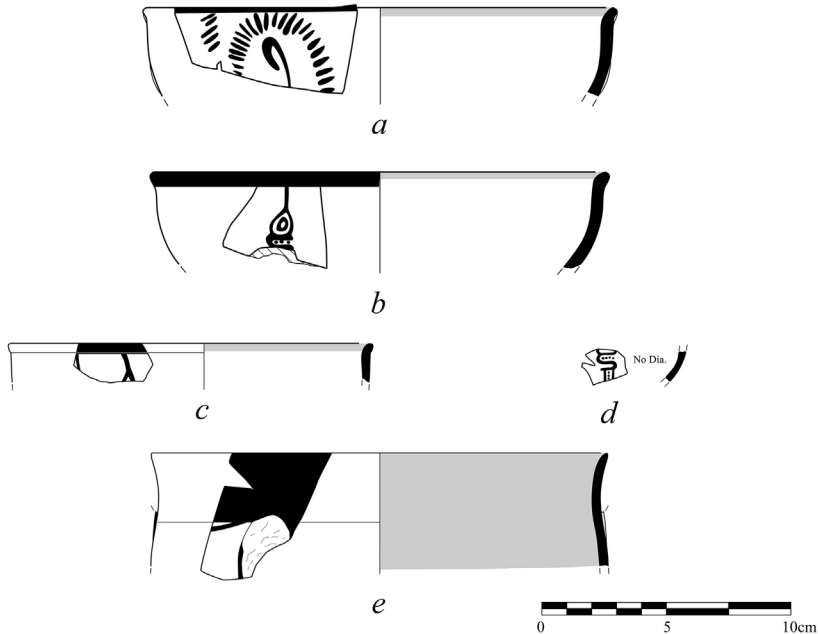


Fig. 3. LH IIIB1 and LH IIIB2 fragments from the Palace of Nestor area. a-d: Patterned kylikes FS 258B with flower FM 18 or vertical whorl shell FM 23, LH IIIB1, nos. N-G07-110-P06, N-G16-74-P14, N-G07-71-P01, N-G07-104-P01; e: Patterned Group B deep bowl FS 284 with running spiral FM 46, LH IIIB2, unnumbered (a, b-d: T. Ross; c: M. Rossin & T. Ross; e: E. Egan with additions by T. Ross & S. Vitale; courtesy of the Department of Classics, University of Cincinnati).

The discovery of decorated kylikes (FS 258B) and Group B deep bowls demonstrates that the palace was used throughout LH IIIB. The continuation of some early LH IIIB shapes in an otherwise LH IIIC Early 1 context reflects the continuity in the performance of long-standing ritual feasts

¹⁹ VITALE *et al.* 2021, 199, 208.

²⁰ EGAN 2015, 66–67, Pls. 79, 98–100, 115; VITALE *et al.* 2022, 129–131, Fig. 7:3–4.

in the area of the palace.²¹ As argued recently, these ceremonies had been a defining cultural tradition of the Pylian social space since LH IIB.²²

Wall paintings

By H. Brecolaki

Pylos wall paintings from Blegen's excavations fall into two major groups according to their find-spots. The first consists of fragments *in situ* on ground floor walls or, more often, fallen from them or a second storey. All are contemporary with earlier or later stages in the life of the final palace. Those fragments undamaged by fire were almost certainly not on walls when the palace was destroyed in LH IIIC Early 1, but had been incorporated in rubble wall fill, or used as bedding for the upper floor.

The second group comprises several thousand fragments thrown away in dumps or scattered randomly around the slopes of the acropolis; these had been stripped from the palace walls during episodes of periodic re-decorating.

Still earlier discarded fragments were recovered during recent excavations in conjunction with the construction of a new shelter over the final palace remains. Owing to these discoveries, a long-term history of wall painting that began already in MH III is now documented.²³

Fragments from earlier contexts share affinities of colour and style that distinguish them from wallpaintings of the final palatial phase, notably a predilection for bright, uniform, abstract blue, and occasionally red and yellow backgrounds. These function as prominent homogenous stylistic markers of a workshop.²⁴

In contrast, the latest decoration of the palace employed a gamut of mineral and organic pigments, some of which (e.g., murex purple) require complex preparation and application. The overall colour sensibility of paintings then shifted from saturated hues to more nuanced and subtle chromatic values. The earlier preference for saturated backgrounds was abandoned, together with the primary colours triad. Painters became aware of the significance of complementary colours.²⁵

²¹ VITALE *et al.* 2022.

²² VITALE *et al.* 2021.

²³ EGAN 2021.

²⁴ For an extensive discussion of this topic, see BRECOULAKI *et al.* 2021.

²⁵ BRECOULAKI 2018.

To propose a dating for the wall paintings based only on iconographic, stylistic, and technological features, with a disregard for their stratigraphical context and associated pottery deposits, is a vain and dangerous exercise. Wall paintings, unlike pottery, cannot offer secure dating criteria *per se*. The evolution of the art of painting was a slower and more complex phenomenon, dependent on artistic idiosyncrasies within specific micro-contexts, elite ideologies, and local visual conventions and traditions within wider social and cultural macro-contexts. In certain instances, innovative techniques and styles in the Pylos paintings intentionally reproduced conservative or traditional iconographies that originated in temporally remote Minoan and Cycladic figurative repertoires. We have elsewhere stressed affinities between the ships in the West House miniature 'Flotilla Fresco' and those in the deliberately archaizing 'Naval Scene' of Hall 64 at Pylos.²⁶

Although comparisons of Pylos paintings with compositions from other sites and contexts are desirable, caution must be exercised. For example, the griffins from the Throne Room at Knossos are usually juxtaposed with those from Hall 46 and the Throne Room of Pylos, but any similarities imply neither a direct participation of Knossian painters or workshops in the decorative program at Pylos, nor a straightforward adaptation of a Cretan motif and its transfer to a Mycenaean context.²⁷ Not only is the arrangement of the Pylian griffins more complex than those at Knossos, but, as already noted by Lang, the differences between the two compositions and their individual features are more obvious than their similarities.²⁸ In spite of the fact that the Knossos griffin painting doubtless was an influential predecessor of the Pylos griffins, there is no reason to believe that the decorative programs of the two palaces are of the same date, let alone created by the same artist or workshop.

Lang also observed similarities between the papyrus in the Throne Room of Knossos and the papyrus with deer from Pylos, but again stressed significant differences:

"The stem and leaves on 36C17 are quite close in style, but flowers have

²⁶ BRECOULAKI *et al.* 2015.

²⁷ Contrary to the suggestion by GODART in his introduction (ARN, xviii): "...peut-on exclure que des artistes crétois ayant opéré à Cnossos aient peint les murs de la salle du trône du palais de Nestor."

²⁸ LANG 1969, 101-102.

been added to the plant which are schematic in the extreme; they are stylizations not of papyrus flowers but of some generalized concept of a flower, reminiscent of some flowers on vases. This seems to be a fairly clear indication not so much of a stylistic difference between the two paintings but of a difference in time sufficient to make complete a divorce already initiated: that is, the Knossian artist used the papyrus flowers to decorate the griffin, but the connection was still sufficiently alive for him to associate closely the flower and plants; for the Pylian artist the papyrus had not only lost its own flower but has taken on a new bloom completely unrelated to the plant.”²⁹

The more we move away from the original source, the more a ‘borrowed’ motif is de-constructed and re-elaborated through eclectic practices, acquiring different forms according to the contexts in which it is employed.

Earlier Linear B tablets

By A. P. Judson & J. Bennet

The vast majority of Linear B tablets from Pylos are associated with the palace’s final destruction, either due to their stratification within this destruction layer or to their associations with tablets from this layer (by joins, scribal hand, and/or administrative relationships).³⁰ However, in addition to a small number of fragments not (certainly) found *in situ*, about whose dating nothing can be securely said,³¹ two main groups of tablets have been argued to belong to earlier periods.

The H91/Civ tablets are commonly attributed to an earlier period than the majority of the Pylos tablets, usually dated as LH IIIA,³² following the argument of Thomas Palaima.³³ These include **Ae 995** and **Xa 1419** (attributed by Palaima to H91), **Xa 1420** (Civ), and **La 994**

²⁹ LANG 1969, 125.

³⁰ PALAIMA 1988, Chapter 3; SHELMEERDINE 1998-1999.

³¹ See, e.g., JUDSON *et al.* 2019.

³² E.g. DEL FREO 2019, 194; DRIESSEN 2008, 73.

³³ PALAIMA 1983; 1988, 111-113, 165, 169. Palaima’s designation ‘H91’ corresponds to H691 in ARN and GODART 2021, H46 in *PT*³, and H46/H47 in *PTT*². Other scribal attributions follow *PTT*² unless otherwise stated.

(*ex* **Ua**; Civ?).³⁴ Although this dating is based primarily on these tablets' palaeography,³⁵ Palaima also argued that their findspots suggest an earlier date, since most come from areas which included finds from earlier periods: **Xa 1419** and **1420** from the northern part of the Southwestern Area, and **Ae 995** from Rooms 55-57 (**La 994**'s findspot is unclear).³⁶ However, the disturbed nature of the stratigraphy in these areas means that none of these tablets can securely be associated with material from LH IIIA (or any other period); they therefore cannot be archaeologically dated.

A second group from the Megaron includes 13 tablets found in the destruction layer of burned red brick which covered the whole of the Megaron, attributed to H13, H27, and H28;³⁷ one found in a pottery basket, attributed to H27;³⁸ and three from the Southwestern Area which may have been displaced from the Megaron post-destruction.³⁹ The excavators attributed these tablets to a balcony above the room;⁴⁰ they have generally been interpreted as a deposit from an upper-storey textile workroom/storeroom.⁴¹ No certain links exist between these tablets and those from other areas of the palace.

The suggestion that the Megaron tablets are earlier than the rest of the Pylos texts was first made by José Melena. Although none of the tablets is complete, there also are few joining fragments, as would be expected for tablets fallen from above: Melena therefore suggested that they were used after a previous destruction to make the bricks which fell into the Megaron during the final destruction, citing in support "the rather primitive character of the tablets themselves both in pinacological and palaeographic aspects."⁴² A similar argument has been made

³⁴ **Xn 1449** (findspot unknown) was originally also assigned to H91 (PALAIMA 1983, 81-82; 1988, 111-113) but is now joined to **Vn 1339** (from the Northeastern Building: MELENA 1996-1997, 165-166).

³⁵ See SALGARELLA & JUDSON, this volume.

³⁶ On disturbances of the material in Rooms 55-57 and the difficulties of interpretation these cause, see BLEGEN & RAWSON 1966, 223, 225-227 (which does not mention any tablets). It is possible (as argued by Palaima) that **La 994**, along with **Ae 995**, is one of the two tablets from this area referred to in BLEGEN 1953, 25, 29, but this is uncertain.

³⁷ **Ae 629, 634; La 622-624, 626-628, 630-633, 635.**

³⁸ **La 640.**

³⁹ **La 1393, 1394; Wr 1374** (PALAIMA 1988, 162-166; SHELMEKDINE 1998-1999).

⁴⁰ BLEGEN & RAWSON 1966, 81, 91; followed by PALAIMA 1988, 137-138.

⁴¹ E.g. JASINK 1990-1991, 228; KYRIAKIDIS 1996-1997, 217.

⁴² MELENA 2000-2001, 367.

by Christina Skelton on the basis of a more detailed palaeographic and pinacological analysis of the Megaron tablets.⁴³ However, Emily Egan suggests that some of the small finds from the brick layer fell from an upper-storey room adjacent to the Megaron.⁴⁴ It therefore remains an open question whether at the time of the final destruction the tablets were in an active use context or in the walls.

Godart's arguments for an earlier dating for the final destruction are based partly on possible links between the H91/Civ tablets, assumed to date to LH IIIA, and those associated with the final destruction.⁴⁵ These links consist of:

- 1) the attribution of **La 994**⁴⁶ to the Megaron scribe H28/H664,⁴⁷ based on its unusual form of LANA.⁴⁸
- 2) the attribution of **Vn 1339** (from the Northeastern Building), to which **Xn 1449** (previously H91) is joined, to H46?/H691?.⁴⁹

If these attributions are accepted (both tablets remain unattributed in *PTT*²), this would indeed link **La 994** to the Megaron and the H91 tablets to the final destruction. However, since both the H91/Civ tablets and the Megaron tablets are of uncertain date, linking them via **La 994** (itself not even certainly associated archaeologically with the other H91/Civ tablets) does not help to date either of these groups (Godart does not discuss the arguments for the Megaron tablets possibly dating to an earlier period than the rest of the tablets). The tentative association of H91 with the Northeastern Building, if confirmed, would certainly provide an argument against the separation of this hand's tablets from the main archives, but this would be evidence against an earlier date for these tablets from disturbed areas, not for the earlier dating of all of the tablets securely associated with the final destruction.

The most that can therefore be said, overall, is that (setting aside the palaeographic and pinacological arguments), there is no conclusive

⁴³ SKELTON 2008, 171-172; 2010; 2011a; 2011b, 75; see also FIRTH & SKELTON 2016, 223-224.

⁴⁴ EGAN 2015, 107-108; see also LAFAYETTE 2011.

⁴⁵ GODART 2021, 90-91.

⁴⁶ Civ? in PALAIMA 1988.

⁴⁷ *PT*³/GODART 2021 = Palaima's S632-Ciii.

⁴⁸ See Godart's earlier association of **La 994** with 'H613???' (*ARM*).

⁴⁹ *PT*³/GODART 2021 = Palaima's H91?.

archaeological evidence for dating the H91/Civ and the Megaron tablets either as contemporary with or as earlier than the remainder of the Pylos tablets.

The date of the destruction of the Palace

It is our view that future historical studies of the Aegean Bronze Age should build on our conclusions, as presented here, which stem from a comprehensive examination of old and new excavation data as well as primary documents. Godart's arguments for an earlier dating for the destruction of the Palace of Nestor are based on a misunderstanding of the stratigraphy and ceramic chronology of the site, of the contexts of those Linear B tablets supposedly earlier than LH IIIC Early 1, the style and technique of Pylian wall paintings, and the likely source of earlier artefacts found in the destruction levels of the palace.

The wall paintings of the Throne Room at Pylos are significantly different from those of Knossos. There is no definitive evidence that any Linear B tablets can be dated earlier than LH IIIC Early 1. While many older objects were, indeed, being used in the final days of the Palace, these had likely been up-cycled when Early Mycenaean graves were plundered.⁵⁰ Nor is there any justification for disassociating the main body of tablets from Rooms 7 and 8 from the destruction of LH IIIC Early 1.

We now also know that the issue of reoccupation of the site is more complicated than had been imagined by Popham. Hruby has argued that one room in the Pantries was reused for small-scale ritual purposes almost immediately after the destruction of the palace—so near in time, in fact, that the ceramics from it cannot be distinguished from those in the actual destruction debris of the palace.⁵¹ But the palace was never re-settled on a large scale after its destruction.

⁵⁰ On the likely source of antique hard stone seals employed by the later palace bureaucracy, see STOCKER & DAVIS 2017, 601, n. 61. On earlier plaster offering tables see DAVIS & STOCKER 2022, Chapter 6. An antique knife was also found in Room 6 of the Archives Complex in association with remains of sacrifice (see STOCKER & DAVIS 2004, 184-185, n. 24). Lastly, we should hardly be surprised to find “des trépiéds de fabrication crétoise” recensés en Ta 641.1a” in the Ta tablets; their mention tells us nothing about the date of destruction (*pace* ARN, xviii, n. 47). PALAIMA (2003) has convincingly argued that these were antique at the time of the final destruction.

⁵¹ HRUBY 2006, 36-45.

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Reduce, reuse, recycle? The clay of the Pylos tablets

Julie Hruby, Dimitri Nakassis

Introduction

This paper considers the issue of whether clay was recycled for the manufacture of Linear B tablets, based on the systematic study of the clay fabrics of the Pylos tablets announced at the last Mycenaean colloquium.¹ The idea that tablets were not intentionally fired and so tablet clay could be reused to make other ceramic artifacts appears relatively early in Linear B studies. The idea seems to originate with Arthur Evans, who observes that the tablets “were not intended as permanent archives, but as temporary vouchers, which could be ‘pulped’ when they became obsolete, and the clay used again.”² John Chadwick was somewhat more explicit about the process: “When no longer required the tablet could be ‘pulped’ by pounding it to fragments in water, and the clay used again.”³ Over time, the scholarly *communis opinio* has been that Linear B tablets were temporary documents, and that unlike some cases in the ancient Near East, where archives might contain tablets from decades earlier (‘dead’), all Mycenaean archives were in active use (‘alive’).⁴ Scholars have asserted that tablet clay could have been, or simply was, recycled, though the argument for this has never been made explicitly. For example, in 2001, John Bennet suggested that tablets were temporary documents, and that “when they had outlived their usefulness, they could

¹ NAKASSIS & PLUTA 2017, 290.

² SM II, 3. See also *Docs*¹, 37-38, 114.

³ CHADWICK 1958, 16.

⁴ Cf. CHARPIN 2004, 55-56; DRIESSEN 1994-1995, 244; KARAGIANNI 2015, 30; PALAIMA 2003, 153.

easily be recycled into more tablets.”⁵ Others have asserted outright that tablet clay was recycled; Angeliki Karagianni, for example, suggests that tablet clay “can be easily recycled and reused by immersing it in water, hand-moulding and re-softening its surface to accommodate the new text—a practice that Mycenaean scribes took particular advantage of.”⁶

Because the evidence for this practice has never been systematically evaluated for the Aegean, or for Pylos in particular, this seems like an opportune moment to step back and think about what evidence we do, or do not, have.

Methodology

While petrographic analysis of the Linear B tablets from Pylos is impossible, close macroscopic analysis is beginning to provide insight into their manufacture and the processes leading to their firing and deposition. The current project includes two complementary approaches to understanding the tablets as artifacts, a pXRF (portable X-ray fluorescence) study of the elemental composition of the ceramic matrix, undertaken by Billy Wilemon Jr. and Michael Galaty, and a macroscopic study of the ceramic fabric, undertaken by the current authors and Joann Gulizio.⁷ These two different approaches are intended to enhance our understanding of different parts of the tablet production process. The pXRF study is expected to identify clusters of tablets made of clay from the same or similar sources, while one of the primary goals of the macroscopic examination is to understand the ceramics’ inclusions, both natural and intentionally added, reflecting decisions made and actions taken after the clay had been acquired.

The distinction is, in practice, sometimes a little less clear. For example, macroscopic examination included color identification using the Munsell system,⁸ and while the color of most tablets is unsurprisingly some variety of gray or black, there is one tablet series, the **La** tablets, with coloration that is distinct from the remainder of the corpus. The coloration of fired ceramic fabrics can reflect a wide range of factors, including differences in the clay’s mineral content, particularly the pres-

⁵ BENNET 2001, 27.

⁶ KARAGIANNI 2015, 47.

⁷ NAKASSIS *et al.* 2020; WILEMON *et al.* 2020.

⁸ MUNSELL 2000.

ence, types, grain sizes, and distributions of iron oxides, in addition to their interactions with other organic and inorganic compounds in the clay.⁹ The other major contributor to the coloration of fired ceramics is the condition under which they were fired, including time, temperature, and atmosphere,¹⁰ with an oxidizing environment producing a much greater range of colors, and a reducing one producing grays and black.¹¹ This suggests that at least in some cases, it may be possible for macroscopic examination to identify different fabrics on the basis of color, reinforcing the conclusions of a study from the Classic Maya site of Palenque.¹² In this particular ceramic corpus, however, firing conditions severely impede analysis on the basis of matrix color. Because so many of the tablets were fired in a reducing atmosphere at the time the palace burned, the predominant colors in this assemblage are different values of gray and black, a fact which renders appropriate use of color as a reflection of fabric types difficult or impossible. The uncontrolled nature of the firing resulted in highly variable colors on many tablets. Consequently, each tablet's colors were established as a range, using multiple endpoints, in addition to the color of the core whenever it was visible. All tablets had color ranges established through comparison with a book of *Munsell soil color charts*.¹³

All tablets and sealings were examined macroscopically, and also, as necessary, with a 10x magnifying glass and with a Dino-lite AM4815ZT polarizing microscope (Fig. 1). The proportion of inclusions in the ceramic matrix was estimated, and inclusion types were described in order of decreasing frequency within each tablet, with descriptions including size range, sphericity and roundness, hardness, and color, in addition to potential identification.¹⁴ This method is best at noting distinctive, and especially relatively hard, inclusions such as chert; inclusions with

⁹ RICE 2015, 278; SHEPARD 1976, 16-17.

¹⁰ RICE 2015, 278.

¹¹ RICE 2015, 281; SHEPARD 1976, 21-22.

¹² RANDES & BARGIELSKI WEIMER 1992.

¹³ MUNSELL 2000.

¹⁴ Inclusions were described with reference to SANDERS *et al.* 2017, 123-126. Because the Wentworth scale was used, the term 'sand' refers to particle size rather than rock or mineral content. The term 'very fine sand' refers to anything from 0.0625 to 0.125mm, 'fine sand' refers to anything 0.125 to 0.25mm, 'medium sand' refers to inclusions from 0.25 to 0.5mm, 'coarse sand' refers to anything from 0.5 to 1mm, and 'very coarse sand' includes anything from 1 to 2mm (WENTWORTH 1922, 381). Due to constraints of visibility, very fine and fine sands were both identified as being 'fine,' and typically anything larger than 0.5mm was measured with calipers.

distinctive shapes, such as cubic; large inclusion size; variable inclusion colors, especially colors that contrast with gray or black; and high inclusion frequencies. By contrast, inclusions were more difficult to identify when they were close in color to that of the clay, especially if they were relatively matte. This periodically occurred with softer inclusions embedded in surfaces that had been heavily reduced.

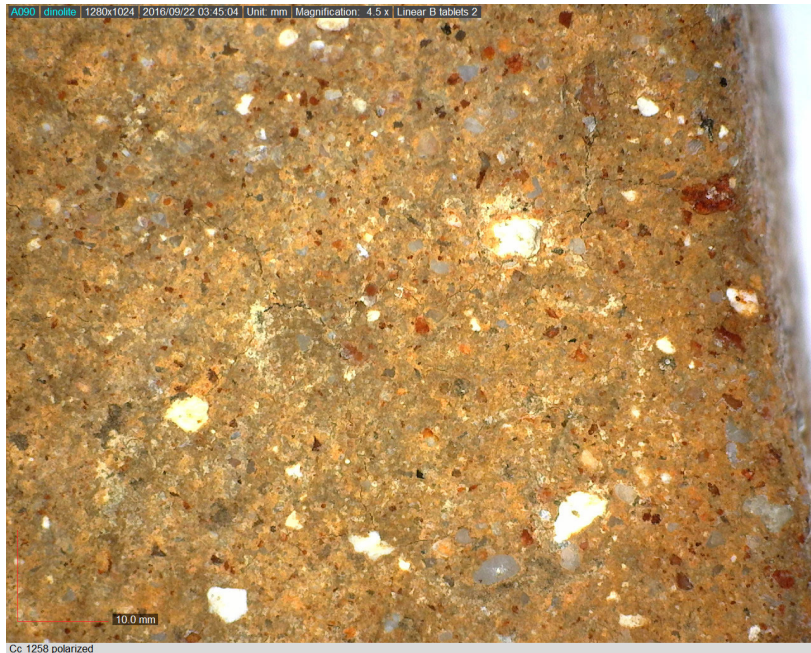


Fig. 1. Photograph of the fabric of PY Cc 1258, Dino-lite AM4815ZT polarizing microscope (photograph by Julie Hruby, courtesy of the Department of Classics, University of Cincinnati).

Individual tablets also had characteristics that enhanced or impeded analysis. Tablets were more difficult to evaluate when they were dirty or retained encrustation, often of calcium carbonate. Preservation levels also played a significant role. Inclusions were typically more visible in breaks than on the surface, because cracks had initially propagated from inclusion to inclusion; as a result, intact tablets were more difficult to evaluate than broken ones. The freshness of breaks also played a role, with ancient breaks appearing smoother than newer ones, in part because some had lost inclusions. Whether and how well tablets had been mended also played a role; less heavily mended tablets, and those that had

not had gaps filled, simply had more breakage surface area visible, which increased overall inclusion visibility. Sealings and some tablets that were preserved only in small fragments were not large enough to preserve many inclusions, especially if the inclusions were fairly low density.

Recycling

It is useful to differentiate tablet editing or reuse from tablet recycling. There is extensive evidence for the former two categories from the Mycenaean world, including cases where the flat end of a stylus was used to erase signs, or where tablets were wrapped in damp cloth, but much less evidence is available for recycling.¹⁵ Although in Mycenology the practice of recycling has been more asserted than argued, scholars of cuneiform tablets in the Near East have discussed at length whether, when, and to what extent tablet clay was recycled. Xavier Faivre has made a detailed argument for the reuse and recycling of tablet clay,¹⁶ and clay recycling emplacements have been claimed at numerous sites.¹⁷ The recent reassessment of this evidence by Jon Taylor and Caroline Cartwright has suggested that “while it seems safe to assume that some recycling of tablets did take place, the evidence for it is very limited, and evidence of its absence exists.”¹⁸ Raw clay is ubiquitous and easily accessible, whereas “recycling involves unnecessary effort.”¹⁹ Even in school contexts, where tablets go out of use as soon as they have been created, there is a great deal of evidence for tablet discard.²⁰ Taylor and Cartwright also make the critical point that inclusions in clay would tend not to survive levigation or soaking, as larger inclusions would sink to the bottom of the vessel in which they were being submerged and would, therefore, not appear in the final clay body.²¹

Close examination of the Pylos tablets reveals that the clay is highly variable in quality and is, on the whole, much less fine than Near Eastern non-school-text tablets. With a few exceptions, it is difficult to be certain which inclusions were intentional temper and which were

¹⁵ See JUDSON 2020, with references.

¹⁶ FAIVRE 1995.

¹⁷ ROBSON 2019, 37.

¹⁸ TAYLOR 2011; TAYLOR & CARTWRIGHT 2011, 318.

¹⁹ TAYLOR 2011, 21.

²⁰ TAYLOR 2011, 21-22.

²¹ TAYLOR & CARTWRIGHT 2011, 315.

naturally occurring in the clay, but very little if any of the Pylian clay has been finely levigated. There are cases where Near Eastern tablets do have inclusions, but they seem to be consistently smaller. Taylor points out that tablet clay from Old Babylonian Tell ed-Der was “levigated to a stage where inclusions were < 0.01mm, but unsoaked fragments up to 3mm remained.”²² By contrast, inclusions at Pylos can reach 14mm (Fig. 2). Taylor points to tablets from Nuzi and a Canaanite tablet found at Tell el-Amarna as having unusually large inclusions, and while measurements are not given, those shown in a photograph seem quite small, based on the text size, compared to what we see at Pylos. The Amarna tablets, with points of origin throughout the Eastern Mediterranean, typically have either no inclusions (see the Babylonian tablets in particular) or inclusions described as ‘sand’ (i.e., usually referring to grain size, so according to the Wentworth scale,²³ reaching less than 2mm; in fact, they seem to refer to much finer material than that), though they occasionally also include what are described as very small stones (e.g., quartzite from the Hittites reaches 0.7mm).²⁴ Taylor does point to Neo-Babylonian school tablets as being “full of stones and shells, indicating insufficient levigation”; it is unsurprising that the clay for school texts would be less well prepared.²⁵ In all of these cases except perhaps the Neo-Babylonian students’ texts, the purity of the clay compares extremely favorably with that of the Pylos tablets.

Goren and colleagues argue that “as tablets cannot be too gritty, we may expect the inclusions to be sieved, thus preserving only the finer fraction and eliminating rock types and minerals that appear in the coarser fraction of the sand.”²⁶ At Pylos, however, the clay fabrics of the **Ad** tablets are coarse enough that they were clearly never sieved (Fig. 2). The chert inclusions from the fabrics of the **Ea** tablets, by contrast, are sufficiently regular in shape and size that these tablets probably were intentionally tempered, perhaps uniquely among the Pylos tablets (Fig. 3). Goren and colleagues divide inclusions into ‘artifact inclusions,’ i.e., intentionally added temper, and ‘ecofact inclusions,’ or those naturally mixed with the clay. They suggest that “if artifact inclusions do appear,

²² TAYLOR 2011, 6.

²³ WENTWORTH 1922.

²⁴ GOREN *et al.* 2004, 31-37; WENTWORTH 1922.

²⁵ TAYLOR 2011, 7.

²⁶ GOREN *et al.* 2004, 7.

it may be suggested that the local pottery workshop's clay had been applied for tablet production.²⁷ That seems not to be the case at Pylos, however; the chunky **Ea** tablet fabric does not correspond to any known local pottery fabric. Almost all **Ea** tablets had inclusion densities above 10% and many around 25%, so that the writing surfaces were coarse and challenging to inscribe (Fig. 3).



Fig. 2. Photograph of right part of **PY Ad 671**, showing large (14mm) chert inclusion (photograph by Pylos Tablets Digital Project, courtesy of the Department of Classics, University of Cincinnati).



Fig. 3. Photograph of left part of **PY Ea 28**, with break revealing fabric with inclusions; color saturation was increased to make inclusions more visible (photography by Pylos Tablets Digital Project, courtesy of the Department of Classics, University of Cincinnati).

While a tablet blank and twists of well-kneaded clay for making administrative documents, perhaps sealings as well as tablets, have been found at Pylos,²⁸ there is no obvious settling tank or jar for the production or recycling of tablets on site. Carl Blegen and Marion Rawson report no appropriately sized structures or vessels from Room 7 or the floor level of Room 8.²⁹ The pithos in Room 7, sometimes suggested to have been a potential water source for tablet production, was probably not used to hold or recycle clay.³⁰ First, Blegen and Rawson believed it to have held olive oil that, once the pithos had broken, fueled the fire in the Archives Complex.³¹ While the basis for that belief is not self-evident (they clearly did not have residue testing done), it is nonetheless plausible. The contents of Room 7 did indeed burn in an unusually hot, reducing fire, of the variety we might expect from burning olive oil, as the sintered,

²⁷ GOREN *et al.* 2004, 7.

²⁸ BLEGEN & RAWSON 1966, 99, 136, 137, Pl. 276.

²⁹ BLEGEN & RAWSON 1966, 92-100.

³⁰ PALAIMA 2011, 150; PLUTA 1996-1997, 240, 246, 247.

³¹ BLEGEN & RAWSON 1966, 92.

blackened aspect of the tablets from this context should indicate. Additionally, it is possible for excavators to smell olive oil, even thousands of years later, as those at Palaikastro discovered.³² We should consider the possibility, then, that Blegen and Rawson might have identified the contents of this vessel accurately. More to the point, the pithos was simply too big to be used for levigating or recycling clay; while its capacity was not measured, it was described as ‘enormous,’ and based on its dimensions, it should have had a capacity of well over a cubic meter.³³ At 1.64 m tall, it would have been difficult to reach its contents without a stepladder and nearly impossible to reach the bottom even with one.³⁴

A few scholars have suggested that it might be possible to recycle a tablet simply by immersing it briefly in water.³⁵ We do not have any clear evidence for this having happened at Pylos, where the tablets are consistently made from a relatively dry clay, with some notable exceptions.³⁶ Our experience is that wetter clays tend to have a ‘mushy’ appearance and may have drip marks or circular rings where they were touched.³⁷ Karl-Erik Sjöquist and Paul Åström do observe that the Knossos tablets were substantially wetter when they were made than the Pylos tablets,³⁸ not having had the opportunity to observe the Knossos tablets firsthand, we withhold judgment on whether they can have been recycled through immersion. However, based on the results of Sjöquist and Åström’s experimentation with recycling, we would hypothesize that only very recently formed texts would be sufficiently moist to be recyclable using this method.³⁹

Most scholars envision tablets being recycled much as Chadwick did; unwanted tablets are collected, either slowly over time or in bursts as tablets on specific topics go out of date. They may be either crushed and then rehydrated, or soaked at length, then the clay is reused. This process is less straightforward or easy than some would assert; Sjöquist and Åström found experimentally that even unfired tablets became in-

³² CUNNINGHAM 2007, 38.

³³ BLEGEN & RAWSON 1966, 92.

³⁴ BLEGEN & RAWSON 1966, 394.

³⁵ KARAGIANNI 2015, 47; PALAIMA 2011, 105.

³⁶ PALAIMA in SJÖQUIST & ÅSTRÖM 1985, 103; PALAIMA 1996.

³⁷ Cf. SJÖQUIST & ÅSTRÖM 1991, 21, Figs. 18-19c.

³⁸ SJÖQUIST & ÅSTRÖM 1991, 11.

³⁹ SJÖQUIST & ÅSTRÖM 1991, 23-24.

creasingly hard over time, and that in order to effect recycling, a one-to three-hour soak would have been required, followed by kneading with water, and that “sometimes it was necessary to repeat this procedure several times before the tablet acquired a uniform consistency suitable for writing.”⁴⁰ They concluded that “it must be more laborious to rework old, dry tablets for reuse than to make new tablets with fresh clay. A shortage of fresh clay might motivate such reuse.”⁴¹ In the case of the Palace of Nestor at Pylos, clay shortages seem highly unlikely; the palace is in a region with extensive clay deposits, including some immediately at hand, and even clays that were insufficiently plastic to be suitable for pottery production would have sufficed for tablets.⁴² Shortages seem especially unlikely when one considers that compared to their contemporaries in the ancient Near East, Mycenaeans produced extremely small quantities of tablets.

If recycling were widespread, we would expect the macroscopically visible suites of inclusions to overlap substantially from tablet to tablet and series to series; we would also expect not to see large or heavy inclusions. However, overlapping suites of inclusions can have other causes as well, such as overlapping lithic detritus in the natural geologies of the locations where the clay was formed or acquired, or clay mixing before tablets were made in the first place, or cross-contamination of clays through reuse of vessels for levigation or soaking, or of surfaces for working. In other words, macroscopically identifiable inclusions are better suited for identifying cases where recycling probably did not occur than for identifying cases where it did.

In the case of specific tablet series, we can say that it is highly unlikely that the clay had been recycled. The idiosyncratic chert inclusions both in the **Ad** series, with its surprisingly large examples, and in the **Ea** series, with its uncommonly densely packed inclusions of consistent size, angularity, and roundedness, are particularly unlikely to have been recycled. The **Aa** tablets, with consistently very low inclusion frequencies, are also unlikely to have been recycled, as are the **Ac** tablets, all of which have fine sand as their primary inclusion (no **Ac** tablet has more than one non-sand inclusion visible). All six **Cc** tablets have chert, sand, and calcium carbonate. Thirty-six of the 69 **Eb** tablets with at least

⁴⁰ SJÖQUIST & ÅSTRÖM 1991, 23-24.

⁴¹ SJÖQUIST & ÅSTRÖM 1991, 24.

⁴² GALATY 2010.

approximately identifiable suites of inclusions have chert and sand; the quantity of chert is not consistently high, and another 12 are identified as having sand but tend to have very poor inclusion visibility, suggesting that other inclusions may exist. This implies that most or all of those particular tablets may have come from a single batch of clay that had probably not been recycled.

Of the 15 **Es** tablets, eight have been identified as having mudstone/siltstone, sand, and chert, six tablets have mudstone/siltstone and sand, and one has only sand; given the constraints of visibility, these may well all represent a single production batch that was not recycled. The earlier tablets from the Throne Room, most of them **La** tablets, with their distinctively intense matrix coloration and consistent suites of inclusions, with subrounded chert in sizes up to 3mm, mudstones/siltstones, and fine sand, are also unlikely to have been made from recycled clay. The **Qa** tablets also have consistently fine fabrics, typically with fewer than 2% visible inclusions; the fabrics were all sandy, with fine or fine to medium sands, and other inclusions were extant but infrequent. Again, these were probably produced from a single batch of clay which had not been recycled. The **Sh** tablets also look like a more or less unified set: ten of 12 examples have either chert and sand, or chert, mudstone/siltstone, and sand, while the remaining two have chert, calcium carbonate, mudstone/siltstone, and sand. The two tablets with calcium carbonate inclusions, **Sh 743** and **Sh 744**, are otherwise similar to the other texts in the series. The **Sh** tablets are one of the few series in which palm-leaf shaped tablets exhibit a botanical void that apparently represents a straw around which the tablet was formed, and **Sh 743** and **744** are formed around a straw just like the other members of their class.

This is not to say that our study of the fabrics is entirely incompatible with recycling. In general, the more different types of inclusions are in a matrix, the more plausible recycling becomes as one possible cause, simply because if different clay types are recycled together, their inclusions should be combined. The **Cn** series has a much higher level of variability in fabric types than most Pylia series, including four tablets (**Cn 418, 702, 1059, 1197**) that had all available inclusion types: chert, mudstone/siltstone, calcium carbonate, and sand. Tablet **Fr 1251** also has chert, sand, mudstone/siltstone, and calcium carbonate inclusions: it too is a candidate for having been recycled, though it could equally well simply have been made from clay that initially and naturally had

this range of inclusions, or from a blended clay with the same range of inclusions, or perhaps it was made in a context in which different clay types had been used previously and not cleaned up. However, the fact that several of these tablets have fairly large inclusions (**Cn 202, 286, 328, 437, 453, and 702** all have inclusions reaching 4mm) suggests that even they may not have been made from recycled clay.

Conclusions

The evidence gathered by this study hardly eliminates the possibility that recycling was practiced. Yet we are struck by the fact that the evidence taken as a whole is fairly ordered and presents us with comprehensible patterns, despite its limitations. Our impression is that tablet formation is for the most part a highly structured process, with many series having fairly consistent inclusion types and suites of inclusions. This suggests that tablets were usually made in coherent batches, an impression that the pXRF data also give.⁴³ It is interesting to observe in this connection that many of the Pylian texts show evidence for being palimpsests. We might consider the relative scarcity of evidence for recycling in our study, combined with the presence of more than 100 palimpsests,⁴⁴ to indicate that reusing tablets was far more common than recycling and refashioning, especially since the former certainly seems more practical. On occasion we can point to this playing out in specific examples: for instance, the **Ac** tablets are extremely consistent in terms of their inclusions, and these texts are also all certainly or probably palimpsests according to José Melena. Of the other series that we suggested were made of a single batch of clay (**Aa, Ad, Cc, Ea, Eb, Es, La, Sh, and Qa**), all but one (the **La** series) have at least one text with evidence for being a palimpsest, and a number of these series have a large number of palimpsests.

If tablet production is a structured process, this does not imply that it produced homogeneous results. In fact, it is worth noting that there is a high level of variability in the combinations of inclusions. Indeed, there is substantially more heterogeneity in the Pylos tablets than there is in

⁴³ WILEMON *et al.* 2020.

⁴⁴ In *PT*³ Melena identifies 152 tablets with evidence of being palimpsests, with 94 being certainly identified as such and 33 probably.

ceramic vessel fabrics from the palace.⁴⁵ The reasons for this phenomenon remain unclear to us, but several possibilities present themselves. First, as mentioned above, clays that were unsuitable for pottery production seem to have been acceptable to Pylian tablet-writers. Second, it might be that tablets were being made in multiple parts of the territory and brought to the palace for information processing and storage.⁴⁶ Certainly at least one Pylian text (**Eq 213**) refers to an administrator, perhaps the tablet-writer himself, traveling beyond the palatial center to collect information.⁴⁷ Third, it is possible that more individuals were responsible for making tablets than making the pottery found at the palace: Sjöquist and Åström identified ten individual palmprints on only 47 tablets out of what was then 1,112 tablets and fragments, compared to perhaps 10-20 full-time potters (or the equivalent) working in Messenia as a whole, and perhaps only four contemporaneous potters whose work appeared at the palace.⁴⁸ A related question is whether tempers were being added intentionally to tablet clay. The nature of our evidence makes it difficult to answer this question conclusively, but we think that it is likely in some cases. For instance, in many of the **Ea** tablets angular chert makes up *c.* 25% of the matrix (perhaps up to 33% in **Ea 439**). We cannot understand why this should be the case — why add so many inclusions, especially ones that have the potential to interrupt a smooth writing surface? — but it is difficult to explain the quantity and regularity of such inclusions in any other way.

Although our argument has been mainly negative with respect to recycling, our findings suggest that tablet production is a far more interesting area of study as a result. Pylian tablet-makers were doing far more than just making, reusing, and recycling tablets. As our colleagues in Assyriology have demonstrated, there is a great deal more to be learned from the physical properties and material histories of our texts.

⁴⁵ Cf. GALATY 1999, 50.

⁴⁶ Cf. HALLAGER 2017.

⁴⁷ BENNET 2001.

⁴⁸ SJÖQUIST & ÅSTRÖM 1985; PALAIMA 2011, 83-85. On the number of potters, see HRUBY 2006, 199-203, *pace* WHITELAW 2001.

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**The Linear B tablets from the North Entrance Passage
at Knossos:
a preliminary account of an interdisciplinary approach**

Ophélie Mouthuy

The holistic study integrating archaeological, pinacological, epigraphic, linguistic and textual approaches conducted by Jan Driessen in the 1990's opened the way to recognize a potential diachronicity and the possibility that a succession of tablets deposits within the Knossos archives existed, perhaps corresponding to distinct periods of the Linear B administration in the palace.¹ In his study, Driessen argued that the deposit of the Room of the Chariot Tablets [henceforth: RCT] constituted an early stage of the Linear B administration. While the basic principles of this hypothesis are now widely accepted, the precise sequence and internal chronology of the various Knossian palatial deposits still needs to be thoroughly evaluated.

As a follow-up of this initial study, I attempted to approach another large collection of tablets from within the palace, that of the North Entrance Passage [henceforth: NEP], following a similar interdisciplinary perspective.² A number of detailed analyses allows, I believe, to situate the NEP deposit more convincingly in terms of its chronological relations to the RCT and other Knossian deposits. In this preliminary account paper, I highlight some of the main results of my doctoral research starting with a reappraisal of the archaeological context of the NEP deposit, followed by a brief overview of some of the pinacological,

¹ DRIESSEN 1999.

² MOUTHUY 2020.

epigraphical and palaeographical features that can be used as potential chronological markers for the deposit.

Archaeological context

A large and initial part of my research was taken up by the study of the archaeological context of the NEP. It was my aim to review both the circumstances of discovery during the excavations conducted by Arthur Evans at the beginning of the 20th century, and the stratigraphy. This allowed to propose a probable reconstruction of the architectural context of the North Entrance complex through the different phases of the Bronze Age.³ During the Neopalatial period (ca. 1700-1450 BC), this area of the building was characterized by a monumental entrance. During the Postpalatial period (ca. 1300-1200 BC), however, at the end of its use life, the area witnessed some important architectural modifications: the main passage was blocked to the north and its floor level was raised about 1.20m, following the levelling of destruction debris.

This evaluation of the archaeological context of the NEP deposit also included a broader taphonomic approach which focused on the processes that led to the particular deposition of the tablets. To do so, original excavation data were reinvestigated through the notebooks and notes of Evans, Duncan Mackenzie, and Theodore Fyfe in order to compensate for some of the oversimplified interpretations found in later publications. The material associated with the tablets in the destruction layers was also re-evaluated in an attempt to better identify the circumstances of discovery and provide clues for dating. This approach made it possible to consider all possible scenarios that could convincingly explain the depositional processes of the tablets forming the NEP deposit.⁴

Taphonomy of the deposit

“A curious feature was that in the same deposit as the inscriptions as many as six large plain couple-amphoras were brought out in a pale yellow clay. Some of these were whole or complete though fragmented.”⁵

From the moment of the discovery of the deposit, the ca. 550 Linear B

³ MOUTHUY 2020, 22-77.

⁴ MOUTHUY 2020, 47-63, 78-86.

⁵ DB, 9 May 1900.

tablets from the NEP were found mixed with roughly 40 double vases.⁶ This immediately caught the attention of the excavators, who described this assemblage as ‘curious.’ Indeed, taken together, a certain number of elements are difficult to explain.

Firstly, the tablets were burnt and broken, sometimes recorded as being in very poor conditions of preservation, while the vases were almost completely intact (they only show a few fresh breaks) and not burnt at all. Moreover, there is also a variety of precise findspots, since at the time of the excavations the tablets of the NEP were collected in the following locations (Fig. 1):

- along the length of the three West Bastions, from the south-west corner of Bastion C (2.00-3.00m below the surface), but not on the east side;
- a little further to the south, at the level of the Room of Spiral Cornice [henceforth: RSC], but higher in the stratigraphy (0.90-1.20m below the surface);
- in the south-western corner of the northern compartment of the RSC, where the tablets were found in a deposit of wood ash (0.50m below the surface), in an extremely fragmentary state. In the same location, fresco fragments were found above and below the fragments of inscriptions.

The double vases were found exclusively along the West Bastions with the tablets, but the deposit of vases stopped between Bastions B and C, while tablets continued to be found until the middle of Bastion A. Furthermore, no tablets were found inside the vases. The overall morphology of the vessels is quite typically LM IIIB, but their duplication is rather unique. All vases seem to have resulted from an identical firing process, and due to the absence of wear, we may hypothesize that they were never used and seemingly freshly produced.

About 50 additional tablets were collected from the rooms immediately west of the passage (Fig. 1). These were also found mixed with stirrup jars and vases similar to the amphorae of the passage. Almost all

⁶ A preliminary study of these vases, in collaboration with Charlotte Langohr, was supported by a permit granted by the Heraklion Museum in June 2018, and I thank Georgia Flouda for her kind assistance on behalf of the museum. Ten double vases were found in the storerooms, while one double vase is displayed in the museum’s exhibition windows.

the stirrup jars found in the Room of the Stirrup Jars [henceforth: RSJ] are intact or reported to be fragmentary but complete.⁷ They were found on a clay surface and can also be dated to the Post-palatial period, i.e. LM IIIB. Tablets were also collected along the western wall of the same room, both on and in a very clayish soil matrix.⁸ As a result, they were in a very poor state of preservation, sometimes close to disintegration. In contrast, some tablets were collected at a much lower level on the other side of the northern mud wall of the room.⁹

In the Room of Saffron Gatherer [henceforth: RSG], tablets appeared during the first excavation campaign on the last floor. However, as no wall was identified between the RSG and the RSJ at the time of the excavation, it is difficult, if not impossible, to distinguish between the tablets from the two rooms; it is likely that the great majority of the tablets actually came from the RSJ. In the RSG no vases are recorded but only other finds such as stone lamps. In 1901 some tablets were discovered during a test beneath the last floor level. When collected, these tablets were very friable.¹⁰

The obvious differences in terms of state of preservation between the tablets and the double vases are puzzling, especially considering that they were found clustered together, although the tablets were clearly more extensively dispersed than the vases.¹¹ As mentioned, the former were clearly burnt whereas the latter did not show any traces of fire. Furthermore, the tablets were badly broken and almost certainly in a

⁷ DB, 8 May 1900: “[...] as many as five vases whole or in fragments were found lying on the floor which is covered with a tough deposit of clay [...]”

⁸ DB, 8 May 1900: “[...] badly preserved inscriptions [...] continue to appear on the floor along the West wall;” EVANS 1900-1901, 35, notes: “a few centimetres below the floor level with which this wall (=N mud wall) was connected, another Mycenaean pavement came to light and some inscribed tablets resting upon it.” In this description it can be inferred that the tablets were in a clay layer above the earlier tarazza floor. Evans keeps this idea in EVANS 1935, 733-734: “the chamber in which the tablets lay, covered by a shallow accumulation of soil.”

⁹ DB inked, 6 April 1901: “At the foot of the N face of the N wall of this room and beneath the level of the floor was found yesterday several fragments of inscriptions suggesting deposit, two being whole [...] The mud N wall [* .80 to floor] had collapsed and this accident had facilitated the search for inscriptions.”

¹⁰ DB, 8 April 1901: “[...] an earlier floor level made its appearance. Part of this new floor was cement, part consisted of a large slab. Above this floor were found some fragments of inscription tablets in a very soft condition.”

¹¹ For discussions about the dating of the tablets, see, for example, DRIESSEN 1999; FIRTH 2000-2001; PALMER & BOARDMAN 1963; RAISON 1988; WOODARD 1972.

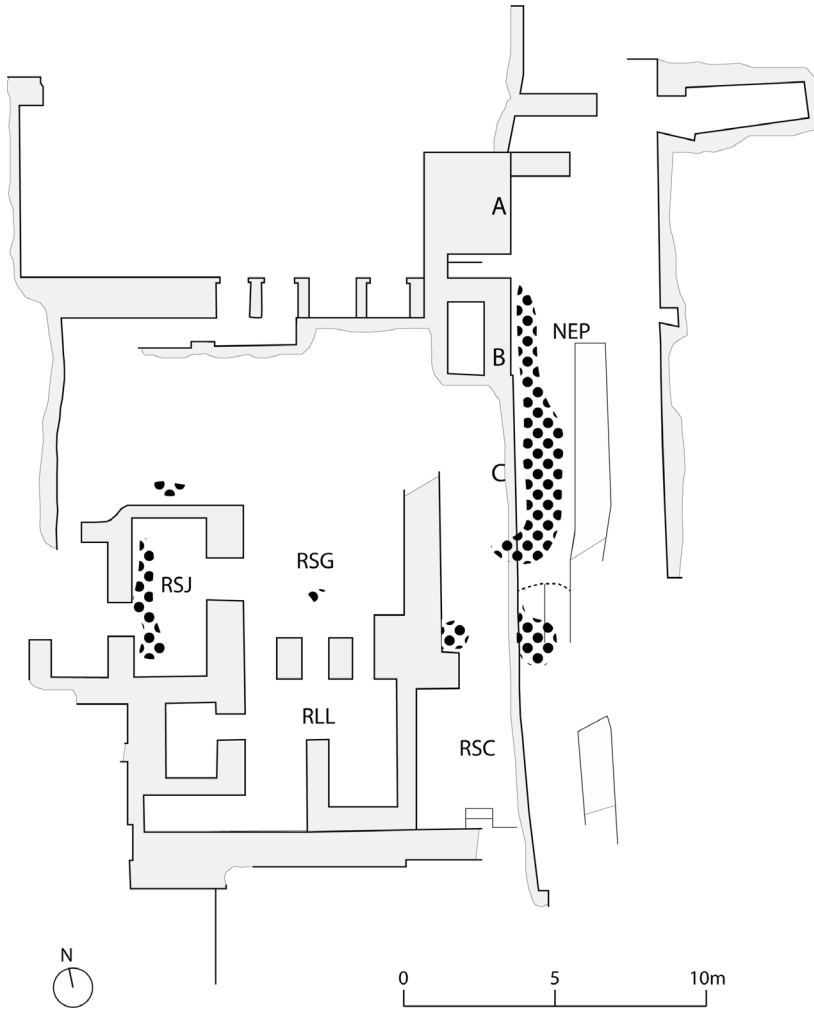


Fig. 1. Reconstruction of the find-places of the NEP tablets.

secondary position whereas the vases were intact and clearly abandoned in their original position. While different potential depositional scenarios that could explain this particular stratigraphy were explored, here, I only focus on what I think is the most likely sequence of events (Fig. 2).¹²

¹² See MOUTHUY 2020, 79-84 for other potential scenarios.

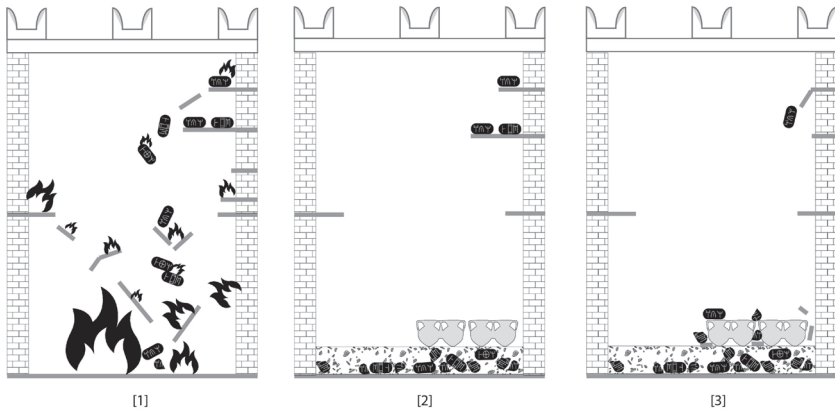


Fig. 2. Potential depositional sequence.

According to this scenario, the tablets were originally stored on the upper floor of the NEP – as was the case for most of the tablets in the palace at Knossos¹³ – and were caught in a fire that ravaged the entire northern sector (Fig. 2, [1]). This destruction caused the floor/ceiling to collapse partially into the passage, still used as in the Neopalatial period as the main entrance to the palace. The majority of the tablets hence ended up on the ground floor, but some probably remained at higher level. After a possible phase of abandonment, the entrance area was reoccupied, but the upper floor remained abandoned probably because it was too much ruined (Fig. 2, [2]). As William Woodard already suggested, the destruction debris, including all tablets, were swept up and levelled over in the old passage.¹⁴ The area was then used as a storage room in which the double vases would have been standing up to the abandonment of this part of the palace in LM IIIB1. After the final abandonment of the area, some of the tablets that were somehow still in position on the upper floor eventually fell down, mingling with the vases (Fig. 2, [3]).

The presence of the tablets in the upper layer of the abandonment level could then potentially be related to their original position within an upper room. One may conjecture that they were not lying on the floor, but stored on shelves against the side walls, which did not imme

¹³ DRIESSEN 1997, 111. The only exception is formed by the tablets from the Room of Column Base.

¹⁴ WOODARD 1972.

diately collapse when the ceiling gave in during the first destruction, and that this happened only later. It may be worth noting that Mackenzie mentions finding fragments of miniature frescoes both slightly above and beneath some of the tablet fragments in the RSC.¹⁵ This seems to indicate that the wall decoration of the upper floor was partially destroyed with the initial collapse while other parts of it came down later, after the remaining tablets had fallen. This event implies that the ceilings would have been preserved, at least to some extent, after a major destruction. Moreover, the tablets that stayed on the upper floor would have been reasonably well protected as long as they remained in their original position.

During excavation, because the floor surface was of trodden earth, it is possible that the interface between the actual destruction debris and the level on which the double vases stood was missed. Consequently, the vessels and inscriptions fragments were collected together and considered a single deposit.

Although this scenario seems to fit the evidence, it should be remembered that John Boardman, in his early study of the area, suggested that the late floor of the passage could present traces of burning.¹⁶ Another objection that could be made relates to the recognizable internal order of the tablets as recorded by Evans. As Richard Firth has argued, this could indicate the limited nature of the dispersal of the inscribed material.¹⁷ Usually, when tablets are found in high concentrations, we tend to assume that they are relatively close to their primary position.¹⁸ This said, we know that tablets were occasionally stored in perishable containers. If this was the case of the NEP deposit, this might have affected not only their overall distribution, but also their state of preservation after the collapse of the upper floor. The discovery, in the southeast angle of the RSC, of charred wood remains together with the tablets is evidently worth mentioning in this regard.

¹⁵ DB inked, 2 May 1900: “[...] at a point xx [SW corner of Compartment] just above the flooring, large numbers of fragments of inscriptions [mainly small (DB pencil)] in a crumbling condition began to appear. Later at (x) .50 down and just above the floor was found a large piece of fresco with plant decoration. Beneath appeared further fragments of the inscriptions.” DB inked, 3 May 1900: “The fragments of inscriptions underneath and about the fresco were then recovered.”

¹⁶ PALMER & BOARDMAN 1963, 49.

¹⁷ FIRTH 1996-1997, 58.

¹⁸ DRIESSEN 1997, 119.

This hypothetical scenario implying a twofold process, i.e. the destruction of an upper floor preceding the final abandonment of the palace, but creating mixed assemblages, can also be proposed for the RSJ. There, during the excavations, tablets were found on or within a thick clay matrix, on which several LM IIIB stirrup jars were standing.¹⁹ Two observations match well with the potential scenario evoked above. Firstly, although the tablets were burnt and fragmentary, the vessels were very well preserved and showed no traces of burning. Furthermore, the excavators argued that these inscription fragments were in a poorer state of preservation than those of the passage due to their contact with the clayish sediment. This could suggest that the fragments actually stayed in contact with the soil matrix for a relatively extended period of time. Secondly, tablet fragments of the same deposit were also found beyond the RSJ and at a lower level during the second year of excavations.²⁰ This is revealing, because it suggests that the tablets not found in the clayish level were indeed better preserved, but it also indicates that they may have fallen from above, therefore explaining their wider distribution over the area.

It is also important to consider the mud or simple clay wall discovered to the north of the RSJ in 1901. This wall partly disintegrated during excavation, meaning it was probably not exposed to fire that would probably have solidified its construction.²¹ It is highly probable, then, that this clay wall was constructed at the same time as the clay floor containing the tablets. Its state of preservation would be indicative of the final abandonment of the area after the baking of the tablets, which are the result of destruction by fire.

In the rest of the sector, the cleaning after the destruction appears to have been more meticulous, and a plaster floor was installed.

Date of the deposit

The architectural phasing proposed here shows that there were several episodes and potential destructions in the passage during the Final and

¹⁹ See above, n. 8.

²⁰ *DB*, 6 April 1901: "At the foot of the N face of the N wall of this room and beneath the level of the floor was found yesterday several fragments of inscriptions suggesting deposit, two being whole."

²¹ *DB*, 17 April 1901: "The mud N wall of this room having collapsed it was decided to take advantage of the fact towards getting down beneath the floor level."

Post-palatial period, between LM II and LM IIIB.²² But it is certain that during one of these episodes a violent fire destruction took place, which affected the whole of NEP. In each of these episodes, the area was modified and repaired, both through the installation of floors or the addition of walls.

The violent fire destruction is probably the one observed by Woodard on the walls of the East Bastions during his visit in 1967.²³ He mentions that some traces of burning at 0.70 m above the paving were still visible at the time. Boardman, too, noticed traces through the LM IIIB floor of the passage.²⁴ Thanks to the witness baulk left along the West Bastions, this destruction can be dated to LM IIIA1/A2 at the time when the paved passage was fully in service.²⁵ In the rooms west of the passage, similar fire marks were identified both on the floor and on gypsum thresholds.²⁶

The second episode is formed by the abandonment and the time of use of the last earth floor, on which the double vases and some of the tablets were found. At this moment, walls blocking the passage were built, transforming the space into a room, the access to which was potentially more easily controlled, and within which goods were stored.

The tablets must form part of one of these two episodes. Considering the potential scenario discussed above, the most likely hypothesis would be that the tablets belong to the most violent destruction of LM IIIA1/A2, and that they would become only later associated with the vases. This scenario seems to correspond most closely with the archaeological data.

Chronologically speaking, if this depositional history can be considered reliable, it means that the tablets should almost certainly predate the final abandonment of the palace of Knossos. In other words, if the deposit of Linear B inscriptions came from an upper floor destroyed by fire before the reoccupation of the ground level, it may even be suggested that LM IIIB early formed its *terminus ante quem*.

In my doctoral research, this scenario was confronted with a series of pinacological, epigraphic, palaeographic and textual analyses in an at-

²² MOUTHUY 2020, 63-73.

²³ WOODARD 1972, 116.

²⁴ PALMER & BOARDMAN 1963, 49.

²⁵ EVELY 1976.

²⁶ WOODARD 1972, 116.

tempt to support or refute the depositional processes highlighted above and to provide chronological information.

A brief overview of the interdisciplinary analysis

A general framework exists for the phasing of Linear B archives in Crete and on the mainland. According to Driessen, there were three main ‘moments’ in Mycenaean administration, represented by multiple features found in particular palatial deposits (Fig. 3). The RCT deposit would represent the earliest phase of the palace administration, that of the NEP an intermediate phase, and those of the West and East Wings the most advanced stage.²⁷ It is precisely this general scheme that I have tried to consider in the light of an interdisciplinary analysis of the NEP deposit. Because of space limitations, only some of the results that provide the most valuable information in terms of chronology, principally where pinacology and palaeography are concerned, are discussed here.



Fig. 3. Three main ‘moments’ of Mycenaean administration.

Pinacological and epigraphic evidence

It is the colour of the clay resulting from their firing, combined with the preservation condition of the documents, which provides the best indication to corroborate the taphonomic hypothesis. A physical analysis (i.e. pinacology) of the tablets from the NEP through autopsy shows that they are often well-fired and in a relatively good state of preservation. Their condition could hence confirm that they were originally stored on the floor from which they fell during a destruction. Moreover, the physical, intra-serial homogeneity indicates that they were probably arranged in sets before the fire. On the contrary, the disparities sometimes observed between the different series and sets can be explained by the respective position of these groups of tablets before the destruction. It is possible to imagine that the tablets were organized by topics on different

²⁷ DRIESSEN 2000, 151-152.

levels of a shelf, and perhaps also gathered in perishable containers such as baskets, wooden boxes, etc. The differences in the parts that were damaged, which can be observed on some of the tablets when they fell, also converge towards the hypothesis of a kind of storage at different levels, and seem to fit well with the depositional process suggested above.

The study of various characteristics related to the materiality of the tablets also provide some interesting results in terms of chronology. Of the seven palmprints found on the NEP tablets, links with other deposits can be made via two kneaders (Table 1). The first, R YPSILON, is identified on the tablet **C 5734** (scribe 233) as well as on tablet **Dv 7219** (scribe 117) found in the E-W Corridor (J1). Nonetheless, the state of preservation of this tablet is quite bad since there are no readable signs. The second kneader, L DELTA, may have left his palmprint on tablet **Ch 7065** (scribe 110). The same kneader is attested on three tablets of the **Fh**-series of scribe 141 found in the Room of Column Bases [henceforth: RCB].²⁸

Kneader	NEP	E-W Corridor	RCB
R NY	Ak(3) 782 Uf(2) 837		
R XI	Vf 1002, 1004		
L THETA	Bo 5752, 7035		
L ETA	Bo 5749 Dk 5758?		
R TAU	Vf 756 L 758 K(2) 773, 774, 776		
R YPSILON	C 5734	Dv 7219	
L DELTA	Ch 7065?		Fh 360, 372, 5450

Table 1. Palmprints identified in the NEP and elsewhere.

²⁸ MOUTHUY 2020, 111-113.

Furthermore, if we look at the format of the tablets, we can note some peculiarities which tend to suggest that the record-keeping within the various deposits used different media. What distinguishes the deposits is the proportion of page-shaped and palm-leaf shaped tablets (Table 2).²⁹ These variations in preferred media could have chronological implications for record-keeping.

Format	RCT	NEP	CoST	Pylos
Palm-leaf tablets	+/- 600	+/- 545	+/- 32	+/- 900
Page tablets (+cards)	+/- 1 (+/- 31)	+/- 50 (+/- 8)	+/- 6 (+/- 2)	+/- 126
Ratio	1 : 14	1 : 10	1 : 4	1 : 7

Table 2. Proportion of page-shaped and palm-leaf shaped tablets in different deposits [CoST = Corridor of Sword Tablets].

The same can be said about the cutting of tablets (Table 3). It may be worth mentioning that there are nine examples in the RCT of tablets that were cut on both sides, but only a single one in the NEP, and two from the RCB.³⁰ The differences in cutting seem statistically quite relevant between the different deposits.

Cutting	RCT	NEP	Other deposits
Palm-leaf: left OR right	117	75	127
Palm-leaf: left AND right	9	1	2
Page: top or bottom	1	7	11
TOTAL	127	83	138
	20 %	16.5 %	4.7 %

Table 3. Cutting of the tablets in the RCT, NEP and other Knossian deposits.

Apart from the physical aspects of the medium, the study of the materiality of the inscription itself (i.e. epigraphy) can also contribute to refine

²⁹ MOUTHUY 2020, 102, 383.

³⁰ MOUTHUY 2020, 114-117; SJÖQUIST & ÅSTRÖM 1991.

the chronological approach. In this regard, the organization of the information on the tablet is an important element. In general, it seems that the scribes of the NEP attached more importance to the layout of their texts than those of the RCT, where the texts are rather short and the information is very succinct. And although the same may be observed in the NEP, some new ways of structuring the generally more abundant information have emerged. In the other deposits, however, such as those of the West and East Wings, tablets with more sophisticated texts and a more rigorous organization are encountered, and this applies both to the page-shaped tablets – which are even larger – and to the palm-leaf shaped tablets. Generally speaking, we can observe a close relationship between the quantity and the structuring of information. This observation seems again to underline that the RCT and NEP deposits cluster somewhat together while being relatively distinct from those of other areas of the Knossian palace.

Scribal evidence

As appears to be the norm at Knossos, the majority of scribes carried out their activities in a single location, but some scribal cross-references can be made between the NEP and other deposits in the palace, and particularly those of the West Magazines (Table 4).

NEP scribe	West- Magazine	West wing	Area of clay signet Room	CoST	E-W corridor	Arsenal
102a		X				
102b			X	X		
106	X?					
118	X					
120	X					
136	X	X			X	
206						X
207	X	X?				
217	X					

Table 4. Scribal cross-references between the NEP and other Knossian deposits.

These scribal connections are relatively weak compared to the number of tablets preserved and the high percentage of scribal identifications in the deposit. They are often based on a single tablet by a scribe working in the NEP that was found elsewhere (102a?, 106, 118, 120, 206), or a single tablet found in the NEP by a scribe whose main production has been found elsewhere (206, 207, 217). In a single case, the link is via two tablets of scribe 136, while in the case of scribe 102b three different locations have each yielded a single tablet. It is interesting to note that for these particular cases, the NEP tablets occasionally indicate totals or recapitulations.³¹

In this regard, the absence of a link between the NEP and the RCT confirms its special position, while the same observation can be made for the RCB. From a chronological perspective, it is important to keep in mind that the same scribe may have worked for a relatively long period of time. In other words, these scribal parallels do not necessarily invalidate the phasing mentioned above.

Palaeographic evidence

Where palaeography is concerned, it was shown that graphic features of Linear A were much more evident among the conservative scribes of the RCT than in the other Knossian deposits.³² We would therefore witness a stylistic simplification between the RCT and the later tablets, where a progressive style can be observed that is also found on the mainland. The analysis of some diagnostic signs attested in the NEP has shown that its graphic repertoire includes forms closer to the conservative style, although some scribes show more progressive tendencies.³³ If we give this information the chronological value argued for by Driessen, we can infer that the NEP tradition is therefore part of a style that is later than the RCT style but earlier than most of the other progressive scribal deposits, particularly those of the West Magazines and the East Wing.

Considering the various cross-references between the deposits, we may suggest that the different phases of scribal traditions correspond to different chronological periods.³⁴ In this respect, it is essentially the

³¹ MOUTHUY 2020, 218, 369, 392.

³² DRIESSEN 2000, 151; OLIVIER 1967, Pl. I-LXVII.

³³ MOUTHUY 2020, 231-235.

³⁴ DRIESSEN 2000, 150-157. For a full analysis of the cross-references between the NEP and the other deposits, see MOUTHUY 2020, 87-155 (pinacology and epigraphy), 155-266 (scribes and linguistics), 267-376 (textual analysis and linguistics).

palaeographic approach that allows us to refine these chronological limits, insofar as we can include data from the tablets from the mainland, which are more easily dated on the basis of their archaeological context. It is indeed now relatively clear, thanks to the vast majority of LM IIIB administrative material discovered on the mainland, in parallel with the study of the tablets found in the earlier phases of the Mycenaean sites of Pylos or Mycenae³⁵, that a general chronological sequence can be proposed, which roughly echoes the phasing of the Cretan deposits.³⁶ It may be represented as follows, and has reached wide scholarly acceptance, barring some exceptions (Fig. 4):

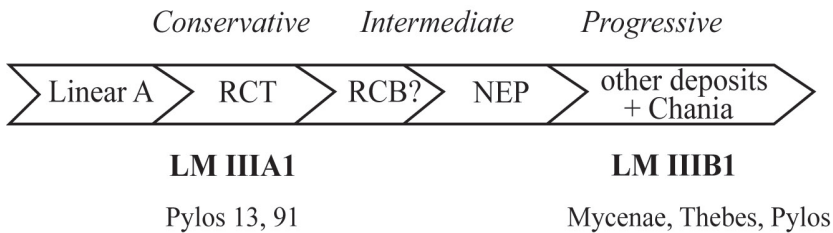


Fig. 4. Phasing of the Cretan deposits and Mycenaean parallels
(after DRIESSEN 2000, 157, Fig. 3.35)

In his study of the RCT, Driessen concluded that the deposit belonged to the LM II/IIIA1 ceramic phase. Recent studies by Firth and Skelton and the parallels they draw with continental tablets would allow to suggest a more precise date, around LM IIIA1.³⁷ At the other end of the chronological spectrum, the stratified deposits at Chania and the study of the continental material respectively indicate the LM IIIB1 or LH IIIB1/2 phase. Because of their palaeographic proximity to the Chaniote material, some of the Knossian tablets – those of the so-called progressive style – also seem to be related to the LM IIIB1 ceramic phase.

³⁵ Two Pylian Hands (91 and 13) have been attributed to a small group of tablets from an earlier context, dated to LH IIIA. These tablets show signs with conservative features more in line with the conservative scribes of Knossos, as well as linguistic features different from the other Pylos tablets. Some tablets from Mycenae and Iklaina could potentially be attached to this group. Cf. DRIESSEN 2000, 154-156.

³⁶ The tablets recently unearthed in the LH IIIB1 context of Agios Vasileios can now be added, see VASILOGAMVROU *et al.*, this volume.

³⁷ FIRTH & SKELTON 2016; SKELTON 2008. According to their phylogenetic analysis, the LH IIIA Pylos tablets inscribed by scribes 13 and 91 would be the oldest attestations of Linear B.

If we now consider, as illustrated above, that the NEP deposit is probably part of an intermediate phase, it is reasonable to assume that its relative chronological position must be comprised between LM IIIA1 (*terminus post quem*) and LM IIIB1 (*terminus ante quem*). This is consistent with the archaeological analysis.

Conclusion

An interdisciplinary approach, as proposed here, provides detailed information both on the taphonomy and on the chronology of the NEP deposit. The NEP deposit was created by depositional processes characterized by two successive but temporally spaced episodes (destruction by fire and subsequent collapse of the remains), which have complicated its understanding. When all the different methods of analysis are considered together, they clearly confirm: 1) that the tablets found in the RCT, the NEP and the other deposits actually corresponded to three distinct phases or ‘moments’ of the Knossian administration, and 2) an intermediate (chronological) position for the NEP deposit creation. The reappraisal of the archaeological context and stratigraphy supported by the interdisciplinary analyses points towards LM IIIB early as a *terminus ante quem* for the tablets. Furthermore, these results also suggest that the tablets of the NEP must be connected to a major fire destruction, presumably in the course of the LM IIIA2 ceramic phase.

Furthermore, these different approaches also tend to suggest that the NEP deposit meets all the conditions for considering the northern sector as a kind of ‘central (pre-)archive’ of the Palace of Knossos, similar to what existed at Pylos. A full discussion is reserved for elsewhere, but we can notice the following conditions:

- 1) the area in question was ideally situated for archival activities of a certain scale near a main entrance;³⁸
- 2) the textual analysis showed a wide range of subjects in the deposit, especially in comparison with the low thematic heterogeneity of the other deposits;³⁹
- 3) the organization of the documents into coherent groups. In this respect, it can be shown that the documents were classified by subject

³⁸ MOUTHUY 2020, 77, 391.

³⁹ MOUTHUY 2020, 275-336, 391.

at the time of the fire. It can also be underlined that the officials of the NEP were distinguished by a division of responsibilities according to economic and geographical interests;⁴⁰

- 4) several documents, though limited in number, contain lists, summaries, counts and totals;⁴¹
- 5) the notable proportion of page-sized tablets within the deposit is also worth mentioning. Indeed, the tablets being larger at the time of the NEP, they would suit well for the compilation operations that would have taken place before the final recording on perishable materials;⁴²
- 6) the NEP deposit contains tablets written by 33 different scribes, out of a total of 75 at Knossos. Moreover, some tablets include contributions by several scribes, which tends to indicate that revised and amended tablets were centralized here;⁴³
- 7) the prosopographical analysis of the NEP tablets illustrates a much wider variety of titles and functions than elsewhere, which could underline the central archive status of the NEP. It indeed seems relatively plausible that a wider variety of officials would be mobilized in this context.⁴⁴

All these elements tend to indicate that the NEP deposit represents the remains of a collection of administrative data that was gathered in order to be permanently compiled on perishable material.

To conclude, although an exhaustive study of the NEP deposit has an intrinsic value, it is mostly through comparisons with the results of the RCT analysis that new insights are forthcoming on important chronological and operational issues concerning the Knossian palatial administration. While a proper assessment of the documents from the other Knossian deposits is the next step, the analysis of the NEP material, briefly reviewed in this paper, provides a firmer ground to continue refining the chronology of the Knossian Linear B administration.

⁴⁰ MOUTHUY 2020, 120-122, 152-154, 219-220, 391.

⁴¹ MOUTHUY 2020, 218, 369, 392.

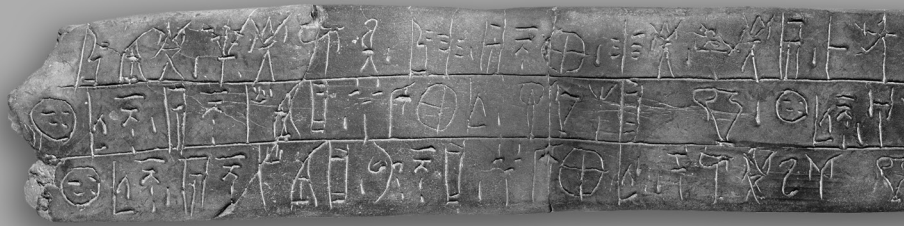
⁴² MOUTHUY 2020, 101-102, 393.

⁴³ MOUTHUY 2020, 214-215, 393.

⁴⁴ MOUTHUY 2020, 214-215, 375-377.

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**Colloquium minutes
and
resolutions**

12/1/21



Minutes of the CIPEM meeting

The members of CIPEM that were invited to attend a virtual meeting on Thursday 23rd September 2021, 16.00 (EET), via Zoom:

Country	Name	Email	Present
AT	Oswald Panagl [OP]	oswald.panagl@sbg.ac.at	Yes
BE	Jan Driessen	jan.driessen@uclouvain.be	No
CH	Alex Leukart	nakileukart@hotmail.com alex.leukart@gmail.com	No
CY	Anna Panayiotou [AP]	panayotou.anna@ucy.ac.cy	Yes
DE	Daniel Kölligan [DK]	daniel.koelligan@uni-wuerzburg.de	Yes
DK/SE/NO	Marie-Louise Nosch [MLN]	nosch@hum.ku.dk	Yes
ES	Carlos Varias García [CVG]	Carlos.Varias@uab.cat	Yes
FR	Françoise Rougemont [FR]	francoise.rougemont@cnrs.fr	Yes
FR	Julien Zurbach (DSG) [JZ]	julien.zurbach@gmail.com	Yes
GR	Vassilis Aravantinos [VA]	vass.aravantinos@gmail.com	Yes
IT	Anna Sacconi [AS]	anna.sacconi@uniroma1.it	Yes
NL	Fritz Waanders		No
UK	John Bennet (SG) [JBe]	d.j.bennet@sheffield.ac.uk	Yes
US	Thomas G. Palaima [TGP]	tpalaima@austin.utexas.edu	Yes

The following were discussed and decided upon:

1. Short report from the Secretary General, John Bennet

The SG noted those of our colleagues who had passed away since the last colloquium: Celestina Milani (4 October 1933 - 19 January 2016); Antonín Bartoněk (29 October 1926 - 30 May 2016); Jean-Pierre Olivier (6 May 1939 - 6 January 2020); Francisco Rodríguez Adrados (29 March 1922 - 21 July 2020); and Frieda Vandenabeele (9 July 1939 - 24 August 2020).

With the passing of Jean-Pierre Olivier, JBe as SG had co-opted Jan Driessen as the representative for Belgium; the Committee agreed to ratify that co-optation.

Since 2015, the SG acted as following:

- He maintained CIPeM's membership of the FIEC by paying its annual subscription each year, including 2021, and had attended on CIPeM's behalf the 15th FIEC Congress (in association with the Classical Association) in London (July 2019); a session relevant to CIPeM had been organised by Torsten Meißner on 'Writing Before the Greeks.'
- Invited Artemis Karnava (Crete) and Torsten Meißner (Cambridge) to co-organise the 15th Colloquium, initially planned for September 2020. Regrettably the colloquium had to be postponed due to the pandemic, was re-scheduled for September 2021, but was eventually cancelled altogether in May 2021. JBe and the co-organisers thanked CIPeM for their support and advice over this difficult decision.
- It had been decided to publish the papers for which abstracts had been submitted, and to hold virtual meetings of the relevant committees, plus two public lectures on new discoveries at Knossos and Ayios Vasilios (these had been attended by 374 and 303 people respectively, offering good publicity for our field).
- A publication agreement has been made with *Ariadne*, the journal of the Faculty of Philosophy of the University of Crete, for the proceedings to be published as a Supplement to the journal. *Ariadne* will fund the printed version of the volume to be distributed by Crete University Press (<https://www.cup.gr/>), but it will also dispose of it fully online (<http://www.phl.uoc.gr/ekdoseis/ariadniSupplement.php>).

Guidelines would be issued shortly and the deadline for submission was termed as 31 December 2021.

2. Committee reports

Reports from the three committees held virtually were delivered by the relevant spokesperson: Lisa Bendall (*Comité des signes*), Dimitri Nakassis (*Comité des instruments de travail*), and Federico Aurora (Committee on digital approaches to Aegean scripts). The CIPEM members listened carefully and asked each spokesperson to remain in contact with the relevant committee members for each area until the 16th Aegean Scripts colloquium in 2025.

3. Replacement of CIPEM members for CZ, NL, possibly other countries; discussion of the role and composition of CIPEM

JBe pointed out that, in relation to CIPEM membership, CZ has remained blank since Bartoněk's passing and that Fritz Waanders (NL) had indicated that he no longer had an interest in Mycenaean Studies; similarly Bulgaria was also unrepresented, as was the former Yugoslavia. The Committee did not feel it could make recommendations at this meeting specific to these cases, but the larger issue was raised of whether CIPEM is currently in contravention of its own Statutes (: LEJEUNE, M. 1966 *Comité International Permanent des Études Mycéniennes (CIPEM)*, *SMEA* 1, 129-132), circulated with the meeting Agenda; and, beyond that, whether a committee constituted like CIPEM – with national representatives and no funds – was appropriate as a professional organisation in the 21st century.

There ensued a lively discussion that included the following points: that CIPEM's affiliation with FIEC, and through it, with UNESCO should be retained given the generally unfavourable environment towards the Humanities; that the presence/absence of Mycenologists in countries would naturally ebb and flow, so a fixed roster was unlikely ever accurately to reflect the current situation; for early-career scholars/students, having a geographically based structure was advantageous; the size of the committee (smaller better than larger); was the committee an administrative group charged with various tasks (e.g. organising colloquia) or was it a society for Mycenaean Studies?

4. The 16th Aegean Scripts Colloquium in 2025

A proposal from CVG, Eugenio R. Luján and Alberto Bernabé to host the next Colloquium in Madrid in 2025 was tabled and welcomed by the Committee, which agreed to lend its support and offered its good wishes. As is customary, Eugenio R. Luján was co-opted to CIPEM to work with CVG to organise the colloquium. As host, CVG undertook to pay the FIEC subscription (currently €110) for the period up to and including the year of the colloquium.

5. Election of a new Secretary General to succeed John Bennet

JBe indicated his willingness to step down as Secretary General in order for the host of the next Colloquium to take over. The Committee unanimously agreed to elect CVG to be the Secretary General of CIPEM with immediate effect and until the next colloquium. The committee wished him well in this endeavour.

6. Any Other Business

All the CIPEM members thanked the organisers of the 15th colloquium for their hard work, in difficult times, and to JBe for his service as Secretary General.

TGP reminded the Committee of the resolution at the Ohrid colloquium that an archival repository for Mycenaean Studies be created; this had been met partially through the creation of PASP, but he notified the Committee that the future of PASP at the University of Texas was no longer secure beyond his own retirement.

23 September 2021

Resolutions of the *Comité des signes*

The Committee met on 22 September 2021 at 15.00 CET.

Chairs: Lisa Bendall, Maurizio Del Freo and Hedvig Landenius Enegren.

Attendees: John Bennet, Flavia Carraro, Matilde Civitillo, Cassandra Donnelly, Louis Godart, Anna Judson, Torsten Meißner (absent but sent written comment), Barbara Montecchi, Dimitri Nakassis, Tom Palaima, Juan Piquero, Vassilis Petrakis, Anna Sacconi, Ester Salgarella, Philippa Steele, Miguel Valério, Julien Zurbach.

Linear A

Sign A 372

The sign is attested on side B of the roundel **PYR Wc 4** and has no parallel in the Linear A signary. Erik Hallager suggested numbering the sign as A 372 (HALLAGER, E. 1996 *The Minoan roundel and other sealed documents in the Neopalatial Linear A administration*, Aegaeum 14, 197). During the discussion it was proposed to interpret the sign as a ligature formed by a sequence of two AB 120s. It was noted, however, that Linear A does not have ligatures formed by two identical ideograms (307 + 307 = A 638 is not a good parallel since A 307 was a transaction sign). It was therefore agreed to identify the sign as an independent ideogram with unknown value to be numbered as A 372 (see *Addendum* below for comments addressed to the chairs after the meeting).

Sign A 373

The first sign on the left of the roundel **KH Wc 2123** was interpreted by Hallager as a new Linear A ideogram and therefore numbered as A 373 (ANDREADAKI-VLAZAKI, M. & HALLAGER, E. 2007 New and unpublished Linear A and Linear B inscriptions from Khania, *Proceedings of the Danish Institute at Athens* 5, 13-15). The discussion centred on the fact that the sign is present on an erased surface and that photo and drawings seem to diverge and need to be checked again. On the other hand, it was noted that an ideogram is expected on a roundel. The issue was postponed to a future meeting.

Sign A 505 bis ('04' '708')

Reading based on autopsy by Jean-Pierre Olivier (cf. *Rapport* 2001-2005, 208). Based on the independent autopsy by Del Freo and Zurbach, it was agreed that the two signs did not form a juxtaposition. The proposal for a new sign A 505*bis* was therefore rejected.

Sign A 506 bis (08+04)

Reading based on autopsy by Olivier (*ibid.*). Based on the independent autopsy by Del Freo and Zurbach, it was agreed that Olivier's reading was correct.

Linear B*Sign *125 PYC*

The distinction between *124 CYP and *125 PYC was suppressed in *Austin Colloquium* 2000. In Copenhagen in 2015, however, it was objected that PYC is so frequently cited in the literature that it would be confusing to make a change. In the meantime, *125 PYC has been suppressed in *KT*⁶. After some discussion it was agreed to suppress *125 PYC since the standard practice is to suppress one sign if two retain the same value (in this case 'cyperus').

*Signs *141 vs *141 bis*

The distinction between *141 and *141*bis*, proposed by Godart in 2009, was accepted in Paris (*Études Mycéniennes* 2010). In Copenha-

gen in 2015, however, it was observed that *141 and *141bis could be endo-scribal variants and it was therefore proposed to suppress *141bis, but the decision was deferred. In the meantime *141bis has been introduced in ARN and PTT² as ARG and in PT³ as *AURb. The Copenhagen deferment has thus not been respected. Consensus was not possible to reach and a final decision has been deferred.

Sign *155^{VAS}+NI

This was a ligature attested on MY Ue 661.1 but not included in the *Salamanca convention*, nor formally accepted in any of the subsequent Colloquia. After some discussion, in which reservations were put forward about the ligature having a ‘bottom up’ problem (vase sign on top of NI), it was agreed that the transcription was substantially correct. It was recommended, however, that the ‘bottom up’ problem be highlighted in the critical apparatus.

General topics

It was recommended not to use transliterations unless these are specifically approved by the CIPEM colloquia (in order to avoid cases like *65 = *ju* and *79 = *zu*, depending on authors).

The problem of transliteration of Linear A ligatures (X+Y) and juxtapositions (‘X’ ‘Y’) was raised. It was suggested that the problem be reconsidered by comparing existing solutions (*GORILA*; PUGLIESE CARRATTELLI, G. 1945 *Le iscrizioni preelleniche di Haghia Triada in Creta e della Grecia peninsulare*, *MonAnt* 40, col. 421-610; RAISON, J. & POPE, M. 1980 *Corpus transnuméré du linéaire A*) and new proposals (SALGARELLA, E. 2020 *Aegean Linear Script(s): rethinking the relationship between Linear A and Linear B*).

It was suggested to form a committee that is active between colloquia to discuss urgent or pending issues.

Addendum

In an email after the meeting two participants contested the vote about A 372. No other participants have come forward with concerns about this issue. However, since the novel Zoom format of the meeting may have created confusion in the voting procedure, the question will be

addressed again in an interim meeting of the *Comité des Signes* and submitted to the attention of the CIPEM.

22 September 2021

Resolutions of the *Comité des instruments de travail*

September 21, 2021, 16.00 Athens

Chairs: Cynthia Shelmerdine, Dimitri Nakassis, and Federico Aurora

Present: John Bennet, Flavia Carraro, Matilde Civitillo, Louis Godart, Anna Sacconi, Tom Palaima, Alessandro Greco, Philippa Steele, Julien Zurbach

Recommendations and statements are set in italics:

1. Aurora raised the issue, discussed in the committee during the Copenhagen colloquium in 2015, whether the committee ought to continue to serve as a body between CIPeM meetings. Nakassis pointed out that the committees are purely advisory to the main CIPeM body so the committee could give advice but not issue any binding resolutions. Bennet agreed and suggest that the committee set itself up as an advisory board. Palaima was concerned with the need for such advice, given the rapidly accelerating pace of publication in an increasingly digital world; in certain cases, decisions could be passed to the Secretary-General. Shelmerdine suggested, and Palaima agreed, that the committees should be resources to scholars for five year periods, especially with respect to new publications and new tablets. Shelmerdine suggested, summarizing the sense of the discussion, that during the periods in between colloquia, the committee chairs can be consulted if questions arise in the presentation of

materials. Nakassis raised the question of how committee chairs are selected, if these committees will serve augmented roles. Shelmerdine and Civitillo suggested that CIPEM have some kind of rules or bylaws set in writing.

We recommend that during periods between CIPEM colloquia, the committee chairs of the instruments de travail can be consulted if questions arise in the presentation of materials. We additionally recommend that the secretary general be included in such consultations.

2. The committee discussed continuing work on lexica, including the *Suplemento al Diccionario Micénico (DMicSupl)* and ongoing work on a second edition of the *Diccionario (DMic)* as well as Linear B General Indices. Godart, Palaima and Shelmerdine expressed that the field owes an enormous debt of gratitude to Francisco Aura Jorro and the entire team working on *Diccionario Micénico*. Palaima was happy to see the inclusion of multiple authors in the *Suplemento* and highlighted the need for such projects to involve younger scholars who can serve as successors. Some mechanism for drawing attention to new scholarly aids was discussed.

We express our gratitude to Aura Jorro and the entire Diccionario Micénico team (Alberto Bernabé, Eugenio Luján, Juan Piquero Rodríguez, and Carlos Varias García) for their contributions to the field.

3. Godart raised the issue of rapid publication; he, Shelmerdine and Palaima expressed enthusiasm for the supplement to *GORILA* currently being undertaken by Del Frego and Zurbach. Zurbach thanked these committee members and expressed the immense amount of work required to produce the supplement. Godart mentioned the model of Pylos (the rapid and interim publication of texts) and suggested that the rapid publication of the Ayios Vasileios texts be encouraged. Bennet informed the committee that new inscribed fragments are still being found and that the complete excavation of the archaeological context in which the tablets are being found should be completed soon. Steele added that rapid publication is also important in other contexts, including Cypro-Minoan documents. Aurora added the importance of digital publication to supplement tra-

ditional approaches; this will be discussed further at the new CIPEM committee on digital approaches. Although new models for publication exist, there are also institutional constraints on how scholars can publish, since certain publications are critical to career advancement and promotion.

We express enthusiasm for new corpora and other instruments de travail, and affirm the importance of rapid publication of new texts and paratextual data.

4. Palaima praised the widespread use of drawings of inscriptions by Godart in the monumental standard corpus publications of Aegean inscriptions for forty-plus years now; and we all thanked Louis, for routinely allowing their use in our scholarly publications with magnanimous pleasure. Louis expressed his great satisfaction that his work has been so helpful to research in our field.
5. Greco showed an example of detailed drawings from high-resolution images derived from RTI models.

21 September 2021

**Resolutions of the *Committee on digital approaches
to Aegean Scripts***

September 22, 2021, 18.00 Athens

Chairs: Federico Aurora, Alessandro Greco, and Dimitri Nakassis

Present: Lisa Bendall, John Bennet, Flavia Carraro, Matilde Civitillo, Cassandra Donnelly, Elena Džukeska, Anna Judson, Torsten Meißner, Barbara Montecchi, Tom Palaima, Juan Piquero Rodríguez, Philippa Steele, Miguel Valério, Julien Zurbach

Recommendations and statements are set in italics:

1. Nakassis read the charge set to the committee by the secretary-general of CIPEM, John Bennet: “There is a clear need for a coordinated approach to digital presentation, dissemination and analysis in Aegean scripts. The organisers have therefore decided to inaugurate a new committee [...] charged with developing this aspect of our field. Obvious needs are a CIPEM (or field-based) website, expansion of digitally available images / texts, the expansion/development of digital analytical tools, both visual + textual.”
2. Nakassis suggested that this committee should continue to work between CIPEM colloquia to facilitate scholarly conversations about digital tools. Bendall agreed. Nakassis suggested that CIPEM ought to consider rules and regulations about the composition of the committee in the future. Palaima noted that there’s never been any sense of exclusion in such committees, but we should avoid it, and that the number of people on the committee need not be limited.

We recommend that the committee continue to work between CIPEM colloquia.

3. The chairs of the committee brought up the idea of a CIPEM website. Meißner said that it was long overdue. Bendall stressed the difficulties of maintaining such a site; previous incarnations had been initiated but abandoned by Thompson and Nakassis. Aurora proposed a collaborative digital environment that focused on sharing and exchanging data. Nakassis read the proposal of Karnava, who stressed the need for shared responsibility, lists of colloquia and participants, archival materials, and preserving the multilingual character of the field. Judson suggested that parts of the website could be edited by multiple authorized users. Palaima suggested contact info for all Mycenologists; Bendall suggested that some parts of the website could be private. Judson brought up the important issue of funding. Meißner suggested a designated webmaster, brought up the overlap between this committee and the instruments de travail, and stressed that we shouldn't duplicate our efforts. Aurora discussed the advantages of linked data and brought up the parallels of papyri.info and epigraphy.info, suggested that the Institute of Classical Studies (ICS) would be a good host for the website, at least at first. Palaima brought up the need for continuous maintenance of the site and the difficulties of small budgets to support such important efforts. Nakassis suggested that we eventually need a steering committee for the website; Aurora suggested an initial working group to establish the website which would then be handed over to a steering committee. Judson asked how the composition of the working group would be determined, and Bennet said that he would be happy to begin that process. Bendall stressed the need for national diversity, and Judson added the need for diversity across gender and career stage as well. Bendall suggested the establishment of bylaws about the election and rotation of the steering committee. Aurora emphasized the importance of the integration between digital datasets and that this should be a long-term goal of our collaborations.

We recommend that CIPEM establish a working group to establish a digital collaboration initiative similar to papyri.info and epigraphy.info, the most visible aspect of which will be a website that will serve as a starting point for this collaborative work on Aegean and Cypriot

syllabic scripts. This group would also propose bylaws that would govern the administrative structure of this initiative, including a steering committee.

4. Montecchi presented on the INSCRIBE project's work, focusing on 3D models.

We congratulate the INSCRIBE team on their innovative research.

5. Greco presented on the *pa-i-to* Project's work, focusing on RTI and high-resolution illustration.

We congratulate the pa-i-to Project on its innovative research.

6. Aurora brought up the issue of encoding data digitally and the prospects of creating a version of EpiDoc for Linear B and other Aegean scripts. Bendall asked what advantages this would bring; Aurora responded with a number of ways in which such encoding would facilitate comparison of editions, search functionality, and so on. Greco praised databases such as *DAMOS* and *LiBER*, and suggested that future work coordinate with them.

We recommend the development of shared guidelines and practices to facilitate collaboration between research teams and to avoid reduplication of effort.

7. Nakassis suggested that the discussion indicated that there was a need for working groups to discuss common approaches. Montecchi agreed and said that we often face the same or similar problems. Bendall suggested that the digital approaches committee could facilitate such interactions, with the website working group focusing on the website. Greco suggested that the time was right for a new collaborative spirit among Mycenologists working with digital data, a sort of digital Wingspread that would facilitate the development of shared standards and protocols. Workshops and conferences were suggested as ways to establish these connections.

We recommend that the committee work to facilitate discussions about digital approaches in between CIPEM meetings, given the evident interest in these technologies.



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Indexes

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