

This pdf of your paper in *Understanding Relations Between Scripts* belongs to the publishers Oxbow Books and it is their copyright.

As author you are licenced to make up to 50 offprints from it, but beyond that you may not publish it on the World Wide Web until three years from publication (July 2020), unless the site is a limited access intranet (password protected). If you have queries about this please contact the editorial department at Oxbow Books ([editorial@oxbowbooks.com](mailto:editorial@oxbowbooks.com)).

# Understanding Relations Between Scripts

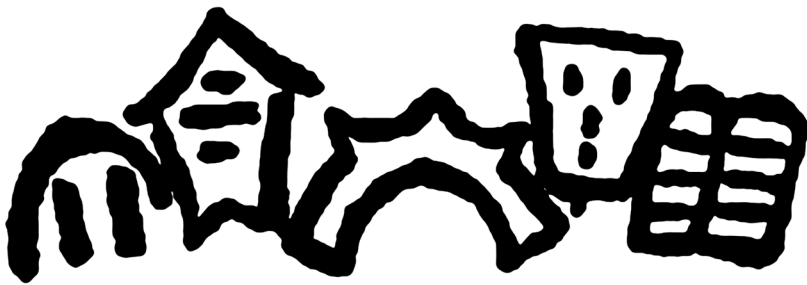
AN OFFPRINT FROM

# Understanding Relations Between Scripts

The Aegean Writing Systems

*Paperback Edition: ISBN 978-1-78570-644-8*  
*Digital Edition: ISBN 978-1-78570-645-5 (epub)*

*edited by*  
Philippa M. Steele



 OXBOW | books

© Oxbow Books 2017  
Oxford & Philadelphia  
[www.oxbowbooks.com](http://www.oxbowbooks.com)

Published in the United Kingdom in 2017 by  
OXBOW BOOKS  
The Old Music Hall, 106–108 Cowley Road, Oxford OX4 1JE

and in the United States by  
OXBOW BOOKS  
1950 Lawrence Road, Havertown, PA 19083

© Oxbow Books and the individual contributors 2017

Paperback Edition: ISBN 978-1-78570-644-8  
Digital Edition: ISBN 978-1-78570-645-5 (epub)

A CIP record for this book is available from the British Library

Library of Congress Cataloging-in-Publication Data

Names: Steele, Philippa M., editor.

Title: Understanding relations between scripts : the Aegean writing systems /  
edited by Philippa M. Steele.

Description: Oxford ; Philadelphia : Oxbow Books, 2017. | Includes  
bibliographical references.

Identifiers: LCCN 2017015744 (print) | LCCN 2017019903 (ebook) | ISBN  
9781785706455 (epub) | ISBN 9781785706462 (mobi) | ISBN 9781785706479  
(pdf) | ISBN 9781785706448 (pb)

Subjects: LCSH: Inscriptions, Linear B. | Inscriptions, Cypro-Minoan. |  
Inscriptions, Linear A. | Writing--Aegean Sea Region.

Classification: LCC P1035 (ebook) | LCC P1035 .U53 2017 (print) | DDC  
487/.1--dc23

LC record available at <https://lcn.loc.gov/2017015744>

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopying, recording or by any information storage and retrieval system, without permission from the publisher in writing.

Printed in Malta by Gutenberg Press Ltd

For a complete list of Oxbow titles, please contact:

UNITED KINGDOM  
Oxbow Books  
Telephone (01865) 241249, Fax (01865) 794449  
Email: [oxbow@oxbowbooks.com](mailto:oxbow@oxbowbooks.com)  
[www.oxbowbooks.com](http://www.oxbowbooks.com)

UNITED STATES OF AMERICA  
Oxbow Books  
Telephone (800) 791-9354, Fax (610) 853-9146  
Email: [queries@casemateacademic.com](mailto:queries@casemateacademic.com)  
[www.casemateacademic.com/oxbow](http://www.casemateacademic.com/oxbow)

Oxbow Books is part of the Casemate Group

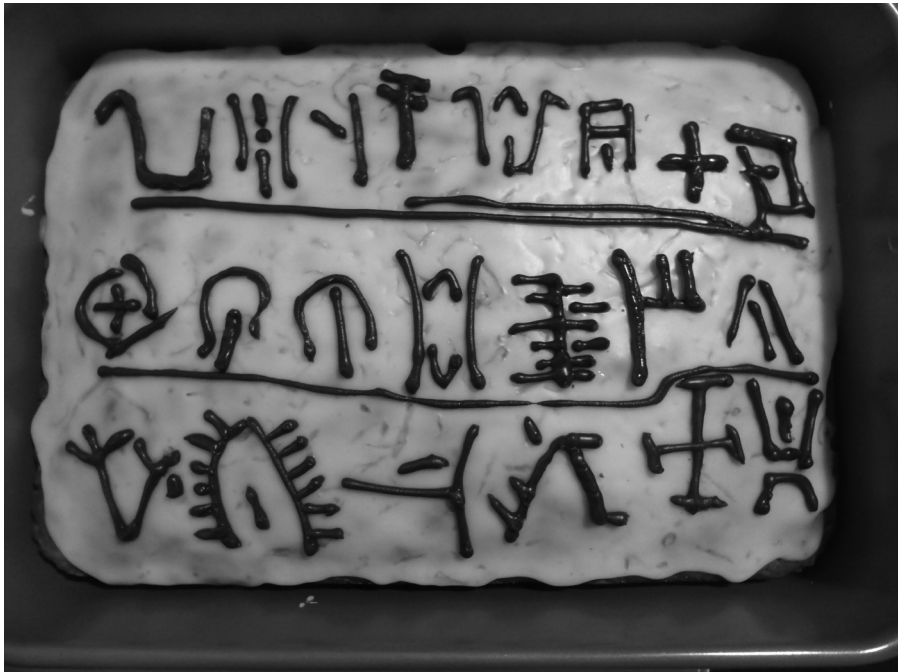
Front cover image: Linear B tablet. Photograph courtesy of Silvia Ferrara.

Back cover: Cypro-Minoan tablet. Photograph courtesy of Silvia Ferrara.

*To the memory of our dear friend, Anna Morpurgo Davies*



*The conference attendants, taken at the dinner in the Parlour Room, Magdalene College. Photo by James Bowe.*



*Cake depicting the early Cypro-Minoan inscription ##001 ENKO Atab 001, made by Anna Judson. Photo by Anna Judson.*

# Contents








List of figures .....	ix
Preface .....	xii
Abbreviations.....	xiv
1. Introduction: The Aegean writing systems.....	1
<i>Philippa M. Steele</i>	
2. Another beginning's end: Secondary script formation in the Aegean and the Eastern Mediterranean .....	7
<i>Silvia Ferrara</i>	
3. Cretan 'Hieroglyphic' and the nature of script .....	33
<i>Roeland P.-J.E. Decorte</i>	
4. Linear B script and Linear B administrative system – different patterns in their development .....	57
<i>Helena Tomas</i>	
5. Reconstructing the matrix of the 'Mycenaean' literate administrations .....	69
<i>Vassilis Petrakis</i>	
6. From Linear B to Linear A: The problem of the backward projection of sound values.....	93
<i>Philippa M. Steele and Torsten Meißner</i>	
7. Processes of script adaptation and creation in Linear B: The evidence of the 'extra' signs .....	111
<i>Anna P. Judson</i>	
8. Script comparison in the investigation of Cypro-Minoan.....	127
<i>Miguel Valério</i>	

9. Is there anything like a Cypro-Minoan 3 script?..... 162  
*Yves Duhoux*

10. Script and language on Cyprus during the Geometric Period:  
An overview on the occasion of two new inscriptions..... 180  
*Markus Egetmeyer*

Bibliography..... 202

## List of figures

- Figure 3.1 CHIC #256/CMS VI,95a-c. Evans' 'keeper of the swine'.  
Figure 3.2 CHIC #262/CMS XII,117. Face a-b with supposed formulae 036-092-031  and 038-010-031 .
- Figure 3.3 Instances of 044-005  with recurring CHIC signs.  
Figure 3.4 Instances of just 044-005  and 044-049  on a single seal-face according to CHIC.
- Figure 3.5 CHIC #56.  
Figure 3.6 Selected instances of 044-005  with recurring Jasink signs.  
Figure 3.7 Left: CHIC #300c/CMS X,52c. Right: CHIC #131/CMS II,6,179.  
Figure 3.8 CHIC #309a.  
Figure 3.9 Impressions and drawings of #308g-d in CHIC. Image courtesy of J.-P. Olivier and L. Godart.
- Figure 3.10 All instances of 044  on clay documents in CHIC.  
Figure 3.11 Phonetic complementation in Mayan: 'jaguar' in logographic, phonetic and phonetically complemented logographic form.  
Figure 3.12 The royal name Yaxun Balam or 'Bird-Jaguar' on Yaxchilan lintel 43 and lintel 30 and further examples of preposed, postposed and full phonetic complementation in iterations of the word WAY 'spirit/co-essence', and MUYAL 'cloud'.  
Figure 3.13 Left: opening lines of the famous law code of Hammurabi. Right: 'dingir' in art, accompanying a ewe suckling a lamb on a 13th century BC cylinder from Ashur.
- Figure 3.14 Elements signifying 'night animals', human body parts, and the 'syllabic doubling sign' accompanying the word 'ka-wa'.  
Figure 3.15 Possible ligatures in sealings found on the Knossos crescent nodules.  
Figure 3.16 Tentative identification of script values in figurative sealing CMS II,8,195.
- Figures 3.17 and 3.18 CHIC #207b/CMS II,1,420b and CHIC#274a/CMS XII,105a.  
Figure 3.19 Row 1: CHIC #298d/CMS XI,14b; CHIC #298b/CMS XI,14d; CHIC #147/CMS II,8,88. Row 2: CHIC #268a/CMS III,229a; CHIC #309b; CHIC #309g. Row 3: CHIC #268b/CMS III,229b; CHIC #161/CMS II,8,83.
- Figure 5.1 The three-sided bar from the Knossos 'Hieroglyphic Deposit' **KN Hg 01** = CHIC #048; and the three-sided bar **MA 2** from the Malia 'Dépôt Hiéroglyphique'.

- Figure 5.2 CH commodity signs \*164-\*165 on the three-sided bar from the Knossos 'Hieroglyphic Deposit' **KN Hg 01** = *CHIC* #048 and LA commodity sign AB 180 on tablets **MA 4** and **MA 6** from the Malia 'Dépôt Hiéroglyphique'.
- Figure 5.3 Klasmatograms (fractional signs) used on CH clay documents. Numbers refer to *CHIC* documents. Images after *CHIC*, 429–430, rearranged by the author. Courtesy of Professors Louis Godart and Jean-Pierre Olivier.
- Figure 7.1 The Linear B core syllabary.
- Figure 7.2 The Linear B extra signs.
- Figure 7.3 Correspondences of labialised and palatalised signs in the Cretan scripts.
- Figure 7.4 *twe* (KN So(1) 4430.b: after *COMIK*<sup>2</sup>).
- Figure 7.5 AB87 (HT 126.b2|-3: after *GORILA*<sup>1</sup>).
- Figure 7.6 AB118 (HT 13.5, KN 2.2, KN Za 19.2: after *GORILA*<sup>5</sup>).
- Figure 7.7 L KN Oa 730: after *COMIK*<sup>1</sup>; PY Ja 749.
- Figure 7.8 *dwo* (KN Fh 360.b: after *COMIK*<sup>1</sup>; PY Ep 539.12).
- Figure 8.1 Olivier's general table of CM 1–3 syllabograms.
- Figure 8.2 Attestations of form CM1 39.
- Figure 8.3 Attestations of form CM2 49.
- Figure 8.4 Homomorphous and homophonous signs of simple design in the Aegean-Cypriot scripts.
- Figure 8.5 Consensual or near-consensual hypothetical values of Cypro-Minoan syllabograms from comparative approaches.
- Figure 8.6 Phonetic values of Linear A syllabograms.
- Figure 8.7 ENKO Atab 001.
- Figure 8.8 The signary of ENKO Atab 001.
- Figure 8.9 Comparison of LA 60/*ra*<sup>?</sup>, CM0 01, and CM 87.
- Figure 8.10 Comparison of LA 08/*a*, CM0 02, and CM 102.
- Figure 8.11 Comparison of LA 31/*sa*<sup>??</sup>, CM0 03, and CM 82.
- Figure 8.12 Comparison of LA 05/*to*<sup>?</sup> and 06/*na*, CM0 04, and CM 08.
- Figure 8.13 Comparison between LA 54/*wa*, CM0 06, and CM 95.
- Figure 8.14 Comparison between LA 02/*ro*<sup>?</sup>, CM0 07 and CM 05.
- Figure 8.15 Comparison between CM0 08 and CM 69.
- Figure 8.16 Diagnostic and optional traits of LA 56/*pa*<sub>2</sub><sup>??</sup> and 57/*ja*.
- Figure 8.17 Comparison between LA 77/*ka*<sup>??</sup>, CM0 09 and CM 25.
- Figure 8.18 Comparison between LA 26/*ru*<sup>??</sup>, CM0 10 and CM 28.
- Figure 8.19 Comparison between LA 27/*re*<sup>??</sup>, CM0 11, and CM 24.
- Figure 8.20 Hypothesised developments LA 27/*re*<sup>??</sup> > CM 28 and LA 26/*ru*<sup>??</sup> > CM 24 in parallel.
- Figure 8.21 Comparison between LA 55/*nu*<sup>??</sup>, CM0 12, and CM 68.
- Figure 8.22 Comparison between LA 04/*te*<sup>?</sup>, CM0 13, and CM 07.

- Figure 8.23 Comparison between LA 09/*se*<sup>2</sup>, CM0 14, and CM 44.
- Figure 8.24 Comparison between LA 37/*ti*, CM0 15, and CM 23.
- Figure 8.25 Comparison between LA 30/*ni*<sup>2</sup>, CM0 16, and CM 67.
- Figure 8.26 Comparison between LA 79/*zu*<sup>??</sup> and CM0 17.
- Figure 8.27 Comparison between LA 01/*da*, CM0 18, and CM 04.
- Figure 8.28 Comparison between LA 38/*e*<sup>2</sup>, CM0 19, and CM 38.
- Figure 8.29 Comparison between LA 24/*ne*<sup>??</sup>, CM0 20, and CM 02.
- Figure 8.30 Comparison between LA 28/*i*, CM0 21, and CM 104.
- Figure 8.31 Assessment of ENKO Atab 001 sign forms in comparative terms.
- Figure 8.32 Comparison between CM 87 and CGk *la*.
- Figure 8.33 Comparison between LA 53/*ri*, CM 09, and CGk *li*.
- Figure 8.34 Comparison between CM 05 and CGk *lo*.
- Figure 8.35 Comparison between CM 24 and Paphian CGk *le*.
- Figure 8.36 Comparison between CM 75 and CGk *ra*.
- Figure 8.37 Comparison between CM 33 and CGk *re*.
- Figure 8.38 Comparison between CM 97 and CGk *ro*.
- Figure 8.39 Summary of the correspondences proposed for the liquid series of Linear A, Cypro-Minoan and Cypro-Greek.
- Figure 8.40 Hypothetical values assigned to signs discussed in section 4 by previous scholarship (1973–2013) *vis-à-vis* the author's suggestions.
- Figure 10.1 Palaepaphos Tomb 49:16/*HoChyMin* ##170. PPAP Mins 001.
- Figure 10.2 Palaepaphos Tomb 49:17 (Karageorghis 1983, I, 61)/*HoChyMin* ##171. PPAP Mins 002.
- Figure 10.3 Palapaphos Tomb 49:18 (Karageorghis 1983, I, 61)/*HoChyMin* ##172. PPAP Mins 003.
- Figure 10.4 Palaepaphos Tomb 49:A (Karageorghis 1983, I, 73)/*HoChyMin* ##189. PPAP Pblo 001.
- Figure 10.5 Handles, Palaepaphos Tomb 49:78, (a) and (b).
- Figure 10.6 Handle Palaepaphos Tomb 61: Pyre A.
- Figure 10.7 Stone, Palaepaphos Tomb 67:D.
- Figure 10.8 Jug of Plain White III, Palaepaphos Tomb 69:66.
- Figure 10.9 Bronze bowl, Palaepaphos Tomb 235:10.
- Figure 10.10 Bronze bowl, Palaepaphos surface find/*HoChyMin* ##186. PPAP Mvas 001.
- Figure 10.11 Vase from a tomb near the mountain peak Maokremmos.
- Figure 10.12 Handle fragment, Kition/*HoChyMin* ##147. KITI Avas 018.
- Figure 10.13 Sign 107 in ##137, ##143, ##147, ##148 and three standardised computer fonts.
- Figure 10.14 Pottery sherd from the sanctuary at Kition-*Bamboula*.
- Figure 10.15 Pottery sherd from Kilise Tepe.

## Preface

This book is the outcome of a conference held in Cambridge on 20–21 March 2015 in the Faculty of Classics of the University of Cambridge. Following a partial solar eclipse on the morning of the 20th (sadly obscured by cloud in Cambridge), nine papers were delivered by this volume's contributors over the course of the two days, culminating in a delightful (and delicious) conference dinner hosted by Magdalene College.

Many thanks are owed to all involved in the conference. My first thanks go to the speakers/contributors themselves, for being so generous with their time and ideas, as well as to everyone who attended the conference, for making it such a success. I know that the conversations and discussions that went on during the event added a great deal to this ensuing publication. Over the two days, everything was set up for us beautifully by the Faculty's custodian, Tony Brinkman, and there were several people who volunteered to help out with running the event: above all my partner, James Bowe, who was working wonders behind the scenes throughout, along with my colleagues Ester Salgarella, Matthew Scarborough, Sarah Finlayson, Moreed Arbabzadah and even two of the speakers themselves, Anna Judson and Roeland Decorte. The conference would not have been able to take place without the generous contributions of the British Academy and the John Chadwick Fund of the Faculty of Classics.

Further thanks are owed to everyone who had a hand in shaping this edited volume. Giorgios Douros's freely available Aegean, Cretan and Cypro-Minoan fonts were indispensable in the preparation of most chapters, where special characters were essential to illustrate our arguments. The editors at Oxbow have been very helpful at every turn, and I would like to express my gratitude in particular to Clare Litt, Julie Gardiner, Mette Bundgaard, Katie Allen, Becca Watson and Hannah McAdams for all their hard work and attention to detail at every stage of the book's production. I am also grateful to everyone who played a role in the peer review process in the early stages of manuscript preparation, and to the contributors for dealing attentively with queries and edits. My Mother, Anne, deserves special mention for the immeasurable help she has given me throughout my editorial activities on this book. The final stages of the publication process were completed during my tenure of a European Research Council grant (no. 677758), as Principal Investigator of the project *Contexts of and Relations between Early Writing Systems* (CREWS), also held at the Faculty of Classics in Cambridge.

My final words are devoted to a dear colleague and friend, who is sadly no longer with us: Anna Morpurgo Davies. It is impossible to express in a few words just how

great a debt is owed to Anna by all of us who work in ancient linguistics and epigraphy, not only for her insights and intellect but above all for her generosity and kindness. I will always be grateful for the support she gave me when I was researching for my doctorate and forging the beginnings of an academic career, for writing references and giving advice, for her incisive comments on my work, and above all for her warmth and good humour. This volume is dedicated to her memory.

# Abbreviations

- CDE Chantraine, P. (1968) *Dictionnaire étymologique de la langue grecque: Histoire des Mots*, Paris.
- CHIC Olivier, J. P. and Godart, L. (1996) *Corpus Hieroglyphicarum Inscriptionum Cretae, Études Crétoises* 31, Paris.
- CM I Ferrara, S. (2012) *Cypro-Minoan Inscriptions. Volume I: Analysis*, Oxford.
- CM II Ferrara, S. (2013) *Cypro-Minoan Inscriptions. Volume II: Corpus*, Oxford.
- CMS *Corpus of Minoan and Mycenaean Seals*, Heidelberg.
- CMS II.6 Platon, N., Müller, W. and Pini, I. with contributions of other authors (1999) *Iraklion, Archäologisches Museum. Teil 6. Die Siegelabdrücke von Aj. Triada und anderen zentral- und ostkretischen Fundorten, unter Einbeziehung von Funden aus anderen Museen. Corpus der minoischen und mykenischen Siegel II:6*. Berlin, Mann.
- CMS V S3 Pini, I. with contributions of numerous other authors (2004) *Kleinere Griechische Sammlungen. Supplementum 3. Neufunde aus Griechenland und der Westlichen Türkei. Corpus der minoischen und mykenischen Siegel V Supplement 3: 1–2*. Berlin, Mann.
- COMIK Chadwick, J., Godart, L., Killen, J.T., Olivier, J.-P., Sacconi, A. and Sakellarakis, I.A. (1986–1998) *Corpus of Mycenaean Inscriptions from Knossos, vols 1–4. Istituto per gli Studi Micenei ed Egeo-Anatolici: Incunabula Graeca LXXXVIII*, Cambridge/Roma.
- DMic Aura Jorro, F. (1985–1993) *Diccionario micénico, vols I–II. Diccionario griego-español*. Madrid, Instituto de Filología.
- Docs<sup>1</sup> Ventris, M. G. F. and Chadwick, J. (1956) *Documents in Mycenaean Greek*, Cambridge.
- Docs<sup>2</sup> Ventris, M. G. F. and Chadwick, J. (1973) *Documents in Mycenaean Greek*, 2nd edition, Cambridge.
- GORILA Godart, L. and Olivier, J.-P. (1976–1985) *Recueil des Inscriptions en Linéaire A, vols I–V, Études Crétoises* 21: 1–5, Paris.
- HoChyMin Olivier, J.-P. (with the collaboration of F. Vandenabeele) (2007) *Édition holistique des textes chypro-minoens*, Pisa/Rome.
- ICS<sup>2</sup> Masson, O. (1983) *Les inscriptions chypriotes syllabiques: recueil critique et commentée*, 2nd edition, Réimpression augmentée, Paris.
- Kouklia Masson, O. and Mitford, T. B. (1986) *The Syllabic Inscriptions of Kouklia*, Constanz.
- LGPN IIIA Fraser, P.M. and Matthews, E. (1997) *A Lexicon of Greek Personal Names, vol. IIIA, Peloponnese, Western Greece, Sicily, Magna Graecia*, Oxford.

- LIV Rix, H., Kümmel, M., Zehnder, T., Lipp, R. and Schirmer, B. (2001) *Lexikon der indogermanischen Verben. Die Wurzeln und ihre Primärstammbildungen*, 2nd edition, Wiesbaden.
- LSJ Liddell, H.G., Scott, R., Jones, H.S., McKenzie, R. and Glare, P.G.W. (1996) *A Greek-English Lexicon*, 9th edition, with a revised supplement, Oxford.
- Μεθώνη 2012 M. Besios, Tsiphopoulos, G. and Kotsonas, A. (eds 2012), *Μεθώνη Πιερίας ι: Επιγραφές, χαράγματα και εμπορικά σύμβολα στη γεωμετρική και αρχαϊκή κεραμική από το 'Υπόγειο' της Μεθώνης Πιερίας στη Μακεδονία*, Thessaloniki.
- NIL Wodtko, D. S., Irslinger, B. and Schneider, C. (2008) *Nomina im indogermanischen Lexikon*, Heidelberg.
- PMK1 Evans, A. (1921) *The Palace of Minos at Knossos*, vol. I.
- PMK4 Evans, A. (1935) *The Palace of Minos at Knossos*, vol. IV.
- Rantidi Mitford, T. B. and Masson. O (1983) *The Syllabic Inscriptions of Rantidi-Paphos*, Constanz.
- SM1 Evans, A. J. (1909) *Scripta Minoa, The Written Documents of Minoan Crete with Special Reference to the Archives of Knossos*, Volume I, Oxford.
- SM2 Evans, A. J. (1952) *Scripta Minoa II, The Written Documents of Minoan Crete with Special Reference to Archives of Knossos* (ed. Myres, J.), Oxford.



# Chapter 5

## Reconstructing the matrix of the ‘Mycenaean’ literate administrations<sup>\*</sup>

*Vassilis Petrakis*

During the Third Palace period, spanning from the end of the Second Palace period administrations at the close of the Late Minoan (hereafter LM) IB phase to the end of the Late Bronze Age (hereafter LBA) IIIB phases, literate administrative activity has been identified in a considerable number of southern Aegean sites from coastal Thessaly to Crete. Even a cursory survey of the material reveals three developments that were without precedents in the Aegean: the almost exclusive restriction of writing to administrative use, its considerable expansion in regions that had never been truly literate before (the Greek Mainland) and an astonishing level of uniformity, observed in the typology of the documents used, the uniform spelling rules of the shared writing system (Linear B, hereafter LB), as well as in text-formatting techniques, specific palaeographic traits and even technical vocabulary, offices and titles. This is the general picture, painted in the broadest possible strokes. This paper is concerned

---

<sup>\*</sup>This paper is a slightly modified version of the oral presentation delivered at the symposium. It reflects a further development of ideas first put forward during a Mycenaean Seminar given on 16 January 2013 (Petrakis 2014) that will hopefully be dealt with in a much longer format in the future. I should like to thank Pippa Steele for her kind invitation and arrangement for accommodation during the excellent and stimulating occasion she put together, as well as for her editorial patience. Helena Tomas is also thanked for her review of the final draft of this chapter. For feedback and stimulating discussion of these ideas at Cambridge I am also grateful to Yves Duhoux, Silvia Ferrara, Anna Judson and Torsten Meißner. I am grateful to Oliver Dickinson, Georgia Flouda, Erik Hallager, Walter Gauss, Artemis Karnava, Olga Krzyskowska, Tom Palaima, Diamantis Panagiotopoulos, Ingo Pini, Todd Whitelaw, Jörg Weilhartner and Judith Weingarten for discussions pertaining to arguments included herein on other occasions, and again Tom Palaima for the opportunity to present some of these ideas to a broader audience during my visit to PASP in the spring of 2016. I wish to thank Artemis Karnava and Kevin Pluta for permission to cite their unpublished doctoral theses; Diamantis Panagiotopoulos for an early draft of his study of Third Palace period sealing practices; Jean-Pierre Olivier and Louis Godart for the use of images for the figures that accompany this paper; Adamantia Vasilogamvrou for permission to refer to still unpublished material from her excavations at Ayios Vasileios in Laconia; and Alexandra Salichou for constructive criticism and everything else. It is my honour and pleasure to acknowledge that an early stage of this research was supported by the Michael Ventris Memorial Award for 2011.

with the reconstruction of the conditions in which it came into being; it is in this sense that the ‘matrix’ in my title is intended.

Any attempt to reconstruct the conditions in which the Third Palace period (or ‘Mycenaean’<sup>1</sup>) literate administrations could have taken shape must necessarily be composed of certain seamlessly intertwined questions concerning the place, date and socio-political context of the system’s emergence, its degree of reliance on the earlier Cretan systems and the reasons behind those features that we consider as innovations. Here I focus on the relationship of these Third Palace period administrations to systems (literate or not) that had been used earlier in the Aegean and stress its probable implications for any reconstruction of the ‘matrix’ of these administrations. In order to assess this relationship, I propose to begin by focusing primarily on the administrative document types associated with the LB writing system and their ancestries, although other epigraphic features will also be brought into the discussion.

## 1. The systemic unity of the Third Palace period administrations

A typological survey of these different document types readily reveals that these function in two distinct yet overlapping and complementary ‘modes’ (i.e. ways of conveying significant information): one literate (involving the employment of writing on various tablet formats, nodules and labels) and one that I have chosen to call *para-literate* or *ad-literate* (involving the action and effect of sealing on a variety of documents). Table 5.1 shows the distribution of the various document types employed by these administrations in the southern Aegean of the time (for a map showing the distribution of the different types of sealings see Panagiotopoulos 2014, 5, fig. 1). At first sight, it might be arguable that the development of the document types could have followed a trajectory different from that of the LB script itself. This position has been indeed entertained by Bennet (2005, 270) and Tomas (2012b; this volume). However, there are some strong indications favouring the *systemic unity* between script and administrative document types, as well as between the two aforementioned administrative ‘modes’.

First, we need to carefully consider that frequently cited fact, namely that LB is only known to have been used for administrative purposes, and especially on those documents whose distribution is shown on Table 5.1.<sup>2</sup> Although some restricted (but

<sup>1</sup> Throughout the paper, a deliberate attempt has been made to suppress the term ‘Mycenaean’ and the pseudo-ethnic connotations it may carry (cf. also Bennet 2005, 270–1). The chronological term ‘Third Palace period’ (coined by Dickinson 1994, 13, fig. 1.2) is favoured here as a convenient reference to the LBA II–IIIB southern Aegean, nicely underscoring a degree of continuity from the preceding First and Second Palace periods, which in Dickinson’s scheme correspond to the Protopalatial and Neopalatial respectively. As they efficiently emphasise diachronic associations in Aegean administrations, Dickinson’s terms are used throughout this paper.

<sup>2</sup> This statement invites some comment on two categories of administrative documents that have been excluded from Table 5.1, namely inscribed stirrup jars and the clay stoppers that secured their spouts. This is no special pleading; scientific analyses of both have demonstrated that they *moved* in a scale

Table 5.1: Distribution chart of the various types of administrative documents in the Third Palace period Aegean

Type	RCT	KN#	PY	IK	TH#	MY#	TI#	MI#	KH#	SI	MA#	VOL	HV	Kolonna
<b>regular string nodules</b>	x*	x*	x*	-	x*	x*	-	x*	-	-	x	-	x*	-
irregular string nodules	x	x	x	-	x	x	-	-	?	-	-	-	-	-
'fold-over' nodules	-	x	-	-	-	-	-	-	x	-	-	-	-	-
<b>inscribed unsealed string-nodule</b>	x*	x*	x*	-	-	-	-	-	-	-	-	-	-	-
direct-object sealings	-	x	x	-	?	-	-	-	-	-	-	-	-	?
combination nodules	x?	x	x	-	?	x	-	-	-	-	-	-	-	-
<b>dome-noduli</b>	-	x*	x	-	-	x	-	-	-	-	-	-	-	-
flat-based nodules	x	-	-	-	-	-	-	-	x	-	-	-	-	-
single-hole hanging nodules	-	?	-	-	-	?	-	-	-	-	-	-	-	-
<b>tablets (various formats)</b>	x*	x*	x*	x*	x*	x*	x*	-	x*	-	-	x*	x*	-
<b>labels</b>	-	x*	x*	-	-	-	-	-	-	x*?	-	-	x*	-

Clay stoppers are excluded; inscribed stirrup jars are noted only when concurring with other document types. x : occurrence (number of occurrences is not marked); ? : probable occurrence of type (identification not certain); \* : occurrence of inscribed administrative documents (Types with inscribed examples are in **bold**); - : absence; # : occurrence of inscribed transport stirrup jar (number of occurrences is not marked).

RCT: 'Room of the Chariot Tablets' (Knossos: West Wing); KN: Knossos (deposits other than the RCT); PY: Ano Englianos/Pylos (western Messenia); IK: Iklaína (western Messenia); TH: Thebes (Boeotia); MY: Mycenaean (Argolid); TI: Tiryns (Argolid); MI: Midea (Argolid); KH: Khania (west Crete); SI: Sissi (north-central Crete); MA: Malia (north-central Crete); VOL: Volos *Kastro-Palaia* (coastal Thessaly); HV: Hagios Vasileios (Lakonia).

Attributions of sealings to the RCT follow CMS II.8 with additions by Hallager 2005a, 252, n. 21. Note that the assignment of the combination nodule HMs (= Herakleion Museum sealing inv. no.) 1546 = CMS II.8, no. 691 adds a new type to this deposit. For the identification of the Sissi document as a label see Drtissen 2012, 24, fig. 1.5. A supposed 'label' from Petsas house at Mycenaean, originally classified as **MY Wq 4**, has now been reclassified as a **UI** tablet fragment (Iakovidis *et al.* 2012, 51). *Probable* (but not certain) hapax occurrences of single-hole hanging nodules have been noticed at Knossos and Mycenaean (cf. Panagiotopoulos 2014, 117 with references). 'Fold-over' nodules are a newly-identified variant of irregular string nodules (Hallager 2005b). Although judgment may be suspended in the case of the fragmentary Kolonna sealing (Gauss 2007, 166–7, fig. 6), the find is tentatively included here for the sake of completion.

admittedly controversial) evidence does exist for some *possible* non-administrative uses of the script (most recent overview in Pluta 2011, 95–118), the patchiness of this material (whose interpretation is in any case far from straightforward) suggests that such usage was indeed non-canonical. This is a major obstacle in any attempt to draw a distinction between the script and its contemporary administrative *instrumenta*: minor aberrations aside, it might be fair – albeit bold – to say that the LB writing system did not properly exist outside the realm of administrative activity.

Such exclusivity is obvious in the case of tablets and labels, whose *raison d'être* is to carry the script. However, one might wish to argue that the sealings, functioning in a different 'mode', could be viewed as a separate sub-system (cf. Bennet 2005, 270), as sealing administrations can theoretically function in non-literate contexts. However, the distribution of Aegean documents makes such a position difficult: our extant data reveal that sites that have yielded sealings (inscribed or not) during this period, have yielded evidence of literate administrative activity as well,<sup>3</sup> in the form of tablets or inscribed regular string-nodules<sup>4</sup> (Table 5.1). This pattern suggests a degree of overlap between the *literate* and the *para-literate* 'modes' that is meaningful and intense, further and best exemplified in the regular concurrence of writing and sealing on the same documents, namely the regular string-nodules. Beyond accidents of discovery or recovery, such close correspondence cements the case for what has been described as the 'quasi-complementary, quasi-supplementary and quasi-independent' partnership (Palaima 1990, 83) between writing and sealing in the Third Palace period Aegean.

These observations indicate a mutually inclusive relationship between writing and sealing administration during the Third Palace period: on the one hand, with few

---

quite alien to the rest of the extant administrative apparatus, even between regions that constituted different administrative *polities* during the Third Palace period, such as West Crete and the Argolid or Boeotia (Haskell *et al.* 2011); treating these categories separately from the rest of the document types is therefore justifiable. We have no evidence that tablets themselves were transported in any considerable distance; although this would not have been physically impossible (Hallager forthcoming), whether this was actually practised is a different issue. The mobility of nodules is a far more complicated and debatable issue; however, even if these could have been produced at peripheral sites (yet still within the same region), there is no positive indication at all of a Third Palace period nodule that was produced outside the administrative catchment of the site where it was eventually deposited.

<sup>3</sup> This statement needs two additional comments: (i) one string-nodule has been found in Quartier Nu at Malia (Panagiotopoulos 2014, 103, fig. 34), and, although Malia has not yielded archival LB documents, fragments of inscribed stirrup jars have been found in Quartier Nu, suggesting at least some level of literacy during the period concerned; (ii) the fragmentary Kolonna sealing (Gauss 2007, 166–7, fig. 6) from a LH IIIA context and a site that has yielded no further evidence for administrative activity (literate or not) seems, at first sight, to shake the consistent association between sealings and literacy. However, its typological affinities are not certain (E. Hallager pers. comm.); in Table 5.1 it is classified tentatively as a direct-object sealing and this identification, if confirmed, would demonstrate that, during the Third Palace period, direct-object sealings could also work in non-literate contexts, as in the First Palace period (Monastiraki).

<sup>4</sup> Regular string nodules constitute the inscribed sealing type *par excellence* during the Third Palace period. This term refers to the gable-shaped, two-hole nodules that are found mostly intact in literate Third Palace period sites and probably had a labelling function (Hallager 2005a, 253–4; Panagiotopoulos 2010, 301–3, 2014, 108). On document typology, I generally follow Hallager's nomenclature with slight modifications.

debatable exceptions, LB, the writing system employed by these administrations was seemingly used for administrative purposes only; on the other hand, there is extreme difficulty in identifying contemporary administrative contexts that functioned without literacy. Although the structure of a writing system and the structure of an administrative system are conceptually unrelated, one can strongly argue, on the basis of the distribution and use of the LB documents, that, during this era, the two were at least *functionally* interdependent.

Admittedly, we cannot easily assume that synchronic unity can be used to safely infer unity throughout the system's development: convergences are indeed far from impossible. Still, we must admit that no hint at such a convergence process is apparent from our available evidence. Rather, despite certain oddities apparent in some (probably early) deposits (e.g. the flat-based nodules from the Room of the Chariot Tablets at Knossos), Third Palace period bureaucracies seem to have been fully developed already by the beginning of the LH III B period, as the perfectly 'canonical' document typology from the ongoing excavations at Ayios Vasileios in Laconia shows (Vasilogamvrou forthcoming; data included in Table 5.1).

Accepting the unity of the LB writing system and the administrative system in which this script was almost exclusively employed might have a considerable consequence for our study: it suggests that we should arrive at a plausible hypothesis that has the potential to explain *all* aspects and features of the system.

## 2. The ancestries of the Third Palace period administrative document types

Returning to my stated intention to focus on Third Palace period administrative document typology, I should readily observe that wonderful overviews of the various document types and their development and association with earlier Aegean administrations have already been performed by Erik Hallager and Helena Tomas (Hallager 2011; 2015; Tomas 2008; 2011; 2012b; this volume). The method employed has been to compare the form and function of the documents associated with the LB administrations with the range of document types associated with administrations using the Linear A (hereafter LA) and the so-called 'Cretan Hieroglyphic' (hereafter CH) scripts, observing continuities and discontinuities, as well as possible correspondences among the different systems. Before I embark upon a more detailed discussion of the picture that they have managed to draw so effectively, I would like to comment on the rationale and objectives behind such valuable exercises in document type comparison.

A seeming inconsistency has generated a considerable puzzle: although most of the LB phonographic signary may be a further development or adaptation of the LA one (as many as 68 out of 87 or c. 80% of the LB syllabograms have certain or probable LA correspondences<sup>5</sup>), this is not reflected in the considerable changes observed in

<sup>5</sup> For the most recent overview see Melena 2014, 8, 12, figs 17.1–17.2. However, the figures of LA correspondences are considerably lower in the non-phonographic component of the LB system (Petraakis forthcoming).

the types and functions of the administrative documents used to carry the LB script. Important documents associated with LA, such as the roundel and the varieties of hanging string-nodules seem to fall entirely out of use during the Third Palace period (Hallager 2005, 245–9, figs 1–2; Hallager 2011; Tomas 2012b), while the inscribed LB document *par excellence*, the tablet, also seems to differ considerably in form, format and function from its LA counterpart (Tomas 2011, this volume).

It is important to be aware of the assumptions that form the background of these comparisons. *Comparanda* to the LB document types have been predominantly sought in the latest known horizon of the administrative use of LA, with significant assemblages yielding evidence for both the *literate* and the *para-literate* administrative modes, associated with LM IB destruction horizons from Ayia Triada in south central Crete, Kato Zakros in far eastern Crete and Khania in west Crete. Implicit in such comparisons is the assumption that these administrations were typical of their era, the phase that might have immediately preceded the genesis of the LB system (both writing and administrative). The reluctance to extend the range of *comparanda* to include documents predating the LM IB period may be understandable. But the crucial question of how representative of the overall administrative ‘landscape’ the LM IB material is has seldom been raised, despite the generally acknowledged differences between the assemblages that already hinted at significant regional diversity. However, well-known facts, such as the overwhelming dominance of standing flat-based nodules at Kato Zakros versus the popularity of single-hole hanging nodules at Ayia Triada (Hallager 1996 I, 236; Krzyskowska 2005, 184, 192; Panagiotopoulos 2014, 51), do suggest that using the extant assemblages to reconstruct *the* typical LM IB administrative assemblage may be based on the false axiom of uniformity, as well as representativeness. The latter may be particularly significant, since we lack LM IB deposits from the largest Cretan centre at the time, Knossos itself. Given the evidence for considerable regionalism in Second Palace period sealing practices, we must not light-heartedly assume that the Knossian *lacuna* can be easily filled by referring to material from other sites.

In 2010, the full publication of a seemingly unrelated assemblage, the Middle Minoan (hereafter MM) IIB ‘Archive’ recovered in 1996 at Petras near Siteia (Tsipopoulou and Hallager 2010), revealed that a lot of what seemed unprecedented in the Third Palace period administrations now could be traced to a much earlier system employing not LA, but the CH script. By inviting the CH evidence into the picture, the differences between the LM IB and Third Palace period document typologies were put in a new perspective, although the chronological distance between CH assemblages and Third Palace period ones remained a concern (Hallager 2011, 326; Tomas 2012b, 38, 44). We shall review the problem of this chronological gap later on; for the time being, let us focus on the forms and functions of the documents themselves.

The initially surprising CH ‘correspondences’ of Third Palace period documents are particularly apparent on certain sealing types, as well as tablet formats. Table 5.2 shows the basic associations of the LB document types with those associated with

Table 5.2: The administrative document types associated with the LB script and their correspondences with types of documents inscribed in the LA and CH scripts

LB document type	LA	CH
portrait 'page-shaped' tablet	× (different function from LB?)	∅
landscape 'page-shaped' tablet	∅ (but HT 10, HT 133 are almost square)	× (KN HD; PH; <i>dubitanda</i> that could be LA: Table 5.3)
elongated ('palm-leaf') tablet	× (PH; KN; all evidence is pre-LM IB)	× (MA; cf. also <i>CHIC</i> #108; 'lames'; four-sided bars)
Label	∅	∅
inscribed unsealed string-nodule	∅	∅ (but cf. inscribed unsealed crescents at KN HD)
regular string nodule (occas. inscribed)	∅ (cf. two-hole hanging nodules, see discussion in text)	∅ (but cf. inscribed crescents, see discussion in text)
irregular string nodule	× (KN ETR)	× (KN HD; PE?)
'fold-over' nodule (KN, KH only?)	∅	? (cf. PE 'lumps' L9-10?)
direct-object sealing (various sub-types)	×	×
combination nodule	∅	× (PE; perhaps KN: CMS II.8, 13 of unknown context)
dome-nodulus (inscribed only at KN)	× (rarely inscribed)	× (uninscribed)
flat-based nodule (KN RCT, KH? uninscribed)	× (rarely inscribed)	× (KN HD; MA DH)

KN: Knossos; ETR: East Temple Repository (Knossos); PH: Phaistos; MA: Malia; DH 'Dépôt Hiéroglyphique' (Malia); HD: Hieroglyphic Deposit (Knossos); PE: Petras

The difference between the so-called 'portrait' and 'landscape' formats of the page-shaped tablet refer to whether the text (usually of more than three lines) follows alongside the short or the long side of the roughly rectangular writing surface. On the possibility of the Petras 'lumps' being 'fold-over' nodules see Hallager 2005b, 108–9, figs 6–7. Types whose association with Third Palace period administrations is still open to doubt (e.g. 'irregular flat-based nodules', see Hallager 1996 I, 202–3) have not been included. Other references: CMS II.8; Hallager 1996, 2011; Panagiotopoulos 2010, 2014; Petrakis 2014; Tomas 2011, 2012; Tsipopoulou and Hallager 2010.

the other two writing systems that were put in administrative use in earlier periods, namely the CH and the LA scripts. The emerging picture is already complex enough, but it must be supplemented with a few important additions. It must be stressed from the outset that *ex silentio argumenta* need to be formulated with extreme caution: absence of evidence is not evidence of absence and one should be careful in assessing such 'absences', even when the quantity and quality of the evidence suggests that they are meaningful. Nonetheless, we cannot refrain from considering the picture as it is.

The overall picture presented in Table 5.2 is already discussed to some extent by Hallager and Tomas (Tomas this volume, with references). Hallager has justifiably stressed that correspondences between LB- and CH-associated types are more numerous and better, emphasising that those types shared between LA and LB (i.e.

various tablet formats, stoppers, direct-object sealings, *noduli* and flat-based nodules) are not exclusive, since they also occur in association with CH (Hallager 2011, 322).

It is necessary to refer to the strong affinity between the Third Palace period gable-shaped regular string-nodule (the LB-inscribed sealing type *par excellence*) and the very similar so-called crescents associated with CH administrations and very often inscribed in the CH script. ‘Mycenaean’ regular string-nodules are closer to crescents than to Second Palace period two-hole hanging nodules, which are relatively scarce, very rarely inscribed and morphologically rather diverse (as opposed to the gable-shaped variant which is remarkably uniform across the Third Palace period southern Aegean, cf. Hallager 2005a, 254). Such correspondence between the Third Palace period regular string-nodules and CH crescents becomes even more compelling when one considers the similarity between the LB document type named here the *inscribed unsealed string-nodule* (classified as **Wo** at Pylos and as **Wm** at Knossos), which has no parallel at all in the Second Palace period administrations associated with LA<sup>6</sup>, and the CH *inscribed unsealed ‘crescents’* (Hallager 2011, 322). The inscribed unsealed crescent is so far only known from three examples from the ‘Hieroglyphic Deposit’ at Knossos,<sup>7</sup> an assemblage located at the North End of the Long Corridor in the West Wing of the palace, that will be of critical importance in our discussion, although its chronology and coherence should invite some comments (see *infra*).

Closer study of some probably early LB assemblages reveals a few more features on documents *other than sealings* that are paralleled in the so-called CH administrations, but not attested in relationship to LA. Although what we can associate is a sporadic feature in one system with what is far more common and canonical in the other, these parallelisms deserve to be considered here, since they can be placed within a broader framework of interconnections among the three categories:

- i. The practice of cutting elongated tablets to form separate shorter mini-documents, very popular in the Room of the Chariot Tablets (hereafter RCT)<sup>8</sup> also at Knossos and extremely rare anywhere else (Driessen 2000, 48–9; Duhoux 2012a; Tomas

<sup>6</sup> Besides tablets, the only inscribed documents without sealing impressions are those sporadic instances tentatively named as ‘irregular *noduli*’ or ‘labels’, which are not a homogeneous category (Hallager 1996 I, 203–4).

<sup>7</sup> **KN Ha(01) 01-03** = *CHIC* #001-#003.

<sup>8</sup> I here accept the view that the Linear B documents from the RCT may be dated to a comparatively earlier stage of the development of the Third Palace period administrative system, quite plausibly within the LM II-III A1 range (see Driessen 2000 for a thorough analysis of the deposit). A crucial feature is the occurrence of a few examples of a variant of the flat-based nodule, a type of clear Second Palace period descent (associated chiefly with LA but also with CH) that probably sealed ‘packages’ of leather documents; these flat-based nodules are found with LB documents nowhere else except in the RCT. As Hallager (2005a, 252) has emphasised, the RCT flat-based nodules are somewhat different from the usual Second Palace period varieties (e.g. those found at LM IB Kato Zakros). So far, the best typological parallel for the RCT nodules is a flat-based nodule found in a LM III A1 context in Khania (Hallager 2005a, 252–3; *CMS* V S3, no. 103). Still, parallelism is not exact, since the Khania nodule bears the impression of thick twisted cord (E. Hallager, pers. comm.), instead of the (leather?) straps on the RCT nodules (*CMS* II.8, 43, fig. 11).

- 2013), is unknown in LA, but has been identified in two CH four-sided bars from Knossos (**KN Hh(04) 02** and **Hh(04) 03**<sup>9</sup>) that were originally cut from a longer document (Olivier 1994–1995).
- ii. The unusual tall dividers evident in the Knossos **Vd** tablets, again from the RCT (see also Duhoux 2012a, 216–18), resemble the CH vertical dividers (< | >) that occur chiefly on archival documents (*CHIC*, 446–7), but are so far unknown from LA administrative documents.<sup>10</sup>
  - iii. An interesting correspondence in format exists between two four-sided bars inscribed in CH from the so-called 'Dépôt Hiéroglyphique'<sup>11</sup> at Malia (probably on **MA/P Hh(07) 01** face a; more confidently on **MA/P Hh(07) 02** face cA–cB<sup>12</sup>) and a very popular arrangement on LB elongated tablets: what I will call here the 'half-way ruling': a horizontal ruling line does not divide into two registers the entire length of the elongated writing surface, but a part of it is reserved without horizontal ruling and written with larger signs.<sup>13</sup>

A couple of possible morphological correspondences that seem to link the LB and CH phonographies directly (i.e. without any extant LA correspondences) might also be mentioned: (i) between B 33 <ra<sub>3</sub>> <𐀓𐀓> (so far exclusively Helladic in its phonographic use and exclusively Knossian in its non-phonographic or sematographic use) and CH sign 023 <𐀓>; (ii) between B 62 <pte> <𐀓> (of more general distribution) or perhaps untransliterated B 63 <𐀓𐀓> (so far exclusively Helladic) and CH sign 036 <𐀓> (*CHIC*, 19). Other instances noted as possible by Olivier and Godart may also be considered (e.g. between CH sign 008 <𐀓> and B 52 <no> <𐀓>, in *CHIC*, 19, but AB 28 <𐀓> can also be considered). However, I hasten to note that any such similarity (and I also note these are not absolutely compelling matches) needs to be treated with great caution, because their significance principally rests on negative evidence, namely the uncertainty or absence of corresponding LA forms. The case of AB 48 <nwa> <𐀓>, once considered as a direct and exclusive link between the CH and LB phonographic signaries (e.g. Hallager 2011, 324), is very didactic as to the dangers involved in such assessments: the sign was, in the meantime, identified on **SY Za 4**, a so-called 'libation table' from Kato Symi inscribed in LA (Muhly and Olivier 2008, 207–8, 216).

We might here add an example of a non-phonographic LB sign that does show an intriguing affinity to CH. A non-canonical variant of \*159 <𐀓> TELA ('cloth') is found


<sup>9</sup> *CHIC* #057 and #058 respectively.

<sup>10</sup> Tall vertical marks that resemble dividers appear in Linear A graffiti on stucco from Ayia Triada (**HT Zd 155–157**, see *GORILA* 4, 130–135), but are lacking from archival documents. The CH vertical dividers occur also – albeit somewhat questionably – on a few inscribed seals (*CHIC* #206, #283, #291, #292, #297 and #305 that, interestingly, also include a few questionable occurrences of 'klasmatograms' 308 𐀓 and 309 𐀓).

<sup>11</sup> The French term is retained here throughout in order to avoid confusion with the Knossos 'Hieroglyphic Deposit'.

<sup>12</sup> *CHIC* #112 and #113 respectively.

<sup>13</sup> The registers thus formulated are transcribed through uppercase Latin characters (.A, .B, etc) in LB editions and a similar practice is followed in *CHIC*, 165 for the four-sided bar **MA/P Hh(07) 02** face c.

on tablets from the ‘Megaron’ (Room 6) of the Main Building of the ‘Palace of Nestor’ at Pylos (PY La 623 verso; 626 verso; 630). There, besides the ubiquitous (and therefore ‘canonical’) fringes commonly found in the bottom part of the main rectangular element of the sign, fringes also appear on the top (Nosch 2012, 306–7, fig. 3, 326, fig. 10 *bottom*); this specific feature, unknown in the examples of its LA homographs, is paralleled in the CH sematogram \*163 <  > known from a clay medallion from the Malia ‘Dépôt Hiéroglyphique’ (MA/P He(07) 01 face b<sup>14</sup>). It is interesting, in this perspective, that Melena has advanced a persuasive argument favouring the earlier (pre-LH IIIB, probably LH IIIA) date of the these ‘Megaron’ tablets (Melena 2000–2001, 367; Skelton 2009).

Of course, none of them may be considered unequivocal evidence for ‘direct’ links between the LB and CH signaries: just as the case had been with <nwa> until the publication of the Symi inscription, their significance rests on the absence of such features or variants from the extant LA material. We cannot afford to underestimate the complexity of palaeographic interrelationships within the Aegean and the sheer number of unknowns that lurk behind the enormous gaps among the patches of our evidence, not just about ‘early’ LB, but almost all Aegean epigraphic material predating the 13th century BC.

Having raised these cautionary warnings, I must note that the ancestry of LB signs must be approached with an open mind: no *exclusive* affinity with LA should be axiomatically accepted for those LB graphemes that have reliable homographs in both CH and LA scripts. Besides a careful comparative reassessment of their palaeographic variants, the regional and chronological distribution – as well as patterns of use of these signs – need to be taken into account. Unfortunately, such an analysis could not be undertaken in the present context (but see comments in Tomas, this volume).

Let us now consider all the three separate ‘groupings’ of evidence suggesting the association between the LB and CH administrations. We have so far considered the considerable correspondences in document types (Table 5.2 with references), the aforementioned epigraphic traits, and the very questionable – albeit not entirely impossible – correspondences in a few graphemes. Overall, it is the accumulation rather than the individual definitiveness of the aforementioned associations that prove them collectively significant. It is of considerable importance that such ‘links’ actually transcend what was previously argued to be an artificial (even if heuristically useful) division between the literate and the para-literate administrative ‘modes’.

However, we cannot lose sight of the fact that, impressive as their concentration might seem, those CH features so far considered cannot possibly stand alone as an explanation of the formation of the Third Palace period assemblages. Quite the contrary: they should be considered *alongside* those features that can *also* (or even perhaps *exclusively*) be understood as a further development of the LA system, most notably a considerable part of the LB phonographic signary. We should also carefully consider those features or elements that are found in association with all three writing

<sup>14</sup> CHIC #103.

systems: such shared links actually obscure any positive assignment of their Third Palace period correspondences, making any inference about the development and ancestry of these common types a matter of speculation.<sup>15</sup>

This baffling condition has generated a variety of responses. Hallager, rejecting any plausible genetic link between the LB system and the LM IB administrations using the LA script, chose to overemphasize the CH links, thereby suggesting that

'the Linear B administration did not derive directly from Linear A, but also and basically from the Cretan hieroglyphs'. (Hallager 2011, 326)

Other scholars have been willing to consider the possibility that the Third Palace period system had multiple origins, as suggested by the different patterns observable in the development of the various aspects or components of the system. Tomas has advocated such a position, carefully suggesting that

'the origin of Linear B was *not limited to a single source* [...] whereas Linear A remains the main source for the script, the administrative system appears to have derived *partly* from the Cretan Hieroglyphic administrative system'. (Tomas 2012b, 44, emphasis added)

A somewhat similar thesis is also tentatively put forward by Diamantis Panagiotopoulos who has referred to the

'Möglichkeit eines hieroglyphischen "Substrats" in der mykenischen Siegelpraxis [...] Es wäre durchaus möglich, dass im mykenischen Verwaltungssystem Elemente aus beiden kretischen administrativen Traditionen (Hieroglyphen und Linear A) fortlebten'. (Panagiotopoulos 2014, 56)

These views may well offer possible interpretations of the picture we have so far encountered. Especially the hypothesis of multiple origins is an elegant one (Tomas 2012b; this volume). However, there are serious obstacles created by the strong – almost exclusive – association between writing and administration during the Third Palace period, as well as the consistency and uniformity of the LB system. These patterns make it difficult to accept any explanatory framework that isolates specific components, aspects or features of the system in order to advance *ad hoc* interpretations of one independently of the others.

My working hypothesis here is as follows: if, in order to explain *the full range* of the features attested in Third Palace period administrations, we find ourselves needing to refer both to elements *hitherto* associated with LA *as well as* elements *hitherto* associated with CH, this may suggest that the context of the emergence of this new system somehow included a co-existence of both categories. It might even be necessary to carefully reconsider the degree to which these had so far been considered as mutually exclusive entities.

<sup>15</sup> For instance, Hallager uses the typological correspondences to argue that the CH administrative system could have been the common ancestor of the sealing systems associated with LA and LB (Hallager 2011, 323 with fig. 4). Much of the same evidence is interpreted by Tomas (2012b; this volume) as indicative that the LB administrative system developed out of *both* CH and LA components.

Further exploration of this line of argument invites consideration of a phenomenon not previously associated with the genesis of the Third Palace period bureaucracies, but which now emerges as directly and fundamentally relevant: what has often been described as the ‘co-existence’ of the CH and LA writing systems.

### 3. Paradox or unrecognized norm? The interplay between CH and LA in Bronze Age Crete

The co-existence of features that are considered as ‘canonically’ associated with CH and LA, once considered an oddity of the Malia so-called ‘*Dépôt Hiéroglyphique*’ (originally published in Chapouthier 1930), can now be documented in at least two more sites, a fact which strongly suggests the need for a change in perspective (cf. Meriggi 1973, 172, n. 1; Olivier 1996, 108; also Karnava 2007 on First Palace period evidence). In what follows I wish to place the emphasis on two significant aspects of the problem: (i) the existence of *dubitanda*, documents which our modern *etic* scholarly perspective may classify as either CH or LA and (ii) the remarkable interplay between CH and LA features, especially in the Knossos ‘Hieroglyphic Deposit’ and the Malia ‘*Dépôt Hiéroglyphique*’.

As the editors of *CHIC* have noted, a number of documents they eventually chose to classify as CH could, with varying degrees of certainty, be understood as actually being inscribed in LA (*CHIC*, 18). I have also *tentatively* added to this list three more documents whose affinities are, for the moment, unclear: (a) **KN Wc 23**, a roundel from the ‘East Temple Repository’ (hereafter ETR) located in the West Wing of the Knossos palace, which was excluded from the LA corpus since it bears a mark that had not been considered a writing sign proper (*GORILA* 2, lvi), and has not been accepted as a CH inscription either; (b) a small four-sided bar from Palaikastro, published by Brice as bearing a LA inscription (Evans and Bosanquet 1923, 146, fig. 128, pl. xxxiiib; Brice 1961, 21, pl. xxvii: no. iv 6); (c) *CHIC* #110 = **MA/P Hf (06) 02**, a probable ‘*lame à deux faces*’ or tablet fragment from the Malia ‘*Dépôt Hiéroglyphique*’. Although this has been included as an unproblematic CH document in *CHIC*, it was originally published as bearing a CH inscription [H.19] on one side and a LA inscription [L.3] on the other (Chapouthier 1930, 23, 56, pl. ii [H.19]; Brice 1961, 19, pl. xxvi, no. iii 11). One might excuse Chapouthier’s original identification, by considering the overall context of the ‘*Dépôt Hiéroglyphique*’ (where a ‘co-existence’ of CH and LA would justify the presence of a document written in both scripts), but the identification of the only legible sign on side *b* (Chapouthier’s ‘LA’ side), CH sign 085 <  $\text{A}$  > is only found on this document and on *CHIC* #041 = **KN He (06) 02**, a clay medallion from the Knossos ‘Hieroglyphic Deposit’. The significance of this limited distribution will be discussed *infra*.

Besides these three examples (two of which are currently absent from all extant *corpora*), extant *dubitanda* documents (Table 5.3) include three crescents, two tablets and one three-sided bar. Out of seven documents, it may be highly significant that five *dubitanda* come from the Knossos ‘Hieroglyphic Deposit’ (the other two being

Table 5.3: *Dubitanda*: Inscribed documents that might be identified either as written in the CH or in the LA writing system

CHIC # no.	Document	Museum inv.	Type	Provenance	Reference
010	KN Ha (02) 07	HMs 190	crescent	Knossos ‘Hieroglyphic Deposit’	CHIC, 18, 72–73
014	KN Ha (02) 11	HMs 249	crescent	Knossos ‘Hieroglyphic Deposit’	CHIC, 18, 74–75
019	KN Ha (03) 04	HMs 189	crescent	Knossos ‘Hieroglyphic Deposit’	CHIC, 18, 78–79
048	KN Hg 01	HM 1303	three-sided bar	Knossos ‘Hieroglyphic Deposit’	CHIC, 18, 98–99
068	KN Hi 01	HM 1268	tablet	Knossos ‘Hieroglyphic Deposit’	CHIC, 18, 122–123
122	PH Hi 01	HM 1	tablet	Phaistos (unknown context)	CHIC, 18, 182–183
not included	KN Wc 23	HMs 342	roundel	Knossos ‘East Temple Repository’	GORILA 2, lvi; Hallager 1996 II, 160
not included	IV 6 [Brice]		‘four-sided bar’	Palaikastro	Brice 1961, 21, pl.xxvii: no. iv 6
110	MA/P Hf (06) 02	HM 1384	<i>lame à deux faces</i> or tablet?	Malia ‘ <i>Dépôt Hiéroglyphique</i> ’	CHIC, 158–159

Their concentration at Knossos is notable, especially in the so-called ‘Hieroglyphic Deposit’. Note also the concentration of klastatograms shared between CH and LA in the Knossos ‘Hieroglyphic Deposit’ (see text for discussion). HM = Herakleion Museum no.; HMs = Herakleion Museum sealing inv. no.

the ETR roundel – but still Knossian – and the Phaistos tablet **PH Hi 01** of unknown context). The situation is highly intricate. *If* we allow these *dubitanda* to be actually identified as inscribed in LA (an admissible option), then the Knossos ‘Hieroglyphic Deposit’ would feature the very same ‘oddity’ as the Malia ‘*Dépôt Hiéroglyphique*’: a seeming co-existence of CH and LA documents (cf. Olivier 1996, 108).

Still, to term this as mere ‘co-existence’ is an understatement of the highly complex situation revealed when these *dubitanda* come to focus. Most intriguing is the Knossos three-sided bar (**KN Hg 01** = CHIC #048). Olivier and Godart recorded their doubts (CHIC, 18), but eventually decided to include the Knossos three-sided bar in the CH corpus, while Artemis Karnava, on the other hand, has chosen not to consider it, identifying it as a LA document (Karnava 2000, 19). The only typological parallel for **KN Hg 01** is the three-sided bar **MA 2** from the ‘*Dépôt Hiéroglyphique*’, which, however, has been commonly classified as a LA document (Fig. 5.1). But the Maliote LA associations of **KN Hg 01** do not end here: it features signs \*164 <  $\text{𐀓}$  > and \*165 <  $\text{𐀓}$  >, which are unparalleled in the CH corpus (CHIC, 426), but bear a remarkable resemblance to sign AB 180 <  $\text{𐀓}$  > that appears (in simple or ligatured forms) on two of the Malia elongated tablets recognised as inscribed in LA, again from the Malia ‘*Dépôt Hiéroglyphique*’



Fig. 5.1: Left: The three-sided bar from the Knossos 'Hieroglyphic Deposit' KN Hg 01 = CHIC #048; Right: the three-sided bar MA 2 from the Malia 'Dépôt Hiéroglyphique'. Images after CHIC, 98 and GORILA 1, 270. Courtesy of Professors Louis Godart and Jean-Pierre Olivier.

(MA 4; MA 6) (Fig. 5.2). On the other hand, if one follows Karnava in identifying KN Hg 01 as inscribed in LA, just like the Malia three-sided bar, another point can be raised: the shape of the inscribed artefact itself recalls that of the three-sided prism, the commonest shape among CH seals (76 out of 148 examples as counted in Karnava 2000, 165, Table 32).

We are faced with nothing less than a true conundrum: we have a document type whose shape is clearly associated with the seal shape best represented in the CH corpus. But the clay document itself *may* never be inscribed in CH; both examples *might* be inscribed in LA; still, in both its occurrences, it is found in close association with inscriptions identified as 'canonical' CH in the Knossos and Malia deposits.

At this point, it is imperative that I add one observation on the signary used on documents from the 'Hieroglyphic Deposit': klasmatograms (signs representing fractional amounts) from this assemblage are almost all paralleled in LA (CHIC, 17, 19, 429–31) (Fig. 5.3). Their distribution elsewhere in the CH corpus is extremely limited: they do not occur in the First Palace period assemblages from Malia (Quartier Mu) or Petras. Their densest concentration is on three four-sided bars (bearing commodity signs and classified as Hh(08) = CHIC #065–#067) and the *dubitandum* tablet KN Hi 01 = CHIC #068 from the Knossos 'Hieroglyphic Deposit'; besides three CH seals (CHIC #206,

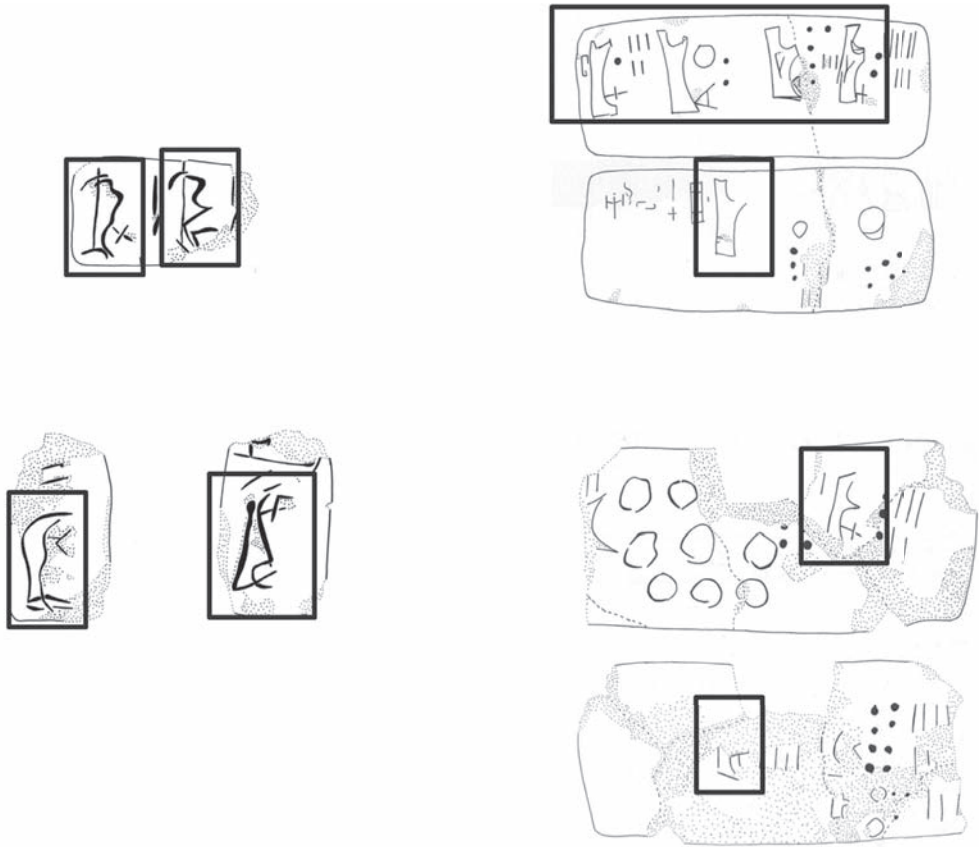


Fig. 5.2: Left: CH commodity signs \*164–\*165 on the three-sided bar from the Knossos 'Hieroglyphic Deposit' KN Hg 01 (sides a-c) = CHIC #048. Right: LA commodity sign AB 180 (plain and ligatured forms) on tablets MA 4 (top) and MA 6 (bottom) from the Malia 'Dépôt Hiéroglyphique'. Only sufficiently preserved occurrences of the sign are highlighted within rectangle frames. Images after CHIC, 98 and GORILA 1, 272, 274, 276, rearranged and annotated by the author. Courtesy of Professors Louis Godart and Jean-Pierre Olivier.

#291-#292),<sup>16</sup> non-Knossian attestations are on documents that either could be LA (the *dubitandum* Phaistos tablet PH Hi 01 = CHIC #122), or 'co-existed' with documents classified as LA (the four-sided bar MA/P Hh(08) 01 = CHIC #118 from the Malia 'Dépôt Hiéroglyphique'). The distribution of these signs and their ligatures forms an additional intricate nexus between the Knossos and Malia assemblages.<sup>17</sup> The concentration of

<sup>16</sup> Jasink (2005) has argued that these signs, when they appear on seals, function as logograms or phonograms. Her analysis is persuasive, but we should observe that these 'odd' occurrences are on seals that feature other 'odd' features, such as the presence of vertical 'dividers' (admittedly, the 'cross' or X-shaped stiktogram occurs more widely on seals).

<sup>17</sup> Klastmatograms that hitherto exclusively occur on the Hh(08) bars and/or tablet KN Hi 01 from the Knossos 'Hieroglyphic Deposit' (CHIC #065-#068) are: 303  $\Theta < \text{t} >$ , 305  $\Xi < \text{v} >$ , 306  $\Pi < \text{f} >$ , as well

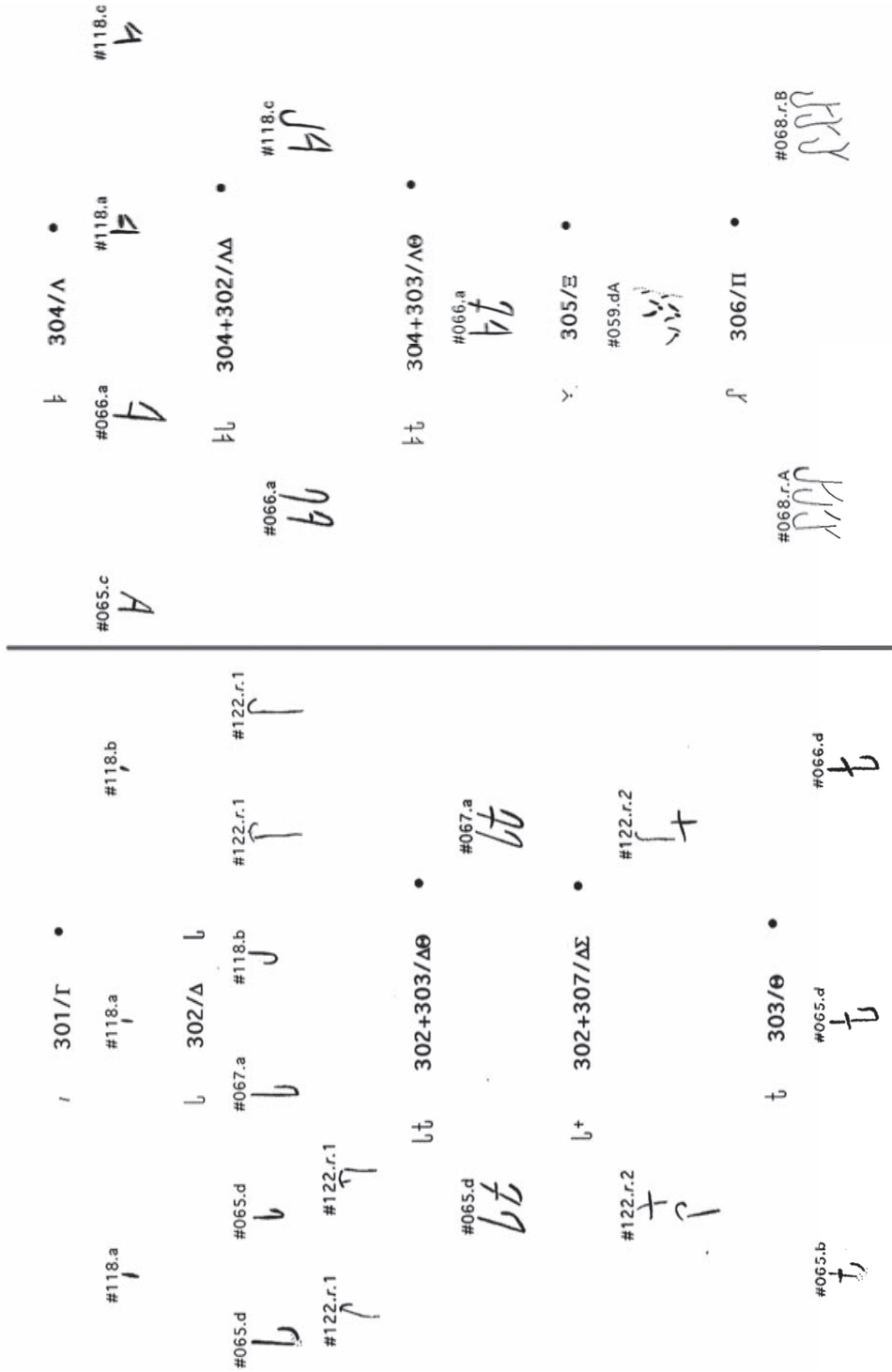


Fig. 5-3: Klastomatograms (fractional signs) used on CH clay documents. Numbers refer to CHIC documents. Images after CHIC, 429-430, rearranged by the author. Courtesy of Professors Louis Godart and Jean-Pierre Olivier.

klasmatograms on *dubitanda* and other documents from the Knossos 'Deposit' and the Malia 'Dépôt' suggest that their employment there might constitute a feature (or symptom) of the aforementioned CH-LA 'co-existence'.

It must have been clear by now how complicated the situation is in the Knossos 'Hieroglyphic Deposit' and how many and diverse links and parallelisms can be found with the Malia 'Dépôt *Hiéroglyphique*'. This situation adds significance to the existence of signs (presumably phonograms) that are only shared between these two 'Deposits', such as the aforementioned CH sign 085 <  $\text{A}$  > between the clay medallion **KN He (06) 02** = *CHIC* #041, and the possible 'dubitandum' *lame* or tablet fragment **MA/P Hf (06) 02** = *CHIC* #110.<sup>18</sup> The least we can do is admit an intense interplay between the CH and LA categories in at least these two cases. However, to do so is actually to dance around the crucial question: what was really going on at the Knossos and Malia administrations represented by these assemblages? What kind of system (or systems) do they represent?

Directly relevant to any attempt to answer this is what stems from a comparison of the two assemblages. The types of inscribed documents attested in each 'deposit' are shown on Table 5.4. We must note that if the question-marks are removed from the Knossian *dubitanda*, we have a no less than impressive typological correspondence: both the Knossos and the Malia assemblages will then be featuring almost the same types of inscribed documents, distributed almost in the same way among the two scripts.<sup>19</sup> This surely cannot be accidental. The only exceptions seem to be the *lames à deux faces* and the roundels, two types which are present at Malia, but are absent from the Knossos 'Hieroglyphic Deposit'. However, we must observe that, on the one hand, the appearance of the *lames* at Malia can be explained as a local traditional feature, since such *lames* (class **Hf** in *CHIC*) occur almost exclusively at Malia Quartier Mu at the end of MM II (*CHIC* #085-#094<sup>20</sup>), while on the other hand Knossos has yielded

---

as klasmatogram ligatures 302 + 303  $\Delta\theta$  <  $\text{L}$  > and 304 + 303  $\Lambda\theta$  <  $\text{L}$  >. Of these, all have reliable LA homographs, except the *hapax* 305  $\Xi$ . 302  $\Delta$  <  $\text{L}$  >, 304  $\Lambda$  <  $\text{L}$  > and ligature 304 + 302  $\Lambda\Delta$  <  $\text{L}$  > (all three with LA homographs too) occur at the Knossos 'Deposit' as well as on a **MA/P Hh(08) 01** from the Malia 'Dépôt' (302  $\Delta$  <  $\text{L}$  > also occurs on **PH Hi 01**); ligature 302 + 307  $\Delta\Sigma$  <  $\text{L}$  > occurs only on **PH Hi 01** and 301  $\Gamma$  <  $\text{L}$  > only on **MA/P Hh(08) 01**. 308  $\text{Q}$  <  $\text{L}$  > and 309  $\text{X}$  <  $\text{L}$  > seem to appear on seals, but their identification there as 'klasmatograms' can be questioned (Jasink 2005). Nonetheless, 308  $\text{Q}$  <  $\text{L}$  > also occurs on a *lame* or bar from Symi (**SY Hf 01**, see *infra* n. 20), while 309  $\text{X}$  <  $\text{L}$  > might occur on roundel **KN Wc 23** from the Knossos ETR, see *infra*). 307  $\Sigma$  <  $\text{L}$  > appears on seals, but occurs also on **PH Hi 01** and has good klasmatographic homographs in both LA (A 702 or B) and LB (where, even as a metrogram, it is transcribed as AB 02 <RO>).

<sup>18</sup> It is acknowledged that a thorough palaeographic re-examination of these assemblages is demanded and is scheduled by the author for the near future.

<sup>19</sup> It is noteworthy that they also share one type of uninscribed document, the flat-based nodule. There may be reasons to sustain belief that the bulk of the material is chronologically and contextually homogeneous (see *infra* for comments on the 'integrity' of the 'Hieroglyphic Deposit' and the Malia 'Dépôt *Hiéroglyphique*').

<sup>20</sup> A seeming exception might be the fragment from the Kato Symi sanctuary in the Viannos region (south-central Crete), identified as a *lame à deux faces* (**SY Hf 01**) (Lebessi *et al.* 1995). Since the diagnostic part

Table 5.4: Typological composition of inscribed documents from the Knossos ‘Hieroglyphic Deposit’ and the Malia ‘Dépôt Hiéroglyphique’

Script	Document type	Knossos ‘Hieroglyphic Deposit’	Malia ‘Dépôt Hiéroglyphique’
CH	crescent	×	×
	<i>lame à deux faces</i>	–	×
	four-sided bar	×	×
	medallion	×	×
	tablet	×	×
LA	four-sided bar	–	×
	three-sided bar	–	×
	tablet	–	×
	roundel	–	×
Dubitanda	three-sided bar	×	–
	crescent	×	–
	tablet	×	–

× occurrence; – absence.

References: Hallager 1996 I, 57–60; *CHIC*; *GORILA* 1. Dubitandum *CHIC* #110 from the Malia ‘Dépôt’ is formally published as a *lame à deux faces*, but could also be the fragment of a tablet.

roundels in the adjacent ETR assemblage, probably dated to the mature LM IA phase (see immediately *infra*).

In any case, the similarities between these two assemblages positively show that these must somehow reflect similar administrative realities. This suggestion, supported strongly by the impressive correspondence in their typological composition, invites a careful reconsideration of two much debated issues: their integrity and chronology.

First, the integrity of both assemblages has been called into question. Despite the many open questions surrounding the character of the Malia ‘Dépôt Hiéroglyphique’, Pelon has given fairly conclusive evidence that the assemblage is coherent and dates to the close of the MM IIIB period (Pelon 1983, 701–3). Regarding the Knossos ‘Hieroglyphic Deposit’, while it seems clear from some of Evans’ notes that documents recovered on other locations were also integrated to the ‘Deposit’, we should not be carried away by too much suspicion. One positive piece of evidence exists to suggest some degree of homogeneity in this assemblage (Hallager 1996 I, 36, n. 33; Krzyszkowska 2005, 115–16): the fact that two sealings of different types (the crescent

---

with a suspension hole is not preserved, however, it is possible to hypothesize that this document was the fragment of an elongated tablet (class **Hi** in *CHIC*), a suggestion compatible with its dimensions. One might note that the Syme document, if a *lame*, it would be the only one bearing a klasmatogram (308 ☐); otherwise, CH klasmatograms occur only on tablets or four-sided bars with commodity signs.

HMs 185 and the flat-based nodule HMs 195) were impressed with the same seal (CMS II.8, no. 79).<sup>21</sup> At the end, it might be fair to say that, despite any rightfully suspected false assignments by Evans that sadly transform most arguments into 'matters of faith' (Krzyszowska 2005, 116), it can be argued that the correspondence in the typological make-up between the Knossos and Malia assemblages (Table 5.4) is extremely difficult to explain, unless both assemblages were more or less coherent.<sup>22</sup>

Regarding chronology, we must consider Ingo Pini's suggestion that certain impressions assigned to the Knossos 'Hieroglyphic Deposit' were made with seals that can be stylistically dated to the MM III/ LM I period (CMS II.8, 6–8<sup>23</sup>). Although this depends on the still problematic coherence of the assemblage, Pini's analysis clearly suggests the MM III/ LM I transition as a *terminus post quem* for the 'Deposit'. Such a late date may indeed cause 'consternation' to some scholars, as Krzyszowska (2005, 116) notes; however, it enables things to fall neatly into place, since it establishes the 'Hieroglyphic Deposit' as almost contemporary to (perhaps even slightly later than) the Malia 'Dépôt Hiéroglyphique' (see above), in the later part of the Second Palace period.

Under the circumstances described, and for the specific contexts in question (especially the Knossos 'Hieroglyphic Deposit'), maintaining any rigid distinction between CH and LA seems to become less meaningful, even misleading, an idea already voiced by Meriggi (1973, 172, n. 1). But, if so, how can the situation reflected in the Knossos

<sup>21</sup> Inspection of possible fingerprints could also be employed to test the coherence of the 'Hieroglyphic Deposit', but this investigation must be promised for the near future.

<sup>22</sup> Unfortunately, a full discussion of the coherence and chronology of the 'Hieroglyphic Deposit' could not be accommodated here and must be postponed. However, on the strength of the observed similarity between Knossos and Malia 'Hieroglyphic Deposits', we may bring into the discussion KN 22, the fragment of an elongated non-ruled LA tablet (also described as a two-sided bar) without proper context identified in the 1950s by Emmett Bennett at the Herakleion Museum (Bennett 1958, pl. 4 then numbered **Kn 5800**). Bennett classified this fragment as 'indeterminate script' noting that '[t]he shape of the tablet is not far from those of Linear A' (Bennett 1958, 36, 49). Despite the lack of any information as to its context, the similarity of KN 22 in typology and layout to LA and CH tablets from the Malia 'Dépôt Hiéroglyphique' (MA 4; MA/P Hi 01-02 = CHIC #119–#120; also perhaps MA/P Hf(05) 01 = CHIC #108), as well as CH tablets (KN Hi 02 = CHIC #069) and bars (KN Hh(06) 01 = CHIC #063) from the Knossos 'Hieroglyphic Deposit', should be nonetheless noted.

<sup>23</sup> HMs 189 = KN Ha(03) 04 (a *dubitandum* crescent, see Table 5.3) is impressed with CMS II.8, nos 124 and 702, which are of MM III–LM I date; the same holds for HMs 140 (an irregular string-nodule) impressed with CMS II.8, no. 286. Other documents of MM III–LM I date (based on the style of the seal impressions) include single-hole hanging nodule HMs 128 impressed with CMS II.8, no. 157, the odd crescent HMs 132 impressed – amongst five different seals – with CMS II.8, no. 353 and three flat-based nodules (HMs 126 and OAM 1938.982 impressed with CMS II.8, no. 376; HMs 144 impressed with CMS II.8, no. 375). Moreover, three uninscribed crescents (HMs 176 impressed with CMS II.8, no. 55; HMs 179 impressed with CMS II.8, no. 40; HMs 202 impressed with CMS II.8, no. 195) and three flat-based nodules (HMs 180 impressed with CMS II.8, nos 41–2; HMs 197 impressed with CMS II.8, no. 97; and HMs 203 impressed with CMS II.8, no. 98) are of MM III date. One should stress again that these dates are based on the style of the seals, and are therefore *termini post quos*. Although the 'Hieroglyphic Deposit' includes documents with impressions of MM II seals, this does not necessarily indicate an earlier date for the documents themselves.

and Malia assemblages be positively assessed? And what are the implications of such a conclusion for the genesis of the Third Palace period bureaucracies?

I hope that the above discussion has done something to advance our understanding of the character of this ‘co-existence’ of the CH and LA scripts in the Second Palace period.<sup>24</sup> Certainly we can no longer speak of a paradox, an oddity or an anomaly (cf. also the thoughtful exposure by Olivier 1996, 108). The way these assemblages are shaped, and the intertwined associations between CH and LA elements within them, suggest that we may no longer label this as ‘digraphia’ or mere co-existence or symbiosis of scripts or systems that are otherwise well-defined. Proper description and interpretation of this phenomenon may call for a thorough revision of our conceptual and classificatory arsenal. I think just enough momentum has been gathered to make a rather provocative suggestion: that what the Knossos and Malia assemblages actually represent is neither CH nor LA, but a hitherto unrecognised entity: a ‘North Central Cretan Second Palace period administrative system’<sup>25</sup> defined by the fusion of the CH and LA categories that modern scholarship, in other cases, had so far defined as distinct and mutually exclusive.

I feel obliged to deal in advance with a potential problem with the line of argument I am pursuing here. Besides the ‘Hieroglyphic Deposit’, Knossos has yielded one more significant Second Palace period administrative deposit, found in the East Temple Repository (ETR), again in the West Wing of the palace complex. The coherence of this assemblage is not questioned, its chronology is reasonably settled (mature LM IA) and the documents found in it have been commonly considered as LA. It is also true that the one tablet certainly assigned to this assemblage, **KN 1**, can be confidently assigned to LA.<sup>26</sup> Certain elements from the ETR are especially intriguing, however, as they seem to occur in no other ‘canonical’ LA administrative assemblage.

- i. The inscribed sign or signs (two mirrored S-spirals: < **§** >) that appear on one roundel from the ETR (HMs 342 = **KN Wc 23**) are so far unique among such documents inscribed in LA; therefore, the document had been excluded from *GORILA* on the argument that its inscribed signs do not represent writing at all (*GORILA* 2, lvi; cf. Hallager 1996 II, 160). However, discussion on these marks should also take into account their similarity to LA klasmatogram 703 (D), shaped as an inverted S, a virtual homograph to AB 75 < **ζ** > (LB value <we>) or, just as likely, a variant of the metrogram \*116 or **ρ** or Linear A klasmatogram 703. In fact, the mirrored (i.e. S-shaped) variant of Linear A klasmatogram 703 occurs on a roundel from Kea (**KE Wc 2**); within the CH corpus, a sign similar to LA klasmatogram

<sup>24</sup> For the co-existence of scripts in First Palace period contexts see Karnava 2007. Cf. also recently Perna 2014.

<sup>25</sup> This somewhat cumbersome label is preferred here as it is plainly descriptive.

<sup>26</sup> Although it can be argued that it seems palaeographically removed from the LM IB LA of Ayia Triada, I must readily admit that a thorough study of LA palaeography still remains to be done; no assessment of palaeographic affinities or divergences can be presently made with accuracy and reliability.

703 has been identified as a klasmatogram (309 λ), although it occurs only on inscribed seals, where Jasink (2005, 23–9) has argued that it functions rather as a commodity sign or phonogram. Moreover, the much similar 2-spiral is a common motif on CH seals, although it is consistently not transcribed in CHIC (Hallager 1996 I, 106, fig. 39; Jasink 2005, 23–9). Given the above, and considering the occurrence of klasmatograms on roundels inscribed in the LA script, we should not light-heartedly reject **KN Wc 23** from the inscribed roundel corpus. The possibility that these marks could be accommodated within the LA or the CH signary must remain open.<sup>27</sup>

- ii. Sphragistic practice associates the ETR with the Knossos 'Hieroglyphic Deposit' and the Malia 'Dépôt Hiéroglyphique': although CH seals are properly absent from the ETR, roundels from there (**KN Wc 3, 30** and **41**) do display repeated stamping (from the same or different seals), which is paralleled in the 'Hieroglyphic Deposit',<sup>28</sup> as well as on **MA Wc 13** and **14**, assigned to the 'Dépôt Hiéroglyphique' (Hallager 1996 I, 59–60, n. 181, 108).<sup>29</sup>
- iii. The ETR included a type of sealing so far not found in any other Second Palace period deposit, until recently known only from Third Palace period administrative contexts (see Table 5.1), as well as the Knossos 'Hieroglyphic Deposit' (HMs 140), but recently identified also in the MM IIB CH 'archive' at Petras (see Table 5.2): the irregular string-nodules that were used to secure, rather than merely label, as the twisted string-marks ('*Wickelbänder*' in the CMS terminology) and the regularly broken status of such objects suggest.<sup>30</sup>

We should be careful not to read too much into fragmentary and disparate evidence, but the existence of such non-canonical (and arguably CH-associated) elements in the ETR deserves our fullest attention. Seen alongside the mature Second Palace period dates of the Knossos 'Hieroglyphic Deposit' and the Malia 'Dépôt Hiéroglyphique', the unique marks on the ETR roundel **KN Wc 23** and the irregular string nodules associated with it in the broadly contemporary ETR lend strong support to the hypothesis that Knossos, and arguably north-central Crete in general, had undergone developments unparalleled elsewhere on the island during this period. This 'difference' of north-central Crete may be also hinted at by evidence from other sites in the region, such as

<sup>27</sup> Cf. also Hallager 1996 I, 106–7. The type of document does not preclude the CH identification: although roundels were until recently associated exclusively with administrations employing the LA script, a roundel (**PE Hc 002**) has been securely identified in the Petras CH 'archive' of MM II date (Tsipopoulou and Hallager 2010, 157, 182).

<sup>28</sup> HMs 132 (a unique document) bears impressions from as many as five different seals.

<sup>29</sup> However, it must be noted that the practice of multiple impression occurs elsewhere too on roundels (**PYR Wc 4**; **SA Wc 1-2**), as well as on other documents of more controversial typological identity, such as the Khania 'irregular flat-based nodules' (Hallager 1996 I, 202–3).

<sup>30</sup> On the type see Hallager 2005a, 254–8; 2010, 209–10; for impressions of '*Wickelbänder*' that secure the identification of irregular string-nodules in the ETR see Hallager 2010, 208, fig. 1 *middle row* (HMs 385, 391, 397, 1240).

the peculiarities found in at least one LA tablet from Tylissos (**TY 2**), as well as Olivier and Godart's observation that the rather 'archaising' LA from Archanes, located only 15 km south of Knossos, seems closer to LB forms than the better known Ayia Triada signary (Lembessi *et al.* 1974, 165).

#### 4. The genesis of the Third Palace period bureaucracies

The hypothesis of a regional north-central Cretan system in the late Second Palace period is directly relevant to the problems posed earlier in this paper: I argue here that the aforementioned 'fusion' of CH and LA features has some kind of *genetic* association with the analogous 'fusion' of CH and LA elements discerned in the Third Palace period systems. 'Fusion', of course, only describes our *etic* understanding of what can be argued to have been a regional system, where these categories – arguably 'separable' in other contexts – may have naturally co-existed. I would strongly suggest that the system represented by the Knossos 'Hieroglyphic Deposit', the Knossos ETR and the Malia '*Dépôt Hiéroglyphique*' represents the closest we can get to the plausible typological and praxeological matrix, the 'womb' where the LB administrations took shape.

Accepting this line of reasoning has important implications for the *place* and *date* of the emergence of the Third Palace period bureaucracies. The fusion is not a pan-Cretan phenomenon; it is firmly located, as far as we can tell, in north-central Crete, and the hypothesis advanced here raises once more the question of the role of Knossos in the emergence of the administrations we have come to commonly label as 'Mycenaean'. Now, perhaps more intensely than ever, the burden of proof is with those who would wish to argue that the system could have been developed outside Crete.

Similarly, the dates of the Knossos 'Hieroglyphic Deposit' and the Malia '*Dépôt Hiéroglyphique*' give us a *terminus post quem* at the beginning of the LM I period, which is compatible with the powerful *terminus post quem* provided by the abrupt disuse of LA as an *administrative script* at the end of LM IB. As John Bennet has eloquently phrased it, LA 'did not simply disappear; rather, it was killed', at least in this realm of use (Bennet 2008, 22), even if the crudely painted LA inscription on the torso of the LM IIIA1 terracotta figurine from Poros (**PO Zg 1**) indicates the sporadic survival of the script in other (perhaps peripheral cultic) uses (Dimopoulou *et al.* 1993).

The disuse of the CH script is considerably more difficult to understand, and the phenomenon is much complicated by the uncertainty over the survival of CH literacy as potentially reflected in the preservation of CH seals (admittedly, not necessarily 'legible' at the time of their final deposition). However, a so far uniquely late *archival* document, the CH medallion (**PE He 001**) found on a floor with LM IB destruction debris in the North Magazines of the Second Palace period complex of Petras, without any further indication of disturbance in this particular locus, suggests that this script could have remained in use (and probably *alongside* the use of LA documents, such as tablets **PE 1-2**) until the very end of the Second Palace period (Tsipopoulou and

Hallager 1996, 39–42, fig. 16). If the 'co-existence' of CH and LA features in LM IB Petras is confirmed, we may have a third such case on the north coast of Crete, although as far east as Sitia, and as late as the very end of the Second Palace period.<sup>31</sup> Bennet's observation on the abrupt abandonment of LA may be applied to the CH script as well: it was not merely LA, but actually the administrative uses of all previously extant Cretan writing systems that were 'killed' at the very end of the LM IB period, to be effectively replaced by the unprecedentedly uniform Third Palace period system employing the LB script.

The approach advocated herein should open the way for a thorough reappraisal of the administrative landscape of Second Palace period Crete. Great caution will be necessary, and any progress must be based on assessments that are sensitive to the potentially meaningful differences on both diachronic and synchronic (i.e. local or regional) scales.

For instance, it can be argued that evidence for any 'co-existence' of CH and LA features is limited to the period *preceding* the final LM IB phase. Although such a conclusion would seem to downplay (i) the existence of the Petras CH medallion and (ii) the lack of uniformity observed across so-called 'canonical' LM IB assemblages, it does underscore the fact that, apart from Petras, LM IB Cretan administrations do not display features attributable to CH. Could this imply that the CH-LA 'fusion' had become obsolete by LM IB times?

The answer to this may lie in the aforementioned Knossos lacuna, what Olga Krzyskowska called 'a notorious black hole' administratively (Krzyskowska 2005, 189). The lack of *any* document from this phase at Knossos must be associated with the absence of closed LM IB deposits from the palace complex, which is in turn a reflection of the special 'fate' of this super-site and its subsequent LM II-III A1 take-off that I shall be returning to in a moment. A single hint at Knossos being functional during this period might be this site's participation in the nexus of the famous 'matching impressions' from finger-rings found across central Cretan sites and also Akrotiri on Thera (Krzyskowska 2005, 188–91): a combat or battle scene (presumably from a gold signet-ring) had impressed two single-hole hanging nodules from Knossos (CMS II.8, no. 279 on HMs 369 and HMs 1275), as well as five flat-based nodules from LM IB Ayia Triada (CMS II.6, no. 15 on HMs 526/1–3, 595–6).

The hypothesis advanced here, in awareness of the complexities and problems it may present, is that LM IB Knossos may have employed an administrative system that displayed the forerunners of the full administrative apparatus of Third Palace period bureaucracies and whose earlier stage may be reflected – however patchily – in the Knossos 'Hieroglyphic Deposit' and Malia '*Dépôt Hiéroglyphique*',<sup>32</sup> as well as probably in those 'idiosyncratic' features of the ETR assemblage. The gaps in our knowledge of the

<sup>31</sup> One is also reminded of the 'dubitandum' from Palaikastro, also located in East Crete (Brice 1961, 21, pl. xxvii: no. iv 6), included here in Table 5.3.

<sup>32</sup> As well as possibly associated documents, such as KN 22 (see above, n. 22).

administration of Second and Third Palace period Knossos are still quite formidable. What we are still almost completely missing is evidence for the development of the signaries in use at Knossos during the LM IB-LM II phases. But even if 'we are unlikely to get a second chance' (Krzyskowska 2005, 116) at filling information that has been lost from this exceptional site, efforts to reconstruct critical points in the administrative history of the Kephala should be nonetheless attempted.

Within post-LM I north central Crete, LM II-III A1 Knossos once more reappears as the most plausible accommodator of the system reform that the formation of the Third Palace period system clearly represents. This is the phase when Knossos, arguably the only functional administrative centre known so far in the contemporary Aegean, shows all the symptoms of what may be termed 'formative period anxiety' or 'early post-reform stress': an exploding monumentality and a degree of experimentation in art forms, imagery and mortuary investment that had no predecessor and would see no follow-up either on the Kephala hill (cf. Driessen and Langohr 2007; Preston 2008 for a general introduction to Third Palace period Crete). The genesis of the Third Palace period bureaucracies brought regionalism in administrative practice to an abrupt end. Their emergence was, in terms of administrative history, a true watershed, sweeping away to oblivion regional systems that had existed before it.

In the apparent attempt of the new Knossian elite groups to balance between the all-important associations with the Second Palace period past, a necessary resource of power legitimation, and a desperate need to exploit new power resources and strategies prone to concentrative manipulation, the genesis of the Third Palace period system had to stand on a balance point. It responded to novel needs and aspirations, but was also inevitably forged in the 'matrix' of pre-existing structures and practices. These latter I made here a preliminary, tentative, and admittedly bold attempt to reconstruct. I hope this might feed further discussion and re-examination of the problems pertaining to this system reform in some new perspective.

# Bibliography

- Agresti, A. (1990) *Categorical Data Analysis*, New York.
- Amadasi Guzzo, M. G. (2015) 'Les inscriptions phéniciennes' in Caubet, A., Fourrier, S. and Yon, M. (eds) *Kition-Bamboula VI. Le sanctuaire sous la colline*, Lyon, 335–345.
- Anastasiadou, M. (2016) 'Drawing the line: Seals, script and regionalism in Protopalatial Crete' *American Journal of Archaeology* 120, 159–193.
- Andronikos, M. (1968) *Totenkult*, Göttingen (= Buchholz, H.-G. ed. *Archaeologia homerica. Die Denkmäler und das frühgeschichtliche Epos III/W*).
- Aravantinos, V. L. and Vasilogamvrou, A. (2012) 'The first Linear B documents from Ayios Vasileios (Laconia)' in Carlier, P., de Lamberterie, C., Egetmeyer, M., Guilleux, N., Rougemont, F. and Zurbach, J. (eds) *Études Mycéniennes 2010* (Biblioteca di Pasiphae 10), Pisa/Roma, 41–54.
- Aruz, J. (2008) *Marks of Distinction. Seals and Cultural Exchange between the Aegean and the Orient*. (CMS 7), Mainz am Rhein.
- Bagley, R. W. (2004) 'Anyang writing and the origin of the Chinese writing system' in Houston, S. D. (ed.) *The First Writing. Script Invention as History and Process*, Cambridge, 190–249.
- Baines, J. (2004) 'The earliest Egyptian writing: development, context, purpose' in Houston, S. D. (ed.) *The First Writing: Script Invention as History and Process*, Cambridge, 150–189.
- Baines, J., Bennet, J. and Houston, S. D. (eds) (2008) *The Disappearance of Writing Systems. Perspectives on Literacy and Communication*, London.
- Bartoněk, A. (2003) *Handbuch des mykenischen Griechisch. Indogermanische Bibliothek. Erste Reihe*, Heidelberg.
- Basso, K. (1974) 'The ethnography of writing' in Bauman, R. and Sherzer, J. (eds) *Explorations in the Ethnography of Speaking*, Cambridge, 425–432.
- Bauman, R. and Briggs, C. L. (2003) *Voices of Modernity. Language Ideologies and the Politics of Inequality*, Cambridge.
- Baurain, C. (1980) 'Chypre et le monde Égéen', *Bulletin de correspondance hellénique* 104, 566–571.
- Beekes, R. S. P. (2010) *Etymological Dictionary of Greek. Leiden Indo-European Etymological Dictionaries 10.1-2*, Leiden/Boston.
- Beekes, R. S. P. (2014) *Pre Greek: Phonology, Morphology, Lexicon* (ed. S. Norbruis). Brill Introductions to Indo-European Languages 2, Leiden/Boston.
- Begg, I. D. J. (1987) 'Continuity in the West Wing at Knossos', in Hägg, R. and Marinatos, N. (eds) *The Function of the Minoan Palaces*, Stockholm, 179–184.
- Bennet, J. (2001) 'Agency and bureaucracy: thoughts on the nature and extent of administration in Bronze Age Pylos' in Voutsaki, S. and Killen, J. T. (eds) *Economy and Politics in the Mycenaean Palace States* (Cambridge Philological Society. Supplementary vol. 27), Cambridge, 25–37.
- Bennet, J. (2005) 'Response to Erik Hallager' in D'Agata, A.-L., Moody, J. and E. Williams (eds) *Ariadne's Threads. Connections Between Crete and the Greek Mainland in Late Minoan III (LM IIIA2 to LM IIIC)*, Tripodes 3, Athens, 267–272.
- Bennet, J. (2008) 'Now you see it; now you don't!: the disappearance of the Linear A script on Crete' in Baines, J., Bennet, J. and Houston, S. D. (eds) *The Disappearance of Writing Systems*, London, 1–29.
- Bennet, J. (2013) 'Epilogue' in Piquette, K. E. and Whitehouse, R. D. (eds.) *Writing as Material Practice: Substance, Surface and Medium*, London, 335–342.

- Bennett, E. L. Jr. (1958) 'Some Minoan texts in the Iraklion Museum' in Grumach, E. (ed.) *Minoica. Festschrift zum 80. Geburtstag von Johannes Sundwall*. Deutsche Akademie der Wissenschaften zu Berlin. Schriften der Sektion für Altertumswissenschaften 12. Berlin, 35–49.
- Bennett, E. L. (1963) 'Names for Linear B Writing and for its Signs', *Kadmos* 2:2, 98–123.
- Bikai, P. M. (1983) 'The imports from the East' in Karageorghis, V. (ed.) *Palaepaphos-Skales. An Iron Age Cemetery in Cyprus*, Constance, I, 396–406.
- Boffa, G. (2013) 'Il santuario di Apollo ad Eretria. Osservazioni sulla documentazione epigrafica di età geometrica' in Giardino, L. and Tagliamonte, G. (eds) *Archeologia dei luoghi e delle pratiche di culto* (colloquium Cavallino/Lecce 2012), Bari, 31–43.
- Boffa, G. (forthcoming) 'Il vaso ben levigato. Una proposta di lettura per l'iscrizione più antica dalla necropoli di Osteria dell'Osa', *La Parola del Passato*.
- Boltz, W. G. (1986) 'Early Chinese writing', *World Archaeology* 17, 420–436.
- Boltz, W. G. (2001) 'The invention of writing in China', *Oriens Extremus* 42, 1–17.
- Bombardieri, L. and Jasink, A. M. (2010) 'Decorative repertoire and script signs: a complex "origin" for the writing system in Cyprus?', *Kadmos* 49, 133–157.
- Boone, E. H. and Mignolo, W. D. (eds) (1994) *Writing without Words: Alternative Literacies in Mesoamerica and the Andes*, Durham.
- Bordreuil, P. and Pardee, D. (2001) 'Textes alphabétiques en ougaritique: 8. Abécédaire' in Yon, M. and Arnaud, D. (eds) *Études ougaritiques I. Travaux 1985–1995*. Ras Shamra Ugarit 14, Paris, 341–348.
- Bordreuil, P. and Pardee, D. (2009) *A Manual of Ugaritic*, Winona Lake.
- Branigan, K. (1965) 'The origin of the Hieroglyphic Sign 18', *Kadmos* 4:2, 81–83.
- Branigan, K. (1966) 'The prehistory of Hieroglyphic Signs 12 and 36', *Kadmos* 5:2, 115–117.
- Brice, W. C. (1961) *Inscriptions in the Minoan Linear Script of Class A, Edited from the Notes of Sir Arthur Evans and Sir John Myres*, Oxford.
- Brice, W. C. (1991) 'Notes on the Cretan Hieroglyphic Script: III. The inscriptions from Mallia Quartier Mu. IV. The clay bar from Knossos. P116', *Kadmos* 30, 93–104.
- Bricker, V. R. (1986) *A Grammar of Mayan Hieroglyphs* (Middle American Research Institute, Publication 56), New Orleans.
- Bricker, V. R. (2008) 'Mayan' in Woodard, R. D., *The Ancient Languages of Asia and the Americas*, Cambridge, 163–192.
- Brixhe, C. (2007) 'Les alphabets du Fayoum', *Kadmos* 46, 15–38.
- Broodbank, C. (2004) 'Minoanisation', *Proceedings of the Cambridge Philological Society* 50, 46–91.
- Bruns, G. (1970) *Küchenwesen und Mahlzeiten*, Göttingen (= Buchholz, H.-G. ed. *Archaeologia homerica. Die Denkmäler und das frühgeschichtliche Epos II/Q*).
- Bryce, T. (2002) *Life and Society in the Hittite World*, Oxford.
- Buchholz, H.-G. (2004) 'Zyprische Bronzeschalen der geometrischen und archaischen Periode. Eine Studie zu Typologie, Chronologie, Epigraphik und kultureller Außenwirkung zyprischen Metallhandwerks des frühen ersten Jahrtausends v. Chr.', *Centre d'études chypriotes. Cahier* 33, 99–148.
- Cagni, L. (2000) 'I documenti amministrativi mesopotamici del periodo antico-babilonese: precedenti, tipologie, sigillature' in Perna, M. (ed.) *Administrative Documents in the Aegean and their Near Eastern Counterparts*, Turin, 53–61.
- Caplice, R. (2002) *Introduction to Akkadian*, Studia Pohl: Series Maior, Dissertationes Scientifcae De Rebus Orientis Antiqui 9, Rome.
- Cardona, G. R. (1981) *Antropologia della scrittura*, Turin.
- Carrier, D. (1996) 'Gombrich and Danto on defining art', *Journal of Aesthetics and Art Criticism* 54:3, 279–281.
- Casabonne, O. and Egetmeyer, M. (2002) 'À propos du sceau de Diweiphilos' (in Borgia, E., Casabonne, O. and Egetmeyer, M. 'Notes ciliciennes'), *Anatolia Antiqua* 10, 177–181.
- Catling, H. W. (1979) 'Copper in Cyprus, bronze in Crete: some economic problems' in Karageorghis, V. (ed.) *Acts of the International Archaeological Symposium: 'The Relations between Cyprus and Crete, ca. 2000–500 BC'*, Nicosia 16 April–22 April 1978, Nicosia, 69–75.

- Chadwick, J. (1968) 'The group sw in Mycenaean', *Minos* 9, 62–65.
- Chadwick, J. (1970) *The Decipherment of Linear B*, 2nd edition, Cambridge.
- Chadwick, J. (1976) 'Who were the Dorians?', *La Parola del Passato* 31, 103–117.
- Chapouthier, F. (1930) *Les Écritures Minoennes au Palais de Mallia, Études Crétoises* 2, Paris.
- Chapouthier, F. (1951) 'Remarques sur le déchiffrement des hieroglyphes minoens', *Minos* 1, 71–76.
- Charalambous, A., Kassianidou, V. and Papasavvas, G. (2014) 'A compositional study of Cypriot bronzes dating to the Early Iron Age using portable X-ray fluorescence spectrometry (pXRF)', *Journal of Archaeological Science* 46, 205–216.
- Charalambous, A., Kassianidou, V. and Papasavvas, G. (2016) 'A comparative study of Cypriot bronzes dated to the Late Bronze and the Early Iron Age' in Photos-Jones, E. (ed.) *Proceedings of the 6th Symposium of the Hellenic Society for Archaeometry* (Athens 2013), Oxford, 95–99.
- Childe, G. V. (1957) 'Civilizations, cities and towns', *Antiquity* 31, 36–8.
- Consani, C. (1996) 'AB 118/DWO tra minoico e miceneo' in Consani, C., Negri, M. and Aspesi, F. (eds) *Κρήτη τις γὰρ ἔστι: Studi e ricerche intorno ai testi minoici. Quaderni Linguistici e Filologici, Università di Macerata, Facoltà di Lettere e Filosofia, Istituto di Glottologia e Linguistica Generale VIII*, Roma, 71–81.
- Cooper, J. (2004) 'Babylonian beginnings: the origin of the cuneiform writing system in comparative perspective' in Houston, S. D. (ed.) *The First Writing: Script Invention as History and Process*, Cambridge, 71–99.
- Cross, F. M. (1989) 'The invention and development of the alphabet' in Senner, W. E. (ed.) *The Origins of Writing*, Lincoln, 77–90.
- Cross, F. M. and Stager, L. E. (2006) 'Cypro-Minoan inscriptions found in Ashkelon', *Israel Exploration Journal* 56, 129–159.
- Damerow, P. (1999) *The Origins of Writing as a Problem of Historical Epistemology*, Preprint 114 of the Max Planck Institut für Wissenschaftsgeschichte, Berlin.
- Daniels, P. T. (1992) 'The syllabic origin of writing and the segmental origin of the alphabet' in Downing, P. A., Lima, S. D. and Noonan, M. (eds.) *The Linguistics of Literacy*, Amsterdam, 83–110.
- Daniels, P. T. (2000) 'On writing syllabaries: three episodes of script transfer', *Studies in Linguistic Sciences* 30, 73–86.
- Daniels, P. T. (2003) '(There are) three models of script transfer: the "misunderstanding model"', *American Oriental Society, Abstracts of the Two Hundred and Fourteenth Meeting*, 1–2.
- Daniels, P. T. (2006) 'On beyond alphabets', *Written Language and Literacy* 9, 7–24.
- Daniels, P. T. (2007) '*Littera ex occidente*: toward a functional history of writing' in Miller, C. L. (ed.) *Studies in Semitic and Afroasiatic Linguistics Presented to Gene B. Gragg*, Chicago, 53–68.
- Danto, A. C. (1997) *After the End of Art, Contemporary Art and the Pale of History*, Princeton.
- Darnell, J. C. (2003) 'Die frühalphabetischen Inschriften im Wadi el-Hôl' in Seipel, W. (ed.) *Der Turmbau zu Babel: Ursprung und Vielfalt von Sprache und Schrift: Eine Ausstellung des Kunsthistorisches Museums Wien für die Europäische Kulturhauptstadt Graz 2003*, Vol. 3A, Vienna, 165–71.
- Darnell, J. C., Dobbs-Allsopp, F. W., Lundberg, M. J., McCarter, P. K., Zuckerman, B. (2005) 'Two early alphabetic inscriptions from Wadi el-Hôl', *Annual of the American Schools of Oriental Research* 59, 63–124.
- Davis, B. (2011) 'Cypro-Minoan in Philistia?', *Kubaba* 2, 40–74.
- Davis, B. (2014) *Minoan Stone Vessels with Linear A Inscriptions (Aegaeum 36)*, Leuven/Liège.
- Deger-Jalkotzy, S. (2013) 'Cremation burials in the Mycenaean cemetery of Elateia-Alonaki in Central Greece' in Lochner, M. and Ruppenstein, F. (eds.) *Brandbestattungen von der mittleren Donau bis zur Ägäis zwischen 1300 und 750 v. Chr.*, Vienna, 221–229.
- Del Frio, M. (2010) 'Review of: Olivier, J.-P. *Édition holistique des textes chypro-minoens*', *Studi Micenei ed Egeo-Anatolici* 52, 305–313.
- Dickinson, O. (1994) *The Aegean Bronze Age*, Cambridge.

- Dietrich, M. and Loretz, O. (1988) 'Die Alphabetafel aus Bet Semes und die ursprüngliche Heimat der Ugariter' in Mauer, G. und Magen, U. (eds) *Ad bene et fideliter seminandum (Festgabe für K. Deller)*, Neukirchen, 61–87.
- Dikaios, P. (1963) 'The context of the Enkomi tablets', *Kadmos* 2, 39–52.
- Dikaios, P. (1969–1971) *Enkomi: Excavations, 1948–1958*, Vols I–II, Mainz-am-Rhein.
- Dimopoulou, N., Olivier, J.-P. and Réthémotakis, G. (1993) 'Une statuette en argile avec inscription en linéaire A de Poros Irakliou' *BCH* 117, 501–521.
- Diringer, D. (1948) *The Alphabet. A key to the History of Mankind*, London.
- Dreyer, G. (1998) *Um111 el-Qaab I: das prädynastische Königsgrab Uj und seine frühen Schrijtzeugnisse*, Mainz.
- Driessen, J. (1990) *An Early Destruction in the Mycenaean Palace at Knossos. A New Interpretation of the Excavation Field-Notes of the South-East Area of the West Wing* (Acta Archaeologica Louvaniensia Monographiae 2), Leuven.
- Driessen, J. (1997) 'Linear A tablets and political geography', in Hägg, R. (ed.) *The Function of the 'Minoan Villa'*, Stockholm, 216–217.
- Driessen, J. (1998–1999) 'Kretes and Iawones. Some observations on the identity of Late Bronze Age Knossians', in Bennet, J. and Driessen, J. (eds), *A-na-qa-ta. Studies Presented to J. T. Killen*, *Minos* 33–34, Salamanca, 83–105.
- Driessen, J. (2000) *The Scribes of the Room of the Chariot Tablets at Knossos. Interdisciplinary Approach to the Study of a Linear B Deposit* (Supplement to *Minos* 15), Salamanca.
- Driessen, J. (2011) 'Chronology of the Linear B texts', in Duhoux, Y. and Morpurgo Davies, A. (eds) *A Companion to Linear B. Mycenaean Greek Texts and their World*, vol. 1, Louvain-la-Neuve/Walpole MA, 69–79.
- Driessen, J. (2012) 'Excavations at Sissi, 2011: Introduction' in *Excavations at Sissi III: Preliminary Report on the 2011 Campaign*, *Aegis* 6, Louvain, 17–26.
- Driessen, J. and Langohr, C. (2007) 'Rallying round a "Minoan" past: the legitimation of power at Knossos during the Late Bronze Age' in Galaty, M. L. and Parkinson, W. A. (eds) *Rethinking Mycenaean Palaces II* revised and expanded 2nd edition (Cotsen Institute of Archaeology at UCLA Monograph 60), Los Angeles, 178–189.
- Driessen, J. and Macdonald, C. F. (1997) *The Troubled Island. Minoan Crete Before and After the Santorini Eruption* (*Aegaeum* 17), Liège/Austin.
- Driessen, J. and Schoep, I. (1999) 'The stylus and the sword. The role of scribes and warriors in the conquest of Crete', in Laffineur, R. (ed.), *Polemos. Le Contexte Guerrier en Ègée à l'Âge du Bronze* (*Aegaeum* 19), Liège/Austin, 389–401.
- Duhoux, Y. (1978) 'Une analyse linguistique du linéaire A' in Duhoux, Y. (ed.) *Études minoennes I. Le linéaire A*. (Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain 14), Louvain-la-Neuve, 65–129.
- Duhoux, Y. (1985) 'Mycénien et écriture grecque', in Morpurgo Davies, A. and Duhoux, Y. (eds), *Linear B: a 1984 Survey*, Louvain-la-Neuve, 7–74.
- Duhoux, Y. (1989) 'Le linéaire A: problèmes de déchiffrement' in Duhoux, Y., Palaima, T. G. and Bennet, J. (eds) *Problems in Decipherment* (Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain 49), Louvain-la-Neuve, 59–120.
- Duhoux, Y. (1998) 'Pre-Hellenic language(s) of Crete', *Journal of Indo-European Studies* 26, 1–39.
- Duhoux, Y. (2008) 'Mycenaean anthology' in Duhoux, Y. and Morpurgo Davies, A. (eds) *A Companion to Linear B: Mycenaean Greek Texts and their World*, vol. I. (Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain 120), Louvain-la-Neuve, 243–393.
- Duhoux, Y. (2009a) 'The Cypro-Minoan tablet 1885 (Enkomi): an analysis' *Kadmos* 48, 5–38.
- Duhoux, Y. (2009b) 'Eteocypriot and Cypro-Minoan 1–3', *Kadmos* 48, 39–75.
- Duhoux, Y. (2012a) 'Les mini-tablettes linéaire B' in Carlier, P., de Lamberterie, C., Egetmeyer, M., Guilleux, N., Rougemont, F. and Zurbach, J. (eds) *Études Mycéniennes 2010* (Biblioteca di Pasiphae 10), Pisa/Roma, 207–225.

- Duhoux, Y. (2012b) 'The most ancient Cypriot text written in Greek: The Opheltas' spit', *Kadmos* 51, 71–91.
- Duhoux, Y. (2013) 'Non Greek languages of ancient Cyprus and their scripts: Cypro-Minoan 1–3' in Steele, P. M. (ed.) *Syllabic Writing on Cyprus and its Context*, Cambridge, 27–47.
- Duhoux, Y., Palaima, T. G. and Bennet, J. (eds.) (1989) *Problems in Decipherment*, Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain 49, Leuven.
- Egetmeyer, M. (2010a) *Le dialecte grec ancien de Chypre. Tome I: Grammaire; Tome II: Répertoire des inscriptions en syllabaire chypro-grec*, Berlin/New York.
- Egetmeyer, M. (2010b) 'The recent debate on Eteocypriote people and language' (Mycenological colloquium 11, Austin/Texas 2000), *Pasiphae* 3, 69–90.
- Egetmeyer, M. (2013a) 'Ougarit et le déchiffrement de ses inscriptions en syllabaire chypro-minoen' in Bordreuil, P., Ernst-Pradal, F., Masetti-Rouault, M. G., Rouillard-Bonraisin and Zink, M. (eds) *Les écritures mises au jour sur le site antique d'Ougarit (Syrie) et leur déchiffrement. 1930–2010. Commémoration du quatre-vingtième anniversaire du déchiffrement de l'alphabet cunéiforme de Ras Shamra-Ougarit* (colloquium Paris 2010), Paris, 133–155.
- Egetmeyer, M. (2013b) 'From Cypro-Minoan syllabaries to Cypro-Greek syllabaries: remarks on the phonetic structure of the grids passing from Pre-Greek to Greek' in Steele, P. M. (ed.) *Syllabic Writing on Cyprus and its Context*, Cambridge, 107–131.
- Egetmeyer, M. (2014) 'Sur l'état de la recherche en écriture chypro-minoenne' (*Journée des langues rares*, Institut Catholique, Paris 2013), *Res Antiquae* 11, 101–118.
- Egetmeyer, M. (2016) 'A bronze bowl from Palaepaphos-Skales with a new Cypro-Minoan inscription from the Cypro-Geometric I period' in Karageorghis, V. and Raptou, E. (eds) *Necropoleis at Palaepaphos from the end of the Late Bronze Age to the Cypro-Archaic Period*, Nicosia, 131–136.
- Egetmeyer, M. (forthcoming) 'A new bronze weight with a Cypro-Greek inscription', *Report of the Department of Antiquities, Cyprus*.
- Egetmeyer, M. and Steele, P. M. (2011) 'A new archaic and possibly Cypriot inscription from Cilicia', *Kadmos* 49, 127–132.
- Englund, R. K. (1998) 'Texts from the Late Uruk period' in Bauer, J., Englund, R. and Krebernik, M. (eds) *Mesopotamien: Späturuk-Zeit und Frühdynastische Zeit*, Göttingen, 15–233.
- Ephron, H. (1961) 'The Jeson tablet of Enkomi', *Harvard Studies in Classical Philology* 65, 39–107.
- Evans, A. J. (1894a) 'A Mycenaean System of Writing in Crete and the Peloponnese', *Athenaeum* 3478, 812–813.
- Evans, A. J. (1894b) 'Primitive pictographs and a Prae-Phoenician script, from Crete and the Peloponnese', *Journal of Hellenic Studies* 14, 270–372.
- Evans, A. J. (1895) *Cretan Pictographs and Prae-Phoenician Script*, London.
- Evans, A. J. (1902–1903) 'The Palace of Knossos. Provisional report for the year 1903', *Annual of the British School at Athens* 9, 1–153.
- Evans, A. J. and Bosanquet, R. C. (1923) 'The inscribed objects in stone and clay' in Bosanquet, R. C. and Dawkins, R. M. *The Unpublished Objects from the Palaikastro Excavations 1902–1906*, (BSA Supplementary Paper 1), London, 141–147.
- Facchetti, G. M., Negri, M. and Notti, E. (2013) 'Epigraphy and linguistic history of Cyprus: status and perspective', *Pasiphae* 7, 57–66.
- Fantalkin, A., Finkelstein, I. and Piasetzky, E. (2015) 'Late Helladic to Middle Geometric Aegean and contemporary Cypriot chronologies: a radiocarbon view from the Levant', *Bulletin of the American Schools of Oriental Research* 373, 25–48.
- Faucounau, J. (1977) 'Études chypro-minoennes' (I–III), *Syria* 54, 209–249.
- Faucounau, J. (1980) 'Études chypro-minoennes' (IV–V), *Syria* 57.2, 375–410.
- Faucounau, J. (1994) 'The Cypro-Minoan scripts: A reappraisal fifty years after John F. Daniel's paper', *Επιστημονικό Περιοδικό Αρχαιολογίας και Ιστορίας της Τέχνης, έκδοση του Συνδέσμου Κυπρίων Αρχαιολόγων* 3, 93–106.

- Ferioli, P., Fiandra, E., Fissore, G. G. and Frangipane, M. (1994) (eds) *Archives Before Writing*, Turin.
- Ferrara, S. (2013) 'Writing in Cypro-Minoan: one script, too many?' in Steele, P. M. (ed.) *Syllabic Writing on Cyprus and its Context*, Cambridge, 49–76.
- Ferrara, S. (2014) 'Desecrating signs: "hieroglyphic" writing systems and secondary script inventions' in Galanakis, Y., Wilkinson, T. and Bennet, J. (eds.) *Critical Essays on the Archaeology of the Eastern Mediterranean in Honour of E. Susan Sherratt*, Oxford, 73–80.
- Ferrara S. (2015) 'The royal and the layman. Possible onomastics on Late Bronze Age clay balls' *Studi Micenei ed Egeo-Anatolici* new series 1, 105–115.
- Ferrara S. (2016) 'Writing away: Mobility and versatility of scribes at the end of the Bronze Age', *Oxford Journal of Archaeology* 35.3.
- Ferrara, S., Weingarten, J. and Cadogan, G. (2016) 'Cretan Hieroglyphic at Myrtos Pyrgos', *Studi micenei ed anatolici* new series 2, 81–99.
- Fiandra, E. (1968) 'A che cosa servivano le cretule di Festòs', *Πεπραγμένα του Β' Κρητολογικού Διεθνούς Συνεδρίου/Proceedings of the Second International Cretological Congress*, vol. 1, Athens, 383–397.
- Fiandra, E. (1975) 'Ancora a proposito delle cretule di Festòs: connessione tra i sistemi amministrativi centralizzati e l'uso delle cretule nell'età del bronzo', *Bollettino d'Arte* 60, 1–25.
- Finkelstein, I. and Sass, B. (2013) 'The west Semitic alphabetic inscriptions, Late Bronze II to Iron IIA: archeological context, distribution and chronology', *Hebrew Bible and Ancient Israel* 2, 149–220.
- Firth, R. (1996–1997) 'The find-places of the tablets from the palace of Knossos', *Minos* 31–32, 7–122.
- Firth, R. (2000–2001) 'A review of the find-places of the Linear B tablets from Knossos', *Minos* 35–36, 63–290.
- Franklin, J. C. (2016) *Kinyras: the divine lyre*, Washington, DC.
- Gaur, A. (2000) *Literacy and the Politics of Writing*, Bristol.
- Gauss, W. (2007) 'Ägina Kolonna in frühmykenischer Zeit' in Alram-Stern, E. and Nightingale, G. (eds) *Keimelion: Elitenbildung und Elitärer Konsum von der Mykenischen Palastzeit bis zur Homerischen Epoche*, Wien, 163–172.
- Gelb, I. J. (1952) *Study of Writing*. Chicago.
- Gelb, I. J. (1963) *A Study of Writing*, 2nd edition, Chicago.
- Gilboa, A. (2005) 'Sea peoples and Phoenicians along the southern Phoenician coast: a reconciliation: an interpretation of šikila (SKL) material culture', *Bulletin of the American Schools of Oriental Research* 337, 47–78.
- Godart, L. (1979) 'Le linéaire A et son environnement', *Studi Micenei ed Egeo-Anatolici* 20, 27–42.
- Godart, L. (1984) 'Du Linéaire A au Linéaire B' in Nicolet, C. (ed.) *Aux origines de l'hellénisme: La Crète et la Grèce. Hommage à Henri van Effenterre*, Paris, 121–128.
- Godart, L. (1999a) 'L'écriture d'Archanès: hiéroglyphique ou linéaire A?' in Betancourt, P. P., Karageorghis, V., Laffineur, R. and Niemeier, W. (eds) *Meletemata. Studies in Aegean Archaeology Presented to Malcolm H. Wiener. (Aegaeum 20)*, Liège/Austin, 299–302.
- Godart, L. (1999b) 'L'inscription en linéaire B de Kafkania – Olympie (OL Zh 1)', in Deger-Jalkotzy, S., Hiller, S., Panagl, O. (eds) *Floerant Studia Mycenaea*, Vienna, 39–43.
- Godart, L. (2002) 'L'inscription de Kavkania – Olympie OL Zh 1', in Arapojanni, X., Rambach, J. and Godart, L. *Kavkania. Die Ergebnisse der Ausgrabung von 1994 auf dem Hügel von Agrilitses*, Mainz, 213–240.
- Godart, L. and Sacconi, A. (1979) 'La plus ancienne tablette d'Enkomi et le linéaire A' in Karageorghis, V. (ed.) *Acts of the International Archaeological Symposium: 'The Relations between Cyprus and Crete, ca. 2000–500 BC'*, Nicosia 16 April–22 April 1978, Nicosia, 128–133.
- Godart, L., Kanta, A. and Tzigounaki, A. (2000) 'Les scellés de Monastiraki' in Müller, W. (ed.), *Minoisch-Mykenische Glyptik. Stil, Ikonographie, Funktion*, (CMS 6), Berlin, 95–96.
- Gombrich, E. H. (1950) *The Story of Art*, London.
- Goody, J. and Watt, I. (1963) 'The consequences of literacy', *Comparative Studies in Society and History* 5, 304–345.

- Goody, J. (1986) *The Logic of Writing and the Organisation of Society*, Cambridge.
- Grube, N. (2010) 'Proposed phonetic complements in Maya hieroglyphic writing' in Carlin, E. B. and van de Kerke, S. *Linguistics and Archaeology in the Americas: The Historization of Language and Society*, Leiden, 27–43.
- Grube, N. (2012) 'Maya writing' in Nichols, D. L. and Pool, C. A. (eds), *The Oxford Handbook of Mesoamerican Archaeology*, Oxford, 845–854.
- Grumach, E. (1962) 'Mitteilungen: Linear A auf dem Festland', *Kadmos* 1.1, 85–86.
- Grumach, E. (1963a) 'Neue hieroglyphische Siegel', *Kadmos* 2.1, 7–13.
- Grumach, E. (1963b) 'Nachtrag zu "Zwei hieroglyphische Siegel"', *Kadmos* 2.1, 76–78.
- Güterbock, H. G. (1956) 'Notes on Luvian Studies', *Orientalia* 25, 113–40.
- Hallager, E. (1990) 'Roundels among sealings in Minoan administration: a comprehensive analysis of function' in Palaima, T. G. (ed.) *Aegean Seals, Sealings and Administration (Aegaeum 5)*, Liège, 121–147.
- Hallager, E. (1996) *The Minoan Roundel and Other Sealed Documents in the Neopalatial Linear A Administration (Aegaeum 14)*, two volumes, Liège/Austin.
- Hallager, E. (2000) 'New evidence for seal use in the pre- and protopalatial periods', in Müller, W. (ed.), *Minoisch-Mykenische Glyptik. Stil, Ikonographie, Funktion*, (CMS 6), Berlin, 97–105.
- Hallager, E. (2002) 'One Linear A tablet and 45 noduli', *Creta Antica* 3, 105–109.
- Hallager, E. (2005a) 'The uniformity in seal use and sealing practice during the LH/LM III period', in D'Agata, A. L. and Moody, J. (eds.) *Ariadne's Threads. Connections between Crete and the Greek Mainland in Late Minoan III (LM IIIA2 to LM IIIC)*, Athens, 243–265.
- Hallager, E. (2005b) 'Fold-over nodules' in Perna, M. (ed.) *Studi in Onore di Enrica Fiandra: Contributi di Archeologia Egea e Vicinorientale* (Studi Egei e Vicinorientali 1), Paris, 105–112.
- Hallager, E. (2010) 'Development of sealing practices in the Neopalatial period' in Müller, W. (ed.) *Die Bedeutung der minoischen und mykenischen Glyptik* (CMS 8), Mainz, 205–212.
- Hallager, E. (2011) 'On the origin of Linear B administration', *Πεπραγμένα του 1<sup>ου</sup> Κρητολογικού Διεθνούς Συνεδρίου/Proceedings of the 10th Cretological Conference*, Chania, 1–8 October 2006, vol. A1, Chania, 317–329.
- Hallager, E. (2015) 'Mycenaean administrative sealing practice: a world of its own?' in J. Weilhartner, J. and Ruppenstein, F. (eds) *Tradition and Innovation in the Mycenaean Palatial Polities* (Mykenische Studien 34), Vienna, 141–153.
- Harbsmeier, M. (1988) 'Inventions of writing' in Gledhill, J., Bender, B. and Larsen, M. T. (eds) *State and Society: the Emergence and Development of Social Hierarchy and Political Centralisation*, London, 253–276.
- Harper, P. O. Klengel-Brandt, E., Aruz, J. and Benzel, K. (1995) *Assyrian Discoveries at Ashur on the Tigris: Antiquities in the Vorderasiatisches Museum, Berlin*, New York.
- Harper, R. F. (1904) *The Code Of Hammurabi, King of Babylon About 2250 B.C.*, 2nd edition, Chicago.
- Harris, J. F. and Stearns, S. K. (1997), *Understanding Maya Inscriptions: A Hieroglyph Handbook*, 2nd edition, Philadelphia.
- Haskell, H. W., Jones, R. E., Day, P. M. and Killen, J. T. (2011) *Transport Stirrup Jars of the Bronze Age Aegean and the East Mediterranean*, Philadelphia.
- Havelock, E. A. (1982) *The Literate Revolution in Greece and its Cultural Consequences*, Princeton.
- Hawkins, J. D. (1986) 'Writing in Anatolia: Imported and indigenous systems', *World Archaeology* 17.3, 363–376.
- Hawkins, J. D. (2003) 'Script and texts' in Melchert, H. C. (ed.) *The Luwians*, Leiden, 128–169.
- Hawkins, J. D. (2008) 'The disappearance of writing systems: Hieroglyphic Luwian' in Baines, J., Bennet, J. and Houston, S. D. (eds) *The Disappearance of Writing Systems*, London, 31–43.
- Hawley, R. (2008) 'Apprendre à écrire à Ougarit: une typologie des abécédaires' in Roche, C. (ed.) *D'Ougarit à Jérusalem. Recueil d'études épigraphiques et archéologiques offert à Pierre Bordreuil*, Paris, 215–232.
- Herder, J. G. (1985) *Schriften zum Alten Testament* ed. R. Smend, Frankfurt.
- Heubeck, A. (1979) 'Remarks on the Sign-doublers  $ro_2$ ,  $ra_2$ ,  $ta_2$ ' in Risch, E. and Mühlestein, H. (eds) *Colloquium Mycenaicum*, Neuchâtel-Genève, 239–258.

- Heubeck, A. (1982) 'L'origine della lineare B', *Studi Micenei ed Egeo-Anatolici* 23, 195–207.
- Hill Boone, E. (2004) 'Beyond writing' in Houston, S. D. (ed.), *The First Writing: Script Invention as History and Process*, Cambridge, 313–348.
- Hiller, S. (1985) 'Die kyprominoische Schriftsysteme', *Archiv für Orientforschung* 20, 61–102.
- Hirschfeld, N. (1997) *The PASP data base for the use of scripts on Cyprus*, Salamanca.
- Hirschfeld, N. (1999) *Potmarks of the Late Bronze Age Eastern Mediterranean*, PhD. Dissertation, University of Texas at Austin.
- Hirschfeld, N. (2012) 'Appendix IV: the potmarks' in Karageorghis V. and Violaris, Y. (eds) *Tombs of the Late Bronze Age in the Limassol Area, Cyprus (17th–13th centuries BC)*, Nicosia, 289–299.
- Hirschfeld, N. (2014) Book review of P. M. Steele (ed.) *Syllabic Writing on Cyprus and its Context*, *American Journal of Archaeology* 118.4: <http://www.ajaonline.org/online-review-book/1867>.
- Hooker, J. T. (1975) 'Problems and methods in the decipherment of Linear A', *Journal of the Royal Asiatic Society of Great Britain and Ireland* 2, 164–172.
- Hooker, J. T. (1979) *The Origin of the Linear B Script* (Supplement to *Minos* 8), Salamanca.
- Hopkins, N. A. (1994) 'Days, kings, and other Semantic classes marked in Maya hieroglyphic writing', unpublished paper presented at the 93rd Annual Meeting of the American Anthropological Association, Atlanta.
- Hopkins, N. A. and Jossierand, J. K. (1999) 'Issues of glyphic decipherment', unpublished paper presented at the 17th Annual University Museum Maya Weekend, 'Maya Epigraph - Progress and Prospects', University of Pennsylvania, Philadelphia.
- Houston, S. D. (2004a) (ed.) *The First Writing. Script Invention as History and Process*, Cambridge.
- Houston, S. D. (2004b) 'Writing in Early Mesoamerica' in Houston, S. D. (ed.) *The First Writing. Script Invention as History and Process*, Cambridge, 274–309.
- Houston, S. D. (2004c) 'The archaeology of communication technologies', *Annual Review of Anthropology* 33, 223–250.
- Houston, S. D. (2012) (ed.) *The Shape of Script. How and Why Writing Systems Change*, Santa Fe.
- Houston, S. D. and Rojas, F. (forthcoming) 'Sourcing novelty. On the "secondary invention" of writing' in Woods, C. and Shaughnessy, E. (eds) *Signs of Writing. The Cultural, Social, and Linguistic Contexts of the World's First Writing Systems*, Chicago.
- Iacovou, M. (2013) 'The Cypriot syllabary as a royal signature: the political context of the syllabic script in the Iron Age' in Steele, P. M. (ed.) *Syllabic Writing on Cyprus and its Context*, Cambridge, 133–152.
- Iakovidis, S. E, Godart, L. and Sacconi, A. (2012) 'Les inscriptions en linéaire B découvertes dans la "Maison de Petsas" à Mycènes', *Pasiphae* 6, 49–57.
- Ilievski, P. H. and Crepajac, L. (eds) (1987) *Tractata Mycenaea*, Skopje.
- Jackendoff, R. (2002) *Foundations of Language: Brain, Meaning, Grammar, Evolution*, Oxford.
- Janko, R. (1987) 'Linear A and the direction of the earliest Cypro-Minoan writing' in Killen, J. T., Melena, J. L. and Olivier, J.-P. (eds) *Studies in Mycenaean and Classical Greek Presented to John Chadwick* (= *Minos* 20–22), Salamanca, 311–317.
- Janko, R. (2015) 'From Gabii and Gordion to Eretria and Methone: the rise of the Greek alphabet', *Bulletin of the Institute of Classical Studies* 58, 1–32.
- Jasink, A. M. (2005) 'The so-called klastatograms on Cretan Hieroglyphic seals', *Kadmos* 44, 23–29.
- Jasink, A. M. (2009) *Cretan Hieroglyphic Seals: A New Classification of Symbols and Ornamental/Filling Motifs* (Biblioteca di 'Pasiphae' 13), Pisa/Rome.
- Jiménez Delgado, J. M. (2008) 'La situación de \*h en griego micénico', *Kadmos* 47.1–2, 73–90.
- Judson, A. P. (2016) *The Undeciphered Signs of Linear B*, unpublished PhD Thesis, University of Cambridge.
- Judson, A. P. (forthcoming) 'The mystery of the Mycenaean "labyrinth": the value of Linear B  $p_2$  and related signs', *Studi Micenei ed Egeo-Anatolici Nuova Serie* 3.
- Justeson, J. S. and Mathews, P. (1990) 'Evolutionary trends in Mesoamerican hieroglyphic writing', *Visible Language* 24.1, 88–132.

- Karageorghis, V. (1970) 'Note on sigynnae and obeloi', *Bulletin de Correspondance Hellénique* 94, 35–44.
- Karageorghis, V. (1983) *Palaepaphos-Skales. An Iron Age Cemetery in Cyprus*, Constance.
- Karageorghis, V. and Raptou, E. (2014) *Necropoleis at Palaepaphos from the End of the Late Bronze Age to the Cypro-Archaic Period*, Nicosia.
- Karageorghis, V. and Raptou, E. (2016) *Palaepaphos-Skales. Tombs of the Late Cypriot IIIB and Cypro-Geometric periods (Excavations of 2008 and 2011)*, Nicosia.
- Karetsou, A. (2000) (ed.) *Κρήτη-Αίγυπτος. Πολιτισμικοί Δεσμοί Τριών Χιλιετιών. Κατάλογος*, Athens.
- Karnava, A. (1997) 'Review of J.-P. Olivier and L. Godart, 'Corpus Hieroglyphicarum Inscriptionum Cretae' (CHIC), *Studi Micenei ed Egeo-Anatolici* 39, 300–304.
- Karnava, A. (2000) *The Cretan Hieroglyphic Script of the Second Millennium BC: Description, Analysis, Function and Decipherment Perspectives*. Unpublished doctoral thesis, Université Libre de Bruxelles.
- Karnava, A. (2007) 'Tradition and innovation: the scripts in the Old Palatial period', *BICS* 50.1, 199–200.
- Karnava, A. (2013) 'Κύπριοι της 1ης χιλ. π.Χ. στον ελλαδικό χώρο: η μαρτυρία των συλλαβικών επιγραφών' in Michaelides, D. (ed.) *Epigraphy, Numismatics, Prosopography and History of Ancient Cyprus. Papers in Honour of Ino Nicolaou*, Uppsala, 159–169.
- Karo, G. (1930–1933) *Die Schachtgräber von Mykenai*, München.
- Keller-Cohen, D. (1994) *Literacy: Interdisciplinary Conversations*, Cresskill, NJ.
- Kelly, J. D. (2006) 'Writing the state: China, India, and general definitions' in Sanders, S. (ed.) *Margins of Writing, Origins of Culture*, Chicago, 15–32.
- Kettunen, H. and Helmke, C. (2014) *Introduction to Maya Hieroglyphs, XIX European Maya Conference Bratislava 2014*, 14th edition, Bratislava.
- Killen, J. T. (1964) 'The wool industry of Crete in the Late Bronze Age', *Annual of the British School at Athens* 59, 1–15.
- Kober, A. E. (1945) 'Evidence of Inflection in the "Chariot" Tablets from Knossos', *American Journal of Archaeology* 49.2, 143–151.
- Krzyszowska, O. (2005) *Aegean Seals. An Introduction (BICS Supplement 85)*, London.
- Krzyszowska, O. (2012) 'Seals from the Petras Cemetery: a preliminary overview' in Tsiopoulou, M. (ed.) *Petras, Siteia - 25 years of Excavations and Studies. Acts of a Two-day Conference Held at the Danish Institute at Athens, 9–10 October 2010 (Monographs of the Danish Institute at Athens 16)*, Athens, 145–160.
- Krzyszowska, O. (2015) 'Why were cats different? Script and imagery in Middle Minoan II glyptic' in Macdonald, C. F., Hatzaki, E. and Andreou, S. (eds) *The Great Islands: Studies of Crete and Cyprus presented to Gerald Cadogan*, Athens, 100–106.
- Krzyszowska, O. (forthcoming) 'Seals from Petras Siteia: new insights for MM II hard stone glyptic' in *Proceedings of the Cretological Society, Rethymnon 21–27 October 2011*, unpublished.
- Ladefoged, P. and Maddieson, I. (1996) *The Sounds of the World's Languages*, Oxford.
- Landenius Enegren, H. (2008) *The People of Knossos. Prosopographical Studies in the Knossos Linear B Archives*, Uppsala.
- Laroche, E. (1956) 'Documents hiéroglyphiques hittites provenant du palais d'Ugarit' in Schaeffer, C. F. A. (ed.) (*Ugaritica* III), Paris, 97–163.
- Larsen, M. T. (1988) 'Introduction: Literacy and social complexity' in Gledhill, J., Bender, B. and Larsen, M. T. (eds) *State and Society: the Emergence and Development of Social Hierarchy and Political Centralisation*, London, 173–191.
- Lebessi, A., Muhly, P. and Olivier, J.-P. (1995) 'An inscription in the Hieroglyphic script from the Syme sanctuary, Crete (SY Hf 01)', *Kadmos* 34, 63–77.
- Lebessi, A., Olivier, J.-P. and Godart, L. (1974) 'Πινακίδες Γραμμικῆς Α ἐξ Ἀρχανῶν', *ArchEph*, 113–167.
- Le Feuvre, C. (2015) Ὅμηρος δύσγνωστος. *Réinterprétations de termes homériques en grec archaïque et classique*, Geneva.

- Lehmann, R. G. (2012) '27-30-22-26 – How many letters needs an alphabet?' in de Voogt, A. and Quack, J. F. (eds) *The Idea of Writing. Writing Across Borders*, Leiden, 11–52.
- Lehmann, R. G. (2013) 'Ist damit das Nötige gesagt? Zu einem neuen Trend in der althebräischen Epigraphik', *Orientalistische Literatur Zeitung* 108, 221–229 (= review of Rollston, C. A., *Writing and Literacy in the World of Ancient Israel. Epigraphic Evidence from the Iron Age*, Leiden: Brill, 2010).
- Leibundgut Wieland, D. and Frey-Asche, L. (2011) *Weihgeschenke aus dem Heiligtum der Aphrodite in Alt-Paphos. Terrakotten, Skulpturen und andere figürliche Kleinvotive*, Darmstadt.
- Lejeune, M. (1958a) 'Coup d'oeil sur le système graphique' in Lejeune, M. (ed.) *Mémoires de philologie mycénienne. Première série (1955–1957)*, Paris, 318–330.
- Lejeune, M. (1958b) 'Sur les signes notant des syllabes à groupe consonantique initial' in Lejeune, M. (ed.) *Mémoires de philologie mycénienne. Première série (1955–1957)*, Paris, 255–282.
- Lejeune, M. (1972a) 'Doublets et complexes' in Lejeune, M. (ed.) *Mémoires de philologie mycénienne. Troisième série (1964–1968)* (Istituto per gli Studi Micenei ed Egeo-Anatolici: Incunabula Graeca 43), Roma, 89–104.
- Lejeune, M. (1972b) *Phonétique historique du mycénien et du grec ancien* (Tradition de l'Humanisme ix), Paris.
- Lejeune, M. (1997a) 'Les syllabogrammes B et leur translittération' in Lejeune, M. (ed.) *Mémoires de philologie mycénienne. Quatrième série (1969–1996)* (Istituto per gli Studi Micenei ed Egeo-Anatolici: Incunabula Graeca 99), Rome, 25–52.
- Lejeune, M. (1997b) 'Pré-mycénien et proto-mycénien' in Lejeune, M. (ed.) *Mémoires de philologie mycénienne. Quatrième série (1969–1996)* (Istituto per gli Studi Micenei ed Egeo-Anatolici: Incunabula Graeca 99), Roma, 197–212.
- Levelt, C. (1994) *The Acquisition of Place*, Leiden.
- Lévi-Strauss, C. (1955) *Tristes tropiques*, Paris.
- Lewis, G. (1999) *The Turkish Script Reform. A Catastrophic Success*, Oxford.
- Liberman, I. Y., Shankweiler, D., Fisher, F. W. and Carter, B. (1974) 'Explicit syllable and phoneme segmentation in the young child', *Journal of Experimental Child Psychology* 18, 201–212.
- Lomas, K. (2007) 'Writing boundaries: Literacy and identity in the ancient Veneto' in Lomas, K., Whitehouse, R. D. and Wilkins, J. (eds) *Literacy and the State in the Ancient Mediterranean*, London, 149–169.
- Lomas, K. (2008) 'Script obsolescence in ancient Italy: from pre-Roman to Roman writing' in Baines, J., Bennet, J. and Houston, S. D. (eds) *The Disappearance of Writing Systems*, London, 109–138.
- Luce, J.-M. (2009) 'Iron Age burial customs in the Peloponnese and their place in the funerary geography of the Greek world' in Cavanagh, H., Cavanagh, W. and Roy, J. (eds) *Honouring the Dead in the Peloponnese* (colloquium Sparta 2009), Nottingham, 415–426 (online: <<https://www.nottingham.ac.uk/csps/open-source/hounouring-the-dead.aspx>>).
- Luce, J.-M. (2014) 'Les modes funéraires et la parole dans la Grèce de l'âge du fer ancien', *Dialogues d'Histoire Ancienne* supplement 10, 37–51.
- Luraghi, N. (2010) 'The local scripts from nature to culture', *Classical Antiquity* 29.1, 68–91.
- Mackay, A. (1965) 'On the type-fount of the Phaistos disc', *Statistical Methods in Linguistics* 4, 15–25.
- Macdonald, C. F. and Knappett, C. (eds) (2007) *Knossos. Protopalatial Deposits in Early Magazine A and the South-West Houses* (British School at Athens Supplement 41), London.
- MacNeilage, P. F. and Davis, B. L. (2000) 'Evolution of speech: the relation between ontogeny and phylogeny' in Knight, C., Studdert-Kennedy, M. and Hurford, J. R. (eds) *The Evolutionary Emergence of Language. Social Function and the Origins of Linguistic Form*, Cambridge, 146–160.
- Maeir, A. M., Davis, B. and Hitchcock, L. A. 'Philistine names and terms once again. A recent perspective', *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 4, 321–340.
- Mander, P. (2000) 'I testi amministrativi e la sigillatura: gli archivi del III millennio' in Perna, M. (ed.) *Administrative Documents in the Aegean and their Near Eastern Counterparts*, Turin, 33–49.
- Maniatis, Y., Arapogianni, X. and Godart, L. (2010) 'Kavkania: le mot de la fin', *Pasiphae* 4, 117–134.

- Mann, S. E. (1960) 'The decipherment of Cypro-Mycenaean', *Man* 60, 40–42.
- Marazzi, M. (1990) *Il Geroglifico Anatolico. Problemi di Analisi e Prospettive di Ricerca*, Rome.
- Masetti-Rouault, M. G. (2016) 'Le monde syro-mésopotamien à l'âge du Fer I–II: cultures locales et culture impériale, entre Assyriens et Araméens', *Semitica et Classica* 8, 111–116.
- Masson, É. (1969) 'La plus ancienne tablette chypro-minoenne', *Minos* 10, 64–77.
- Masson, É. (1972) 'Les répertoires graphiques chyprominoens' in Ruipérez, M. S. (ed.) *Acta Mycenaea* (*Minos* 11, vol. I), Salamanca, 99–109.
- Masson, É. (1973) 'La tablette chypro-minoenne 20–25 de Ras Shamra: essai d'interprétation', *Comptes-rendus des séances de l'Académie des inscriptions et belles-lettres* 117.1, 32–60.
- Masson, É. (1974) *Cyprominoica: répertoires; documents de Ras Shamra; essais d'interprétation*, Göteborg.
- Masson, É. (1979a) 'L'apparition de l'écriture à Chypre: témoignage probable des contacts entre l'île de Crète et l'île de Chypre au cours de la première moitié du deuxième millénaire' in Karageorghis, V. (ed.) *Acts of the International Archaeological Symposium: 'The Relations between Cyprus and Crete, ca. 2000–500 BC'*, Nicosia 16 April–22 April 1978, Nicosia, 134–8.
- Masson, É. (1979b) 'Quelques inscriptions inédites d'Enkomi', *Ugarit-Forschungen* 11, 559–562.
- Masson, É. (1987) 'La part du fond commun égéen dans les écritures chypro-minoennes et son apport possible pour leur déchiffrement' in Killen, J. T., Melena, J. L. and Olivier, J.-P. (eds) *Studies in Mycenaean and Classical Greek Presented to John Chadwick* (= *Minos* 20–22), Salamanca, 367–381.
- Masson, É. and Masson, O. (1983) 'Appendix 4: Les objets inscrits de Palaepaphos-Skales' in Karageorghis, V. (ed.) *Palaepaphos-Skales: An Iron Age Cemetery in Cyprus*, Constanza, 411–415.
- Masson, O. (1955) 'La découverte d'une tablette chypro-minoenne à Ras-Shamra (1953)', *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres*, 99<sup>e</sup> année, N. 2, 174–180.
- Masson, O. (1956) 'Documents chypro-minoens de Ras Shamra. I Inscriptions diverses et tablette de 1953; II Fragments de tablettes chypro-minoennes de Ras Shamra (1955)' in Schaeffer, C.F.-A. (ed.) *Ugaritica III. Sceaux et cylindres hittites, épée gravée du cartouche de Mineptah, tablettes chypro-minoennes et autres découvertes nouvelles de Ras Shamra. Mission de Ras Shamra*, Vol. 8, Paris, 233–250.
- Masson, O. (1957) 'Cylindres et cachets chypriotes portant des caractères chyprominoens', *Bulletin de correspondance hellénique* 81, 6–37.
- Masson, O. (1968a) 'Les écritures chypro-minoennes et les autres écritures chypriotes' in *Atti e Memorie del 1° Congresso internazionale di Micenologia. Roma 27 settembre–3 ottobre 1967*, Rome 1, 417–425.
- Masson, O. (1968b) 'Kypriaka' (IV. La plus ancienne inscription paphienne, V. La plus ancienne inscription phénicienne de Chypre, VI. Une inscription étrange de Golgoi, VII. Le sanctuaire d'Apollon à Idalion (fouilles 1868–1869)), *Bulletin de Correspondance Hellénique* 92, 375–409.
- Masson, O. (1969) 'Documents chypro-minoens de Ras Shamra' in Schaeffer, C. F. A. (ed.) *Ugaritica VI, publié à l'occasion de la XXX<sup>e</sup> campagne de fouilles à Ras Shamra (1968) sous la direction de Claude F.-A. Schaeffer. Mission de Ras Shamra* Vol. 17, Paris, 379–392.
- Masson, O. and Mitford, T. B. (1986) *Les inscriptions syllabiques de Kouklia-Paphos*, Constance.
- Matthäus, H. (2016) Review of Karageorghis and Raptou 2014, *Gnomon* 88, 629–633.
- Matthäus, H. and Schuhmacher-Matthäus, G. (2013) 'Social and ethnic change in Cyprus during the 11th century B.C. New evidence from Kourion, Kaloriziki, tomb 40', *Pasiphae* 7, 159–168.
- Matthäus, H. and Schuhmacher-Matthäus, G. (2015) 'Kourion-Kaloriziki tomb 40: a republication', in Matthäus, H., Morstadt, B. and Vonhoff, C. (eds.) *PoCA (Postgraduates on Cypriot Archaeology)* (2012), Cambridge, 1–111.
- Mavrojannis, T. (2007) 'Herodotus on the introduction of the Phoenician alphabet to the Greeks, the Gephyraeans and the Proto-Geometric building at Toumba in Lefkandi', *Klio* 89, 291–319.
- Meißner, T. (2008) 'Notes on Mycenaean Spelling' in Sacconi, A., Del Frio, M., Godart, L. and M. Negri (eds.) *Colloquium Romanum, Pasiphae II*, Pisa/Roma, vol. 2, 507–521.

- Meißner, T. (2013) 'Anlässlich von: Beekes, Robert with the assistance of Lucien van Beek: Etymological Dictionary of Greek. Leiden Indo-European Etymological Dictionary Series, 10. Brill Verlag Leiden, 2009', *Kratylos* 58, 1–32.
- Meißner, T. and Steele, P. M. (forthcoming) 'Linear A and Linear B: structural and contextual concerns' in Nosch, M.-L.B. and Landenius Enegren, H. (eds) *Aegean Scripts*, Rome.
- Melchert, C. H. (1996) 'Anatolian hieroglyphs' in Daniels, P. T. and Bright, W. (eds.) *The World's Writing Systems*, Oxford, 120–124.
- Melchert, C. (2004) 'Luvian' in Woodard, R. D. (ed.) *The Cambridge Encyclopedia of the World's Ancient Languages*, Cambridge, 576–584.
- Melena, J. L. (1983) 'Notas de filología micénica III: el silabograma \*86', *Emerita* 51, 262–267.
- Melena, J. L. (1987) 'On Untransliterated Syllabograms \*56 and \*22' in Ilievski, P. H. and Crepajac, L. (eds) *Tractata Mycenaea*, Skopje, 203–232.
- Melena, J. L. (2000–2001) '24 joins and quasi-joins of fragments in the Linear B tablets from Pylos', *Minos* 35–36, 357–369.
- Melena, J. L. (2014) 'Mycenaean writing' in Duhoux, Y. and Morpurgo Davies, A. (eds) *A Companion to Linear B: Mycenaean Greek Texts and their World*, vol. 3 (Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain 133), Louvain-la-Neuve, 1–186.
- Melena, J. L. (forthcoming) 'On the structure of the Mycenaean Linear B syllabary. I. The untransliterated syllabograms. Preliminary report' in *Proceedings of the 11th International Colloquium on Mycenaean Studies, Austin, Texas, 7th–12th May 2000*, Austin. [<https://www.academia.edu/2203598/>]
- Meriggi, P. (1973a) 'Das Wort "Kind" in den kretischen Hieroglyphen', *Kadmos* 12, 114–133.
- Meriggi, P. (1973b) 'Sul geroglifico cretese' in Rizza, G. (ed) *Antichità Cretesi: Studi in Onore di Doro Levi*, vol. 1 (Chronache di Archeologia 12), Roma, 172–181.
- Merrillees, R. S. (1993) 'The languages of Cyprus', *Cahiers du centre d'études chypriotes* 20, 3–17.
- Messaris, P. and Moriarty, S. (2005) 'Visual literacy theory' in Smith, K., Moriarty, S., Barbatsis, G., and Kenney, K. (eds) *Handbook of Visual Communication*, Mahwah, 481–502.
- Michalowski, P. (1990) 'Early Mesopotamian communicative systems: Art, literature and writing' in Gunter, A. C. (ed.) *Investigating Artistic Environments in the Ancient Near East*, Washington DC, 53–69.
- Michalowski, P. (1994) 'Writing and literacy in early states: A Mesopotamianist perspective' in Keller-Cohen, D. (ed.) *Literacy: Interdisciplinary Conversations*, Cresskill, 49–70.
- Militello, P. (2000) 'L'archivio di cretule' del Vano 25 e un nuovo sigillo da Festòs', in Perna, M. (ed.), *Administrative Documents in the Aegean and their Near Eastern Counterparts*, Turin, 221–249.
- Mitford, T. B. and Masson, O. (1983) *The Syllabic Inscriptions of Rantidi-Paphos*, Constance.
- Mora, C. (1991) 'Sull'origine della scrittura geroglifica anatolica', *Kadmos* 20.1, 1–28.
- Mora-Marín, D. F. (2008) 'Full phonetic complementation, semantic classifiers, and semantic determinatives in ancient Mayan hieroglyphic writing', *Ancient Mesoamerica* 19, 195–213.
- Morgan, L. (1985) 'Idea, idiom and iconography' in *Bulletin de correspondance hellénique*, supplement 11, Athens/Paris, 5–19.
- Morpurgo Davies, A. (1985) 'Mycenaean and Greek Language' in Morpurgo Davies, A. and Duhoux, Y. (eds.) *Linear B: a 1984 Survey* (Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain 26), Louvain-la-Neuve, 75–126.
- Morpurgo Davies, A. (1986) 'Forms of writing in ancient Mediterranean world' in Baumann, G. (ed.) *The Written Word. Literacy in Transition*, Oxford, 55–77.
- Morpurgo Davies, A. and Hawkins, J. D. (1978) 'Il sistema grafico del luvio geroglifico', *Annali della Scuola Normale Superiore di Pisa* 8.3, 755–782.
- Morpurgo Davies, A. and Olivier, J.-P. (2012) 'Syllabic scripts and languages in the second and first millennia BC' in Cadogan, G., Iacovou, M., Kopaka, K. and Whitley, J. (eds.) *Parallel Lives. Ancient Island Societies in Crete and Cyprus*, London, 105–118.

- Muhly, P. and Olivier, J.-P. (2008) 'Linear A inscriptions from the Syme sanctuary, Crete', *ArchEph*, 197–223.
- Nahm, W. (1981) 'Studien zur kypro-minoischen Schrift', *Kadmos* 20, 52–63.
- Nahm, W. (1984) 'Studien zur kypro-minoischen Schrift II', *Kadmos* 23, 164–179.
- Nakassis, D. (2012) 'Labor mobilization in Mycenaean Pylos' in Carlier, P., de Lamberterie, C., Egetmeyer, M., Guilleux, N., Rougemont, F. and Zurbach, J. (eds) *Études Mycéniennes 2010* (Biblioteca di Pasiphae 10), Pisa/Roma, 269–283.
- Nakassis, D. (2013) *Individuals and Society in Mycenaean Pylos. Mnemosyne Supplements* (History and Archaeology of Classical Antiquity 358), Leiden/Boston.
- Neumann, G. (1960) 'Minoisch kikina "die Sykomorenefeige"', *Glotta* 3/4, 181–186.
- Neumann, C. (1992) *System und Ausbau der hethitischen Hieroglyphenschrift*, Göttingen.
- Neumann, G. (1996) 'Zur Schaffung der Zeichen \*91 two und \*62 pte von Linear B' in De Miro, E., Godart, L. and Sacconi, A. (eds) *Atti e memorie del Secondo Congresso Internazionale di Micenologia* (Incunabula Graeca 98), Roma, 1, 91–99.
- Nosch, M.-L. B. (2007) *The Knossos Od Series. An Epigraphical Study*, Vienna.
- Nosch, M.-L. B. (2012) 'The textile logograms in the Linear B tablets: *Les idéogrammes archéologiques – des textiles*' in Carlier, P., de Lamberterie, C., Egetmeyer, M., Guilleux, N., Rougemont, F. and Zurbach, J. (eds) *Études Mycéniennes 2010* (Biblioteca di Pasiphae 10), Pisa/Roma, 303–344.
- Olivier, J.-P. (1979) 'L'origine de l'écriture linéaire B', *Studi Micenei ed Egeo-Anatolici* 20, 43–52.
- Olivier, J.-P. (1981) 'Les sceaux avec de signes hiéroglyphique. Que lire? Une question de définition' in Pini, I. (ed.) *Studien zur minoischen und helladischen Glyptik* (CMS 1), Berlin, 105–115.
- Olivier, J.-P. (1986) 'Cretan writing in the second millennium BC', *World Archaeology* 17.3, 377–389.
- Olivier, J.-P. (1989) 'The possible methods in deciphering the pictographic Cretan script' in Duhoux, Y., Palaima, T. G. and Bennet, J. (eds) *Problems in Decipherment*, Louvain-la-Neuve, 39–58.
- Olivier, J.-P. (1990) 'The relationship between inscriptions on hieroglyphic seals and those written on archival documents' in Palaima, T. G. (ed.) *Aegean Seals, Sealings and Administration* (Aegaeum 5), Liège, 11–24.
- Olivier, J.-P. (1994–1995) 'Un simili-raccord dans les barres en Hiéroglyphique de Cnossos (CHIC #057 ⊕ #058)', *Minos* 29–30, 257–269.
- Olivier, J.-P. (1995) 'Les sceaux avec des signes hiéroglyphiques. Que lire? Une question de bon sens' in Müller, W. (ed.) *Sceaux minoens et mycéniens: IVe symposium international, 10–12 septembre 1992, Clermont-Ferrand* (CMS 5), Berlin, 169–181.
- Olivier, J.-P. (1996) 'Les écritures crétoises: sept points à considérer' in De Miro, E., Godart, L. and Sacconi, A. (eds.) *Atti e Memorie del Secondo Congresso Internazionale di Micenologia, Roma-Napoli, 14–20 ottobre 1991* (Incunabula Graeca 98:1), Roma, 101–113.
- Olivier, J.-P. (1997) 'The possible methods in deciphering the pictographic Cretan script' in Duhoux, Y., Palaima, T. G. and Bennett, J. (eds) *Problems in Decipherment* (Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain 49), Louvain-la-Neuve, 39–58.
- Olivier, J.-P. (2000) 'Les sceaux avec des inscriptions hiéroglyphiques. Comment comprendre?' in Perna, M. (ed.) *Administrative Documents in the Aegean and their Near Eastern Counterparts*, Rome, 141–191.
- Olivier, J.-P. (2010) 'Les sceaux et scellés inscrits en "Hiéroglyphique" Crétois, en Linéaire A et en Linéaire B en Crète et en Grèce continentale, en Chypro-Minoen et dans les Syllabaires du Ier millénaire à chypre: un bilan' in Müller, W. (ed.) *Die Bedeutung der Minoischen und Mykenischen Glyptik* (CMS 8), Mainz, 287–295.
- Olivier, J.-P. (2013) 'The development of Cypriot syllabaries, from Enkomi to Kafizin' in Steele, P. M. (ed.) *Syllabic Writing on Cyprus and its Context*, Cambridge, 7–26.
- Olivier, J.-P. (2015) 'Inscription syllabique' in Caubet, A., Fourrier, S. and Yon, M. (eds.) *Kition-Bamboula VI. Le sanctuaire sous la colline*, Lyon, 346–347.
- Packard, D. W. (1974) *Minoan Linear A*, Berkeley/Los Angeles/London.

- Palaima, T. G. (1982) 'Linear A in the Cyclades: The trade and travel of a script', *Temple University Aegean Symposium* 7, 15–22.
- Palaima, T. G. (1988a) 'The development of the Mycenaean writing system', in Olivier, J. P. and Palaima, T. G. (eds) *Texts, Tablets and Scribes. Studies in Mycenaean Epigraphy and Economy Offered to Emmett L. Bennett, Jr* (Supplement to *Minos* 10), Salamanca, 269–342.
- Palaima, T. G. (1988b) 'The development of the Mycenaean script and literacy', *Bulletin of the Institute of Classical Studies* 35, 166–167.
- Palaima, T. G. (1989) 'Cypro-Minoan scripts: Problems of historical context' in Duhoux, Y., Palaima, T. G. and Bennet, J. (eds.), *Problems in Decipherment*, Louvain-la-Neuve, 121–187.
- Palaima, T. G. (1990) 'Origin, development, transition and transformation: the purposes and techniques of administration in Minoan and Mycenaean society' in Palaima, T. G. (ed.) *Aegean Seals, Sealings and Administration (Aegaeum* 5), Liège, 83–104.
- Palaima, T. G. (1990) (ed.) *Aegean Seals, Sealings and Administration (Aegaeum* 5), Liège.
- Palaima, T. G. (1994) 'Seal-users and script-users/nodes and tablets at LM IB Hagia Triada', in Ferioli, P., Fiandra, E., Fissore, G. G. and Frangipane, M. (eds), *Archives before Writing*, Rome, 307–337.
- Palaima, T. G. (1998) Review of 'Corpus Hieroglyphicarum Inscriptionum Cretae (CHIC)', *American Journal of Archaeology* 102, 434–435.
- Palaima, T. G. (2002–2003) 'OL Zh 1: QVOVSQVE TANDEM?', *Minos* 37–38, 373–385.
- Palaima, T. G. (2003) 'The inscribed bronze "kessel" from Shaft Grave IV and Cretan heirlooms of the bronze artist named "Aigeus" *vel sim.* in the Mycenaean Palatial period' in Duhoux, Y. (ed.) *Briciaka. A Tribute to W.C. Brice. Cretan Studies* 9, Amsterdam, 188–201.
- Palaima, T. G. (2010) 'Linear B', in E. Cline (ed.), *The Oxford Handbook of the Bronze Age Aegean (ca. 3000–1000 BC)*, Oxford/New York, 356–372.
- Palaima, T. G. (2011) 'Scribes, scribal hands and palaeography' in Duhoux, Y. and Morpurgo Davies, A. (eds) *A Companion to Linear B: Mycenaean Greek Texts and their World*, vol. 2, Louvain-la-Neuve/Walpole, 33–136.
- Palaima, T. G. and Sikkenga, E. (1999) 'Linear A > Linear B' in Betancourt, P. P., Karageorghis, V. and Laffineur, R. (eds.) *Meletemata. Studies in Aegean Archaeology Presented to Malcolm H. Wiener as He Enters His 65th Year (Aegaeum* 20), Liège/Austin, 2, 599–608.
- Palaima, T. G. and Wright, J. C. (1985) 'Ins and outs of the Archives Rooms at Pylos: form and function in a Mycenaean palace', *American Journal of Archaeology* 89, 251–262.
- Palma di Cesnola, L. (1877) *Cyprus, its ancient cities, tombs and temples. A narrative of researches and excavations during ten years' residence as American consul in that island*, London.
- Palmer, L. R. (1955) 'Observations on the Linear "B" tablets from Mycenae', *Bulletin of the Institute of Classical Studies* 2, 36–45.
- Palmer, L. R. (1963) *The Interpretation of Mycenaean Greek Texts*, Oxford.
- Palmer, L. R. (1980), *The Greek Language*, Bristol.
- Palmer, R. (1995) 'Linear A commodities: a comparison of resources', in Laffineur, R. and Niemeier, W.-D. (eds) *Politeia. Society and State in the Aegean Bronze Age (Aegaeum* 12), Liège/Austin, 133–155.
- Panagiotopoulos, D. (2010) 'A systemic approach to Mycenaean sealing practices' in Müller, W. (ed.) *Die Bedeutung der minoischen und mykenischen Glyptik (CMS* 8), Mainz, 297–307.
- Panagiotopoulos, D. (2014) *Mykenische Siegelpraxis. Funktion, Kontext und administrative Verwendung mykenischer Tonplomben aus dem griechischen Festland und Kreta (Athenaia* 5), Munich.
- Papadopoulos, J. K. (1994) 'Early Iron Age potters' marks in the Aegean', *Hesperia* 63, 437–507.
- Papadopoulos, J. K. (2016) 'The early history of the Greek alphabet: new evidence from Eretria and Methone', *Antiquity* 90 (353), 1238–1254.
- Pardee, D. (1997a) 'Proto-Canaanite' in Meyers, E. M. (ed.) *Oxford Encyclopaedia of Archaeology in the Near East*, Vol. 4, New York/Oxford, 352–54.

- Pardee, D. (1997b) 'Proto-Sinaitic' in Meyers, E. M. (ed.) *Oxford Encyclopaedia of Archaeology in the Near East*, Vol. 4, New York/Oxford, 354–355.
- Pardee, D. (2007) 'The Ugaritic alphabetic cuneiform writing system in the context of other alphabetic systems' in Miller, C. L. (ed.) *Studies in Semitic and Afroasiatic Linguistics Presented to Gene B. Gragg*, Chicago, 181–200.
- Payne, A. (2008) 'Writing systems and identity' in Collins, B. J., Bacharova, M. R. and Rutherford, I. C. (eds) *Anatolian Interfaces. Hittites, Greeks and their Neighbours*, Oxford, 117–122.
- Payne, A. (2012) *Iron Age Hieroglyphic Luwian Inscriptions*, Atlanta.
- Peirce, C. S. (1931–58) *Collected Writings*, Cambridge, MA.
- Pelon, O. (1983) 'L'épée à l'acrobate et la chronologie maliote II', *BCH* 107.1, 679–703.
- Perego, E. (2013) 'The other writing: Iconic literacy and situla art in pre-Roman Veneto (Italy)' in Piquette, K. E. and Whitehouse, R. D. (eds) *Writing as Material Practice: Substance, Surface and Medium*, London, 253–270.
- Perna, M. (2014) 'The birth of administration and writing in Minoan Crete: some thoughts on hieroglyphics and Linear A' in Nakassis, D., Gulizio, J. and James, S. A. (eds) *KE-RA-ME-JA: Studies Presented to Cynthia W. Shelmerdine*, Philadelphia, 251–259.
- Peruzzi, E. (1960) *Le Iscrizioni Minoiche*, Firenze.
- Petrakis, V. (2012) 'Reverse phonetisation? From syllabogram to sematogram in Aegean scripts' in Carlier, P., de Lamberterie, C., Egetmeyer, M., Guilleux, N., Rougemont, F. and Zurbach, J. (eds) *Études Mycéniennes 2010* (Biblioteca di Pasiphae 10), Pisa/Roma, 523–536.
- Petrakis, V. (2014) 'A tale of system reform: The genesis of the Third Palace Period Aegean literate administrations', *Bulletin of the Institute of Classical Studies* 57.1, 129–130.
- Petrakis, V. (forthcoming) 'Figures of speech? Observations on the non-phonographic component in the Linear B writing system' in Landenius-Enegren, H. and Nosch, M.-L. (eds.) *Aegean Scripts. Proceedings of the 14th International Colloquium on Mycenaean Studies, held in Copenhagen, 2-5 September 2015*, Rome.
- Petruševski, P. (1979) 'Révision de la transcription des syllabogrammes \*17 (za), \*20 (zo), \*74 (ze) et \*79 (zu?)' in Risch, E. and Mühlestein, H. (eds) *Colloquium Mycenaeanum*, Neuchâtel/Genève, 259–266.
- Pierini, R. (2014) 'Ricerche sul segno 25 del sillabario miceneo' in Bernabé, A. and Luján, E. R. (eds) *Donum mycenologicum: Mycenaean studies in honour of Francisco Aura Jorro*. (Bibliothèque des Cahiers de l'Institut de Linguistique de Louvain 131), Louvain-la-Neuve, 105–137.
- Pini, I. (1997) *Die Tonplomben aus dem Nestorpalast von Pylos*, Mainz.
- Pini, I. (2000) 'Eleven early Cretan scarabs' in Karetsou, A. (ed.) *Kriti-Egyptos. Politismikoi Desmoi Trion Khilietion. Meletes*, Athens, 107–113.
- Pini, I. (2002) 'Einleitung', in Gill, M. A. V., Müller, W. and Pini, I. *Corpus der Minoischen und Mykenischen Siegel II.8.1. Iraklion, Archäologisches Museum. Die Siegelabdrücke von Knossos*, Mainz, 1–23.
- Pittman, H. (1994) 'Towards an understanding of the role of glyptic imagery in the administrative systems of proto-literate greater Mesopotamia' in Ferioli, P., Fiandra, E., Fissore, G. G. and Frangipane, M. (eds.). *Archives Before Writing*, Turin, 177–210.
- Plath, R. (1992) 'Zur Etymologie von homerisch ὀβελόζ', *Historische Sprachforschung* 105, 243–259.
- Pluta, K. M. (2011) *Aegean Bronze Age Literacy and its Consequences*, unpublished doctoral dissertation, University of Texas at Austin.
- Pope, M. (1961–1962) 'The date of Linear B', *Κρητικά Χρονικά. Πεπραγμένα του Α' Κρητολογικού Διεθνούς Συνεδρίου/Proceedings of the First International Cretological Congress, Heraklion 1962*, vol. 1, Heraklion, 310–319.
- Pope, M. (1964) *Aegean Writing and Linear A* (Studies in Mediterranean Archaeology monograph 8), Lund.
- Pope, M. (1968) 'The First Cretan Palatial Script', *Atti e memorie del primo congresso internazionale di micenologia*, Vol. 1, Rome, 438–447.
- Popham, M. (1993) Review of Jan Driessen: *An Early Destruction in the Mycenaean Palace at Knossos*, Leuven, 1990, *Journal of Hellenic Studies* 113, 174–178.

- Portugali, Y. and Knapp, A. B. (1985) 'Cyprus and the Aegean: a spatial analysis of interaction in the seventeenth to fourteenth centuries BC' in Knapp, A. B. and Stech, T. (eds) *Prehistoric Production and Exchange in the Aegean and Eastern Mediterranean*, Los Angeles, 44–78.
- Postgate, N., Wang, T. and Wilkinson, T. (1995) 'The evidence for early writing: utilitarian or ceremonial?', *Antiquity* 69, 459–480.
- Poursat, J. C. (2000) 'Les sceaux hiéroglyphiques dans l'administration minoenne: usage et fonction' in Perna, M. (ed.) *Administrative Documents in the Aegean and their Near Eastern Counterparts*, Torino, 187–191.
- Powell, B. B. (2009) *Writing: Theory and History of the Technology of Civilization*, Oxford.
- Preston, L. (2008) 'Late Minoan II to IIIB Crete' in Shelmerdine, C. W. (ed.) *The Cambridge Companion to the Aegean Bronze Age*, Cambridge, 310–326.
- Pugliese Carratelli, G. (1945) 'Le iscrizioni preelleniche di Haghia Triada in Creta e della Grecia peninsulare', *Monumenti Antichi dell'Accademia Nazionale dei Lincei* 40, 421–610.
- Radner, K. (2010) 'The stele of Sargon II of Assyria at Kition: a focus for an emerging Cypriot identity?' in Rollinger, R. et al. (eds.) *Interkulturalität in der Alten Welt. Vorderasien, Hellas, Ägypten und die vielfältigen Ebenen des Kontakts*, Wiesbaden, 429–449.
- Ray, J. D. (1986) 'The emergence of writing in Egypt', *World Archaeology* 17.3, 390–398.
- Rehak, P., Younger, J. G. (2000) 'Minoan and Mycenaean administration in the early Late Bronze Age: an overview' in Perna, M. (ed.), *Administrative Documents in the Aegean and their Near Eastern Counterparts*, Turin, 277–307.
- Reich, J. J. (1968) 'The rôle of the naturalistic signs in the Minoan hieroglyphic script', *Atti e memorie del primo congresso internazionale di micenologia*, Vol. 1, Rome, 448–461.
- Risch, E. (1979) 'Les consonnes palatalisées dans le grec du II<sup>e</sup> millénaire et des premiers siècles du I<sup>er</sup> millénaire' in Risch, E. and Mühlestein, H. (eds) *Colloquium Mycenaum*, Neuchâtel/Genève, 267–281.
- Ritner, R. K. (1996) 'Egyptian writing', in Daniels, P. D. and Bright, W. (eds) *The World's Writing Systems*, Oxford, 73–87.
- Robertson, J. S. (2004) 'The possibility and actuality of writing' In Houston, S. D. (ed.) *The First Writing: Script Invention as History and Process*, Cambridge, 16–38.
- Rollston, C. A. (2010) 'The probable inventors of the first alphabet: Semites functioning as rather high status personnel in a component of the Egyptian apparatus', Rollston Epigraphy website: <http://www.rollstonepigraphy.com/?p=195>.
- Rothman, M. S. (1994) 'Seal and sealing findspot, design, audience, and function: Monitoring changes in administrative oversight and structure at Tepe Gawra during the fourth millennium BC' in Ferioli, P., Fiandra, E., Fissore, G. G. and Frangipane, M. (eds.) *Archives Before Writing*, Turin, 97–119.
- Ruijgh, C. J. (1967) *Études sur la grammaire et le vocabulaire du grec mycénien*, Amsterdam.
- Ruppenstein, F. (2013) 'Cremation burials in Greece from the Late Bronze Age to the Early Iron Age: continuity or change?' in Lochner, M. and Ruppenstein, F. (eds) *Brandbestattungen von der mittleren Donau bis zur Ägäis zwischen 1300 und 750 v. Chr.* (colloquium Vienna 2010), Vienna, 185–196.
- Sacconi, A. (1976) 'La scrittura lineare B', *La Parola del Passato* 31, 48–65.
- Sacconi, A., and Cultraro, M. (forthcoming) 'Un fragment de vase inscrit de Prinias: PRI Z 1' in Nosch, M.-L.B. and Landenius Enegren, H. (eds) *Aegean Scripts*, Rome.
- Sakellarakis, Y. and Sapouna-Sakellarakis, E. (1997) *Archanes. Minoan Crete in New Light*, Athens.
- Salomon, R. (2012) 'Some principles and patterns of script change' in Houston, S. D. (ed.) *The Shape of Script. How and Why Writing Systems Change*, Santa Fe, 119–133.
- Sampson, G. (1985) *Writing Systems: A Linguistic Introduction*, Stanford.
- Sanders, S. L. (2009) *The Invention of Hebrew*, Urbana/Chicago/Springfield.
- Saporetti, C. (1976) 'Ipotesi su alcuni segni del sillabario ciprominoico', *Studi Ciprioti e Rapporti di Scavo* 2, 89–108.

- Sass, B. (2004–2005) 'The genesis of the alphabet and its development in the second millennium B.C. – Twenty years later', *De Kêmi à Birît Nâri* 2, 137–156.
- Sass, B. (2016) 'Aram and Israel during the 10th–9th centuries BCE, or Iron Age IIA. The alphabet' in Sergi, O., Oeming, M. and de Hulster, I. J. (eds) *In Search for Aram and Israel. Politics, Culture and Identity*, Tübingen.
- Sass, B. and Finkelstein, I. (2016) 'The swan-song of proto-Canaanite in the ninth century BCE in light of an alphabetic inscription from Megiddo', *Semitica et Classica* 9.
- Schoep, I. (1999) 'The origins of writing and administration on Crete', *Oxford Journal of Archaeology* 18.3, 265–276.
- Schoep, I. (2001) 'The role of the Linear A tablets in Minoan administration', *Ktema* 26, 55–62.
- Schoep, I. (2002) *The Administration of Neopalatial Crete. A Critical Assessment of the Linear A Tablets and their Role in the Administrative Process* (Supplement to *Minos* 17), Salamanca.
- Schoep, I. (2006) 'Looking beyond the First Palaces: Elites and the agency of power in EM III–MM II Crete', *American Journal of Archaeology* 110, 37–64.
- Schoep, I. (2007) 'The social and political context of Linear A writing on Crete' in Lomas, K., Whitehouse, R. D. and Wilkins, J. B. (eds) *Literacy and the State in the Ancient Mediterranean* (Accordia Specialist Studies on the Mediterranean 7), London, 53–62.
- Shelmerdine, C. W. (2012) 'Iklaina tablet IK X 1' in Carlier, P., de Lamberterie, C., Egetmeyer, M., Guilleux, N., Rougemont, F. and Zurbach, J. (eds) *Études Mycéniennes 2010* (Biblioteca di Pasiphae 10), Pisa/Roma 75–78.
- Sherratt, E. S. (2003) 'Visible writing: questions of script and identity in Early Iron Age Greece and Cyprus', *Oxford Journal of Archaeology* 22, 225–42.
- Sherratt, E. S. (2013) 'Late Cypriot writing in context' in Steele, P. M. (ed.), *Syllabic Writing on Cyprus and its Context*, Cambridge, 77–105.
- Sittig, E. (1956) 'Zur Entzifferung der Minoisch-Kyprischen Tafel von Enkomi', *Minos* 4, 33–44.
- Skelton, C. (2009) 'Re-examining the Pylos Megaron tablets', *Kadmos* 48, 107–123.
- Smith, A. D. (2013) 'Are writing systems intelligently designed?' in Englehardt, J. (ed.) *Agency in Ancient Writing*, Boulder, 77–93.
- Steele, P. M. (2013a) *A Linguistic History of Cyprus: The Non-Greek Languages, and their Relations with Greek, c. 1600–300 BC*, Cambridge.
- Steele, P. M. (ed.) (2013b) *Syllabic Writing on Cyprus and its Context*, Cambridge.
- Steele, P. M. (2014) 'Distinguishing between Cypriot scripts: Steps towards establishing a methodology', *Kadmos* 53, 129–148.
- Steele, P. M. (2016) 'A linguistic approach to population movements to ancient Cyprus' in Maguire, R. and Chick, J. (eds) *Approaching Cyprus* (Proceedings of the post-graduate conference of Cypriot archaeology, University of East Anglia, Norwich, 2013), Cambridge, 2–17.
- Steele, P. M. (forthcoming) *Society and Writing in Ancient Cyprus*, Cambridge.
- Stephens, L. and Justeson, J. S. (1978) 'Reconstructing "Minoan" phonology: The approach from universals of language and universals of writing systems', *Transactions of the American Philological Association* 108, 271–284.
- Stone, A. and Zender, M. (2011) *Reading Maya Art: a Hieroglyphic Guide to Ancient Maya Painting and Sculpture*, London.
- Street, B. V. (1984) *Literacy in Theory and Practice*, Cambridge.
- Street, B. V. (1993) (ed.) *Cross-Cultural Approaches to Literacy*, Cambridge.
- Stuart, D. and Houston, S. (1989) *The Way glyph: Evidence for 'co-essences' among the Classic Maya* (Research Reports on Ancient Maya Writing 30), Washington DC.
- Stuart, D. and Houston, S. (1994) *Classic Maya Place Names* (Studies in Pre-Columbian Art and Archaeology 33), Washington DC.
- Sznycer, M. (1983) 'Note sur l'inscription gravée sur une cruche de la tombe 69 de Palaepaphos-Skales' in Karageorghis, V. (ed.) *Palaepaphos-Skales. An Iron Age cemetery in Cyprus*, Constance, appendix v, 416–417.

- Thompson, R. J. E. (2005) 'Two notes on Mycenaean labial stops', *Živa Antika* 55, 107–115.
- Thompson, R. J. E. (2012) 'In defence of ideograms' in Carlier, P., de Lamberterie, C., Egetmeyer, M., Guilleux, N., Rougemont, F. and Zurbach, J. (eds) *Études Mycéniennes 2010* (Biblioteca di Pasiphae 10), Pisa/Roma, 545–561.
- Tomas, H. (2003) Understanding the Transition between Linear A and Linear B Script, unpublished DPhil Thesis, University of Oxford.
- Tomas, H. (2008) 'Comparing Linear A and Linear B administrative systems: the case of the roundel and the elongated tablet' in Sacconi, A., Del Freo, M., Godart, L. and M. Negri (eds) *Colloquium Romanum*, Vol. 2, Pisa/Roma, 767–774.
- Tomas, H. (2010) 'Cretan Hieroglyphic and Linear A', in Cline, E. (ed.), *The Oxford Handbook of the Bronze Age Aegean (ca. 3000–1000 BC)*, Oxford/New York, 340–355.
- Tomas, H. (2011) 'Linear A tablet ≠ Linear B tablet' in Andreadaki-Vlaziaki, M. and Papadopoulou, E. (eds), *Πεπραγμένα του 1<sup>ου</sup> Κρητολογικού Διεθνούς Συνεδρίου/Proceedings of the 10th Cretological Conference, Chania, 1–8 October 2006*, vol. A1, Chania, 331–343.
- Tomas, H. (2012a) 'Linear A scribes and their writing styles' in Kyriakidis, E. (ed.), *The Inner Workings of Mycenaean Bureaucracy* (Pasiphae V/2011), Pisa/Roma, 35–58.
- Tomas, H. (2012b), 'The transition from the Linear A to the Linear B sealing system' in Regulski, I., Duistermaat, K., Verkinderen, P. (eds), *Seals and Sealing Practices in the Near East. Developments in Administration and Magic from Prehistory to the Islamic Period. (Orientalia Lovaniensia Analecta 219)*, Leuven/Paris/Walpole, 33–49.
- Tomas, H. (2013) 'Saving on clay: the Linear B practice of cutting tablets' in Piquette, K. E. and Whitehouse, R. D. (eds.), *Writing as Material Practice: Substance, Surface and Medium*, London, 175–191.
- Tomas, H. (2014) 'Orality of Linear A, scriptuality of Linear B' in Gordin, S. (ed.), *Visualizing Knowledge and Creating Meaning in Ancient Writing Systems*, Berlin, 101–117.
- Tomas, H. (forthcoming) 'From Minoan to Mycenaean elongated tablet' in Landenius-Enegren, H. and Nosch, M.-L. (eds.) *Aegean Scripts. Proceedings of the 14th International Colloquium on Mycenaean Studies, held in Copenhagen, 2–5 September 2015*, Rome.
- Topçuoğlu, O. (2010) 'Iconography of protoliterate seals' in Wood, C. (ed.) *Visible Language. Inventions of Writing in the Ancient Middle East and Beyond*, Chicago, 29–32.
- Trigger, B. (2004) 'Writing systems. A case study in cultural evolution' in Houston, S. D. (ed.) *The First Writing: Script Invention as History and Process*, Cambridge, 39–68.
- Tsipopoulou, M. and Hallager, E. (1996) 'Inscriptions with Hieroglyphs and Linear A from Petras, Siteia', *Studi Micenei ed Egeo-Anatolici* 37, 7–46.
- Tsipopoulou, M. and Hallager, E. (2010) *The Hieroglyphic Archive at Petras, Siteia* (Monographs of the Danish Institute at Athens 9), Athens.
- Valério, M. (2013) 'Problems of Cypro-Minoan paleography: the case of sign shapes 08, 13 and 78', *Kadmos* 52, 111–134.
- Valério, M. (2014a) 'On a new archaeological corpus of Cypro-Minoan inscriptions', *Bibliotheca Orientalis* 71.5–6, 711–716.
- Valério, M. (2014b) 'Seven uncollected Cypro-Minoan inscriptions', *Kadmos* 53, 111–127.
- Valério, M. (2014c) Review of Steele 2013, *Aula Orientalis* 32, 187–192.
- Valério, M. (2016) *Investigating the Signs and Sounds of Cypro-Minoan*, Doctoral Thesis, University of Barcelona. <http://diposit.ub.edu/dspace/handle/2445/99521>.
- Van den Hout, T. (2007) 'Institutions, vernaculars, publics: The case of second-millennium Anatolia' in Sanders, S. L. (ed.) *Margins of Writing, Origins of Culture*, Chicago, 221–262.
- Van den Hout, T. (2010) 'The rise and fall of cuneiform script in Hittite Anatolia' in Woods, C. (ed.) *Visible Writing. Inventions of Writing in the Ancient Middle East and Beyond*, Chicago, 99–106.
- Vasilogamvrou, A. (forthcoming) 'The West Stoa Archive at Ayios Vasileios: Archaeological context, chronology and preliminary study of the documents' in Landenius-Enegren, H. and Nosch, M.-L.

- (eds.) *Aegean Scripts. Proceedings of the 14th International Colloquium on Mycenaean Studies, held in Copenhagen, 2-5 September 2015*, Rome.
- Ventris, M. (1956) 'Notes on the Enkomi 1955 tablet' in Dikaios, P. 'A new inscribed clay tablet from Enkomi', *Antiquity* 30(117), 41-42.
- Ventris, M. and Chadwick, J. (1953) 'Evidence for Greek dialect in the Mycenaean archives', *Journal of Hellenic Studies* 73, 84-103.
- Verdan, S., Kenzelmann Pfyffer, A. and Theurillat, T. (2012) 'Early alphabetic inscriptions from Eretria, Greece. 8th cent. BC graffiti from the sanctuary of Apollo Daphnephoros' in Fuchs, M. E., Sylvestre, R. and Schmidt Heidenreich, C. (eds.) *Inscriptions mineures: nouveautés et réflexions* (colloquium Lausanne 2008), Bern, 179-183.
- Warren, P. (1992) 'Knossos revisited' (Review of Jan Driessen: *An Early Destruction in the Mycenaean Palace at Knossos*, Leuven, 1990), *Classical Review* new series 42.1, 137-139.
- Webb, J. M. and Weingarten, J. (2012) 'Seals and seal use: Markers of social, political and economic transformations on two islands' in Cadogan, G., Iacovou, M., Kopaka, K. and Whitley, J. (eds.) *Parallel Lives: Ancient Island Societies in Crete and Cyprus* (BSA Studies 20), Athens, 85-104.
- Weeden, M. (2014) 'Anatolian hieroglyphs: logogram vs. ideogram' in Gordin, S. (ed.), *Visualizing Knowledge and Creating Meaning in Ancient Writing Systems*, Gladbeck, 81-100.
- Weingarten, J. (1986) 'Some unusual Minoan Clay nodules', *Kadmos* 25, 1-21.
- Weingarten, J. (1988) 'The sealing structures of Minoan Crete: MM II Phaistos to the destruction of the palace of Knossos. Part II: The evidence from Knossos until the destruction of the palace', *Oxford Journal of Archaeology* 7.1, 1-25.
- Weingarten, J. (1990) 'More unusual Minoan clay nodules: Addendum II', *Kadmos* 29, 16-23.
- Weingarten, J. (1995) 'Sealing studies in the Middle Bronze Age III: the Minoan hieroglyphic deposits at Mallia and Knossos' in Müller, W. (ed.) *Sceaux minoens et mycéniens* (CMS 5), Berlin, 285-311.
- Weingarten, J. (2000) 'The transformation of Egyptian Taweret into the Minoan genius' in Karetsou, A. (ed.) *Krete-Aigyptos. Politismikoi desmoi trion chilietion*, Athens, 114-119.
- Weingarten, J. (2005) 'How many seals make a heap: Seals and interconnections on Prepalatial Crete' in Laffineur, R. and Greco, E. (eds) *Emporia. Aegeans in the Central and Eastern Mediterranean* (Aegaeum 25. II), Liège, 759-766.
- West, M. (2013) *The Epic Cycle. A Commentary on the Lost Troy Epics*, Oxford.
- Wiener, M. H., Friedrich, W. L. and Manning, S. W. (2009) 'Thera Discussion' in Manning, S. W. and Bruce, M. J. (eds) *Tree-Rings, Kings, and Old World Archaeology and Environment: Papers Presented in Honor of Peter Ian Kuniholm*, Oxford, 316-332.
- Wengrow, D. (2008) 'Prehistories of commodity branding', *Current Anthropology* 49, 7-34.
- Woodard, R. (2014) *The Textualization of the Greek Alphabet*, Cambridge.
- Woods, C. (2010) 'The earliest Mesopotamian writing' in Woods, C. (ed.) *Visible Writing. Inventions of Writing in the Ancient Middle East and Beyond*, Chicago, 33-50.
- Yakubovich, I. (2008) 'Hittite-Luvian bilingualism and the development of Anatolian Hieroglyphs' in Kazansky, N. N. (ed.) *Colloquia Classica et Indo-Germanica IV. Studies in Classical Philology and Indo-European Languages*, St Petersburg, 9-36.
- Yakubovich, I. (2010) 'Anatolian hieroglyphic writings' in Woods, C. (ed.) *Visible Writing. Inventions of Writing in the Ancient Middle East and Beyond*, Chicago, 203-206.
- Yakubovich, I. (2011) 'Luwian and the Luwians' in Steadman, S. R. and McMahon, G. (eds) *The Oxford Handbook of Ancient Anatolia 10,000-323 B.C.E.*, Oxford, 534-537.
- Yon, M. (2004) *Kition dans les textes. Kition Bamboula V, Testimonia littéraires et épigraphiques et Corpus des inscriptions*, Paris.
- Younger, J. (1990) 'New observations on hieroglyphic seals', *Studi Micenei ed Egeo-Anatolici* 28, 85-93.

- Younger, J. (1998) 'The Cretan Hieroglyphic script: A review article', *Minos* 31–32 (1996–1997), 379–400.
- Younger, J. G. (2003) 'Cretan Hieroglyphic transaction terms: "total paid" and "total owed"' in Duhoux, Y. (ed.) *Briciaka. A Tribute to W.C. Brice. (Cretan Studies 9)*, Amsterdam, 301–316.
- Younger, J. (2015) Book review of S. Ferrara *Cypro-Minoan Inscriptions. Vol. 1, Analysis. American Journal of Archaeology* 119.3. <http://www.ajaonline.org/online-review-book/2169>.
- Younger, J. G. (Cretan Hieroglyphic website) The Cretan Hieroglyphic Texts, <http://people.ku.edu/~jyounger/Hiero/index.html>, accessed July 2015.
- Younger, J. G. (Linear A website) Linear A Texts in phonetic transcription & Commentary, <http://people.ku.edu/~jyounger/LinearA/>, accessed July 2015.
- Yule, P. (1980) *Early Cretan Seals: A Study of Chronology*, Mainz.
- Zahn, R. (1901) 'Sitzungsberichte Der Archäologische Gesellschaft Zu Berlin: Marz', *Archäologischer Anzeiger*, Berlin, 19–25.