

The Social and Cultural Contexts of Historic Writing Practices

edited by

Philip J. Boyes, Philippa M. Steele
and Natalia Elvira Astoreca

Published in the United Kingdom in 2021 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

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Hardback Edition: ISBN 978-1-78925-478-5
Digital Edition: ISBN 978-1-78925-479-2 (ePub)

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

Library of Congress Control Number: 2021931167

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Printed in the United Kingdom by Short Run Press

Typeset by Versatile PreMedia Service (P) Ltd

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Front cover: Monk-scribe astride a wyvern, Metropolitan Museum of Art



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List of contributors

DR PHILIP J. BOYES
Faculty of Classics, University of Cambridge
Sidgwick Avenue
Cambridge
CB3 9DA
United Kingdom
pjb70@cam.ac.uk

DR NATALIA ELVIRA ASTORECA
Faculty of Classics, University
of Cambridge
Sidgwick Avenue
Cambridge
CB3 9DA
United Kingdom
ne276@cam.ac.uk

DR SARAH FINLAYSON
Institut für Klassische Archäologie und
Byzantinische Archäologie
Marstallhof 4
69117 Heidelberg
Germany
sarah.finlayson@zaw.uni-heidelberg.de

DR CÉCILE GUILLAUME-PEY
Centre for South Asian Studies
Centre national de la recherche scientifique
Paris
France
cecile.guillaume-pey@ehess.fr

JULIA-SOPHIE HEIER
Ludwig-Maximilians-Universität München
Institut für Nordische Philologie
Geschwister-Scholl-Platz 1 80539 München
Germany
sophie.heier@campus.lmu.de

PROFESSOR JOHN S. HENDERSON
Department of Anthropology
McGraw Hall
Cornell University
Ithaca, NY 14853
USA
henderson@cornell.edu

DR NANCY HIGHCOCK
Department of Archaeology
University of Cambridge
Cambridge
CB2 3DZ
nancy.highcock@gmail.com

KATHRYN HUDSON
Department of Linguistics
University at Buffalo
United States

DR VALENTINA MIGNOSA
Faculty of Classics
University of Oxford
United Kingdom
valentina.mignosa@classics.ox.ac.uk

THEODORE NASH
Kelsey Museum of Archaeology
434 South State Street
Ann Arbor, MI 48104
USA
theonash@umich.edu

DR AURÉLIE NÉVOT
Centre national de la recherche scientifique
Paris
France
aurelie.nevot@gmail.com

PROFESSOR MARIE LOUISE NOSCH
 Centre for Textile Research
 Saxo Institute,
 University of Copenhagen
 Denmark
 nosch@hum.ku.dk

DR KARENLEIGH OVERMANN
 University of Bergen
 Faculty of Psychology
 Department of Psychosocial Science
 Postboks 7807
 5020 Bergen
 Norway

and

University of Colorado, Colorado Springs
 Department of Anthropology
 1420 Austin Bluffs Pkwy
 Colorado Springs, CO 80918
 USA
 Karenleigh.overmann@keble.oxon.org

DR CHRISTIAN PRAGER
 Universität Bonn
 Abteilung für Altamerikanistik
 Oxfordstrasse 15
 53111 Bonn
 Germany
 cprager@uni-bonn.de

DR PHILIPPA M. STEELE
 Faculty of Classics, University of Cambridge
 Sidgwick Avenue
 Cambridge
 CB3 9DA
 United Kingdom
 pms45@cam.ac.uk

PROFESSOR OLGA TRIBULATO
 Dipartimento di Studi Umanistici
 Università Ca' Foscari Venezia
 Dorsoduro 3484/D
 30123 Venice
 Italy
 olga.tribulato@unive.it

DR AGATA ULANOWSKA
 Department of Aegean and
 Textile Archaeology
 Faculty of Archaeology,
 University of Warsaw
 Krakowskie Przedmieście 26/28
 00-927 Warsaw
 Poland
 a.ulanowska@uw.edu.pl

A.J. WEST
 Leiden Institute of Area Studies (LIAS)
 Matthias de Vrieshof 3
 2311BZ Leiden
 The Netherlands
 a.j.west@hum.leidenuniv.nl

PROFESSOR JAMES WHITLEY
 School of History, Archaeology and Religion
 Cardiff University
 John Percival Building
 Colum Road
 Cardiff CF10 3EU
 Wales, United Kingdom
 WhitleyA@Cardiff.ac.uk

Acknowledgements

This volume publishes papers presented at the conference Exploring the Social and Cultural Contexts of Historic Writing Systems, which was held at the Faculty of Classics, University of Cambridge on 14–16 March 2019. This was the second conference organised under the banner of the project *Contexts of and Relations Between Early Writing Systems* (CREWS), which is dedicated to interdisciplinary exploration of writing practices in the East Mediterranean and Near East in the second and first millennia BC. The previous conference was published as *Understanding Relations Between Scripts II: Early Alphabets* (Boyes and Steele 2019). We are grateful to the whole CREWS team, including our visiting scholars, who not only contributed to the conference and this volume, but also to the creation of a positive and engaging research environment.

CREWS has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No 677758). We would especially like to take this opportunity to thank the ERC for all the outstanding work it does to support new research, and in particular for the funding that has made possible not only this conference but the CREWS project itself. We are, as always, proud to fly the EU and ERC banners.

We are extremely grateful to the Faculty of Classics for hosting the conference, and to everyone who worked to help make the conference a success, especially our project administrator, Sarah Lewis, and Faculty staff including Tony Brinkman, Lina Undicino and Lucyna Prochnicka. In addition, we extend our thanks to all those who chaired sessions and the many friends and colleagues who volunteered to help with the smooth running of the conference.

It is worth noting that much of the production of this volume took place against the background of the 2020 global coronavirus pandemic, which affected the lives and work of all the contributors to varying degrees. We are very grateful to all the contributors who worked hard in these very difficult circumstances to produce their chapters, and to the peer reviewers who also in many cases went above and beyond the call of duty without even the prospect of being thanked in print by name. We are similarly grateful to our publishers at Oxbow for their understanding and patience.

It is also understandable that because of the additional burdens imposed by the virus, as well as for other reasons, some contributors to the original conference were not able to provide written versions of their papers for this publication. Many of the conference papers were recorded and are available to watch on YouTube at <https://bit.ly/2J3VNLO>. This includes excellent papers by Piers Kelly, Katherine Forsyth and Katherine McDonald, who were unfortunately not able to contribute written versions. Other papers were presented by Christopher Rollston, Claus Jurman

and Marcia-Anne Dobres. We regret that for various reasons we have not been able to offer either written versions or recordings of these papers; nevertheless we are very grateful to these presenters for their valuable contributions to the conference.

Philip Boyes would like to thank his wife Jennie for all her love and support during the organisation of the conference and the production of this volume. Philippa Steele would like to thank her mother Anne and her partner James (who helped out behind the scenes at the conference) for keeping her going and for all their love and kindness throughout.

Abbreviations

BTCGI	AA.VV., <i>Bibliografia topografica della colonizzazione greca in Italia e nelle isole tirreniche, Rome and Naples</i> , Scuola normale superiore, École française de Rome, 1984–present
CHIC	Olivier and Godart (1996)
CDLI	Cuneiform Digital Library (2015), Oxford: Oriental Institute, University of Oxford. https://cdli.ucla.edu/
COMIK	Chadwick <i>et al.</i> (eds) (1986–1998)
CVA Denmark 1	Blinkenberg and Friis Johansen (1924)
DR	Jacobsen and Moltke (1937–42)
GORILA	Godart and Olivier (1976–85)
IG	<i>Inscriptiones Graecae</i> (Multiple volumes, 1860–present), Berlin
IGDS I	Dubois (1989)
IGDS II	Dubois (2008)
ISic	Prag, J., Cummings, J., Chartrand, J., Vitale, V. and Metcalfe, M. http://sicily.classics.ox.ac.uk/inscription/ISic0298 , I.Sicily
KJ	Krause and Jankuhn (1996)
<i>Kokalos</i> 1978	‘Una nuova iscrizione anellenica da Montagna di Marzo’, round table discussion published in <i>Kokalos</i> 24, 1978, 3–62 (individual comments are quoted by authors’ names)
LGPN	<i>Lexicon of Greek Personal Names</i> . http://clas-lgpn5.classics.ox.ac.uk:8080/exist/apps/lgnp1-search/index.html
LIA ²	Pisani (1964)
LSAG ²	Jeffery (1990)
PID 2.3	Whatmough (1933)
<i>Samnordisk runtextdatabas</i>	http://www.nordiska.uu.se/forskn/samnord.htm
SEG	<i>Supplementum Epigraphicum Graecum</i> , Leiden, Brill, 1923–present
Sö	Brate and Wessén (1924–36)
VSS	Schmoll (1958)

Chapter 1

Introduction: writing practices in socio-cultural context

Philip J. Boyes, Philippa M. Steele and Natalia Elvira Astoreca

This book is about writing as social practice; that is, as a thing that people do, and one which is – like all human practice – fundamentally embedded in a mesh of cultural, social, material and ideological relationships. The chapters in this volume demonstrate how, for all that writing can sometimes be seen as eternal and transcending the specific environment of its creation, its cultural meanings can in fact only be understood with reference to the multiple and overlapping contexts of its production, transmission and the various instances of reception. In many cases, this reception is its *reading* but we shouldn't overlook the possibility of writing being received in other ways, including the non-literate and the overtly anti-literate. They also explore the idea of writing as an *act*, the meanings of which are similarly embedded in culture and can be construed in multiple ways according to the ideas, values and perspectives of those involved.

This agenda takes a particular stance on a question which has been much turned over by researchers of writing and literacy for many decades now, its ostensible simplicity masking deep and murky waters: *what is writing?* Answers would vary greatly depending on who you ask, but two kinds of approaches can be identified in earlier scholarship, which we might call the 'structural' and the 'cultural'. We begin by sketching some of the history of this scholarship as a way of introducing the themes of this volume and the range of approaches encompassed by its contributions.

When we talk about a 'structural' approach, we mean that strand of writing research which approaches writing in terms of its systemic relationships and internal structures, that is, as a kind of code which can be deciphered and which can be understood by presenting the rules according to which it operates. Within this broad category, further differentiations can be identified. For example, some scholars define and approach writing primarily in terms of its relationship to spoken language, which makes it in some sense secondary to speech and can present quite rigid definitions

of what is and is not writing. On the other hand, the late twentieth and twenty-first centuries have seen more inclusive definitions of writing start to consolidate among scholars working on writing. Linguistics and writing research were not unaffected by the reactions against structuralism that came from the 1960s onwards, which disputed Saussure's fundamental connection of signifier and signified (see, for example, Derrida's *Of Grammatology* [1967a; 1976]). Even so, there is still some resistance towards the notion that writing might be separated from speech. Still in the 1990s and early 2000s we could read things like 'it is thus necessary for a writing system to represent the sounds of language' (Daniels 1996, 3, his italics) or '*writing is truly writing when it systematically represents speech*' (Robertson 2004, 20, his italics). In opposition, a growing number of scholars conceive writing as a graphic means of communication, rather than a system circumscribed to speech, and thus include examples of semasiography, other graphic systems like musical or mathematical notation, and early non-glottographic writing, tagged by Gelb as 'the forerunners of writing' (Harris 1986; 2001; Boone 2004; Powell 2009). While positions within the structural 'camp' can thus vary quite markedly, what they do have in common is that they view writing first and foremost as a system, which can be abstracted to a greater or lesser degree from a specific cultural environment and studied in a self-contained way.

The 'cultural' approach treats writing not as a system, but as an element of social practice within a given cultural environment – similar to making pots, cooking, performing a ritual, dancing, fighting, creating and consuming art, and all the other myriad acts that people carry out every day as part of their ordinary social lives. This is the polar opposite of the abstracted way of studying writing outlined above. It is not primarily interested in 'writing systems' as self-contained structures of rules and linguistic relationships, but in writing as a *practice*, carried out by human beings and so bound up inextricably with their agency, their ideas, their agendas and their imperfections, as well as being deeply integrated with other kinds of practice and culture. It is a key tenet of practice theory that context is crucial, since an act can only be understood with an adequate handle on the circumstances which led someone to do it, the cultural meanings it has in a given time and place and for given people and social groups, and the outcomes – intended or otherwise – that it entailed. Like any product of human society and human action, then, the meanings of writing as a social phenomenon are not fixed properties internal to the system, but ever-changing, dependent on the contexts of both the act itself and the vantage point from which it is perceived.

As we have said, these are the poles between which most research is situated, and much research includes elements of both, especially today. However, it seems safe to say that the vast majority of research into writing continues to take place mostly within the structural vein, especially as concerns investigation into writing in historical periods, and notwithstanding recently burgeoning interest in specific areas of writing-as-practice such as materiality (see below). Its prevalence owes much to the fact that study of writing has mostly been carried out by linguists, trained in a discipline largely founded on the structuralist methods of scholars like Saussure.

This volume aims to promote the second, cultural approach as a way of broadening the questions being asked and opening up new ways of considering the material. In particular, it seeks to demonstrate the value of perspectives which have been applied relatively rarely in writing research, incorporating methods, concepts and questions from disciplines such as social theory, anthropology, archaeology, cultural history and more. This sort of interdisciplinary approach, we would argue, is a necessary requirement of studying writing as social practice, since social context can hardly be understood from writing practice alone.

Writing systems: structural and formalist approaches

To understand the theoretical underpinnings of the practice-based view of writing, which is central to this volume, it is helpful to begin with the more traditional approach it was a reaction against. Research into writing was, to a large extent, defined as a field by Ignace Gelb's seminal work *A Study of Writing* (1963 [first ed. 1952]). Gelb's so-called 'grammatology' focused on the analysis of the structural and formal elements of writing systems and how these evolved historically from a logographic to an alphabetic form. He essentially disregarded other aspects of writing practices, considering them to be a matter for other research areas. This limited scope was recognised at the time, such as by Paper (1954–1955, 91), who noted, 'It is Gelb's thesis that considerations of external form are meaningful only to the epigrapher or paleographer, not to the "grammatologist"'. Wider issues of writing's place within societies and the uses it was put to were even further beyond his field of interest.

Gelb's circumscribed definition of what the study of writing ought to constitute caught on to a significant extent, paving the way for a field focused mostly on typologies of writing systems, as shown by another milestone of the field, Daniels and Bright's edited volume *The World's Writing Systems* (1996). This thorough study deals with the chronological development and typological structures of multiple writing systems. Most schemes for classifying writing typologically focus on the different kinds of relationship between spoken sound and graphical sign – logographic, syllabic, consonantal and so on. This typological approach has proven highly influential and an enduring source of debate: a large proportion of research into writing remains concerned with how to define these typologies in such a way that we can understand writing systems better from a formal perspective. From these formal approaches other branches of writing systems studies have emerged focused on the neuropsychological and educational spheres (cf. Grigorenko *et al.* 2012).

The formalist approaches of Gelb, Daniels and Bright are deeply rooted in evolutionary and structuralist theories that were widespread during the first half of the twentieth century and which proved especially influential in linguistics through the work of Ferdinand de Saussure. Saussure's posthumously-published *Cours de linguistique générale* (1916 [2001]) both jump-started structuralism in linguistics and well beyond, and also enshrined the idea of writing as essentially a secondary handmaiden to linguistics, fundamentally nothing more than the graphic representation of natural

(spoken) language. 'A language and its written form constitute two separate systems of signs. The sole reason of the existence of the latter is to represent the former' (Saussure 1983, 24). It is obvious that this excludes the potential for writing to fulfil other roles for a particular individual or society – a means of creative self-expression, a way of defining identity, an act of religious worship, a political statement, and so on – but even within the abstracted world of formalist grammatology it is a narrow view, deeply biased towards the assumed supremacy of phonographic systems, like alphabets and syllabaries, which represent the sounds of speech through signs, and which, of course, were the most familiar to all these writers.

The structuralism developed by Saussure within the field of linguistics in the early twentieth century rapidly found adherents well outside that discipline. His work popularised a focus on how signs – not just linguistic or graphic but also social and cultural – operate in relation to each other to create structures. It also advanced a scientific, notionally objective way of going about this analysis. In this sense, structuralist approaches chimed with another important current in twentieth-century theory, functionalism. This too was interested in systems, and held to the notion that the key to understanding a practice, object or social institution was identifying the function it fulfilled within a system, whether that be a writing system, an economic system, a society or whatever. Although developed for the analysis of linguistics, Saussure's methods and theoretical framework was rapidly applied to other fields of study, including society and culture, by anthropologists and sociologists such as Claude Lévi-Strauss (1963; 1969). Structuralism reached its peak around the 1960s, by which time it was being widely applied across a great number of fields.

The counter-current to these traditional structuralist and functionalist approaches identified a number of failings. Firstly, the positivist style of research was ill-suited for much of the evidence used in the humanities and social sciences, which is subject to interpretation at every stage. We can see this in archaeological excavation, for example. The presence or absence of a given item might appear to be a simple fact, but really it is anything but. Subjectivity has already permeated the data in the identification of the artefact, the delineation of its stratigraphy, the decisions about what items to keep and record and what to discard, the choices about how to identify the context, and even the decision about where to dig in the first place. This on top of the numerous elements of chance which determine the survival or otherwise of material culture in the first place. There is no objective, neutral data in archaeology; every data-set has been shaped by subjectivity, interpretation and the research interests of the people involved (Hodder 1997). Secondly, interpreting data in terms of systems and structures is all very well, but this can risk being arbitrary and descriptive rather than explanatory. How do we choose what to include in any given system or structure? More importantly, where do these systems and structures *come from*? They are evidently not innate to places or cultures, nor are they unchanging. So what causes structural change? This brings us to the third, and perhaps most important deficiency – the lack of ability to account for human agency. To greater

or lesser degrees, many systems or structure-focused theories tend towards the abstract – analysis is concentrated on mechanistic interactions of social phenomena or arbitrarily-defined subsystems; a key concern is exploring how these components fit together to construct the overall machine, whether that be a language, a writing system or a society. There are very few actual people in any of this, and little sense that any of the choices people make have any substantial effect on things: they're just another cog in the mechanism, acting according to their functional programming. Apart from being bleakly anti-humanist, such a perspective makes little allowance for the unintended side-effects or contingent events which are a constant feature of human life when it takes place not in the idealised environment of a systems diagram but in the messy real world, where people have to contend with such matters as their embodiedness, distractions, imperfect knowledge, irrational impulses, and so on.

The reaction against these problems in structuralist and functionalist theory helped define some of the key elements of work on practice and remain highly influential across much of the humanities and social sciences even forty or more years later; and while central concepts such as agency have begun to appear on the agenda for scholars working in linguistics and in writing systems studies, they continue to be somewhat marginalised and experimental in the face of far more entrenched structuralist approaches. This was one motivation for placing practice and context in the centre stage when we organised our conference and this volume arising from it.

Practice, agency and context

In order to introduce the theme of practice-based approaches to writing, it is worth sketching some of the main developments in the reaction against structuralism, with the caveat that a comprehensive exploration of the history of research in this area is impossible in the space available. The most influential early theoretical contributions to the study of practice were made by Pierre Bourdieu and Anthony Giddens. In the 1970s and '80s they advanced views of practice and its relationship to society which are in many ways quite similar, both placing a new emphasis on the importance of human agency. Giddens (1984) formulated a theory of what he called structuration, which was concerned with social structures not as immutable and intrinsic properties of a given society, social stage or functional subsystem, but as ongoing processes which are constantly reproduced, renegotiated or reacted against by the people caught up in them. Human practice, then, is situated in, and conditioned by, a particular social context; but social structures are born out of such practice. The result is a constant cycle or dialectic in which practice is deeply intertwined with both structural and human factors. Bourdieu (1977; 1990) developed a similar idea in his notion of the habitus, the collection of dispositions that arise in a person (or a group, institution or society) because of the social and cultural environment in which they are socialised. Humans act in relation to these dispositions, but they nevertheless have a certain amount of leeway for creativity and agency – the habitus is not a rigid determinism.

This idea of agency, of the central role of *people* in the production, consumption and thinking about writing is a key difference between how writing is approached in this book and in the more traditional formal approaches discussed above. Agency has been intensively theorised in disciplines like anthropology and archaeology (see, for instance, Gell 1998a; Dobres and Robb 2005; Robb 2010), but much less so in relation to linguistics and writing (Englehardt 2013a). At a methodological level, the question of how we should go about the practical business of incorporating agency into research on writing practices is not always obvious. One potential avenue emerges from the deep-rooted idea that writing is a kind of technology. This can be traced all the way back to Plato, who calls it a *tekhnē* when he rails against literacy in his *Phaidros* (e.g. 274e) and perhaps because of this classical precedent, many western historians of technology have included writing in their surveys, even if they make little effort to analyse or explain in what sense they consider it technological. Among the most influential of these treatments was Walter Ong's idea that writing is a 'technology that restructures thought' (Ong 1986; 2012). Ong's theories on the transformational effect of alphabetic literacy on human thought have been largely re-evaluated since the late 1980s (see the discussion in Boyes and Steele (2019b)), although certainly the cognitive aspects of writing are worthy of study, as Overmann demonstrates in this volume. The treatment of writing as a technology is not inherently flawed, however. This means that work carried out in other disciplines on the relationship between technology and agency, and the techniques formulated for studying it, can be readily transferable to work on writing. In an ancient context, Marcia-Anne Dobres (2000; 2019) has done very useful work on this subject in which she emphasises the importance of careful study of the physical processes involved in the production of objects – particularly through the framework of the *chaîne opératoire*, of the decisions made as to where practice should be standardised and where individuality could be expressed or corners cut. She strongly underlines the importance of an awareness of the embodied nature of technological production:

[t]echnological practice [...] is not simply the activities and physical actions of artifact production and use, but the unfolding of sensuous, engaged, mediated, meaningful, and materially grounded experience that makes individuals and collectives comprehend and act in the world as they do. (Dobres 2000, 5)

Thinking about writing in these terms brings out the twofold nature of the word itself. Writing is both a verb – a thing people do, a process and an example of practice – and the artefact produced by this practice, which in turn can be involved in further processes of use, distribution, interpretation and reception. Both are realised within particular socio-cultural circumstances, involving people, other objects and complex networks of agency. Both can have meanings beyond simply that encoded by the signs themselves. And yet it is worth distinguishing them conceptually. An example can illustrate the value of this. Imagine a very young child scrawling signs with crayons. When asked, they might reply that they are 'writing'. They might be able to tell you

exactly what their ‘text’ says, although it is not in reality legible even to them. As a production practice, this evidently deserves to be considered among writing practices, since this is what the person doing it asserts it to be, and since it clearly forms part of their socialisation, education and self-identification as a literate. The context in which this act takes place is highly significant: it can be understood very differently if the child is three years old, five or ten; if they are able-bodied or not; if they have parents or siblings who are prolific writers; in a household where literacy and reading are valued or one where they are not. Specific choices made by the child in how they form this writing also have important implications: what are the connotations of the script and/or language they are trying to reproduce, if indeed they have a ‘real’ prototype in mind at all?

Once the initial act of creation is over and done, there is then the matter of what happens to the object produced – in this case a large, somewhat crumpled piece of paper with perhaps vaguely recognisable crayon scribbles on it. As an object, is this writing? Using Gelb’s definitions, certainly not: as a communicative system encoding spoken language, it is wholly deficient. But we have already judged it to have been produced during a writing practice. Again, context is everything to understanding this object and its place within its society’s writing culture. Is it shown around friends and family by proud or amused parents, kept and perhaps brought out and wryly shown off as a prodigious early work when the small child has grown into a famous author? Is it immediately screwed up and discarded by the child themselves, frustrated by their inability to accurately reproduce the script they were aiming for? Or does the child’s pride collide with a condemnation as inept by a stereotypically strict and traditional schoolteacher? None of these are questions we can answer just from the abstracted text, or even from an inspection of the whole object. Both as an act and as an artefact, writing can only be properly understood in reference to the ever-shifting circumstances of time, place and agency.

Figure 1.1 offers a real example of this. It was written by one of the authors of this chapter on the first page of a slim school exercise book labelled ‘Philip B. – Science’. It is not dated, but we can infer a number of things about the act of production – its setting, purpose and the competence of the trainee writer involved. Leafing through the book, which covers several months (other pages are dated), we can see a general improvement in the handwriting and almost complete elimination of errors, as well as the consistent interest of the writer in illustrating his work. There are ticks and approving comments in pen by a teacher. The post-production history of the item is impossible to deduce from the object itself, however, and certainly not from just the text. Clearly the book was kept, and in good condition. The cover is still attached; it is not faded, torn or excessively creased. Only from outside information – testimony of the owner or from the ‘find-spot’ – can we determine its later history: kept by the writer’s mother among other papers in the loft of his childhood home, all of which were given to the author decades later when that house was sold. It was examined again, with a pang of nostalgia, and shown to the author’s wife, then put alongside

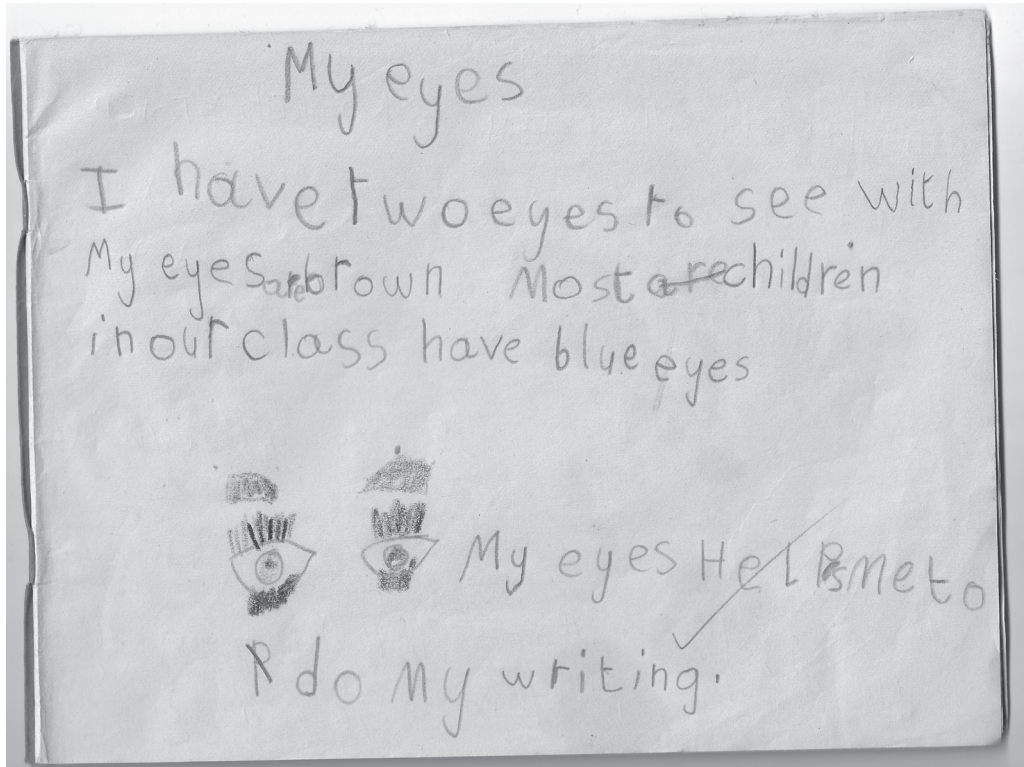


Fig. 1.1. A page from a school exercise book. Photograph by P.J. Boyes.

other papers in the study, where it was once again forgotten for around a year, before being located once more (with no small effort) and scanned to use as an example in an academic book the author was now editing. Even over the course of only around three decades, the object and its inscription have thus had at least three radically different contexts and meanings: routine school exercise, forgotten keepsake, and case-study in a discussion of the social context of writing.

Writing as material culture

One of the most productive ways ‘writing-as-practice’ and ‘writing-as-artefact’ have come together has been the growing focus on materiality. Although recent scholarship may give the impression that material approaches to writing are a new phenomenon, it is possible to trace a much longer history in some areas of scholarship. In particular, some palaeographic studies have involved extensive engagement with both material and structural aspects of writing, where the application of both approaches is integral to the palaeographic analysis – even if the materiality of the inscribed objects may not always have been acknowledged explicitly by the scholars in question. Where the writing interacts with the inscribed surface in three rather than two dimensions (e.g.

impression in clay or incision in stone, as opposed to ink or paint applied to the surface) there is particular scope for the physical and material properties of the object, and the tools and methods used to add writing to it, to affect the way in which the signs of a writing system appear. Some scripts are associated with particular media and methods of inscription (*e.g.* some inscriptions are impressed in soft clay, some incised on metal, others painted on the surface of hard ceramics, etc.), and individual signs can often vary considerably in their appearance, reflecting the different methods of their production. Since those individual signs are the building blocks of structuralist approaches to writing, this basic fact is of considerable importance to even the most traditionalist scholars working on writing systems, whether they take account of it or not: the ‘structure’ of a writing system (and so its means of encoding language) cannot be understood unless its individual components can be identified. Paying attention to the tools or implements involved in writing can tell us about matters such as technique, method, variation and similarity between sites; this also raises the simple question of what to look for in terms of archaeological evidence for writing taking place.

The field of Bronze Age Aegean scholarship is a useful example, where combined approaches to palaeographic study have been developing since the discovery of most inscriptions in the early twentieth century. Inscriptions in what are usually classed as three scripts – Cretan Hieroglyphic, Linear A and Linear B – appear on a range of different types of object and material, applied using different methods. Correspondingly, these systems display considerable variation in the palaeographic features of their signs (see Palaima 1988a): this is the case even in such a well-attested and standardised script as Linear B, and it is far more challenging to draw up a complete list of the signs that make up the far more sparsely attested Cretan Hieroglyphic script. The decipherment of Linear B was made possible not by abstract theorising as to the structural features of the system but by careful attention to the physical characteristics of Linear B signs, as is apparent in the work and correspondence of scholars such as Alice Kober and Emmett L. Bennett, which in turn led to a nuanced understanding of the overall repertoire of signs and their individual variation in shape. That was the foundation that Michael Ventris was able to build on when analysing patterns in sequences of Linear B signs and eventually recognising Greek to be the underlying language. Palaeographic study of Linear B has in fact had an even longer legacy, as its use to identify individual ‘scribes’ (or better, literate administrators) by their handwriting has led to integrated research on the activities of individuals working in the Mycenaean administrative centres, incorporating archaeological evidence for their contextual associations in order to reconstruct their interests and movements (for a helpful overview, see Palaima 2011).

Another instructive example can be found in Bronze Age Cyprus, where a script related to those of the Aegean was in use throughout the Late Bronze Age, and where palaeographic study faces an even steeper obstacle because of the sheer variety of object types and materials in the very small corpus of Cypro-Minoan inscriptions (see Steele 2018, 97–127). Already in 1941 John Daniel laid the theoretical groundwork for palaeographic study of Cypro-Minoan, making the case for paying close attention to

the relationship between sign shape and the material features of inscribed objects, as well as methods of inscription. Although more recent scholarship has begun to acknowledge Daniel's argument (Palaima 1989; Ferrara 2012), a full treatment combining an exhaustive materiality-focused study of the inscribed objects with a complete reassessment of the structure of the writing system is still lacking.¹ On the other side of the Aegean too, very recent studies have begun to capitalise on the potential for new, properly contextualised palaeographical studies to inform and improve our understanding of Linear A (Salgarella 2020) and even Linear B (Judson 2020). This agenda is also furthered by the paper in this volume by Marie-Louise Nosch and Agata Ulanowska, punning playfully on the idea of 'materiality' by looking at signs related to the craft of textile production, and bringing not only the issues of system structure and sign identification but also material and social context to bear on the study of Cretan Hieroglyphic writing.

The degree of engagement with material approaches to inscribed objects varies greatly between different fields dealing with different areas of the ancient world. However, recent theoretical developments in writing research have begun to make the adoption of materiality approaches to writing far more explicit than in the above examples of the Bronze Age Aegean and Cyprus. In part, this is an engagement with writing's 'thingness', an attention to its 'substance, surface and medium' (Piquette and Whitehouse 2013b, a, 2–3; for other work on materiality in writing, see Balke and Tsouparopoulou 2016; Whitley 2017; Angliker and Bultrighini forthcoming). But it also involves an awareness of the socially-embedded nature of these material properties through the embodied nature of human interaction with material and through the incorporation of the objects of writing into other activities. As Piquette and Whitehouse (2013a, 3) put it:

'Materiality' can thus refer in a general way to the material aspects of artefacts, while also, and importantly, prompting their situation in relation to mutually-informing sets of practices. This enables material to be described as more than a mere 'support' for writing. It becomes active in the construction of meanings, from the preliminary work of manufacturing artefact 'blanks' on which marks are made, and the techniques of surface transformation which give rise to written marks, to the ways in which these physical objects were incorporated into subsequent activities, from reading/viewing (where intended) and display, to discard, deposition or loss.

¹ The ongoing (at time of writing) doctoral study of CREWS Visiting Fellow Martina Polig (University of Ghent/Cyprus Institute, Nicosia) takes an important step towards completing redressing this omission by using state of the art 3D documentation (utilising a structured light scanner) of nearly 90% of surviving Cypro-Minoan inscriptions to study the palaeography in minute detail, in a way that has not previously been possible. Another CREWS Visiting Fellow, Cassandra Donnelly, is taking a combined material/palaeographic approach to the potmarks and other single-sign inscriptions long known to relate to Cypro-Minoan writing but traditionally excluded from any study of the writing system (on the basis that a single sign is not enough to study encoded language, betraying the fundamentally linguistic-structuralist approaches of earlier studies).

Materiality research thus integrates productively with the ideas of practice, agency, technology and *chaîne opératoire* raised in the previous section. For instance, a focus on the tools or implements involved in writing can tell us about matters such as technique, method, variation and similarity between sites. See, for example, Cammarosano's illuminating discussion of the cuneiform stylus (2014). Close examination of non-scriptal marks on the tablets might also offer evidence for production practices beyond those of just inscription itself – at Knossos, for instance, Sjöquist and Åström (1991) suggested that children were employed in the creation of blank tablets on the basis of handprints in the shaped clay.

However, there can sometimes be a danger with palaeographical and materiality studies that study of production takes on an excessive importance, and that – like in more traditional approaches – the inscription is abstracted from its wider social environment and from subsequent processes of distribution, exchange and use. Attention is very closely focused on the marks of inscription, which are often isolated and abstracted even from their contexts within the individual document for the sake of comparison, with wider contextual and social relationships treated secondarily, if at all. If we focus excessively on the micro level, and on the process of inscription in isolation from other social and cultural practices then we are reproducing the same arbitrary and misleading separation of writing from the rest of human culture and material culture that characterised early grammatology, notwithstanding the new material awareness. Bridging this divide between the micro and the macro, between epigraphic materiality, palaeography and disciplines such as archaeology and anthropology is key to overcoming this potential failing and offering a more integrated perspective that brings the undoubted insights these methods can offer to bear on wider questions of society, culture and identity.

There have been several efforts made to begin overcoming this divide, which offer a number of potential routes. One is to use analysis of the materiality of production as a way into addressing broader questions about the people and societies which produced a given example of writing. For example, Steele and Boyes (forthcoming) use a comparison of stylus impressions on Cypriot and alphabetic cuneiform tablets to explore connections in writing culture between Cyprus and Ugarit and ties these into wider discussions of diplomatic, trade and cultural interaction. Another fruitful approach is to broaden the focus of materiality research out from a primary concern with production practices and to think more about how it relates to the distribution, use and reception of the inscribed object after the writing has been completed. This 'archaeology of writing' is explored by Boyes in this volume and Boyes (2021). Meanwhile, Piquette has stressed the importance of the embodied, phenomenological dimension of the use and reception of inscribed objects (Piquette and Whitehouse 2013a; Piquette 2018) – the fact that people experience the material world through sensory perception, and that choices made and acts of engagement with physical artefacts are always mediated through human bodies in all their diversity. This draws on and develops a phenomenological aspect to agency which was already present

in Giddens' work (1984). As well as the obvious considerations of the physical and sensory processes involved in reading and writing, there are also other ways writing practices can relate to the human body, including things like tattooing, scarification and, as Guillaume-Pey describes in this volume, even the physical consumption of writing for ritual purposes. The meanings of inscribed objects are thus enmeshed within webs of relationships involving not just the materiality of objects, but also the corporeal, sensory materiality of human (and non-human) bodies, which in turn are imbued with culturally-dependent meanings and implicated in other forms of practice.

This reference to non-human bodies brings us to another important point: that we shouldn't limit ourselves to thinking only about human agency and participation in material practices and relations. Recent developments in the theory of materiality and agency have seen an increased consideration of the possibility of non-human agency – that of animals, objects and even ideas (Knappett and Malafouris 2008; Hodder 2012). This can seem counter-intuitive at first but is quite easy to illustrate: objects constantly affect the ways they can be interacted with through their physical affordances. A chair 'wants' to be sat on by virtue of its shape and size – though it doesn't completely preclude being utilised in other ways. The idea of non-human agency can seem especially resonant in ancient and non-Western contexts, where animals can play much more prominent roles in daily practice and where religious beliefs often imbue great swathes of living and non-living things with animacy. We should not make the mistake, however, of assuming such ideas are peculiarly 'other', as anyone who has ever suspected malice in a car, computer or set of dice can readily attest. There are many ways in which the agency of things might inform our research into the materiality of writing and its relationship to its wider socio-cultural context. The materiality of an inscribed object or writing surface affects the form of the writing, the way people use it and the writing culture that emerges (see *e.g.* the contributions to Englehardt 2013a). For example, as West discusses in this volume, the short lifespan of palm-leaf writing surfaces in the tropical climate of Java has implications for the appearance of scripts, the culture of writing (such as which genres appear) and attitudes to the history of writing on the island. Inscription can give mute objects voice, as Whitley and Elvira Astoreca discuss in this volume, rendering them active and vocal participants in human social life in distinctive new ways.

Writing in society and culture

The study of materiality is the closest point of intersection between most research into writing and the disciplines of archaeology and anthropology. It was in these disciplines, in the sub-field of material culture studies, that much of the theory and methodology of materiality was first formulated (*e.g.* Miller 2005). Material culture is, of course, archaeology's stock-in-trade. Objects comprise the discipline's primary source of evidence and the reconstruction of society through their contextual analysis its principal method. The idea that social life is materially constituted and that context is critical

to the analysis and interpretation of this material world is baked into archaeology's fundamental approach. The phenomenological, embodied aspect of materiality research into writing alluded to above is also paralleled in archaeology, most dramatically in the early post-processual boom of the 1980s and early '90s (e.g. Tilley 1994; Meskell 1996; see also Trigger 2006, 472–475), which has since blossomed into a mature proliferation of such approaches throughout much of the field. If archaeology is first and foremost material, then the starting-point of anthropology is culture. But that discipline has recognised the importance of materiality in this just as archaeologists have never shied away from making the step from artefacts to culture. Many of the analytical tools and interpretative models of archaeology and anthropology overlap, then, with their main point of difference being the former's focus on the past and the latter's on the contemporary, or at least recently historical.

This being the case, it is perhaps surprising that interest in materiality of writing has not developed into greater engagement with archaeology and anthropology more broadly. Despite the undoubted advances in materiality research, it often remains rather circumscribed and narrowly focused on the objects of writing themselves – the inscribed object, writing-surface and implements. Rarely does the discussion move to consider the rest of the material culture assemblage within which these items were found and so the ways that writing practices are integrated into the broader field of practice and culture at a site. Rarely is there a sense that setting – *physical* context – matters, beyond the specific functional demands of what is needed to write or read – raw materials, light and so on – or that the beliefs, ideologies, dispositions and other intangibles that make up the wider *cultural* context are fully taken into account in most discussions of how writing worked in ancient societies. Finlayson's paper in this volume represents a rare attempt to take this much broader sense of context into account in the case of Bronze Age Aegean writing. To return to the example of the primary-school science exercise, we've already mentioned its changing physical context or 'findspot' – classroom, schoolbag, loft, study and (in reproduction) the pages of this volume – but to understand its cultural context would mean thinking about not just the specific object history of this item, but its place in wider discourses surrounding literacy, education, rationality and citizenship, as well as the way Western society sentimentalises childhood and the strong feelings of nostalgia, comfort but also disquiet which relics of childhood can engender for adults. Or we might decide to focus on the illustration and explore the association of illustrated texts with childhood, or the much greater integration of artistic expression into every aspect of children's lives than is the case with adults. Appadurai neatly encapsulates some of the different forms of social context an object might have in the distinction he makes between its 'cultural biography' and 'social history' in his seminal work *The Social Life of Things*:

[T]here are important differences between the *cultural biography* and the *social history* of things. The differences have to do with two kinds of temporality, two forms of class identity, and two levels of social scale. The cultural biography perspective, formulated by Kopytoff, is appropriate to specific things, as they move through different hands, contexts, and uses,

thus accumulating a specific biography, or set of biographies. When we look at classes or types of thing, however, it is important to look at longer-term shifts (often in demand) and larger-scale dynamics that transcend the biographies of particular members of that class or type. Thus a particular relic may have a specific biography, but whole types of relic, and indeed the class of things called 'relic' itself, may have a larger historical ebb and flow, in the course of which its meaning may shift considerably. (Appadurai 1986, 34. Emphasis original)

These are not ways we are particularly used to thinking about ancient writing; at least, not as epigraphers or researchers into the practice of writing itself. Manuscript scholars, librarians or museum curators used to tracing the life-stories of items within their collection or of prospective acquisitions are, of course, intimately familiar with the idea of object provenances and biographies. There can even be a measure of resistance, since some of the threads such an approach would invite us to pull at can seem to lead quite far away from the practice of writing *per se* and into disciplinary realms quite far removed from epigraphy, palaeography and traditional linguistics. But this is the point: everything is intertwined, no element of culture exists in a vacuum, and writing practices cannot be understood with these traditional approaches in isolation.

This is why archaeology and anthropology are so essential to studying writing practices. The expertise of these disciplines in observing, describing and analysing different kinds of context and working out from that to interpret the place of an object within a culture is invaluable. Nancy Highcock's paper in this volume ably demonstrates this, showing how Mesopotamian artistic traditions, religious beliefs and dedication practices combine with cuneiform writing traditions to influence and explain writing practices on inscribed votive items. The contemporary, or near-contemporary, evidence available from anthropological fieldwork further expands our ability to see just how dependent on culture writing practices are. We're able to observe first-hand and receive direct testimony from practitioners about practices that would either be invisible or very difficult to interpret in the archaeological record, or even from historical sources.² Aurélie Névoit's chapter in this volume offers an excellent example of this by highlighting

² We hope it will be obvious from the discussion so far why two proposals on anthropological studies of *contemporary* writing practices are included in a volume whose title focuses on the historic. When organising the conference, we placed no limitations on the geographical or chronological remit and tried our best to select speakers whose expertise lay in a diverse set of regions and periods. This diversity was a key aspect of the intellectual agenda of the conference and remains so in this book. The inclusion of these chapters opened up a much broader conversation about the possibilities of interactions between writing traditions and social, cultural and religious contexts. At the same time, we must be conscious of the ways archaeologists and anthropologists have in the past often treated non-Western case-studies as examples of 'primitive' practices that correspond in a simplistic way to the imagined past of their own societies. This is explicitly not what we are suggesting here. Of course, contemporary writing practices in Yunnan, China or Odisha, India do not map straightforwardly on to writing practices in other times or places, but these examples can prompt us to ask new questions of evidence from elsewhere. In the end we retained the word 'historic' in the title since the majority of papers concern the past, but we are very glad that anthropologist colleagues working in modern societies saw the relevance of their research to our agenda and were so keen to be involved, valuably enriching our outlook on writing practices ancient and modern.

the rich culture of teaching, apprenticeship and secrecy behind variations in signs which might otherwise be taken as inexplicable or even mistaken deviations from 'standard' forms. Without understanding the complex interplay between what is written and the restricted oral framework passed down by *bimo* to their apprentices which allows them to interpret the text's ellipses and idiosyncrasies, we would be misapprehending the nature of these writing practices to a very significant degree.

Another area where writing is entangled in complex ways with other practices is to be found in visual culture, which is explored by several chapters in this volume. As an essentially visual medium of expression, writing has tended to be defined by its visual characteristics, and even the most traditional structuralist approaches to scripts have seen 'iconicity' or 'pictography' as an important feature of early graphic developments. For Gelb's evolutionary model of writing, a stage where ideas and things are represented by their visual depictions was the essential first step: 'Just as speech developed out of imitation of sound, so writing developed out of imitation of the forms of real objects or beings. At the basis of all writing stands the picture' (Gelb 1963, 27). Fortunately, modern scholarship has begun to move away from this instinct to make a sharp distinction between pictorial representation as somehow primitive in comparison with writing systems known to encode the sounds of language. While for Gelb a script such as Mayan did not count as real writing because of a perceived lack of systematic representation of language, we now understand far better the complex interplay of logosyllabic representation and iconography, combined with a deliberately high level of variability and *horror repetitionis* in Mayan writing (see Prager, this volume). Similarly, it has become apparent that early treatments of Cretan Hieroglyphic (which is in fact a logosyllabic script like its relatives Linear A and B) had unsystematically privileged some signs as 'true' writing while relegating others to 'non-linguistic' decoration, and it is only in very recent scholarship that such biases are beginning to be redressed (see Decorte 2017, 2018a; Nosch and Ulanowska, this volume). These are cases where understanding a script and the writing practices surrounding it simply cannot be divorced from some appreciation of their relationships with complex visual repertoires grounded in wider social practice.

While in some cases like those above the visual characteristics of writing have led to doubts – particularly in older scholarship – about the very status of a writing tradition, in other cases the highly visual nature of writing has been more warmly embraced. Egyptian hieroglyphs are the paradigm example. The way in which this script encodes language (via single, double and triple consonant combinations originally representing whole words but also used to spell phonetically) is very well understood, but there can be no doubt that this was a writing tradition that was inseparable from principles of iconographic representation, aesthetic decoration and visible monumentality. But while Egyptian hieroglyphs seem to give an extreme example, in principle any writing tradition can produce inscriptions reliant on their highly visual features, using size, colour and technique to visible effect, especially

where decoration and/or monumentality are on the agenda. This is no less the case in the Viking runestones that played longstanding, iconic roles in the social and visual landscape (Heier, this volume) than in the highly visual interplay of text and image in Maya monuments (Prager, this volume). Katherine Forsyth's paper at the conference (not included in this proceedings volume, but available on our YouTube channel³ and to appear elsewhere in the future) raises another interesting possibility: that the visual aspects of the way writing appears on an object may itself affect the very structure of the script, in this case ogham, which seems to have been designed around principles of maximal visual disambiguation.

Considering writing as culture opens up the question of cultural interaction, hybridisation and the adaptation of writing practices to new forms. Traditional approaches to writing have often tended to approach this from the perspective that writing is an intrinsic good, an invention of such patent utility that anyone who encountered it would inevitably be drawn to adopt it or invent their own version. Accompanying this is often a rather evolutionist assumption that writing practices themselves will tend towards greater efficiency over time, such as through the increasing simplification and schematisation of sign-forms or preferences for scripts with small repertoires which are seen as being easy to learn over those with much larger signaries and more complex rules governing which to use. An awareness of the importance of culture in determining writing practices shows clearly that none of these assumptions is necessarily true, any more than art should be understood in terms of a natural evolution from less to more accurately depicting its subject, with more advanced forms automatically being subject to adoption and emulation by those who encounter them. We can see this, for example, in the case of standard Chinese writing. Its logographic nature would be seen as 'primitive' under evolutionist models, and its 'resistance' to simplification, a smaller signary or a more direct adherence to the phonemic principle would be considered anomalies. Apart from the obvious assumption of the supremacy of the principles of alphabetic writing in such judgements, they would be to wholly ignore the cultural importance Chinese script has as an icon of Chinese identity (and indeed, of different variants of the script as indexing different kinds of identity and meaning among different groups within and outside China – see Lillis 2013, 38–40), the strong aesthetic traditions attached to it – such as the importance of calligraphy, and even its functional utility as a means of allowing numerous different Chinese languages/dialects to be mutually intelligible in writing even if they are not in speech. This, in turn, has had considerable ramifications for the possibility of a sense of cultural and/or political unity to be established over such a large area (not always, it should be said, necessarily positive ones for all people involved).

The last several decades have seen archaeology and anthropology move away from the idea of cultures as bounded entities defined by discrete material cultures and embrace views of identity which are discursive, situational, plural and overlapping.

³ Available at <https://bit.ly/2VkiRUJ>.

These coincide with material culture which is not a straightforward index of a single 'culture' but is constantly appropriated, borrowed, reinterpreted and hybridised to suit different agendas and identity claims. So it is too with writing practices, scripts and inscribed objects. Several chapters in this volume explore these themes. In particular, Theodore Nash's contribution explores how scripts and writing cultures spread from place to place and the complex processes of adaptation and reimagining they undergo for the new socio-cultural contexts. Olga Tribulato and Valentina Mignosa tackle similar issues from a different perspective, reminding us that although identity can be an important factor in the cultural significance of writing practices, it isn't always salient and must be demonstrated on a case-by-case basis.

Other contributors have focused on different aspects of identity. Sarah Finlayson, Kathryn Hudson and John S. Henderson have used their chapters to explore how writing practices were used to define and negotiate elite identities in the Bronze Age Aegean and the Maya world respectively, while James Whitley and Natalia Elvira Astoreca have addressed personal identity, offering two different perspectives on how first-person inscriptions were used to define selfhood in ancient Greece. And as Elvira Astoreca points out, again we potentially have some interesting interactions here between the sorts of things individuals want to write and the linguistic structure of the system, because the frequency of initial vowels in Greek names and potential for individual ambiguity if vowels are not represented may well play an important role in the development and success of an alphabetic system that represents vowels as well as consonants – unlike the Semitic consonantal scripts that came before them.

Contexts of writing and the CREWS Project

If our reflections on socio-cultural approaches to writing seem to present a varied range of different views and aspects of research into writing practices, that gives quite a good impression of how complex and multi-faceted the relationship between writing and culture is. There is no one way of studying writing, no single answer to the question of what writing is or does. The more we embrace the applicability of different perspectives, the more we learn, and writing traditions from different areas and periods have a great deal to teach all of us. This is a message that we hope is central to our work on the CREWS project: *Contexts of and Relations between Early Writing Systems*, a five-year ERC-funded initiative under whose aegis the conference underpinning the present volume was organised.

One of the most enjoyable aspects of that conference (held in the Faculty of Classics at the University of Cambridge in March 2019) was the unexpected sense of community between a group of scholars working on completely different material, times and places. To see archaeologists, linguists, anthropologists, epigraphists, historians all coming together, open to each other's perspectives and ready to learn from each other, all contributing to a much larger conversation, made the meeting feel very special. One of our key goals was to bring together people working on questions of writing

and its social context in very different disciplines and to show how the insights and experiences of one might elucidate questions in another in unexpected ways; we also invited people not working on writing directly but whose expertise we thought would benefit the discussion of practice, agency and social context. It is difficult to replicate the resulting dynamism in print, but I hope that the contributions to this book will give some sense of the conference's range; each author's paper has also been enriched by the feedback they received during the meeting itself, with its many opportunities for discussion. The conference programme, along with links to videos of many of the papers, can be found on the CREWS website (<https://crewsproject.wordpress.com/social-and-cultural-contexts-of-writing/>) for the hardcore aficionado (or the especially dedicated reviewer).

Although not all those who spoke at the conference were able to contribute to this publication of the proceedings, we are delighted that this book nevertheless covers a broad range of time-periods, locations and research approaches. The diversity on offer served to emphasise the breadth of forms and meanings writing can have in different social and cultural contexts. We encourage readers not to restrict themselves only to those chapters whose case-studies coincide most closely with their own fields of interests, but to sample as broadly as they can and think about how writing practices and their socio-cultural meanings in very different times, places and circumstances might offer new ways of thinking about their own material. This is the spirit in which this book is offered.

Chapter 2

Towards a social archaeology of writing practices¹

Philip J. Boyes

Archaeology is, by its nature, a rather expansionist discipline. In gathering the disparate fragments of evidence with which we seek to reconstruct the past, we find ourselves venturing into everything from history to biological science. The field is notorious for appropriating and incorporating into itself the theory and methodology of other disciplines: ‘archaeological theory’ is a hodgepodge of sociology, philosophy, cultural studies and more, very little of which was first created with archaeology in mind. As an archaeologist, it can at times feel like nothing is beyond its scope, that everything can and should be folded into its holistic attempt to reconstruct the past.²

It’s curious, then, how little archaeology has had to say about writing. We’re accustomed to archaeologists using metaphors of reading and literacy to explain people’s engagement with other aspects of the social and material world – ‘reading the past’, ‘reading archaeological landscapes’, ‘writing the body’ and so on (Hodder and Hutson 2003; Yamin and Metheny 1996; Meskell 2000 respectively). Occasionally there

¹ This chapter comprises an exploratory first outing of ideas that is developed in more detail in Boyes (2021), which is the end-product of the research project within which this work was carried out. My research, like this volume as a whole, is part of the CREWS Project. This project has received funding from the European Research Council (ERC) under the European Union’s Horizon 2020 research and innovation programme (grant agreement No 677758). I am grateful to those who commented on the suggestions offered in this paper when it was delivered in March 2019, and especially to Philippa Steele for reading draft versions of this and the related chapters in the larger monograph. Any errors are, as ever, my own.

² This is, I’m aware, a rather ‘maximalist’ understanding of what archaeology is; for others, it might be seen as a more specific, limited field specifically focused on dealing with material remains. As far as I’m concerned, while materiality is at the heart of archaeology, the interpretation of those remains can only be achieved by drawing upon a full range of available material, and thus archaeological disciplinary expansionism is mandated.

are discussions about methodologies for integrating written sources with the material culture, about the nature and theory of textual or historic archaeology. These are not the same as an archaeology of writing, however. When it comes to writing as a type of human practice, a field of creativity and interpretation that spans material and immaterial culture, archaeologists have seemed reluctant to get involved. When a clay tablet or inscribed stone stele is unearthed, archaeologists tend to wash their hands of it and send it to specialist epigraphers, palaeographers and philologists. Its objectness falls away and it becomes a 'text' or 'inscription', defined by the writing it bears. Its other characteristics – its archaeological context, material features, methods of production, use and functions, interpretations by various people and groups, and so on, have traditionally been relegated to secondary concerns, if they have been considered at all (see also Tsouparopoulou 2016). In many traditional publications, the object that bore an inscription was not even mentioned or illustrated – only the writing was deemed worthy of publication.

This is something of a simplification, and things have been changing. In particular, the notion of materiality has been growing in prominence within epigraphic studies for several years now.³ By this is meant such things as the physical nature of the object upon which the writing is found – its size, composition, likelihood to degrade or survive – the methods by which the writing is produced. This is very welcome, but even among materially-minded epigraphers terms like 'text vehicle' or 'material support' remain widespread, encapsulating and ingraining an assumption that the writing is in some way primary and the object itself exists mainly to substantiate. There has been extremely useful work done on production processes like the way signs were inscribed or the manufacture of writing surfaces, but it's less common to see significant engagement with other aspects of the material biographies of inscribed objects, including how they relate to the wider network of material culture and practice within a society. Often, too little attention is given to the roles these objects played, how people interacted with them beyond the act of inscribing a text, and how the fact of their inscription affected these things. In short, while researchers into writing are increasingly aware that texts are not free-floating abstract lexical entities but are features of objects that have materiality, in many cases we continue to decontextualise these objects, to separate them off from wider society and culture – in short, from the archaeological.

This chapter aims to do two things: first, to outline a theoretical framework for reintegrating the epigraphic with the archaeological and exploring the socio-cultural context of writing practices and writing systems, and secondly to explore some of the practical challenges in putting such a methodology into effect in a specific case-study, namely my research focus of Late Bronze Age Ugarit.

³ The literature on this is vast and growing, but see, for example, Eidem (2002); Pearce (2010), Taylor (2011); Ferrara (2012); contributions to Piquette and Whitehouse (2013b); Ellison (2015), Balke and Tsouparopoulou (2016) all with extensive further bibliography.

Writing as social practice

It is fundamental to my approach here that writing is a human practice embedded in social and cultural relations in exactly the same way that making and using pottery, building and occupying houses, producing and consuming food and any other form of productive behaviour are. As such, it seems to me that any archaeology of writing must be a *social* archaeology and that we can use the questions and methodologies long established within this sub-discipline as a template for how we should approach writing systems.

Looking through publications on social archaeology with a view to this sort of adaptation, the breadth of topics and approaches can initially be daunting. Just one companion to the field – Lynn Meskell and Robert Preucel's (2004) *A Companion to Social Archaeology* – includes in its contents page such disparate topics as embodied subjectivity, gender, sexuality, age, colonialism, the social significance of material culture; ideology, power and consumption; space and landscape; household production; diaspora and identity; politics and the often contested relationship between archaeology and indigenous understandings of the past. We might easily add others of our own – matters such as food practices, religion and ritual, the archaeology of social change, and more. Some of these topics, such as gender, ethnicity and other forms of identity, are of obvious relevance to writing systems; many others are almost never encountered in scholarly discussions of the subject. It is not possible here to go through each in turn and demonstrate their relevance to the world of writing practices. Many are discussed in Boyes (2021). But in my view there isn't a single branch of social archaeology that writing practices are not entangled with in some way. From food preparation to body-modification, identity to politics, writing practices – by virtue of the fact that they *are* social practices – are intertwined with every other part of human social life. They cannot be anything else.

This brings us to the matter of theoretical frameworks. The networked, mutually-entangled view of human practice which I have alluded to is, of course, drawn from a particular theoretical understanding of practice and its relationship to material culture and human agency. More generally, it's obvious that if our premise is that the social context of writing is inextricably entangled with the whole vast and messy bundle of human behaviour and culture, then we're going to need some sort of theoretical or methodological apparatus to structure and make sense of this rapidly-expanding field of enquiry.

As described in the Introduction to this volume, the understanding of practice and its relationship to human society which I follow here is derived from Giddens and Bourdieu (Bourdieu 1977; 1990; Giddens 1984; see also Englehardt 2013b). Bourdieu, through his idea of habitus, and Giddens, with his notion of structuration, explored how human agency was shaped by, enabled by, or reacted against pre-existing structures of thought, social organisation and expected behaviours.⁴ These new practices then served to reproduce or alter those structures in an endless cycle.

⁴ An exhaustive bibliography of agency would be impossible here but see, for example, Dobres and Robb (2005), Knappett and Malafouris (2008), Englehardt (2013a), Robb (2010).

This cyclical churn of practice, social structure and agency involves more than just human actors, as more recent work has increasingly emphasised (Knappett and Malafouris 2008; Hodder 2012). A number of scholars have argued persuasively for the idea that agency exists in the relationships between any and all social entities, whether human, animal or even inanimate objects. It has become common to talk about the ‘agency of things’ – the way material culture enforces, allows, limits, denies and affords particular forms of behaviour. As Malafouris puts it (2008, 22, emphasis original), ‘[W]hile agency and intentionality may not be properties of things, they are not properties of humans either: they are the properties of material engagement, that is, of the grey zone where brain, body and culture conflate.’ He offers the example of wheelmade pottery, which is the result of an interaction between human being, potter’s wheel and the clay itself, each exerting a certain measure of influence on the final form.

Emerging from this relational approach is a view of culture, society and practice which is fundamentally network-based – everything is tied to multiple other entities; nothing is single, discrete and bounded (Latour 2005; Knappett 2008; Hodder 2012). In short, everything is, to use Hodder’s term, *entangled*.⁵ The links in this vast and complex mesh are fraught with varying measures and forms of agency. They have broader utility too: we’re accustomed to speaking of ‘writing systems’ or ‘traditions’ as if they’re relatively discrete entities in their own rights, readily separable from their rivals. Often, however, it makes much more sense to think in terms of meshes of practices that interlink to differing degrees, with some clustered much more closely together as similar but none entirely alike, and others more distantly connected but nevertheless not entirely distinct separate ‘systems’. These networks have also proven a productive way of thinking about the pathways along which people and objects disseminate writing practices, scholarly materials and related knowledge (Robson 2014; 2019).

Does this mean that when we look into writing practices we also need to look at everything else? And is this not an impractically vast undertaking? Well, yes, I think we do: as I said at the outset, archaeology is an expansionist discipline and to gain a proper understanding of how something works within a society and culture, there is ultimately a necessity to cast our nets as wide as possible and approach the matter as holistically as we can, both in terms of the questions we ask and the evidence we take into account. Practically, however, there are certain factors which prevent this becoming an ever-expanding and unmanageable task. Time, funding and the limits of our own abilities all come into play: of course we must draw the line somewhere and that will depend on personal judgement and the nature of a specific case. But there are also the limitations of the evidence, as we will see when we go on to discuss the case of Ugarit. Particularly for earlier periods or societies where available information is limited, certain questions will be very difficult to get traction on; the expansion of our remit becomes limited by the extent to which published data allows us to say

⁵ For another approach to the idea of entanglement in the archaeology of writing, see Tsouparopoulou (forthcoming).

relevant and useful things. I'm not proposing that we must consider *everything* in depth, only that we consider as much as we can and not draw artificial boundaries separating one aspect of social or cultural life off from others.

I want to conclude this theoretical overview with a few words on the subject of 'writing systems'. This term is widely used, not least in the name of the CREWS Project and the titles of both the original oral version of this chapter and the conference at which it was presented. However, I have found myself increasingly uneasy with it, since it seems to sit uncomfortably within the theoretical framework I've articulated here. The idea of a 'writing system' both reifies a particular bundle of practices as a coherent, distinct, named entity – 'cuneiform' or 'Linear B' or whatever – while also depersonalising those practices into a rather machine-like and abstract system. This owes much to the Saussurean roots of modern linguistics (see, for instance, Coulmas 2003, esp. ch. 1) but is in tension with the view of practice I have espoused here, whose theoretical background lies in an attempt to move beyond the depersonalised, agency-less world of Saussurean structuralism. Where constant reproduction and flux are the order of the day, where everything is entangled with everything else, no writing practices can really be parcelled off into convenient, discrete entities or 'systems'. This is something I began to articulate at the previous CREWS conference when I discussed the position of the so-called short cuneiform alphabet relative to the 'long alphabet', linear alphabetic writing and logosyllabic cuneiform (Boyes 2019b). It became clear to me that not only were several of the examples of 'short alphabetic' writing at least as different from each other as they were from the 'long alphabet', but also many aspects of their use and context fitted far more closely with linear alphabetic writing practices than with other examples of the alphabetic cuneiform 'writing system'. In other words, we were not dealing with a set of writing systems and sub-systems, but with a single extended mesh of writing practices including various manifestations of linear alphabetic, alphabetic cuneiform and logosyllabic cuneiform writing practices. Within this we could identify clusters of similar practices but none were entirely alike, nor entirely distinct from other 'systems'.

I'm not trying to deny that, from a linguistic perspective, it can be convenient to talk about 'writing systems' in the sense that the symbolic meaning of signs and their relationship to each other must be in some sense systematised for them to function in communicating meaning across a group of users. From a socio-cultural point of view, however, 'writing systems' can have the arbitrary and dehumanised air of the various social systems and subsystems posited by systems theorists in the functionalist archaeology of the mid-twentieth century, or the autonomous 'cultures' that came before. Just as 'cultures' or 'societies' themselves have long been seen as problematic conceptual shorthands for a dizzying array of practices, material culture traditions, beliefs and identities which never entirely map on to each other, so we must move beyond 'writing systems' as an analytical tool. For these reasons, I think it is prudent, at least in social-contextual discussions such as this, to reframe the discussion around writing *practices*.

Towards a method

If society is entangled, relational and held together by interactions of agency, then our method for approaching the archaeology of writing must also be relational and agency-based. We need to explore how the inscribed object, and/or the writing practices involved in its production, use and reception are enmeshed into other parts of social life and practice, but not in a way that reduces these links to abstract, mechanistically interacting systems and subsystems. We need to think about how agency is exerted in each case, and when it comes to conscious actors, to think about how their choices and decisions are constrained, enabled, suggested, limited, prevented and so on both by the agency of others and by existing social structures or habitus. Four strands of analysis are necessary, which are detailed below. By necessity, these are presented one by one, which can give the impression that they should be sequential, moving ever outwards from the object to more overarching analyses of its place in society. I want to stress that in practice, however, there is not a linear progression from one to the next. These strands must be braided together to form a thorough analysis.

The first form of analysis is to establish clearly the physical characteristics of the object itself. This is what is generally done under the rubric of epigraphic materiality research: we need to define features such as nature of object, size, weight, fabric. Crucially, we shouldn't just direct our attention to the writing itself. If we are dealing with an inscribed vessel, for example, it is at least as important to conduct residue analysis and try to determine its contents as it is to consider what went into the paint used to write the text. This information should all be included – and ideally illustrated – in eventual publication; there shouldn't be an artificial divide between text and object. So far, so basic; most good epigraphic work is probably doing this as a matter of course.

Secondly, we need to think about the object's immediate physical context and to begin to investigate its relationships with other material culture and with people. Again, what I'm calling for here will not blow any minds through exotic novelty: we must consider where the object was found, its stratigraphy and how that deposit was formed: was it a primary or secondary deposit?⁶ Is it likely to reflect where and how the object was used during its 'life' or was it placed there as an act of disposal (*e.g.* through dedication or discard). In addition, we must not draw the line at inscribed objects: it's critically important that we pay just as much attention to the non-inscribed material culture, since this is the only way we can begin to understand the relationships these objects had between each other and with the people who produced, used, traded, observed, coveted, ignored and discarded them. In other words, we must approach inscribed objects as part of the general archaeological assemblage, no differently.

Thirdly, we can look for meanings, for the heterogeneous exertions of agency by and on the objects we are interested in. We can explore the links between objects and

⁶ That is, material found more or less where it was initially fell or was placed versus material secondarily brought there through natural or human processes.

the other material culture with which they are immediately associated, and begin to consider the social factors such as norms, ideologies and beliefs that came into play in these practices. Various frameworks can aid us in this, guide us as we follow the endless network of connections. Robb, for example, advocates a threefold schema of possible meanings: structural meanings derived from the habitus and general beliefs about how the world works; generic meanings based on the particular field of action an object was part of, and contextual meanings based on how these ideas were manifested in this specific instance (Robb 2010, 506). Dobres has explored how agency can be delineated in the material culture of technology – of which writing is an example – and advocates the use of the *chaîne opératoire* as an analytical framework – the fine-grained and detailed analysis of the steps that go into the production and use of a particular item of material culture.⁷ Even something as simple as the contents list of social archaeology handbooks can act as a useful prompt in ensuring we don't overlook a particular branch of the network of relationships and meanings. It can prompt us to ask, 'Have we thought about how these writing practices relate to gender, body, place?' or whatever our blind-spots happen to be. As we'll see when we consider the Ugaritian case study, the specific methodology will depend on the nature of the evidence in a given case, but what is universal and essential is that we should follow the mesh of interrelations and entanglements as widely as we're able, to reconstruct the place of the writing practices within – and *as part of* – the wider network of interaction that comprises society.

Finally, we can think about writing practices from a broader perspective and explore how the meshes of meaning, agency and practice within which objects are embedded serve to create, reproduce and alter writing practices within that society. If we wanted to use the term 'writing systems', this is where we would apply it, since if such a system is anything, it is the commonality of these practices within a given society.

Essentially, what I've argued for here is that writing is not intrinsically any different from any other sort of human practice, and that the same techniques which have for a long time been used by archaeologists to reconstruct other aspects of ancient society and culture can and should be applied here. My intention is not to say that archaeologists are right and that epigraphers and palaeographers have been going about things all wrong, but that these archaeological methods need to be harnessed and reintegrated into the discussion if we're to reconnect ancient writing with its social and cultural context. It makes no difference whether we call this new approach archaeology or epigraphy – like writing practices themselves, they should not be distinguishable, but thoroughly entangled in a single, rhizomatic mesh.

The next question is, 'Does this actually work? Can an epigraphic dataset be analysed in the way I have suggested, and if so, what problems must be overcome?' This is what I will address in the second part of this chapter.

⁷ Dobres (2000).

The archaeology of writing at Ugarit

Excavation at Ugarit and analysis of its epigraphic assemblages began in 1929; there have been more than 90 years of near-continuous excavation and constant translation, study and other research. Nearly a century of choices in fieldwork, publication priorities and research topics has greatly shaped the nature of Ugaritic studies. It has determined what has been uncovered, where material is housed, what has been published and so on, as well as more generally shaping the expectations and norms of those working on the site as to what their research should look like. In short, as with any long-studied archaeological site, we approach it laden with the baggage of the past. Our own agency as researchers is path-dependent, constrained by academic habitus and the accumulated repercussions of our forebears' practice.

In the case of Ugarit, this makes the approach I have been advocating in this paper extremely challenging. From its earliest years, and still today, there has been an extremely pronounced separation of archaeological and textual research at the site, in which the textual has been overwhelmingly privileged. For example, by and large, the textual content of tablets from Ugarit has been extremely promptly and well published, but despite improvements under the current and more recent excavation teams,⁸ the archaeological data necessary to contextualise this material has lagged behind. The Royal Palace, for instance, housed several archives, from which a significant proportion of the city's epigraphic material was recovered. The *Palais Royal d'Ugarit* series amply published this written material between 1955 and 1970; Volume 1, however, which was to cover the actual archaeology of the palace, has never emerged. In the late 1980s a project was carried out to restudy and retrospectively publish material from the palace based on Schaeffer's notes and the material culture held in museums, but again we are limited to brief preliminary publications promising greater things in future (Margueron 1995); this full publication never arrived.

If this dearth of archaeological information were confined to the palace and other areas excavated during the early years of work at the site, it would be unfortunate but we could shrug and chalk it up to the inadequate methods and recording strategies of archaeology in the first half of the twentieth century. Sadly, it continues to be the norm rather than the exception. In the late 1980s and early '90s, the so-called House of 'Urtenu was excavated in a part of the site previously off-limits due to Syrian military installations. It included an important tablet collection which can be dated to the end of the thirteenth century by both stratigraphy and diplomatic correspondences with known figures such as the pharaoh Merneptah. This should have been a perfect opportunity to rectify the shortcomings of the past. Excavation was carried out systematically using modern methods; preliminary publications emerged promising that this archaeological information would be presented in full in due course (Lombard 1995). From the early '90s to the present day, the written material from the House of 'Urtenu has been thoroughly published to a high standard

⁸ The current directors of the Mission de Ras Shamra are Valérie Matoïan and Khozama Al-Bahloul.

(for the fullest and most recent instalment, see Lackenbacher and Malbran-Labat 2016); however, we are still waiting for any more to appear on the archaeology of the structure, its stratigraphy and its material culture assemblages. Just like the texts from the early days of excavation at Ugarit, the most recently-discovered writing floats in a barely contextualised vacuum.

Attempts to reconstruct the archaeological contexts of written material from Ugarit are thus reliant on scattered and superficial descriptions in preliminary publications. These often lack stratigraphic information and topographic locations for finds are usually given using a system of numbered *points topographiques* for which a comprehensive reference has never been published, and by this point may not even exist any longer. In the earlier excavation campaigns, depths were recorded relative to the pre-existing ground surface rather than a fixed benchmark, rendering them more or less useless. What information there is tends to be architectural; as regards material culture, only inscribed, high-status (and generally well-preserved) or imported objects have received much attention. For the vast majority of everyday local material found during the decades of excavation, we have almost no information. Added to this, there is a chronological dimension – or rather a lack of it. Because it has primarily been concerned with the recovery of tablets, excavation at Ugarit has focused almost exclusively on the Late Bronze Age levels; what little exploration there has been of the earlier phases of the city's existence through small-scale sondages is sparsely published. Added to the lack of available stratigraphic information even within the Late Bronze Age levels, this creates a picture of the site almost totally focused on its final years and without adequate understanding of social, architectural and material culture changes over the many centuries leading up to this. This is not to say that reconstructing contextual information for the inscribed objects is impossible – Wilfred van Soldt has done an admirable job presenting and unpicking what is available (see especially van Soldt 1991) – but it is far more limited than we would like.

This isn't meant as criticism of the current or past Ugarit research teams in particular; there is little to suggest that the research and publication practices I have outlined for Ugarit are unique to that site or that investigation of the site has been of a lower standard than other comparable Near Eastern excavations. Rather, these issues stem from fundamental aspects of early twentieth-century archaeology and research into the ancient Near East, especially the overwhelming preoccupation with texts – whether they be the celebrated tablets of the cuneiform world or the scriptures of the Judaeo-Christian tradition. My discussion here is intended as an illustration of how this separation of texts and material culture, and an excessive focus on the former at the expense of the latter, can create a situation where we are so far down that path that turning back and redressing the imbalance is at best extremely challenging. It's simply not possible to carry out the kind of detailed analysis of the immediate physical contexts of inscribed objects from Ugarit or their relationships with other material culture because this information has not been recorded, published

or in some cases even kept. By now it's highly unlikely we will ever get any detailed and useful archaeological data about such crucial parts of the site as the Royal Palace, the principal temples⁹ or the House of the High Priest.

What are the implications of this situation for the social archaeology of writing in the kingdom of Ugarit and the ancient Near East more broadly? To answer this, I think we need to distinguish between people able to shape fieldwork and publication practices, and those working outside excavation teams and reliant on published data-sets and material accessible in museums. For the first group, the method I have proposed should be usable without significant changes. We should encourage the detailed recording of comprehensive information regardless of whether an object is inscribed or not (this probably happens anyway in most cases) and that both inscribed and uninscribed material are analysed together, preferably by the same people and using similar techniques. There is scope for targeted projects collecting the large-scale data needed for particular kinds of analysis, such as exploring *chaînes opératoires*. Crucially, both inscribed and non-inscribed material should be published in an integrated way and with equal dispatch. In this way, today's and tomorrow's excavators can ensure that the data they collect is suitable for the social study of writing practices.

Those with control over the excavation of sites are a small minority of people working on writing and archaeology in the Near East, however, and it's to the second group – in which I include myself – that we must address more attention. For those reliant on existing datasets shaped by the text-centric research practices of the past, it's clear that the methods I proposed in the first half of this paper can't be applied without significant adaptation. Exactly what that adaptation constitutes will of course depend on the individual circumstances.

The approach I've taken in my research into the social context of writing at Ugarit has by necessity been far less methodologically systematic than the ideal I described above. Except in a few rare cases (generally involving high-status and as such atypical material culture), we can't directly link tablets to particular assemblages, or explore close relationships between particular people or practices and the inscribed material, especially when we move outside the literate elite. Instead I have had to content myself with using this ideal approach to guide the questions I ask and interpretations I offer when drawing on what evidence is available. Rather than focusing on the palaeographic concerns which dominate scholarly research into Ugaritic writing, I have tried to work through 'social archaeological' topics and ask how these relate to writing practices at the site. Gender, identity, the body, age, status and so forth. I've thought about how writing affected the lives of non-literates, if it did at all. We

⁹ Our understanding of the temples was considerably enhanced by Callot (2011), who went back to Schaeffer's original notes and compared them to the poorly-preserved surviving remains to extract what information was possible. In this it does an excellent job, but there are significant limits to what it could achieve and few would dispute that we would be in a much better position had the remains been properly recorded and published in the first place.

can then pick through the available textual and material evidence for anything that sheds light on this, including drawing extensively on comparative material from other sites in the region in the Late Bronze Age and Iron Age.

I'll be the first to admit that this falls short of the lofty methodological standards of rigorous integration and careful contextual analysis I set myself; and yet I do not think this means that having thought about and discussed those methods was redundant. While I cannot often delineate precisely how agency is exerted or describe networks of actors in the painstaking and precise way advocated by theorists such as Latour (2005), I do think that this theoretical and methodological groundwork has allowed for a new approach that, if it doesn't necessarily provide any solid new answers, at least prompts new questions and perspectives. I hope to demonstrate this in the final section of this chapter, by exploring the case study of a single aspect of the social archaeology of writing at Ugarit: the relationship between writing practices and place.

Case study: writing and place at Ugarit

While 'space' is an abstract, fundamental quality of the universe, *spaces* and *places* are socially-constructed and specific. They are imagined, inhabited, experienced, interacted with, maintained and reproduced (Lefebvre 1991; Moskowitz 2009; Harmanşah 2013). Places, then, are inextricably bound up in practice.

As I have argued, however, analysis of writing practices has often been disembedded from its physical and social context. When scholars discuss the relationship between writing and place at all, they tend to focus almost exclusively on archives and libraries where written material was stored,¹⁰ but without generally considering the social dimension of these places and others where writing could be found: how people lived, worked and interacted in them and how they were imagined and responded to by those who had access to them and those who did not. It is self-evident that where writing is practised will affect the nature of those practices, just as the places where inscribed objects are stored, sold, displayed or disposed of also have implications for the social entanglements of those objects. By the same token, the presence and nature of writing in a place can contribute to how that place itself is construed: offices, libraries and dark underpasses bedecked with graffiti are all in part defined and given character by the writing that is found there; and yet they have very different places in our culture and are experienced, moved through and interacted with in very different ways.

However, as we have discussed, the amount of published topographical and contextual information for the material culture of Ugarit is very meagre. Key structures such as the Royal Palace or the temples on the Acropolis lack proper archaeological publications and there has been almost no archaeological investigation of the hinterland outside the city. The texts themselves offer little to no direct reflection

¹⁰ For Ugarit, see van Soldt (1991, 2000), Lackenbacher (2001), and in the Near East more generally Black and Tait (1995), Pedersén (1998), Posner (2003 [1972]).

on what the people of Ugarit thought or felt about their environment and its places, although a little can be extrapolated from indirect sources such as mythology. We cannot put ourselves inside the heads of our ancient subjects. So what scope is there for going further and shedding light on the socio-cultural dimension of place as it pertains to writing?

There are two main topics I think we can say useful things about. The first concerns the accessibility of writing – which places it would be associated with inside the city and by whom; the second is to think about how writing defined the wider landscape of the Kingdom of Ugarit, both in the bureaucratic geographies of the administrative texts and in the literal inscription of the land, in the form of monumental inscriptions, landmarks and so on.

Beginning with the first of these, it has been widely recognised for a long time now that stores of tablets at Ugarit seem to have been in parts of structures that have fairly restricted access. All of these archives are in high-status buildings and many are also private residences. In most cases it appears that tablet scatters have fallen from upper storeys, which would be expected to be the less public parts.¹¹ This may have been at least partly a matter of security, but there are also a number of social implications of this placement, even without surviving upper floors to shape our understanding. If we're right that these were the more private parts of houses, usually containing the family's living quarters, the fact that writers were permitted access has implications for the status and familial position of literate people within households. Great diversity is masked by the conventional term 'scribe', from genuine secretaries and servants to high officials of state. But we should also consider the possibility of ancillary staff – those bringing clay and water, perhaps shaping tablets in readiness for use.

Related to this is the question of whether tablets were produced in these upstairs repositories or merely stored there. Writing cuneiform on clay needs a number of things which may not have been obtainable or desirable in these more restricted parts of houses – clay and water, with their associated capacity for mess, and good light. For these reasons, it seems more likely that the actual business of writing may have been carried out in courtyards or on roof terraces – although season and time of day would have come into play in both of these: rooftops in sweltering high summer or Ugarit's rainy winter would not have been pleasant places to work, at least at certain times of day.¹² Both of these potential production locations require us to imagine writers moving up and down stairs between different parts of the house, between restricted and more public spaces. In those houses where apprentices were taught, we have the

¹¹ For an attempt to reconstruct the locations of the tablet stores, see van Soldt (1991). The idea that private quarters would have been situated upstairs is often repeated (e.g. Yon 2006, 29 and *passim*) and is in line with what is reconstructed for domestic architecture in other parts of the Levant (see, for instance, Schloen 2001, Chapter 8).

¹² I am grateful to Christopher Rollston for this point during the original presentation of this paper.

added factor of children or adolescents tramping around in this way, perhaps getting muddy handprints all over the furnishings. If writing took place on rooftops, then this could have made writing practices visible to a wider audience beyond the household itself. Ugarit was not divided into districts of buildings of similar type or elaboration: it was a tightly-packed warren in which houses butted up against temples, rich villas sat alongside small dwellings. We can expect that activities on the rooftop of one house would have been visible from the terraces of many others. Access to texts might have been restricted, then, but it's plausible that people would have seen the business of writing, not to mention the coming and going of clay supplies, letters, apprentices and more, even if they could not have seen exactly what was being done with them. Thus, even though writing itself was in many senses quite restricted, writing *practices* may have been reasonably visible – such that many people outside the literate sphere had some idea of what was done, even if they had little opportunity to see writing close-up or to understand its meaning.

Another category of place which might have been associated with writing is temples. Ugarit has produced a small but significant number of votive objects bearing dedication inscriptions, several of which are thought to have been displayed within the precincts of the primary temples. Indeed, it's from dedicatory material that the two main temples are assigned to Ba'lu and Dagan. As well as dedications in the local alphabetic script, there are also imported objects bearing inscriptions in prestigious foreign scripts – primarily Egyptian hieroglyphs. Again, there has been little work done on the social role of the temples of Ugarit, or on how these dedications were displayed and interacted with within them. This is unsurprising given that both main temples are poorly preserved, were not published at the time of excavation, and their archaeology can only imperfectly be pieced together from surviving excavation notes. Nevertheless, again I think we can engage in a measure of informed speculation.

Access to the temples was presumably restricted. Both were thick-walled tower-temples of a type common across the Levant at this time. Based on the discussion of Ba'lu's palace in his epic, it has been plausibly suggested that the Temple of Ba'lu may only have had one (or one main) window and that this was significant in some way.¹³ Rooftop terraces are generally assumed, and it is often thought that fires may have burned there, either for sacrificial rites or other reasons, although the suggestion that the temples may have doubled up as lighthouses is now thought doubtful (Callot 2011). We do not know where dedicated objects (Fig. 2.1) would have been displayed within the temple or who would have access to them, although the late thirteenth-century letter RS 88.2158 from the pharaoh Merneptah to the king of Ugarit has the latter mentioning the prospect of creating a statue of the pharaoh 'in front of the image of Ba'lu', suggesting that some dedications would have been in the holiest part of the temple, in deliberate relationship with the cult statue, as if proxy-worshippers. Other open questions include

¹³ For a discussion of how the Ba'lu epic might relate to windows or openings in the temple, see Callot (2011, 47)

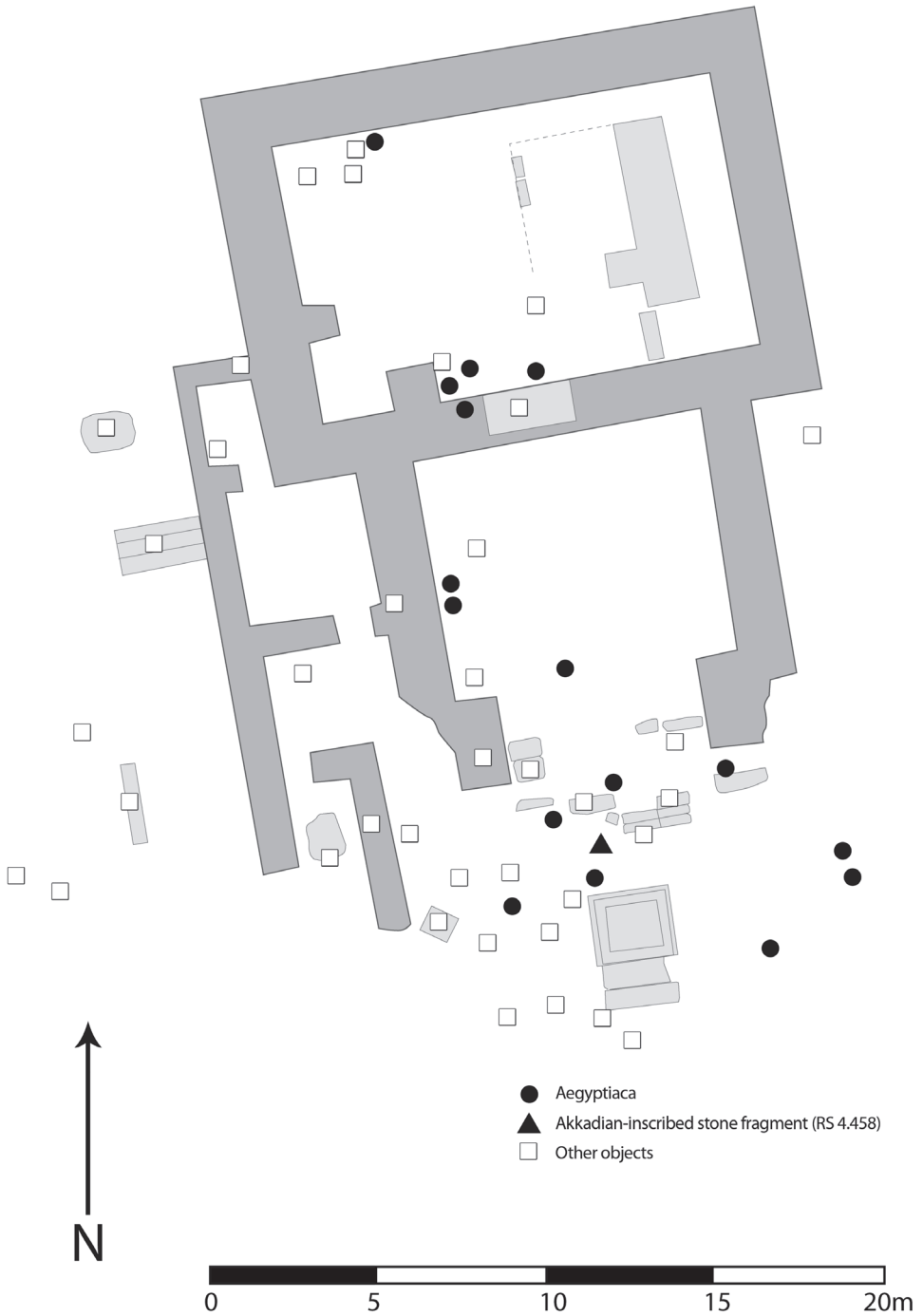


Fig. 2.1. Distribution of inscribed and other objects in the Temple of Ba'lu. Drawn by the author based on Callot (2011, 50-54 and fig. 38).

whether there would have been sufficient light to read the inscriptions and whether the ritual activities which would presumably have been the main reason to enter the buildings would have permitted people time to linger and read.

There's an added complication to this, however. From what archaeological information has been published (Callot 2011), it seems that both temples were probably destroyed by earthquake around 1250 BC. The Temple of Ba'lu began to be rebuilt but reconstruction of the Temple of Dagan seems to have been put on the back burner. The site was cleared but no rebuilding took place before the destruction of the city around 75 years later. Nevertheless, the site continued to host cult activity for Dagan, as is demonstrated by the presence of a stele recording a sacrifice made by Queen Taryelli during this final phase of Ugarit's existence (KTU 6.13; for text, drawing and photograph, see Bordreuil and Pardee (2009, Text 14)). Precise dating is impossible, especially with a seemingly very long-lived queen like Taryelli, but this is likely to have been several decades after the temple's destruction.

The temples present an enigma then: on the one hand, inscribed objects were displayed there. Indeed, these dedications are the only examples of 'public' writing known from Ugarit. On the other hand, we know very little about what form this display took or who was able to see it. Added to this, one of the temples did not even exist any more at the time the stelae were placed on its site; it was present only as an absence, a perhaps-fading memory of the ancient structure that had once stood there and the apparently slightly outmoded, but still respected, cult of Dagan that it housed.¹⁴ It is very difficult, then, to assess the relationship between writing and these sacred spaces. Were these among the very few places where ordinary people could see writing? Were they places where people knew inscribed objects were displayed but were not permitted to see them, or perhaps only at certain times? Was the writing intended for an earthly audience or a divine one, for the elite or for the masses? How did things change when the Temple of Ba'lu was slowly being rebuilt, perhaps shrouded in scaffolding? How did the protracted, haunting absence of the Temple of Dagan affect perceptions of the elite cult activity that took place on its site and the inscribed stelae that commemorated it (which were presumably visible from the street). This is a proliferation of questions we cannot hope to answer in any conclusive way but by asking them we begin to contextualise the writing practices related to these buildings; by speculating, we reintroduce the human element and begin to think about how such inscribed objects relate to different social groups and different practices.

¹⁴ The status of the cult of Dagan is enigmatic at Ugarit. On the one hand, the deity seems to be honoured with one of the two most prominent temples in the city, and royal sacrificial practice is directly attested by the stele we have discussed. On the other, Dagan is near-absent from the mythological texts and less popular than other deities in the city's theophoric onomastics. This, coupled with the tardiness in rebuilding his temple, has led several scholars to conclude that his cult was waning in popularity in Ugarit towards the end of the Late Bronze Age, leaving the god, as Feliu (2003, 64) assesses, 'secondary' and 'marginal'.

One way we can make traction with this, in the absence of real evidence, is through analogy. We can think about modern or better-documented historical places that seem to have had similar relationships between writing, access, sacrality, memory and the urban landscape and use these to shape our speculation. Of course, they will never correspond exactly to the specific places in Ugarit and their socio-cultural relationships, but they can be, to use a cliché, ‘good to think with’. So, for example, the University Library in Cambridge could provide a way of thinking through some of the social issues implicated in a tall and forbidding structure which looms over the surrounding city and which contains written materials inaccessible to the majority, non-initiated population, or the former site of the World Trade Center in New York may offer insights into how sites defined by notably absent buildings can nevertheless maintain those structures as present in social memory and serve as important foci for ongoing ritual activity. For the social repercussions of the sudden destruction of iconic and historic sacred buildings, the responses to the recent fire at Notre Dame in Paris can helpfully inform our speculation.¹⁵ We must obviously take care that we do not use such comparative material in an overly simplistic or culturally inappropriate way, but they can at least guide our thinking in new directions and prompt valuable questions of the ancient structures.

Let us turn to the second broad area where I think we can make some progress – writing in the landscape beyond the capital. There has been virtually no archaeological work done on Ugarit’s hinterland; it is understood almost solely from reconstructions based on the administrative tablets. Our modern view of the Kingdom of Ugarit is almost entirely shaped by writing and writing practices, then, but we cannot tell how true this was in antiquity. It is safe to assume, however, that a palace-based bureaucrat might conceptualise a hinterland mainly encountered only through administrative writings very differently from the people who inhabited it, or even the literate officials who must have ventured out to the villages to gather this information. This is a key point: our view of writing at Ugarit and in many Near Eastern polities is often very metropolitan and urban-focused, but we should not assume that writing was absent from even quite small rural settlements. Even if people’s only exposure to literacy was a palace bureaucrat passing through every so often as he toured the villages to produce lists of households, there is every chance that writing was known in these places, but would have had a distinct social and cultural position different to that in the capital. Also tantalising is the fact that a route seems to have existed from rural village life to the highest echelons of literate intellectualism. The famous scribe ʾIlimilku, responsible for the Epic of Baʿlu and other literary texts, identifies himself

¹⁵ For a fuller discussion see Boyes (2021), but we can note phenomena such as tensions over how the cathedral should be reconstructed; promises by wealthy interests to help fund rebuilding when public interest was high, followed by accusations of tardiness in delivering on those promises once media attention turned away; or resentment from those representing or supporting other worthy causes which were not subject to the same overwhelming financial and political support. Social factors such as class, race, religion, geography, globalisation and tensions between tradition and modernism are just a few of the very many implicated in these debates.

in his colophons as a Šubbanite, from the small village of Šubbanu, which we know from the administrative documents may have contained only 15 households (KTU 4.810). We can only speculate how a boy from such a place might enter into scribal training at the capital and progress to high rank, but it does seem to imply that the hinterland was to some extent integrated into the literate educational system known at Ugarit itself.

This is particularly noteworthy given the otherwise total absence of signs of writing outside the Ugaritian capital. Unlike neighbouring polities in north Syria and Anatolia, there seems to have been no interest at Ugarit in the literal inscription of the landscape. The rock-cut inscriptions of the Hittites (Harmanşah 2014) or the long-term multilingual and multiscriptal monumental landscape palimpsest of the Nahr el-Kelb (Volk 2008) have no parallels there. We cannot simply put this down to lack of investigation, since despite the absence of archaeological survey the region has been inhabited and cultivated for centuries and such things might be expected to have been discovered.

Instead, we can partially explain the absence of landscape inscriptions as a result of Ugarit's political situation. Many of these monumental landscape inscriptions were made by imperial powers as a means of claiming the land, memorialising their presence there and legitimising their political authority. At the Nahr el-Kelb in Lebanon, for example, none of the ancient inscriptions were made by the local Phoenician inhabitants, but by Egyptian or Assyrian armies on campaign. Ugarit, like the Phoenician polities, existed in a complex relationship with the imperial powers. All were to some extent independent, while still pragmatically bound to recognise that such autonomy rested on maintaining a good relationship with the great powers and not overstepping the bounds of acceptable behaviour. The difference is that, unlike the Phoenician polities, Ugarit did have a formal vassal relationship with the empire that was breathing down its neck. It had not been militarily conquered and forcibly incorporated into an imperial realm but, nominally at least, it entered the Hittite sphere at its own request (Singer 1999, 632–636). This may have been merely a pragmatic response to political realities, but it still seems to have counted for something with the Hittites, as the relatively generous initial terms of Ugarit's vassalage and the enduring autonomy it was afforded demonstrate (Boyes 2019a). Within such a relationship, it would have been inappropriate for Hittite troops to have created monumental inscriptions marking their dominance of the Ugaritian landscape – it would undercut the relatively hands-off, even benevolent dominance they were trying to present.

If Ugarit's political and geographical situation explains why the Hittites didn't create monumental inscriptions on its landscape, then the fact that the Ugaritians themselves chose not to do so remains significant. As we can see from the 'Syro-Hittite' states of northern Syria in the period following the end of the Late Bronze Age, it was certainly possible for Levantine polities to emulate these imperial inscriptional practices and make their own marks on their territories. The fact that Ugarit's elites

chose not to do so points not just to their own relationship with the landscape and their choices regarding the role of writing in legitimation, but also perhaps to a reluctance to engage with and emulate some aspects of Late Bronze Age imperial prestige discourse. This seems to fit within a wider context of ambivalence of Ugarit's elites towards Late Bronze Age international power structures and particularly the great powers (Boyes 2019a).

Conclusions

This has been a paper of two halves – first, laying out an ideal schema for what a social archaeology of writing might be, and second showing this to be largely impossible to achieve in the case-study of Ugarit, and instead following a looser, more pragmatically speculative vein which draws on the limited evidence available alongside comparative material in order to ask a number of questions, most of which cannot be answered. Am I arguing, then, for the uselessness of my own proposition? Are the theoretical positions argued in the first half essentially redundant in the face of a data-set that can only be approached through an altogether more pragmatic and limited method?

I would hope not, for two main reasons. First, and most importantly, we must recognise that the way we *can* investigate the social context of writing in places like Ugarit is at present far from ideal, and by articulating what a better framework would look like, we can hope to influence future fieldwork and publication practices and improve the situation in future. Secondly, the kinds of questions raised by this pragmatic and limited approach to writing at Ugarit fundamentally stem from the theoretical positions outlined in the first half of this paper. They are born out of thinking through these problems in terms of agency, context and social relationships, and from attempting to apply the topics and discussions of social archaeology to the problem of Ugaritian writing practice. I may not at present be able to offer much in the way of solid answers, but the questions I am asking are, I think, new, and this in itself justifies the approach.

Ultimately, we are at a transitional point, as frustrating for the researcher as for the reader. I will readily admit the limitations and challenges inherent in applying social archaeological approaches to epigraphic research and datasets a long way down a very different path. Indeed, these challenges and limitations are an important point of this paper, and while we are not there yet, I hope that by sketching out a map and flagging up the potential obstacles, we can begin to reorientate our approaches to writing in a more integrated and socially-aware way.

Chapter 3

The lives of inscribed commemorative objects: the transformation of private personal memory in Mesopotamian temple contexts

Nancy Highcock

Mesopotamia witnessed a long tradition of private individuals commissioning objects inscribed with dedicatory formulae and depositing them in temples and other sacred places. These objects could include the name of the individual, his or her profession, familial relationships, and other personal information. The act of inscription and dedication thus materialised the individual's social being and perpetuated the individual's memory for time immemorial. There are, however, instances in which this information was altered or transformed after the initial act of inscription or deposition. Though rare, this practice demonstrates how personal memory was not immutable or fixed but could be reformulated depending on who was responsible for altering the inscribed object and the ways in which it was altered. By analysing inscribed dedication objects against a larger material backdrop of cylinder seals, a type of inscribed object also owned by private individuals, this chapter will explore how personal memory was constructed, transformed, and sometimes even disrupted. The initial combined act of inscription and dedication did not constitute the only relationship between human, object, and divine recipient, but rather formed one social/temporal dimension for an object that continued to 'make memories' beyond that of the original act.¹

¹ This research was conducted as part of the project 'Memories for Life: Materiality and Memory of Ancient Near Eastern Inscribed Private Objects', funded by the Swedish Research Council Grant No 2016-02028. The team of the Memories for Life project includes: PI Jakob Andersson (Uppsala); Joint PI Christina Tsouparopoulou (Cambridge); Postdoctoral research associates: Nancy Highcock (Cambridge), Rune Rattenborg (Uppsala), Seraina Nett (Uppsala); research assistants: Silvia Ferreri (Cambridge), Philippa Browne (Cambridge), Nils Melin Kronsell (Uppsala) and Russell Clark (Cambridge). The Memories for Life Project is currently compiling a database of all known inscribed objects dedication by non-royal persons between the third and first millennia in Mesopotamia. This database will be made available

Introduction

As in many religious traditions, the practice of offering or dedicating manufactured objects to the divine and depositing them in sacred places such as temples, private chapels, shrines, and other sacred places has a long and rich history in both so-called ‘private’ and royal worship practices of the ancient Near East. In Mesopotamia, a rich variety of object types was offered with certain categories of material culture such as vessels, statues, and weapons being particularly popular. Such objects, most often referred to as ‘votive’ objects in the literature, were dedicated by people from different social categories,² and although the majority were uninscribed, the focus of scholarly attention has been on inscribed objects dedicated by rulers and other elites, as the individuals represented by these objects are identifiable from the inscription itself. Furthermore, it is known from contemporary documentary sources that in addition to manufactured objects, perishable items such as foodstuffs, liquids and textiles were also dedicated to deities: these types of dedications are of course generally missing from the archaeological record, leaving objects made from stone, ceramic, and metal behind.

In Mesopotamia, generally defined as encompassing the region connected to the Tigris and Euphrates River systems (Fig. 3.1), evidence for this practice dates to the late fourth millennium and continues for the remainder of Mesopotamian religious history, although the overall practice is better represented in certain periods due to a combination of modern archaeological excavation history and ancient local and chronological shifts in praxis (Highcock and Tsouparopoulou, 2020). The earliest dedicated objects were, of course, not inscribed, and comprised sculpted stone animals and ritual vessels found buried in the Level III Eanna Temple in Uruk. It has been argued that the bodies of the animals rendered in stone signal the ‘transfiguration of the votive offering of a real animal for sacrifice into the eternalised form of a gift for all time’ (Bahrani 2017, 51). Such dedicated objects were thus able to generate a

as the ‘Cuneiform Inscriptions of Private Individuals’ project on the Open Richly Annotated Cuneiform Corpus (ORACC) online platform in 2021.

The author would like to particularly thank Christina Tsouparopoulou for her guidance on this paper which was first presented at the CREWS conference at Cambridge in March, 2019 and to Rune Rattenborg for the use of his map. My deepest gratitude to Philippa Steele, Philip Boyes, and my fellow speakers and participants for generating such a stimulating event. I am especially thankful to Philip Boyes for his unflagging work as the editor of this volume. The anonymous reviewer provided constructive and much-appreciated feedback which has greatly improved the paper. All mistakes are my own.

A full analysis of the object types, materials, craft-techniques, iconography, contexts and aspects of the inscriptions (palaeography, placement, language, social connections, etc) is beyond the purview of this paper but several studies addressing these issues are currently in preparation by current members of the Memories for Life team.

² Unfortunately, it is often difficult to ascertain the social status or gender of those dedicated uninscribed objects and even those with inscriptions do not always provide further information on the various social categories to which one may belong. However, we should not assume that only those of elite social status or belonging to certain professions were able to dedicate objects.

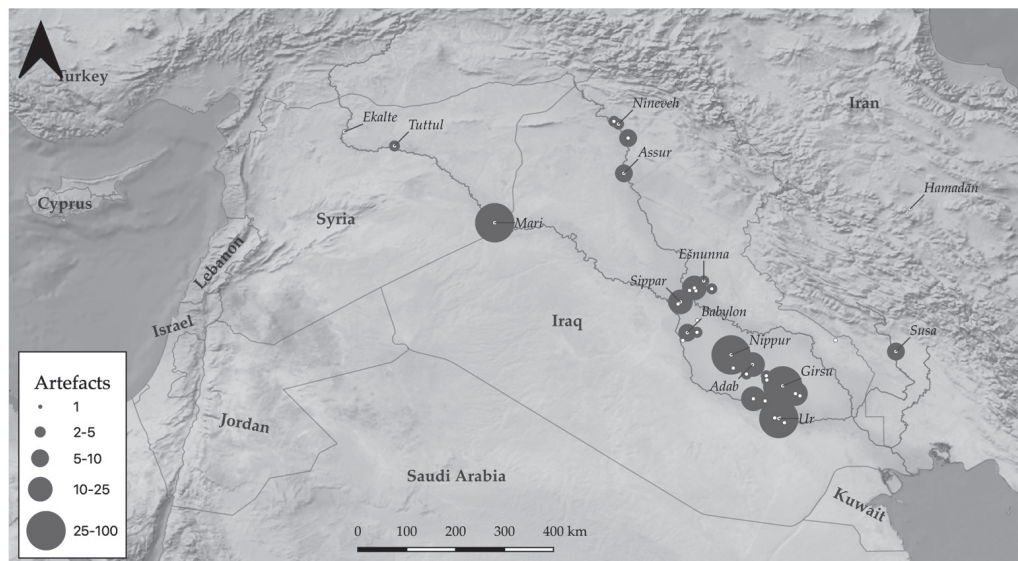


Fig. 3.1. Map of Mesopotamia with sites mentioned in the text and general quantities of known inscribed objects dedicated by private individuals. Map by Rune Rattenborg and provided courtesy of the Memories for Life Project, all rights reserved.

continuous, ritualised form of communication that allowed the object to exist beyond the initial act of dedication. However, as these objects were presumably buried after their active ritual use had expired, these early objects already demonstrate how dedicated objects and/or temple paraphernalia did not necessarily function in the same manner for time immemorial. In this particular case, the objects were not discarded beyond the temple, but were perhaps properly decommissioned in a ritually charged space.

The objects' lives took on new forms and the removal and burial of such objects, although still within the sacred space of the temple, complicates this picture of dedicated objects as functioning in the same manner for perpetuity. Moreover, dedicated objects are not always easy to identify in the archaeological record as the cultic nature of depositions cannot always be determined from object type, context, or assemblage (Osborne 2004, 2-4). As evidenced by later examples of the third and second millennia, some discussed below, dedicated objects have been found redeposited, reused, and in various conditions in different contexts within the temple. Ur III texts indicate the recycling of temple objects and melting down of metal objects for reuse (Evans 2012, 139). Evans has even postulated that gypsum sculptures may have been burned and powdered to repurpose as plaster (2012, 137-143, particularly 137, 139). In other instances, it is clear that dedicated objects were moved elsewhere by later temple personnel. Such is the case at Ur where dedicated objects from the third and early second millennia were moved from the Ningal and Nanna Temples to

a special storage building called the Ganunmah during the Kassite period (Schmitt 2019, 88–90). The lives of dedicated objects in ancient Mesopotamia were dynamic: as archaeological contexts demonstrate they could take on any number of trajectories after their initial dedication and diverse practices existed across space and time.

A preliminary examination of objects inscribed by non-royal, or private, individuals adds further complexity to the diverse lives of dedicated objects. The addition of an inscription to such objects, as first known in the third millennium, offers another dimension through which one can explore how messages to divinities were transformed over time. As noted below, the inscription adds further information about the dedicant including their name as well as other identity markers such as profession and kinship relations. Although uninscribed objects would have also been chosen for their particular type, material, level of craftsmanship, and the place of deposition for its level of access and deity, inscriptions provide an extra layer of information about the personal choices and identities of the dedicant. In this way, ‘mentioning the donor, the recipient, and the rationale for dedication often serve as “missing links” between object-driven and text-based analysis of ritual performance, economy, and social routines’ (Evans and Roßberger 2019, 8). One such social routine was the alteration of the inscription on dedicated stone objects. Though rare in the case of private inscriptions, such transformation of the material text indicates another way in which these objects could take on new meanings beyond their original conception and deposition.

Stone was a popular material with both royal and private individuals³ when dedicating inscribed objects. As Susan Pollock has described in relation to the advent of writing-on-stone in the Early Dynastic Period (early–mid-third millennium BC).

All of these inscriptions in stone can be understood as gestures toward a future that went beyond that of writing on clay tablets. In this respect, the material (stone), the visual and the written contents worked hand-in-hand. Objects such as stelae and sculpture may have been intended to stand in the temple or in a public place; in the case of seals, they might be taken with a person to the grave. (Pollock 2016, 285)

In addition to their perceived longevity, stones (and stone-emulating vitreous materials), also derived their importance from an array of ascribed meanings related to various material properties, place of origin, and time and skill used to transform it from a raw material to finished objects (Schuster-Brandis 2008; Amrhein 2020). Harder, dark stones such as diorite were favoured for statuary by royal donors from the Early Dynastic through Akkadian periods whereas lighter-coloured, softer stones seem to be favoured by private individuals for their own representations (Evans 2012, 126 and references therein). Gypsum was available locally in both southern and northern Mesopotamia and its local provenience may have contributed to its lower-value, and thus accessibility, to non-royal people (Moorey 1994, 125; Evans 2012, 126). The relative

³ Of the 603 inscribed objects dedicated by non-royal individuals currently collected in the Memories for Life project database, 483, or 81% are made from stone (including semi-precious stones).

softness of gypsum may also have necessitated less expensive artisans although data on how private people bought and commissioned statues and other objects is lacking. Diorite and other dark stones such as serpentine and steatite, on the other hand were sourced from far-off places (Moorey 1994, 28–29) and their dark lustre was highly valued as it recalled the night sky (Amrhein 2020, 93 citing Winter 1999, 46). As will be demonstrated in the following examples, however, the perceived permanence and high value of stones did not always prevent these objects from being transformed through inscriptional alterations.

Whilst archaeological context can only provide some clues as to the function of temple objects, whether comprising a dedication or functioning as temple furniture or other paraphernalia, inscriptions can provide more definitive information on the function of the object through their specific dedicatory formulae. As Osborne has pointed out with regards to archaeological context, the terminology for such objects and assemblages is varied and in addition to dedications, one may find descriptions of votives, offerings, hoards and depositions with each label emphasising certain aspects of gift-giving on the importance of a vow fulfilled (Osborne 2004, 5). ‘Votive’ is the most common terminology used with regards to Mesopotamian dedicated objects although Andersson has argued for labelling *inscribed* objects as ‘commemorative’. This term covers both objects given to benefit the donor him- or herself (votive) and those with an inscription which explicitly benefits a third party (dedicatory). There are also numerous examples of objects bearing only the name of the potential donor and an offering formula or those with only the name of the deity so that the beneficiary is not entirely clear (Andersson 2016, 48).

For Andersson, the concept of commemoration also forefronts the life of the object beyond that of the human donor and emphasises the process of memorialisation that occurs beyond the singular act of dedication or deposition. As mentioned, self-commemoration through dedication was practised by both royal and non-royal individuals, and in addition to the types of stone and other materials used, there are also differences in the content and syntax of royal and so-called ‘private’ inscriptions (Andersson 2016). Moreover, Andersson notes that the inscriptions of private people are much less studied compared to royal inscriptions as they readily provide data concerning chronology, lineages, royal deeds, and geographic influence (2016, 50). However, private inscriptions, though attributed to individuals about whom we know very little, can still illuminate religious practice, identity construction and personal commemoration for other members of Mesopotamian societies.

Andersson touches upon the practice of altering inscriptions and re-using privately dedicated objects though notes that it appears to be an ‘unusual’ practice (2016, 68). Indeed, this is another area in which much more is known for royal dedications and other royally commissioned objects in which the fear of reuse, alteration, or destruction is apparent in protective clauses and curses. In addition, we have examples of such royal practices, including appropriating a probably private uninscribed statue for a royal dedication. In a fragmentary statue from the site of Susa, and now

in the Louvre (S82), which can be dated based on its style to the Early Dynastic IIIa period (ca 2500 BC). The inscription, however, dates to the Akkadian period some 250 years later and specifically to the reign of King Maništušu. It is dedicated to the local Elamite goddess Narundi on behalf of the king by the local vassal governor Ešpum (Spycket 1981, 73 and pl. 48; Gelb and Kienast 1994, 80; Frayne 1993, 81–82). Ešpum must have recovered this uninscribed statue of a long-dead individual during temple clear-out or refurbishment and decided to re-activate and bind the statue to a new life through the act of inscribing his own name and filiation to the king into this stone representation of an unnamed man. The act of inscribing this uninscribed statue, retrieved and severed from its original context(s) of sacred function, thus reconfigures and revives its efficacy in a new setting. It should not be discounted that the antiquity of the object may have lent some value for its new dedicant, but the addition of the inscription illustrates that written message supersedes accurate visual representation of the agent involved.

The following discussion will explore related phenomena in privately dedicated objects as an initial and preliminary attempt to answer Andersson's call for further analysis of private commemorative practice (2016, 50).

Private commemorative practice and memory-making

The first known objects to be *inscribed* and dedicated by private individuals date to the Early Dynastic Period I–II (2900–2700 BC; Andersson 2016, 51) and the practice flourishes in the latter half of same millennium (Early Dynastic Period IIIa–b). The earliest known inscribed dedicated objects are both fragmentary statues, one of unknown provenance in the British Museum (Braun-Holzinger 1991, 255; Reade 2000, 84–85; Marchesi and Marchetti 2011, 186; Westenholz 2014, 194–195) and the other from the Šara Temple at the site of Tell Agrab (Oriental Institute Museum A21488; Steible 1982, 199; Braun-Holzinger 1991, 242; Marchesi and Marchetti 2011, 29; no 1).

Recent scholarship on dedicated/commemorative objects has built upon the strong foundations provided by scholars such as Braun-Holzinger (1991) and Steible (1982) to move beyond the collection and preliminary analysis of the inscriptional and material data and study these objects as complex nexuses of meaning both bound to the social beings they represented and as agents with extensive life histories in their own right. Through such studies, often referred to as object biographies, human and object histories are linked and transform together as they move through time and space (Gosden and Marshall 1999). The material turn in scholarship on ancient social relationships has been thoroughly discussed, evaluated, and reevaluated elsewhere (Pollock 2016, 277–281) and the recent work on dedicated, or votive, objects of the third and second millennia includes studies centred on particular temples and sites (Roßberger 2016; Evans and Roßberger 2019 and contributions therein, particularly Gries 2019; Verderame 2019; Cluzan 2019; Evans 2019), object categories such as sculpture (Marchesi and Marchetti 2011; Evans

2012), ‘eye-stones’ (Müller-Kleiser 2016), seals (Roßberger 2016), and mace-heads (Muhle 2008). Other studies have sought to highlight aspects of a donor’s identity by examining the relationship between dedicatory practice and particular social categories like gender and profession (Asher-Greve 2006; Suter 2007, 2008, 2016, 2017; Evans 2012, particularly ch. 6; Paoletti 2016; Verderame 2019; Highcock and Tsouparopoulou 2020).

This discussion will focus on inscribed dedicated objects and the manipulation of those inscriptions in order to elucidate aspects of ancient identity construction. How and why did individuals in ancient Mesopotamia change the inscriptional element of their dedication in order to reflect changes in their self-representation and self-commemoration? In addition to the targeted recipient deity, the inscription may contain a range of relevant information about the donor, including their name, and thus possible gender, their profession or title which can hint toward their social or wealth status, kinship relationships and connections to elites such as the local ruler. Whilst the inscription thus provides ‘extra’ information concerning the donor and their economic, social (including religious), and political networks, it cannot be divorced from the object itself. The inscription and object – its material, quality, manufacture techniques, form, and archaeological contexts – form a unified and multi-faceted message to the god(s) about the human donor.

Of course, dedicated/commemorative objects are not the only category of Mesopotamian private inscriptions. While royal inscribed objects can offer one avenue in which explore private inscriptional alteration and re-use, it is also worthwhile to compare private commemorative objects with objects originating in similar social milieux. Therefore, this exploration of the materiality of commemorative inscriptions is inspired and informed by the fact that we have a large body of evidence of re-carving and reusing inscribed objects in the object category of inscribed cylinder seals. While seals can be considered as practical objects, used in everyday transactions, they were often owned by individuals and tied to that individual’s authority or extension of self. Conversely, it is clear that seals were not irrevocably bound to their original owner, often passing into new hands unaltered or being altered to reflect changes in the identity of the owner. Such transformations are also present in private commemorative dedications, albeit rarer, and when discussed together, it becomes clear that seals can provide a model for how to further imagine the biographies of private inscribed objects and the types of practices to seek in the material itself. The re-use and alteration of seals can be easily explained through their very nature, but that of commemorative dedications is perhaps more surprising.

Private inscription and recarving

The reuse of seals has a long tradition in Mesopotamia as seals were passed across contemporaries or passed down through generations as heirlooms. as evidenced by the appearance of impressions dating from one era on artefacts dating to a later



Fig. 3.2. Kassite Period Cylinder Seal (BM130697, British Museum, London, late second millennium BC, unprovenanced, 2.65 × 1.55 cm. © Trustees of the British Museum, all rights reserved).

period. The use of an Old Assyrian, Middle Assyrian, and Neo-Assyrian seal on the late seventh century BC Esarhaddon Succession Treaty is a famous example of this practice (Watanabe 1985; Lauinger 2012) but this practice also operated at lower and less public levels of society. During the early second millennium BC, for example, some merchants from the city of Aššur were actively using cylinder seals that once belonged to Ur III period officials (ca 2112–2004 BC), a few generations earlier (Lassen 2012, 195).

The reuse of cylinder seals can also be accompanied by modifications in order to signal the new relationship between owner and object. Both the inscription, often naming the owner of the seal, and the image could be recut in order to reflect a change in seal ownership as they are passed down through the generations or altered to represent a new function, office, or even personal taste of the owner (Collon 1987, 120–122). It has also been demonstrated that seals belonging to officials related to the centralised institutions and royal power of Mesopotamia were more likely to have the inscription recut as titles and relationships between officials and the palace were emphasised. On the other hand, people involved in long-distance trade were more likely to re-carve the images on seals (Smith 2018), illustrating a different way in which to express identity and authority in more mobile societies.

A change in ownership is represented by a late second-millennium seal of the Classical Kassite style (Matthews 1990, no. 36). This seal displayed an original inscription commissioned by a certain Ša-Lamassi-damqa but was later modified to contain an extra line naming the individual Ninurta-šeme, perhaps its second owner (Fig. 3.2). This is clear both from the overall composition of the inscription, in which the name Ninurta-šeme appears at the end and beyond the completed invocation to the goddess Gula, but also by the process of the engraving itself in which only

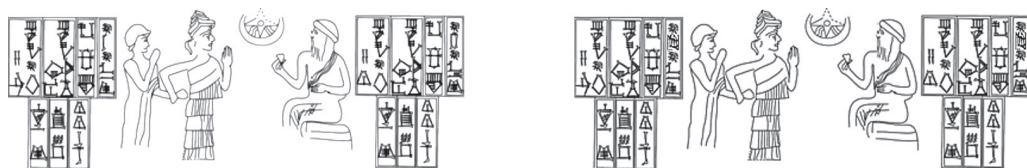


Fig. 3.3. Drawing of Seal Impression of Babati. a) Inscription with name of Amar-Sîn; after Tsouparopoulou 2015, figs. 5.27 C. Tsouparopolou, 5.28 C.E Keiser; C. Tsouparopoulou, all rights reserved; b) Inscription with name of Šu-Sîn. Keiser 1919, no. 101. Courtesy of the Yale Babylonian Collection, Yale Peabody Museum. All rights reserved.

this line was produced by first drilling holes and then hand-carving the line around this anchor point (Porada and Collon 2016, 67–68). The entire inscription thus reads: ‘Gula, great lady, who listens to prayers, who grants life, Ša-Lamassi-damqa is her reverent servant. Have mercy on him! Ninurta-šeme.’ It is unclear if Ninurta-šeme was knowledgeable of the content of the original inscription, but clearly it did not obfuscate the efficacy of the seal as an identity marker nor weaken his own potential relationship to the Gula. Another interpretation could be that Ninurta-šeme added his name to the seal with full knowledge of the identity of the first owner, or even during Ša-Lamassi-damqa’s lifetime. The retention of this first name may have held meaningful personal connections or lent authority to the seal in some way. The alteration of the inscription both transformed the initial incarnation of personhood whilst generating a new nexus of relationships.

The particular case of Babati, an official under two Ur III period kings, illustrates the ways in which we can trace one person’s identity transformation through his or her seal. Figure 3.3a is a drawing of an impression of Babati’s seal in which the inscription describes him as a scribe and a servant of the king Amar-Suen (2094–2047 BC). ‘Amar-Suen, strong man, king of Ur, king of the four quarters: Babati, the scribe, is your servant’. Figure 3.3b is a drawing of an impression of the same seal that has been recut in order to now designate Babati as the scribe and servant of ‘Šu-Sîn king of Ur, king of the four quarters’ (Tsouparopoulou 2015, 157–158; cat. 48). This is particularly interesting because Amar-Suen and Šu-Sîn were brothers and there is evidence that Šu-Sîn was originally supposed to be the heir to the throne after the death of their father Šulgi. When Amar-Suen died, Šu-Sîn went on campaign to erase his brother’s memory and the change in Babati’s seal inscription reflects not only this political change, but his dedicated servant’s allegiance to the new order. A second seal demonstrates the culmination of Babati’s political career as reflected in his titulary: this entirely new seal was a gift from Šu-Sîn that included an inscription laden with new titles including that of chief accountant and governor of several regions, and chief temple manager (Tsouparopoulou 2015, 38, 122, 158). Not only do the life histories of these seals allow us to understand Babati’s career trajectory, they are a wonderful window into how identity, as manifest in stone inscriptions, could change in order to keep up with real-time changes in one’s life. And it is with this in mind that we turn to commemorative objects and what their inscriptions can tell us about the fluidity of identities with regards to temple practice.

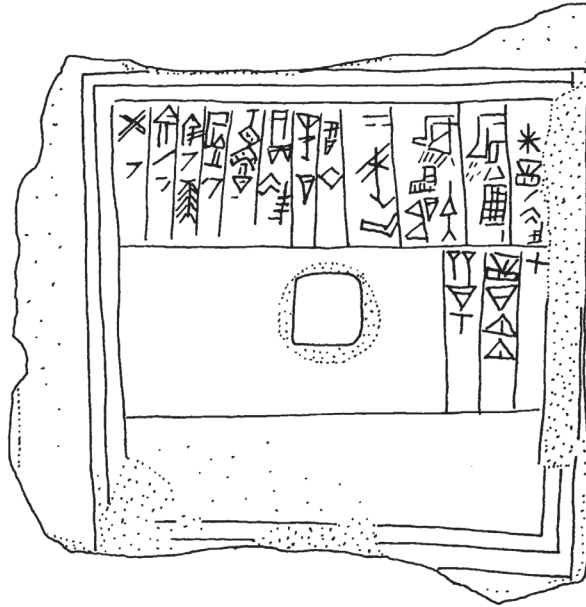


Fig. 3.4. Drawing of Limestone Early Dynastic IIIb Plaque of Urakkila (Louvre, Paris, mid-third millennium BC, unprovenanced, 20 × 21 cm; Boese 1971: pl. 41 no. 3) (© de Gruyter, all rights reserved).

There are two clear examples in the database that distinctly demonstrate the transformation of the self in ‘real time’, demonstrating that the inscription enabled the donor to communicate and commemorate identity markers not only into the distant future, but also within his or her own lifetime. Both examples have been briefly discussed by Andersson in his work on third millennium ‘commemorative’ objects (2016, 55–56) as prime examples of the reworking and reuse of commemorative objects. It is the alteration of the inscription, as found in cylinder seals, which is the remarkable aspect of both objects: unlike the composite statues of the Inanna temple or the Early Dynastic statue inscribed by the Akkadian period Ešpum (see above), the objects discussed below are marked by the traces of the active and changing personal choices of the donors themselves. They highlight the thought that went into the inscription and the importance of the inscription bearing the correct and appropriate information in order to properly commemorate the donor.

The first case is one of the few instances in which multiple objects dedicated by the same individual survive in the archaeological record. Furthermore, this example directly parallels the type of identity transformation, once again as evidenced by a change in title, seen in the seals of Babati. Both an anthropomorphic statue and a plaque were donated by a certain Urakkila from the city of Adab during the Early Dynastic IIIb period. In the first example we have one of the few instances in which multiple objects dedicated by the same person survive – one on an anthropomorphic statue and one on a plaque. These belong to a certain Urakkila from the city of Adab during the Early

Dynastic IIIb period (ca 2500–2350 BC). The inscribed but undecorated limestone plaque (Louvre, unknown museum number, Fig. 3.4), which would have been affixed to a wall in the temple, bears the name of the deity to which it is dedicated, Ninšubur, as well as Urakkila himself, his profession – a barber (Sumerian: šu-i), the name of his wife and the names of his eight children. ‘To Ninšubura, Urakkila, the barber, for his life dedicated (this plaque), Ganutu(is) his wife, Ganšubur, – kikugta, Ursagutu (?), Inim-utu-zi (?), PN, PN, PN, Ninizuzu, (are his children)’ (Steible 1982, 188–189; Braun-Holzinger 1991, 21; Marchesi and Marchetti 2011, 157). Apart from the rather remarkable number of children included in the inscription, the inscription follows the basic formula of dedicatory/commemorative Sumerian inscriptions from this period.

The second object assigned to Urakkila is a fragmentary alabaster statue with an inscription located on the right shoulder (A 7447, Oriental Institute, Chicago, Fig. 3.5). The inscription also follows the general dedicatory formula of the period: ‘For Ninšubur, and for the life of Baraḥenidu the city-ruler of Adab, Urakkila the city-elder dedicated (this statue)’. As previously noted by Westenholz (2012, 155) and Braun-Holzinger (1991, 242, St9), the seventh line of the inscription, here the second box from the left, has been altered. The original cuneiform signs were smoothed down and a new title – here ‘city elder’ (Sumerian: ab-ba-ru) – was carved into the newly blank surface to replace ‘barber’ (šu-i; for the several possible administrative roles of the ‘barber’ during the later Old Babylonian period see Pecha 2011, 179). Braun-Holzinger has also argued that in addition to the transformation of the inscription, there was a re-working of the figure’s garment. The back of the tiered skirt begins at a much lower point on the torso and is incised as opposed to carved in relief as on the front. Furthermore, there is evidence that the top of the skirt was originally much higher in the back where it is projecting from the body. It is possible the back was originally meant to be plain – perhaps the back was not meant to be visible – but at some point it was altered. Without further analysis it is impossible to argue if the costume change occurred simultaneously with that of the inscription after deposition. Andersson has argued that because the plaque was affixed to the temple architecture it could not be removed whereas Urakkila still had access to his statue and thus could alter the inscription to reflect his change in title



Fig. 3.5. Alabaster Statue of Urakkila (A7447, Oriental Institute, Chicago, mid-third millennium BC, unprovenanced, H: 28.3 cm) (Courtesy of the Oriental Institute of the University of Chicago). All rights reserved.

from barber to city-elder; a possible sign of upward mobility (2016, 55). This is entirely possible and raises interesting questions about continued access to these objects by non-temple personnel. Though it is highly unlikely the dedicant would have had personal access to the object, they may have had secondary access once retrieved by temple official. Either way, it is a clear illustration of the inscription as well as the design of the object undergoing a transformation during its initial lifetime. Thought as to how this sculptural representation of this individual, and thus, his embodied memory, was a sustained process either during its manufacture or after it was originally dedicated. That the statue which is dedicated on behalf of the life of the king is the one with the alteration of the title is better understood in the context of the Babati's seal. It was important for elite men working within the royal sphere not only to communicate their changes in title and status through administrative technologies but also through their cultic objects.

The second case study of an altered private inscription involves one of the few double inscriptions known from the Early Dynastic period. The white calcite bowl fragment, excavated in the vicinity of the Ekur Temple at Nippur, was inscribed in Sumerian with a dedication by a husband and wife (Fig. 3.6). The inscription on the left, and thus in Sumerian the first one which would be read, says: 'for the life of his wife and child (or children), he dedicated it (this vase)'. The name is lost and thus the gender of this donor is not clear until the female name in the inscription on the right is read: Abara'ana, his spouse (wife) for a Let-him-live! she (also) dedicated it' (Hilprecht 1896, 61; Steible 1982, 227–228; Braun-Holzinger 1991, 129, G71). The second inscription is not in boxed columns, nor does it seem to be rendered by the same hand. Furthermore, the signs drift up toward the rim in an unusual fashion (Andersson 2016, 56). To the best of my knowledge, this is the only example of commemorative/dedicatory stone bowl from this period in which the inscription is rendered in this manner: normally the inscription is entirely boxed or left open at the top with the rim of the vessel acting as the inscription's limit.

Again, it is difficult to say whether this addition happened after the initial dedication in the temple. Because the first inscription mentions a spouse, it does not seem to be the case that the unknown person got married and thus had to change his status in order to bring his wife into this form of communication with

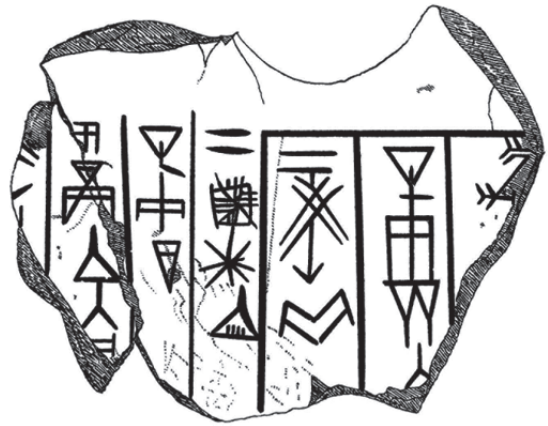


Fig. 3.6. Drawing of bowl fragment displaying double-dedication (Hilprecht 1896: pl. 44, no 98; University of Pennsylvania Museum of Archaeology and Archaeology, CBS 9699+9952) Courtesy of the Penn Museum, all rights reserved.

the god. On the other hand, she clearly was not part of the original conception of the vessel. Still, we can again here see choices people are making – what aspects of their identity are important to communicate. In this case both husband and then the wife – perhaps exerting her personal agency – wanted to commemorate themselves and each other.

Seals as dedicated objects

As noted, cylinder seals are normally more associated with everyday economic and legal transactions rather than communicating with the divine realm, but like commemorative objects they are inherently linked with an individual person through a combination of text and image and thus were innately tied to different forms of religious expression. In addition to the large number of seals depicting religious or ritual imagery seals used for temple administration, seals functioning as grave goods, and seals belonging to gods (Parpola and Wantanabe 1985, 385), there is also ample evidence that seals themselves could also act as commemorative tools in religious modes of communication.⁴ Although not nearly as numerous in the archaeological record as other object types such as stone vessels and statuary, there are examples of seals inscribed with specific dedicatory formulae (Roßberger 2016, 423; Braun-Holzinger 1991, 357–359). The modern designation of seals as ‘votive’, ‘dedicatory’, or ‘commemorative’ is complicated by the fact that many are divorced from their specific depositional context and that there are a myriad of explanations for the presence of seals in religious buildings but there are clear cases of cylinder seals and stamp seals, although not specifically inscribed with dedications, being purposefully deposited in temple courtyards, sanctuaries, and other specially charged areas of temples (Roßberger 2016, 2019 and references therein, particularly Margueron 2004, 211–214; 297–299 for Mari and Klengel-Brandt and Marzahn 1997; Gries 2017, 78–81, cat. 254–269, pl. 157–159 for Aššur) Although the distinction between personal votive objects and temple seals is not always-clear cut, Roßberger’s analysis of seals found within temples such as the Old Babylonian period Išhtar-Kitītum temple in Ischali and Early Dynastic Diyala temples demonstrate that the secondary lives of deposited seals should be reconsidered in light of votive practice (2016, 423f., her table 1).

Indeed, an example of a seal recut for the purpose of religious dedications illustrate the ways in which inscriptions were manipulated to express both the new relationship forged between an individual and object and how this object was then repurposed to create an avenue of communication with the god. The altering of the

⁴ Of the 603 commemorative objects currently collected in the database of the ‘Memories for Life’ team, there are 28 cylinder seals, comprising 4.6% of the total objects. These seals have all been identified as votive/commemorative either based on inscriptions which explicitly state they have been dedicated, their archaeological context, or other features such as large size or an inscription which is read directly from the seal.

inscription materialised a new constellation of meaning and interaction between human and deity which was then activated through the physical deposition of this object-as-message in the temple. This seal, discussed by Roßberger, is an amethyst cylinder seal discovered in the cella of the Upper Sanctuary of the Old Babylonian Išhtar-Kitītum Temple in Ischali (Frankfort 1955, 52, cat. 917; Roßberger 2016, 423). The original inscription designates a woman named Mattatum as the seal's owner but a second inscription, carved over the erased last column of the boxed inscription contains a dedication to Kitītum. The addition is rendered in a less careful hand and is a clear later addition to the seal as originally conceived. The new inscription read 'Mattatum daughter of Ubarrum, for her life to Kitītum dedicated (this)' (Frankfort 1955, 52). It is impossible to know if Mattatum herself commissioned this change or if it represents the work of a later owner who retained the original name, though the former is more likely as only the end of the inscription was changed. If so, the preservation of Mattatum's name could indicate this transformation as one of function instead of identity, that the 'personal seal of Mattatum was thus explicitly turned into a votive object' (Roßberger 2016, 423) and that it was Mattatum's social identity as a devotee of Ištar that was being commemorated for at least her natural life, if not memorialised beyond it.

As demonstrated, seals are a particularly malleable form of material culture. Often innately tied to individual personhood, they act not only as agents of self-representation and replication, allowing a person to affix their identity and decisions to documents and goods across time and space, but also as agents of transformation, retaining a cultural and individual memory whilst creating new means of identity expression. These composite meanings and relationships were part of the object's life history – a history which then accumulated new meanings and functions as they were deposited in temples and other sacred places. Both the individual – as crystallised in the act of depositing one's seal – and the collective, as represented by the variety and scale of material that was deposited, collected, and redeposited as part of temple inventories, were kept alive in these objects (Roßberger 2016, 428–429). The reuse and recutting of objects other than seals also speaks to the transformative aspects of self-commemoration. And indeed, one can look also to the wider corpus of third-millennium dedications, both uninscribed and inscribed, to see that object biographies could become quite complicated *also* after their initial dedication.

A wider perspective: commemorative objects as tools of social transformation

As seen, commemorative objects could be altered in order to ascribe a new social meaning and individual identity to the object. Although this practice is far less common than the reuse and recutting of seals both beyond and within cultic contexts, inscriptions on commemorative objects dedicated in temples could also be transformed in order to embody actual changes in the 'social persona' (Evans 2012, 179) of the human

donor. The inscription can provide concrete data concerning the donor's name, gender, profession, and relationships and changing this information through modification of written word clearly illustrates how dedicated objects could act as dynamic carriers of the commemorated self. This is not to argue that non-inscribed objects could not connote similar information: hairstyles, dress, and gestures of dedicated sculptures can provide information on gender, social status, and profession (Evans, 2012, ch. 6; Suter 2016; Otto 2016) and even the specific archaeological context of certain objects can point to such identity markers. For example, Cluzan has shown that specific areas of the Early Dynastic Ištār-uš at Mari were associated with male and female donors (2019, 51) and Evans has demonstrated that a similar gendered differentiation of space was present in the Early Dynastic Level VIIB Inanna Temple, where male statue fragments built into the liquid installation 173 and female fragments were part of the bitumen-coated pavement and well associated with locus 171 (2012, 197). The alteration of the inscription adds another dimension to these processes of identity expression as embodied in the lives and afterlives of dedicated objects.

Moreover, there is a long tradition of re-using and re-functionalising dedicated objects in Mesopotamian temple contexts. Despite the fact that the 'private' inscribed objects included in the current study have generally been published with greater regard for their inscriptions than their archaeological contexts or material components, discussions on the transformation of memory in the third millennium have actually focused on their primary and secondary depositions. Evans's work on the anthropomorphic statues from the Early Dynastic Diyala region has been particularly illuminating in this regard. Through her analysis of the death – the initial burial or discarding of the statues she advocates for a 'second life' for sculptures, noting that in addition to hoarding and burial, a statue could live on after the connection between it and the living donor was severed (Evans 2012, 137–143). For Evans, this severance occurs at the death of the human donor which thus 'deactivates' the statue, whether inscribed or not: it is no longer tied to an individual and thus the concept of the image or representation of the person (Sumerian: *alan*, Akkadian: *šalmu*) loses its particularity (Evans 2012, 126). Evans writes that it is possible that 'too much emphasis is placed on the inscription when evaluating the life of a dedicatory object within the temple' because the inscription ceases to function after a short time and hypothesises that the agency of the inscription may even be lost as soon as the object enters the temple (Evans 2016, 180). Such views are echoed by Tsouparopoulou who has deconstructed the artefact/text divide by arguing that scholars of Mesopotamian material culture have sanctified the text whilst neglecting the social agency of the object (Evans 2016). Such views mark a clear distinction between 'practical' seals in which names could be retained and perhaps gain meaning and dedicated objects which either never were, or no longer were, part of everyday use. Conversely, as discussed below, even inscribed objects may have been re-circulated over their life spans and there is no reason to doubt that even if individual personalities were forgotten, that the inscription or even name did not contribute added meaning to

the object. Just as the older inscriptions on seals may have brought a certain value through either direct connections or sheer antiquity, so could inscriptional content from either the recent or more ancient past added prestige to re-dedicated or re-used objects. Furthermore, although it is difficult to determine the length of time between inscribing the object, depositing the object, and its eventual re-use or discard, it seems highly unlikely that the donor imagined the inscription to fulfill its purpose as soon as it entered the temple. The intention behind commemorating oneself for one's (and often others') natural life is as important as the life of the object once inside the temple.

Clear evidence of object reuse can be seen in the repurposing of stone objects, including anthropomorphic statues, from the Early Dynastic Inanna Temple at Nippur. For example, two Early Dynastic IIIA statues from an assemblage of material excavated in Favissa A of the Inana Temple at Nippur (Marchesi and Marchetti 2011, 35–36) are clear composite figures. As Evans has pointed out, one statue (7 N 171; A31491, Oriental Institute, Chicago) displays a different stone for the base and the body (2012, 138; n. 170). Hansen and Dales have argued that the other statue (7 N 136+155; 62.70.1, Metropolitan Museum of Art, NYC), a sanga-priest of the Temple of Enlil, is a composite constructed from fragments originating from another statue (Hansen and Dales 1962, 80 cited in Evans 2012, 138). These may simply be attempts to fix a broken statue, but clearly the reassembling of the human form was acceptable. Parts of the statue are no longer part of the original person as originally conceived and activated. Furthermore, there is evidence that statues were purposefully manufactured in a way for them to be disassembled later. Such statues exhibit bored holes, original to the sculpture, through which attachments were used to keep the entire piece together. Evans argues that the fact that drill holes – often with traces of bitumen – were often at the neck, underside of the skirt and the waist indicates the head, feet, or entire body could be easily replaced (2012, 137, fig. 45). A new individual could thus be fixed or constructed from the old parts of another and thus, it is possible that any extant inscription would not match its new donor. Investigating this possibility is the next step in better understanding if object's inscriptions were only changed during the 'first life' of the object, as in the case of Urakkila's statue and the bow of married couple, or if inscriptions were reappropriated in the following iterations of their use.

Although I agree entirely with Evans and Tsouparopoulou that scholars tend to privilege the text over the material properties of the object itself, and can overemphasise the agentive properties of the inscription, I also believe it is worthwhile to discuss the ways in which alterations to the inscription is what transforms the individual memory embodied in the object. Though the inscription may only represent just one phase of the object's life cycle (Evans 2016), there are examples of the inscriptional element experiencing its own life cycle. Through an analysis of the inscription itself, we can learn a lot about how individuals negotiated their identity through the combination of text and image in both contemporary practice and beyond.

Conclusion

Non-royal individuals in ancient Mesopotamia also dedicated inscribed objects to the gods and these objects contained the ability to commemorate the individual donor through material, image, depositional context, and inscriptional content. The multiple examples discussed here demonstrate that although inscriptions were tied to the identity of the devotee through his or her name, profession, kin and extra-kin relationships, the inscribed object could possess 'second life or lives' beyond the initial act of dedication and possibly, after the life of the donor him/herself. Furthermore, the inscription could be amended and new inscriptions created new identities and relationships as represented by the inscribed object. The examples of the Urakkila and the married couple indicate that these transformational processes could also take place during the 'first life' of the object and close study of inscriptions can inform us about the contemporary process of identity negotiation and self-representation (commemoration) in the planning and execution of the dedication. They were not static objects, dormant between their dedication and so-called 'rediscovery' but continuously active, much like the other major type of inscribed identity maker – cylinder seals. Despite the obvious difference in function of seals and dedicated objects, when analysed together, they illuminate the role that text/image/material play in the process of identity construction and negotiation. It is only through a holistic analysis of these complex material messages that we are able to see the choices of ancient people materialise continue to act dynamically: commemoration in stone was not 'set in stone', so to speak.

Chapter 4

A cognitive archaeology of writing: concepts, models, goals

Karenleigh A. Overmann¹

Think about what happens as these words are read: hands turn or scroll the page, eyes move over the writing, and psychological processes turn the written forms into the words and sentences of a specific language. The process can be described as a dynamic interaction between body, brain, and material form. What this description fails to characterise adequately is the agency of the material form: it elicits specific behavioural and psychological responses in its users, capacities they gain as they become proficient in interacting with it – that is, as they learn to read and write. How does a material form like writing become able to influence the behaviours and psychological processing of its users? As its form changed under the gradual pressure of generations of tinkering and adjustment, it accumulated the cognitive effort of past generations and redistributed it to future ones, who simply learned to use the tool and modified it further in the course of use. Yet in the moments of interaction – when we read and write – writing still seems as static, as permanent, as if it were carved into stone. Its form does change, only more slowly than our experience of it suggests. These are aspects of writing that demand further investigation.

If ancient cognition cannot be studied directly, material forms do provide insight into some of the associated behaviours and psychological processing of the ancient peoples who once made and used them. Writing, obviously, implies behaviours like handwriting and psychological processes like vision and language. When interpreted through neuroscience, change in writing implies associated change in the behaviours and brains that produced it. Such analysis requires two things: first, a material record with enough duration and extent to show change over time in detail, and second,

¹ This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 785793.

a cognitive state understood well enough that change in material form can suggest change in behaviours and brains.

Literacy is such a cognitive state, and Mesopotamian writing has a sufficient record of material change to suggest, at least in broad outline, how literacy developed. While literacy is commonly defined as the ability to read and write, this assumes a script, writing that is capable of representing language with fidelity. Script stands in contrast with the initial state of writing, which represented language much less faithfully – so poorly, in fact, there is debate over whether that language was Sumerian or Akkadian (Englund 1998; Hyman 2006; Veldhuis 2014). Early Mesopotamian writing took the form of pictures and signs. These were meaningful either because they depicted an object or they had an agreed-upon meaning, a social convention. For example, a picture of a jar meant *jar* because it looked like one, and a quartered circle meant *sheep* because everyone agreed it had that meaning. This functional literacy depended on this-means-that associations acquirable with far less behavioural and psychological change than what is involved in true literacy, the ability to interact with written forms that do not depend on resemblance and convention. How the initial cognitive state involving early writing yielded literacy and script required change in all three dimensions: the behaviours and psychological processes of the writers and the material form of writing itself.

The idea is that cognition is a dynamic system composed of brains, bodies, and materiality, in which influence among the components is multi-directional. Interaction with material forms changes behaviours and brains. Change in behaviours and brains enables further change to material forms. And material forms accumulate the cognitive effort of past generations and act as a medium for recreating those changes in present and future generations. There is a social aspect to such change as well: in realising literacy and script from early writing, a society had to its behaviours with a specific material form over multiple generations. The material form also had to be malleable enough so its form could change as behaviours and brains reorganised.

Such analysis requires a theoretical framework that can reconcile interdisciplinary data from the neuroscience of literacy and the archaeological and textual records of the Ancient Near East. In the analysis that follows, the framework applied is Material Engagement Theory (Malafouris 2004). MET has three central commitments. First, minds are considered extended and enactive. *Extended* means that material resources may be at least partially constitutive of cognition (Clark and Chalmers 1998; Clark 2008). *Enactive* means cognition is the dynamic interactivity between brains, bodies, and materiality (Hutto and Myin 2013). Reading is an excellent example of cognition that is extended and enactive, since it is difficult to imagine how we would read without the material form that is writing. Secondly, materiality is viewed as influencing change in behaviours and brains. That is, material forms have *agency* (Malafouris and Knappett 2008; Kirchoff 2009; Jones and Boivin 2010; Newen *et al.* 2018). Reading is a good example here as well, as there are specific behavioural and neurological reorganisations associated with learning to read and write, such that interacting with

the material form that is writing changes behaviours and brains. Thirdly, materiality is meaningful in a way that differs from language: it is meaningful in virtue of what it is and what we do with it (Malafouris 2013). Writing is an interesting material form because, as it acquires fidelity to language, it becomes more language-like in how it means, signifying rather than resembling or instantiating. In the analysis presented here, the focus will be on the second and third of MET's central commitments, the agency and semiotic function of the material form that is writing.

An initial MET analysis of change in the material form of Mesopotamian writing (Overmann 2016; 2017) yielded a model of how literacy might develop: from the behaviour that is handwriting, with a material form malleable enough to permit incremental change occasioned by changes in behaviours and psychological processing, and within a specific social context that sustains the behavioural interaction with the material form for generations. After the model is reviewed, it is critiqued in terms of its original development, goals and shortfalls and potential for future expansion. A particular area of expansion is then explored: the way distinct neurofunctional and behavioural pressures influence written forms for language and numbers, thereby affecting how such forms change across languages and cultures (Overmann 2021).

A model of how writing changed in Mesopotamia and the cognitive implications

The initial model of how writing changed over time and the cognitive implications of that change used Mesopotamia as its case study (Overmann 2016). Data on Mesopotamian writing were compiled from the literature and sorted into seven categories, from the making of dictionaries known as lexicography to the identifiability of language (Fig. 4.1). These data were then mapped across time and cultural periods to examine what was changing and when and get a sense of how writing changed as a system. If the plot was initially difficult to create, it must be noted that when it is turned on its side, it resembles a standard archaeological chronology.

Understanding how change in written form is informative regarding change in behaviours and brains starts with what differentiates a literate brain from one that is not literate. In literacy, the region of the temporal lobe that recognises physical objects, the *fusiform gyrus*, becomes trained to recognise written characters as if they were physical objects, interpret them through the gestures of handwriting and associate them with the meanings and sounds of language (McCandliss *et al.* 2003; Dehaene and Cohen 2007; 2011; Nakamura *et al.* 2012; Perfetti and Tan 2013). This neurofunctional reorganisation is common across writing systems, whatever their form and regardless of whether signs map to words, syllables or phonemes.

Among the changes in the material form of writing, one of the most dramatic is the loss of depictiveness. Early signs resembled objects; later signs did not (Fig. 4.2). This change has been characterised as becoming 'increasingly schematic' or abstract (Schmandt-Besserat 1978, 50), though 'abstract' is one of those squishy terms that

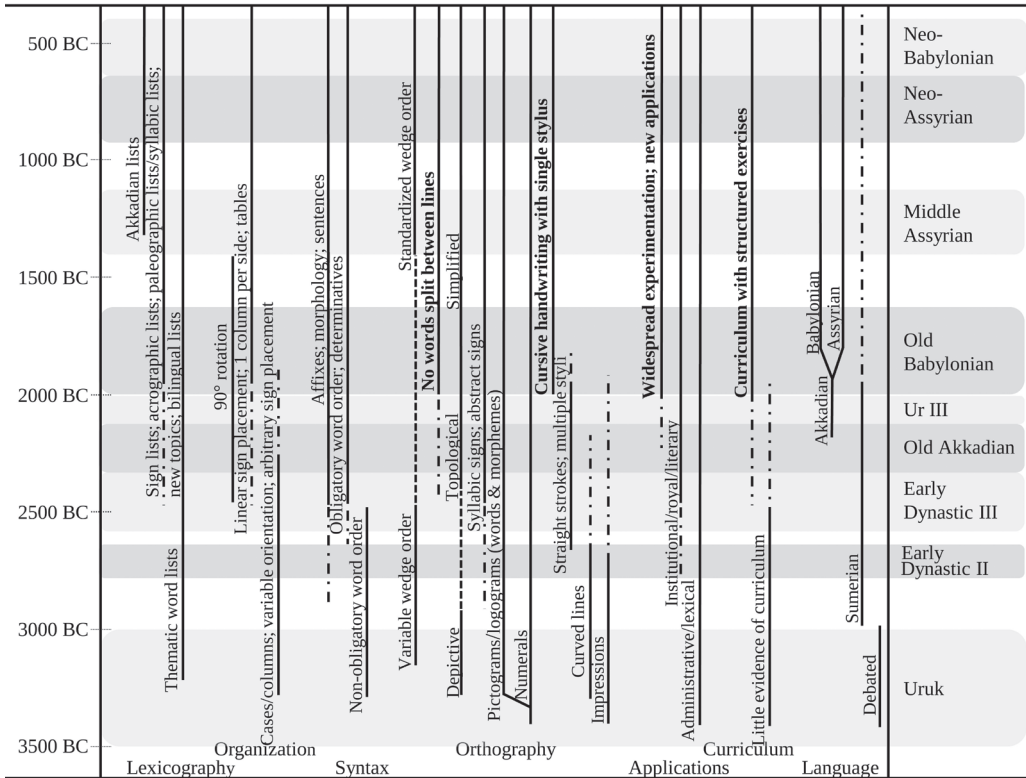


Fig. 4.1. Model of Mesopotamian literacy. The seven categories or dimensions of change in the system of writing include lexicography, dictionary-like compilations of words; organisation, the layout of words upon the surfaces of writing materials; syntax, the ways in which characters, words and phrases are arranged to reflect language; orthography, conventionalisations of signs and sign combinations; applications, the purposes to which writing and scripts are applied; curriculum, the systemisation of training; and language, the degree to which the language expressed is identifiable. The data were sourced from Schmandt-Besserat (1992); Cooper (1996; 2004); Englund (1998); Hyman (2006); Taylor (2011; 2015); Veldhuis (2011; 2012; 2014); Krapijn (2012); and Bramanti (2015). Updated version of the graph originally published as fig. 9 in Overmann (2016, 297). Additional data were added, and the graph has been rotated anticlockwise 90° to emphasise its resemblance to an archaeological chronology.

means different things in different contexts. Here it means less depictive, and it suggests that brains were learning to recognise characters as objects. Objects are recognised through combinations of their local and global features. This works as follows. In Figure 4.3 (left), readers might see a cube in the combination of features, though the lines are not actually there. Local features are the circles and cut-outs, global features, the relations between them. Recognising words is similar. Readers will likely see the words THE CAT in Figure 4.3 (right), though the middle characters are neither H nor A. Meaning is derived from the characters themselves, the context

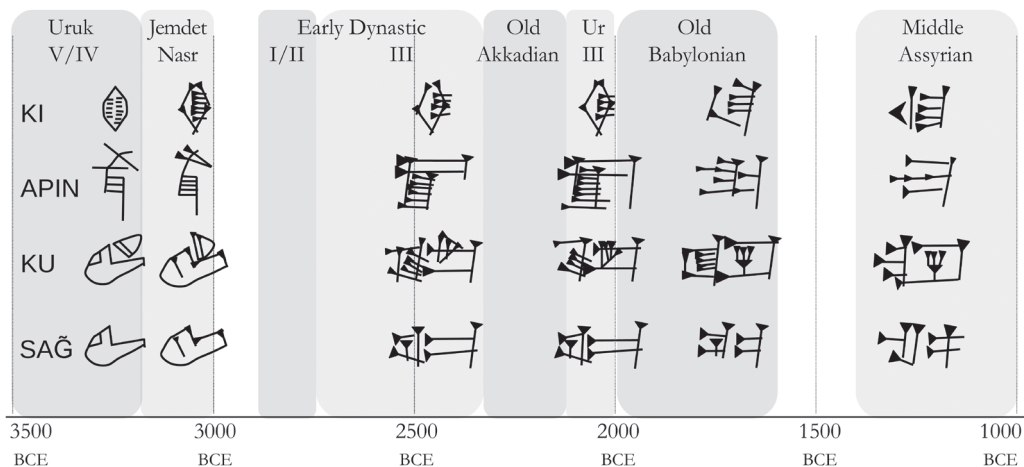


Fig. 4.2. Chronology of signs showing change in form. Early signs (left) are recognisably depictive and differ in obvious ways from one another, while later signs (from 2400 BC and thereafter) are less depictive, and the clues differentiating them are more subtle. Key: Uruk period, 3500–3000 BC; Early Dynastic (ED) II, 2900–2700 BC; ED III, 2700–2340 BC; Old Akkadian (OA), 2340–2200 BC; Ur III, 2100–2000 BC; Old Babylonian (OB), 1900–1600 BC; Middle Babylonian (MB), 1400–1100 BC; Middle Assyrian (MA), 1400–1000 BC. Adapted from fig. 88 in Nissen et al. (1993, 111).



Fig. 4.3. Feature recognition of objects and writing. In both, recognition is a matter of local detail and global cues. On the left, a cube is recognisable in the circles and cut-outs (local details) and relations between them (global cues). On the right, the words *THE CAT* are recognisable; meaning is derived from the characters themselves (local detail), the context of adjacent characters (global cues) and learned associations between written forms and language. Originally published as fig. 2a in Overmann (2016, 288).

of the adjacent characters forming words and learned associations between written forms and language. Trained object recognition and learned lexical associations account for variability in script forms and mapping, as the potential for an object to be recognised through its features and associated lexically is independent of its actual form.

As brains became trained to recognise features and associate lexically, the need for the characters to depict was relaxed. That is, as characters became topologically recognised, they could deform. This in turn allowed characters to become more alike and simpler.

More alike means there was still some resemblance between early and later written forms (Fig. 4.2). However, the later forms are closer in appearance to each other than the early forms were. That is, the clues distinguishing early signs are more obvious than the clues distinguishing later signs. Visual discriminability and individuation – being able to tell characters apart and identify single characters as themselves – depend on familiarity. With familiarity, objects become easier to tell apart, so the distinguishing clues can become more subtle. These effects are also found in facial recognition, particularly across ethnic groups, where they affect things like eyewitness identifications (Brigham *et al.* 2007). Topological recognition lets characters lose their depictiveness, while differentiating in ways that enhance the ability to tell them apart. The range of total variability decreased, while characters converged on points of maximal contrast. This is the process whereby graphic elements become a contrastive system. This process occurs without change to the way graphic elements are mapped to language, so writing can become a contrastive system whether it is logographic, syllabic, alphabetic or some combination. This change also shows why training had to become more formal: written characters became too much alike. It had been relatively easy to tell the earlier pictures apart and approximate their meaning through resemblance and knowledge of conventions. But as characters became more alike, the differences between them were too subtle for anyone who lacked familiarity, and gaining the requisite familiarity required training.

Simpler means characters lost some of their detail toward the end of the chronology shown in Figure 4.2, suggesting an optimisation or balance of local and global detail. Local detail helps novices but slows proficient readers, who make greater use of global cues. In later writing periods, local details were omitted, suggesting readers made greater use of global cues. This had another benefit: The more detail characters have, the longer they take to write, and omitting detail enabled the speed of production to increase to the point where writing could become a more interactive medium with thought. In modern scripts, this same effect of a trade-off between local detail and global cues is found in diacritics for tones in African languages (Bird 1998; 1999; Koffi 2014) and vowels in Hebrew (Ravid and Haimowitz 2006). Discussion involves the potential for having different forms of written language, one for novices and one for proficient readers. Of course, the trade-off is that readers have to learn both.

Handwriting involves motor movements controlled by Exner's Area of the brain (Roux *et al.* 2009). Exner's Area is thought to help us recognise the gesture in the written word, a mental simulation (Konnikova 2014). Its activity is particular to handwriting, not just any fine work involving the hand, so while it is possible to produce characters by, say, carving them in stone, carving differs in both the movements used and the character repetition involved. Writing by hand improves fine motor skills, hand-eye

coordination, recognition and recall functions, lexical retrieval and tolerance for ambiguity in how characters are formed (Giovanni 1994; Longcamp *et al.* 2005; Sülzenbrück *et al.* 2011; James and Engelhardt 2012). In the emergence of literacy, handwriting was critical. Not only did it realise improvements in these functions, it afforded a mechanism for continual adjustment of the material form, which was essential to the system's ability to change. Change in handwriting also implies things like standardisation, automaticity and tolerance for ambiguity in character form.

Standardisation is forming each character with particular strokes in a particular order. When writing first began, there was no such protocol; standardisation emerged gradually (Bramanti 2015; Taylor 2015). It is seen in the strokes used and the order in which they were made, which become increasingly codified. Over time, these codifications show production becoming standardised, and standardisation shows handwriting behaviour becoming habitual and automatic. Automaticity frees up cognitive resources like attention and working memory (Logan 1992; Tucha *et al.* 2008). The same thing occurs when someone learns to drive (Charlton and Starkey 2011). A novice driver must pay significant attention to operating the car and conditions on the road. Proficient drivers attend less to these things, becoming alert only when conditions change. In writing, automaticity lets authors focus on *what* they write, its content, rather than *how*, its production. This helps transform writing from a tool that simply records mental content to one that lets writers engage it directly.

When people write by hand, they develop a tolerance for ambiguity in how characters are formed (Longcamp *et al.* 2005). That is, the writing can become sloppier, while readers can still recognise it. This lets writers recognise characters, while providing early writing an important mechanism for change. This tolerance is one of the things educators fear will be lost as we type more and handwrite less (Konnikova 2014), though arguably, the loss will be offset by the standardised appearance of characters on screens, and the things computers do really well that handwriting cannot, like speed and networking and information lookup and emotional expressiveness (*e.g.*, emoticons).

Being able to recognise characters even when they are ambiguous is an essential element of developing *cursive*, a form of writing that trades accuracy of form for speed of production (Veldhuis 2011). Fast writing keeps up better with the speed of thought, so that writing becomes a highly interactive engagement between mental content, material form and behaviours interfacing the two. Characteristics of clay surfaces and writing implements also influenced how characters were made. Making lines or impressions on clay produces furrows, which is how their order of production is determined (Cammarosano 2014). Furrows also mean that characters had to be relatively simple and made with deliberation, since complex characters and characters made in haste quickly yield an illegible mess. In turn, simplicity improved speed of production, while deliberation improved legibility and reduced error. Simplicity also influenced production at a fundamental level. Characters taking hours to make would not record or communicate information efficiently because of their restricted volume, nor would they support the recombination needed to produce new signs.

Over some 15 centuries, the cognitive system changed from a functional reading and writing, in which language was not very fluent, to a state more akin to the literacy we enjoy, where the material form represents language with fidelity. These threads can be detected among the data (Fig. 4.1): characters lost depictiveness and then simplified, suggesting written objects were being recognised by their features and becoming a system of contrastive elements with an optimised balance of local and global cues. How characters were made converged on wedges, improving legibility, visual discriminability and individuation, and handwriting became standardised, suggesting automaticity. By 2000 BC, a literacy on par with what we mean by the term appears to have developed. Words were no longer being split between lines of text (Cooper 1996), a contiguity and integrity of form consistent with object recognition. Cursive developed (Veldhuis 2011), showing a tolerance for ambiguity and enabling an even greater speed of production. Experimentation was widespread, with writing applied to many new purposes (Veldhuis 2012), a concern with content suggesting automaticity had repurposed cognitive resources like attention. And training became highly formal (Veldhuis 2014) because script could no longer be read without it. As the figure shows, the types and rate of change also decreased around this time.

The initial model: a critique

The initial model provides some unique insights about the way literacy emerged in Mesopotamia from the behaviour of handwriting. First, it suggests that developing literacy involves an initial repertoire of signs with conventionalised ‘this-means-that’ associations. These must be written by hand enough hours per day and days over time to train object recognition and afford automaticity. Signs must be simple, and the material form malleable enough, to enable production, repetition, recombination and change. Finally, signs must not be numerical, as numbers lack the lexical range, the need to include phonography and the ambiguity required to motivate the pursuit of greater linguistic fidelity.

Beyond detailing the emergence of literacy from chronological change in writing, the model illuminates something about our relation with material culture and its role within the human cognitive system. Forget, for the moment, that writing subjects language and ideas to analysis and communicates them across space and time (Olson 1994; Hutchins 1995). Instead, consider only its material form. It is difficult to imagine what sort of thing literacy could be without the material form and the behaviours that engage it. Interaction with the materiality of writing engages specific behaviours and psychological capacities. Over centuries of adjustment, the material form has become adept at eliciting specific behavioural and psychological responses. And yet while it changed, the material form remained synchronised to common behavioural and psychological capacities because it passed through the many hands of multi-generational collaboration. It embodies and makes available the change in behaviours and psychological responses realised and accumulated by past generations. It acts as a

medium for recreating those changes in present individuals, as they learn to interact with it. And through characteristics and mechanisms like malleability and contrasts of form and structure, it affords possibilities for future change.

The model of how writing changes and what the changes imply cognitively has the potential to be expanded further. Its development was exploratory and unguided, suggesting any expansions and revisions should be less idiosyncratic. Further, the model does not currently distinguish unintentional from deliberate change, or direct from indirect influences. It does not examine the effects of linguistic structure (Coulmas 2003), nor consider selective, artistic or playfulness aspects to iconicity. Factors explainable psychologically and behaviourally, like standardisation and loss of depictiveness, seemed more critical to the process than ones that cannot be so explained, like lexicography. But explanatory ease is not the right criterion, and data should not be discarded from the model until it has been applied to at least one other case. It would also be desirable to specify more clearly the factors included and their level of detail, as well as the criteria for assessing the attainment of literacy.

As noted in its initial publication (Overmann 2016), Mesopotamian literacy is unlikely to represent a universal process. In Egypt, where writing emerged at about the same time and in close geographic proximity, the written form underwent not one but two phases of standardisation and losing depictiveness and detail, assessed by contrasting hieroglyphs with hieratic and demotic. Where Mesopotamian writing developed from administrative practices, Egyptian writing was more aligned with religious and state purposes, things affecting writing behaviour and likely influencing how quickly the respective systems changed. Incorporating cases like Egypt into the model will help gain traction on the critical changes, temporal sequencing and functional interdependencies inherent in the process of developing literacy.

Expanding the model: written change in literacy and beyond

Beyond the improvements suggested in the previous section, the model might be expanded in at least four ways. Two potential areas for future investigation in the way literacy develops were suggested by Kelly (2019). First, in the case of nine scripts invented by non-literate individuals in the past two centuries, literacy emerged within a matter of decades or even fewer years, compared to the millennia or longer associated with ancient literacy. One possible explanation is teleological. In modern contexts, literacy is known and understood, so its appreciation and the role of writing and practice in achieving it guide a new script's invention, even when the individuals involved might not be literate themselves. In contrast, in ancient times, no such guiding teleology existed or would have been possible, so the cognitive state emerged incrementally from socially distributed interactions with the material form. Second, there is a relation between sign variability and the size of the inventory of signs in a writing system, and this may bear on assessing the attainment of literacy, as it has implications for the way writing develops as a relational system.

A third area in which the model might be expanded is in the collectivist effects produced by the social use of tools (Overmann and Wynn 2019a, 2019b; Overmann 2020). The model of Mesopotamian literacy shows that sustained, societal investment in specific behaviours and material forms yields cognitive change and creativity that cannot be realised by single individuals or generations alone. This suggests that current models of tool use and cognition should expand beyond the individual to the group.

Cognitive aspects of tool use have been modelled with blacksmithing (Keller and Keller 1996), pottery (Malafouris 2008) and stone tools (Malafouris, 2010; Wynn and Coolidge, 2010). These individualistic models emphasise the individual in terms of performative skill, expertise and *aha!* moments creating insights (Malafouris *et al.* 2014; Wynn and Coolidge 2014). Tools structure and intensify behaviours and select individuals to specific tasks and social roles (Overmann 2016). The individual model does not, however, represent social aspects of tool use. Considered socially, tools are a collaborative medium that influences group behaviours and brains toward common change. Group tools also create communities of specialists, people able and identified for using particular tools who use them in collaboration with one another.

Group use also has an effect on tool form. Though human behaviours and brains have much in common, people differ in their psychological, physiological and behavioural attributes. Most individual variability cancels itself out – highs counteract lows – keeping tool forms synchronised to average capabilities while allowing tool forms to change. Synchronisation in turn distributes the average to new users, influencing cohesion in the group. Cumulative variability yields tools that remain widely accessible, despite change in form. For example, reading and writing require no unusual capacity in psychological processes like attention, nor physiological attributes like fine motor control (obviously, this means the basic ability to read and write, not the ability to engage all the conceptual domains made accessible by writing).

A fourth way the model might be expanded is in numbers, since numerical notations differ from writing for language in several respects (Table 4.1). Numeracy and literacy are dissociable phenomena. That is, while some cultures have developed both, many societies develop numbers without writing and a few have developed writing without numbers (Chrisomalis 2010). They are (doubly) dissociable in a psychological sense as well, something that shows they are cognitive functions subserved by distinct parts of the brain (Brannon 2005; Varley *et al.* 2005; Carreiras *et al.* 2015). These differences have implications for the forms that signs take, as well as for the ways in which these forms change over time and as they are transmitted across languages and cultures.

There is a fundamental difference in how signs for numbers *mean*, compared to signs for words that are not numbers. This difference appears in writing from its very inception: early signs for quantity were repeated, signs for commodity were not (*e.g.*, VA 13629, an administrative tablet from the Uruk V period [3500–3350 BC], contains nine N01, meaning the number *nine*, and one UDU sign, meaning *sheep*). This is because

Table 4.1. Differences between numeracy and literacy

Numerical notations	Written signs for language
<ul style="list-style-type: none"> Numeracy: Ability to reason with numbers Dissociable (numbers without scripts) Doubly dissociable (loss of numeracy without loss of literacy) (Varley <i>et al.</i> 2005) Parietal activity; no language activation (Amalric and Dehaene 2016) Instantiate their meaning Semasiographic Long material prehistory (<i>i.e.</i>, fingers, tallies, tokens) before the invention of writing Need not be handwritten for numeracy to develop Subset of lexicon with no phonetic values = few signs (this means a system of literacy can <i>never</i> develop from writing notations for numbers) No ambiguity; phonetic clues are undesirable because they degrade usability as numbers Read sequentially; error-correction functionality can produce wrong numbers Number universals (Greenberg 1978; Chrisomalis 2020) 	<ul style="list-style-type: none"> Literacy: Ability to read and write Dissociable (scripts without numbers) Doubly dissociable (loss of literacy without loss of numeracy) (Brannon 2005) Brain activity for language functions (Perfetti and Tan 2013) Signify their meaning Glottographic No material prehistory before writing is invented Must be handwritten as a critical component of material change Entire lexicon and phonetic values required = many signs (this means literacy may develop, and may also include writing the phonetic values of number words) High ambiguity; strategies for specifying the words intended are required Read holistically, with error-correction functionality (Rayner <i>et al.</i> 2006) Language universals (Comrie 1989)

These differ in several respects, including the conditions under which they emerge, the material forms used in their representation and manipulation, their mode of representation, and the neural activity associated with their psychological functioning. The list is not exhaustive of the differences between the two.

numerical signs instantiate quantity. That is, four wedges *are* four; six cones *are* six. Their quantity is unambiguous, even across languages, so these signs do not need to be specified further, even when conventions are added to show grouping (as in a sign that means six or ten of a lower-value unit) or to differentiate integers from fractions. In comparison, pictographs signify their meaning through resemblance, ideographs through convention. This makes these signs ambiguous regarding the words they mean, necessitating the invention and incorporation of strategies like determinatives and phonography that specify the intended words by altering the visual appearance of the signs.

Instantiation makes written numbers contiguous with numbers that are not written. This contiguity with prior forms has no counterpart in non-numerical language. That is, three fingers, three beads on an abacus, three cuneiform wedges and the three strokes of the Roman numeral III *are* three. Instantiation is meaningful

without the phonetic component of language, making numbers a semasiographic system. *Semasiographic* notations like numbers and music can be read in any language because they are semantically meaningful but not phonetically specified, allowing for radically different choices of words and syntax (Fig. 4.4). The expression $2 + 2 = 4$, for example, can be put into words – with equal plausibility – as ‘two plus two equals four’, ‘the number two added to itself yields four’, ‘four is the sum of two and two’, ‘deux plus deux est quatre’ or ‘liǎng jiā èr shì sì’.

The lack of any need for phonetic specification meant that the Sumerian words for numbers went unrecorded for nearly a thousand years after writing was invented. Further, when the phonetic component of number words was recorded, it appears to have been a response to a very specific circumstance: in the middle of the third millennium BC, Semitic-speaking scribes in the city of Ebla apparently felt the need to learn the Sumerian number words in addition to the Sumerian notations (Edzard 1980; Pettinato 1981; Friberg 1986). This is much like someone today might learn the Latin words for numbers – *ūnus, duo, trēs, quattuor, quīnque, ... undecim, duodēcim, trēdecim, quattuordecim, quīndecim, ... duodēvigintī, ūndēvigintī, vīgintī* – in addition to the Roman numerals I, II, III, IV, V, ... XI, XII, XIII, XIV, XV, ... XVIII, XIX and XX (Overmann 2021).

Instantiation has little parallel in writing for non-numerical language, since there is no inherent ‘sheep-ness’ to the letters U D U or a quartered circle.² For these signs, specifying the intended non-numerical words means the signs had to be modified to include phonetic or determinative clues that indicated either the word itself or the type of word it was. That is, meaning signified through resemblance and convention is ambiguous in a way instantiation is not; this puts pressure on signs for non-numerical language to improve their ability to specify the words intended. This in turn requires the inclusion of phonographic and other techniques and conventions for specifying words, making writing for non-numerical language glottographic (Sampson 1999; Hyman 2006). *Glottographic* writing represents the words of particular languages, like the pictures representing the words ‘I can see you’ in English through the rebus principle and the logographic, syllabic and alphabetic scripts representing the same words in Chinese, Japanese and German (Fig. 4.4). As was discussed, numerical notations like ‘7’ and ‘13’ do not need such phonetic specification, and in fact, phonography reduces their ability to represent spatial, topological and geometric relations, things essential to the pattern recognition and information manipulation that is mathematics. This quality means using numbers does not require knowing the associated language,

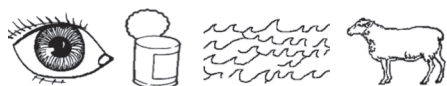
² Geometrical shapes as used in Mesopotamian writing were not unambiguous examples of meaning by instantiation. For example, *niġin*₂ was a circle that as a noun meant ‘total, sum; (the) whole, entirety’ (ePSD 2015) and as a verb meant ‘to encircle’ and ‘to go around’ (ePSD 2015; ETCSL 2006). In mathematical use, *nigin* meant ‘to make hold’ (Høyrup 2002, 45). As a written form, *niġin*₂ might be said to instantiate its meaning. However, it does not appear to have been used to mean *circle*, though its semantic range was related to one. Further, it can also be said to resemble: It meant *encircle* because it looked like a circle. Such signs also emerged later than the numerical impressions in question (e.g., the earliest attestations of *niġin*₂ are dated to the Uruk III period, 3200–3000 BC; CDLI 2015; ePSD 2015).

Semasiographic

$$2 + 2 = 4$$



Glottographic



我能看見你

あなたが見えます

Ich kann dich sehen

Fig. 4.4. Semasiographic and glottographic writing. While semasiographic notations (top) like numbers are developed in linguistic contexts – that is, the people making and inventing them undoubtedly speak a language (Hyman 2006) – these notations carry no phonetic clues to the actual words. Examples include numbers and musical notations. In contrast, glottographic forms (bottom) are tied to specific words in particular languages, like the words ‘I can see you’ in English (rebus writing), Chinese (logographic), Japanese (syllabic) and German (alphabetic). This requires the inclusion of clues to the sounds of the words, their phonographic component.

the difference between using Roman numerals and knowing their names in Latin. Words for numbers like ‘seven’ and ‘thirteen’, on the other hand, require both knowing the particular language and being able to read the associated script. Number-words do not have the same ability to preserve relations, make patterns accessible or manipulate information: consider the increased difficulty of performing addition on a vocabulary list instead of numerical notations, or trying to do algebra with narrative paragraphs instead of equations.

Numbers have a much longer material prehistory than their involvement with writing, as they can be represented and manipulated with devices like fingers, tallies and tokens (Overmann 2018). That is, numeracy, the ability to reason with numbers, does not require numbers be written. This contrasts with non-numerical language, where handwriting is an essential part of developing literacy: simply, if societies do not write by hand, they will not and cannot become literate. While numbers do not need to be written, handwritten notations arguably cause a dramatic change in numeracy. This is because of the neurological reorganisation that occurs when signs are handwritten, a phenomenon that includes signs for numbers. Handwriting numbers is associated with three distinct elaborational effects:

1. Numbers that are not written are collections, like seven fingers, seven notches on a tally or seven cone-shaped tokens. Numbers that are written become entities, recognised topologically through their features. This is true even if they are composed of discrete elements, like the three strokes of the Roman numeral III or the seven wedges in the cuneiform number 7.
2. Functionally, written numbers are concise to a degree other material forms of numbers are not. *Concision* let relations like multiplication and reciprocity be collected into tables, which scribes learned as part of their training. This data would redefine numbers through their relations to each other, making them entities in a relational system.
3. Written non-numerical language was critical to developing mathematics. As writing became more expressive, it was used to record calculations, not as results, as was true with earlier technologies like tokens, and not as equations, the more elaborated form we would use today. Instead, calculations were recorded as narrative descriptions, like the 2nd millennium area calculation on the Old Babylonian mathematical tablet known as BM 13901 (Høyrup 1993; 2002; 2010; 2013), an extract of which is shown in Figure 4.5. It would take another several millennia for such narrative descriptions to be refined as semasiographic forms like our plus and minus signs (Schulte 2015).

J'ai additionné la surface et (le côté de) mon carré: 45'. Tu poseras 1°, l'*unité*. Tu fractionneras en deux 1°: 30'. Tu multiplieras (entre eux) [30'] et 30': 15'. Tu ajouteras 15' à 45': 1°. 1° est le carré de 1°. 30', que tu as multiplié (avec lui-même), de 1° tu soustrairas: 30' est le (côté du) carré.

(Thureau-Dangin 1936, 31)

[I added the surface and (the side of) my square: 45'. You shall set 1°, the *unity*. You divide in two 1°: 30'. You multiply (them) [30'] and 30': 15'. You add 15' to 45': 1°. 1° is the square of 1°. 30', which you have multiplied (with itself), from 1° you subtract: 30' is the (side of) the square.]

(Høyrup 2002, 11)

Fig. 4.5. Old Babylonian mathematical tablet (BM 13901). Problem 1 from the obverse, column 1, lines 1-4 as (top) translated by Thureau-Dangin (1936, 31) and (bottom) put into equations by Høyrup (2002, 11); (middle) the English translation is by the author.

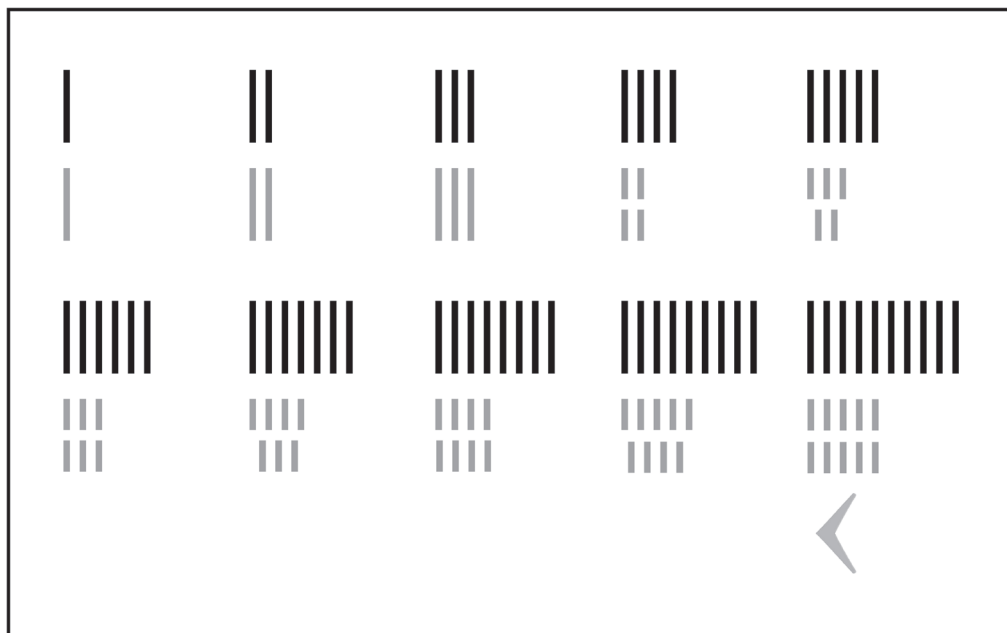


Fig. 4.6. Tally marks for the numbers one through ten. Unmodified marks appear in black, grouped or conventionalised ones in grey. One, two and three (top row, left) are subitisable and thus recognisable without modification. Four and higher fall within the range of magnitude appreciation, recognisable as bigger and smaller in groups (as for example, recognising without counting that the six to the far left in the middle row are fewer than the ten to the far right on the same row). As written notations, quantities higher than about four tend to be grouped in subitisable amounts (shown in grey below the unmodified notations). This strategy too encounters the limit on perceptual appreciation (as in the groups for seven and higher on the bottom row), necessitating the incorporation of strategies like bundling, as in the wedge that represents ten (bottom row, far right).

Numerical representations instantiate quantity and quantity is something humans perceive through an evolutionarily ancient ability, the number-sense we share with other species (Piazza and Izard 2009; Coolidge and Overmann 2012). Our perception of quantity means that we can recognise small quantities – one, two and three – without counting (Weber 1834; Fechner 1860; Dehaene 2003). And without counting, quantities larger than about four are just ‘many’, but in this range we appreciate bigger and smaller in groups, assuming the difference is above a threshold of noticeability. Respectively, these abilities are called *subitisation* and *magnitude appreciation*.

How our perceptual experience of quantity affects multielement numerical signs like those of cuneiform is shown with tally marks in Figure 4.6. The lowest, one to three, can be appreciated without counting because they are subitisable.

More than about four marks are difficult to appreciate because there are more than we can subitise. In this range, we appreciate differences in magnitude, like seeing that on the lower row, there are fewer to the left and more to the right. This perceptual experience influences numerical form. Groups with subitisable elements are appreciable, so their forms neither need nor undergo much alteration. Groups higher than the subitising range are rearranged as subitisable subgroups. As quantity continues to increase, these too become increasingly difficult to appreciate, so at some point – *ten* in cuneiform – they might be ‘bundled’ or grouped. In between subitising and bundling, subitisable subgroups remain under pressure to be counted, making it likely they will eventually simplify as forms that do not involve counting.

Signs for subitisable numbers tend to be highly conserved, because they instantiate quantity in the range that we can appreciate without counting (Fig. 4.7, top row). Large numbers like 7 (Fig. 4.7, middle row) are initially grouped as smaller, appreciable quantities, as was true of cuneiform. Over time, these become forms that avoid counting, like the Hindu–Arabic numeral 7; once this happens, such signs become increasingly subject to mechanisms that change written forms, like visual distinguishability and individuation. For both these categories, semasiography means that numbers can be – and often are – adopted across languages and cultures without phonetic or semantic adaptation. This limits the amount of change these written forms undergo in transmission across languages and cultures.

By comparison, writing for non-numerical language undergoes the most change. It is already under pressure to achieve greater semantic and phonetic specificity. When a system of writing is adapted to different languages, it initially does a poor job of representing at least some concepts and sounds, by an amount that varies with the affinities between cultures and languages. This keeps writing under pressure to specify concepts and sounds, including those of the adopting populations. This same pattern holds in Chinese (not shown; interested readers may consult Overmann 2021). Subitisable numbers change the least, large numbers by an intermediate amount and non-numerical words the most. This is despite the fact that transmission occurs across a relative homogeneity of language and culture. The form of the higher numbers additionally suggests they had been available for some time, long enough to become forms that did not require counting, before they appeared in the oracle bones.

When change in the material form of written numbers is considered and contrasted with change in writing for non-numerical language, the overall pattern that emerges is this: signs for numbers instantiate; so small numbers conserve, while large numbers simplify, and both are relatively insensitive to changes in languages and cultures. Signs for non-numerical language signify, so they must specify meanings and sounds, and this subjects them to the greatest amount of change, especially when they transmit across languages and cultures.






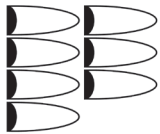









				
Archaic 3350 BCE	Cuneiform 1900 BCE	Brâhmî 450 BCE	Maghribi 875 CE	Modern 2000 CE
				
Archaic 3350 BCE	Cuneiform 1900 BCE	Brâhmî 450 BCE	Maghribi 875 CE	Modern 2000 CE
				
Archaic (Sumerian?) 3100 BCE	Cuneiform (Akkadian) 2000 BCE	Alphabet (Phoenician) 500 BCE	Alphabet (Greek) 750 BCE	Alphabet (Latin) 2000 CE

Fig. 4.7. Change in numerical and non-numerical signs. The signs shown are related, but as represented, the lineages are incomplete. Signs for numbers instantiate, placing them under distinct neurofunctional pressures influencing their forms and how these forms change as they are adopted across languages and cultures. Signs for subitisable numbers are under the least pressure, so their form is conserved to a high degree; signs for numbers above the subitising range are under pressure to simplify as forms that do not require counting, which subjects them to the processes and mechanisms of writing change. Non-numerical signs must incorporate phonography to reduce ambiguity about which words they intend; phonographic clues increase the visual complexity of these signs, subjecting them to the greatest amount of change in form as they transmit across languages and cultures. Data sourced and images redrawn from Tompack (1978); Nissen (1986); Ifrah (2000); Chrisomalis (2010); Papadoupoulos (2016), and the CDLI.

Concluding thoughts

Modelling how the material form of writing changed in original contexts and interpreting that change through the theories and methods of cognitive archaeology is a unique way to analyse writing systems, one with the potential to realise novel insights. As reviewed here, this type of analysis has shed new light on the question of how societies of average people were able to achieve a complex cultural system like literacy (also see Overmann 2016; 2017; 2019). This required them to sustain a particular behaviour with a specific material form (*writing*, as verb and noun respectively) over generations. Each

generation's engagement with writing changed their behaviours and psychological processing incrementally, enabling them to change the form of writing, however slightly. Change in the form of writing, in turn, accumulated and redistributed the incremental behavioural and psychological changes in the users. This iterative process would ultimately realise a material form and an associated cognitive state – script and literacy – that were well beyond what any one individual could have invented.

The model has the potential to generate further insights. Several ways in which it might be formalised and expanded were discussed. Some proposals would add depth, detail and rigour to the examination of how literacy emerges from the collective practice of writing. Another proposal for the model's expansion concerned the social use of tools and their collective effects. Work on this front is ongoing: for example, insights gained from analysing writing as a self-organising system were recently applied to lithic technologies as they are known in the archaeological record of some 2 million years ago as part of a multi-year collaboration on 4E cognition in the Lower Palaeolithic (Overmann 2020). Change in the material form of written numbers also seems particularly appropriate for this type of analysis and was accordingly discussed here at some length. The initial conclusion is that written representations for numbers and language experience distinct neurofunctional pressures that influence the forms they take, how these forms transmit across languages and cultures and how these forms change over time.

An approach wherein writing is treated as a material form tractable to the theories and methods of cognitive archaeology has the potential to illuminate the processes whereby complex cultural systems developed in ancient times. It can also give us insight into the co-evolution of cognition and culture more generally, in technologies and cognitive states beyond writing and literacy, and in time periods beyond the ancient world – including our own present and future.

Chapter 5

The materiality of the Cretan Hieroglyphic script: textile production-related referents to hieroglyphic signs on seals and sealings from Middle Bronze Age Crete¹

Marie-Louise Nosch and Agata Ulanowska

Introduction

The Middle Bronze Age in Crete (hereafter MBA, ca 2100/2050–1700/1675 BC, Manning 2010a, table 2.2), while continuing the traditions of the Early Bronze Age (EBA), witnessed several socio-economic, political and, presumably, technical developments that led to the establishment of the first centralised polities in and around the complexes that are conventionally termed palaces in Aegean archaeology (e.g., Hägg and Marinatos 1987; Driessen *et al.* 2002). The increasing socio-economic complexity and political centralisation resulted in an introduction of writing practices: the Cretan Hieroglyphic script in central and north-eastern Crete, and the Linear A script attested in central, northern and southern Crete, as well as beyond the island (e.g., Karnava 1999; Anastasiadou 2016; Steele 2017a).

Significant technical MBA developments encompassed textile manufacture, one of the key crafts in Bronze Age economies (e.g. Barber 1991; Tzachili 1997; Gillis and Nosch 2007; Burke 2010). The implementation and dissemination of the new technique of purple dyeing in MBA Crete (Burke 2010) should be seen in a relation to the increased importance of wool (Militello 2014; Nosch 2014a; 2015), a raw material with better capacities for fixing dyes than plant fibres (cf. Siennicka *et al.* 2018b, 4–5). In the MBA, discoidal loom weights invented in Crete in the EBA were transmitted to

¹ The complex relationship between textile production, seals, and sealing practices is the main topic of the research project entitled ‘Textiles and Seals. Relations between Textile Production and Seals and Sealing Practices in Bronze Age Greece’. The project is funded by the programme SONATA 13 of the National Science Centre in Poland, grant no. 2017/26/D/HS3/00145, and directed by A. Ulanowska in the Institute of Archaeology, University of Warsaw in 2018–2021, in a collaboration with M.-L. Nosch, O. Krzyszkowska and K. Żebrowska. We also thank C. Breniquet and A. Karnava for their insights and fruitful, and critical, discussions on this topic.

the wider southern Aegean, possibly together with weavers and with an entire warp-weighted loom technology (Cutler 2012; 2016; 2019; Gorogianni *et al.* 2015; Vakirtzi 2019). Finally, the scale of production presumably increased in size (*e.g.* Militello 2007; 2014) and in complexity, as is reflected in the diverse administrative practices related to textile making. Wool was weighed using a specific LANA weight unit (Nosch 2014a, 392–393; Alberti 2017, 4–5). Textile tools, especially loom weights, were occasionally incised with marks, impressed by seals, or even inscribed (Burke 2010; Karnava 2018; 2019; Ulanowska 2020a). Although the practices of weighing wool and marking textile tools were already in use in the EBA, in the MBA they became more frequent and related to writing. Wool and textiles were the subject of several MBA written documents, as suggested by the graphic forms of some signs in the Cretan Hieroglyphic and Linear A scripts, such as CHIC 041 and AB 54 (*cf.* Oren *et al.* 1996, 101–102; Militello 2007, 43; Burke 2010, 74; Del Frio *et al.* 2010, 349–351; Nosch 2012, 304–305) and their use in inscriptions (*e.g.*, the inscription CHIC #089b: 034–041–084/051–051–051–041 from Building B in Quartier Mu, Malia, *cf.* Younger 2005).

In this paper, the textile production-related iconography of MBA seals from Crete is our basis for investigating possible relationships between textile production and inscribed seals. We argue that real-world referents to the material culture of textile production developed into stylised and abbreviated motifs² frequently used in the imagery of MBA Cretan seals, specifically three- and four-sided prisms. Those real-world referents are detectable both in the representational motifs and in the graphic forms of some signs of the Cretan Hieroglyphic script.

The nature of the Cretan Hieroglyphic script and its signs

As mentioned above, two MBA scripts co-existed on the island, the Cretan Hieroglyphic and Linear A, both undeciphered to date. The writing system of Cretan Hieroglyphs probably evolved from a series of non-linguistic pictogrammatic images and symbols. Many Cretan Hieroglyphic signs bear resemblance to physical objects like plants, animals, tools and weapons, ships, or body parts. The Cretan Hieroglyphic script has 96 syllabograms, and ten of them also serve as logograms. There are 33 logograms and nine signs for fractions (*e.g.* CHIC; Karnava 1999; 2014). The inscriptions were incised, *e.g.* on clay nodules, ‘medallions’, *lames à deux faces* (two-sided clay strips), bars and vases, painted on pots, carved on seals and stone vases, and stamped using the inscribed seals (Karnava 1999).

The iconography of textile production in Aegean glyptic art – methodology and a series of potential textile production-related motifs

The iconography of Aegean seals has already proved to be an important source of knowledge for textile research. Numerous depictions of costumes and cloth offerings

² When we discuss depictions on seals, we use the general term ‘motif’. The term ‘real-world referent’ denotes here an element of material culture that is potentially rendered graphically as a Cretan Hieroglyphic script sign.

on seals supplement the iconographic evidence of Aegean clothing from wall paintings, figurines and pottery (e.g. Boloti 2009; 2017; Crowley 2012; 2013; Jones 2015; Shaw and Chapin 2016). Textile production, too, has been recognised iconographically in the motifs of loom weights (Burke 2010, 44–47; Ulanowska 2017), the warp weighted loom (Ulanowska 2016a), and depictions of fibre-yielding animals, i.e. sheep and goats (Burke 2010, 47). Possibly in this category should be considered moths, seen as potential producers of wild silk³ (Panagiotakopulu *et al.* 1997, 423–425). Spiders may constitute a symbolic reference to spinning and weaving (Burke 2010, 47; Ulanowska forthcoming).

More textile production-related motifs have been recognised within the ‘Textiles and Seals’ research project (Ulanowska 2020b; forthcoming). The inspiration and methodological foundation for the new readings of those motifs was provided by C. Breniquet and her original idea to recognise potential textile production-related motifs in the iconography of Mesopotamian seals (Breniquet 2008, 269–341; 2010, 57–63). Her use of the *chaîne opératoire* concept as a semantic framework for decoding textile production references in the imagery of Mesopotamian seals, is in this study further enhanced by specific knowledge of Aegean Bronze Age textile production (Barber 1991; Tzachili 1997; Burke 2010; Nosch and Laffineur 2012; Harlow *et al.* 2014; Andersson Strand and Nosch 2015; Siennicka *et al.* 2018a) and hands-on experience in textile making (e.g. Ulanowska 2016b). The present study is based on the assumption that a generalised knowledge of textile technology must have prevailed in BA societies and hence iconographic references to textile production would be commonly understandable (Ulanowska 2018b).

The preliminary identification of textile production-related motifs was assessed by internal and external criteria and comparisons. Internally, it was examined whether the following features could be detected in the graphic forms of the motifs:

- 1) The distinct physical resemblance of the real-world referent for a motif (e.g. shape of stem and leaves, presence of seed capsules in a flax motif, shape of horns, ears, tails, presence of fleece in a sheep motif; Fig. 5.1);
- 2) Highlighted features of functional importance (e.g. heddling and shed-changing mechanism of looms, presence of a whorl on a spindle, loom weights and bars, warps and heddles as parts of the warp-weighted loom; Fig. 5.2);
- 3) Specific human technical gestures, handling and postures (e.g. both hands engaged in spinning, a standing position in weaving on the warp-weighted loom, physical handling of textile tools; Ulanowska 2020b; forthcoming).

Two approaches were adopted to test and challenge the new identifications (Ulanowska 2020b; forthcoming). First, they were cross-checked with earlier identifications or previously adopted conventional terms used to describe these motifs in the scholarly literature (Table 5.1). Second and externally, possible iconographic

³ The silk moth motif is debated. Yet, since this motif seems to be present only in LBA glyptic, as suggested by the CMA Arachne database: ‘*Schmetterling*’ motif, <https://arachne.uni-koeln.de/arachne/index.php>, accessed on 27 December 2019, it is not discussed in this contribution.

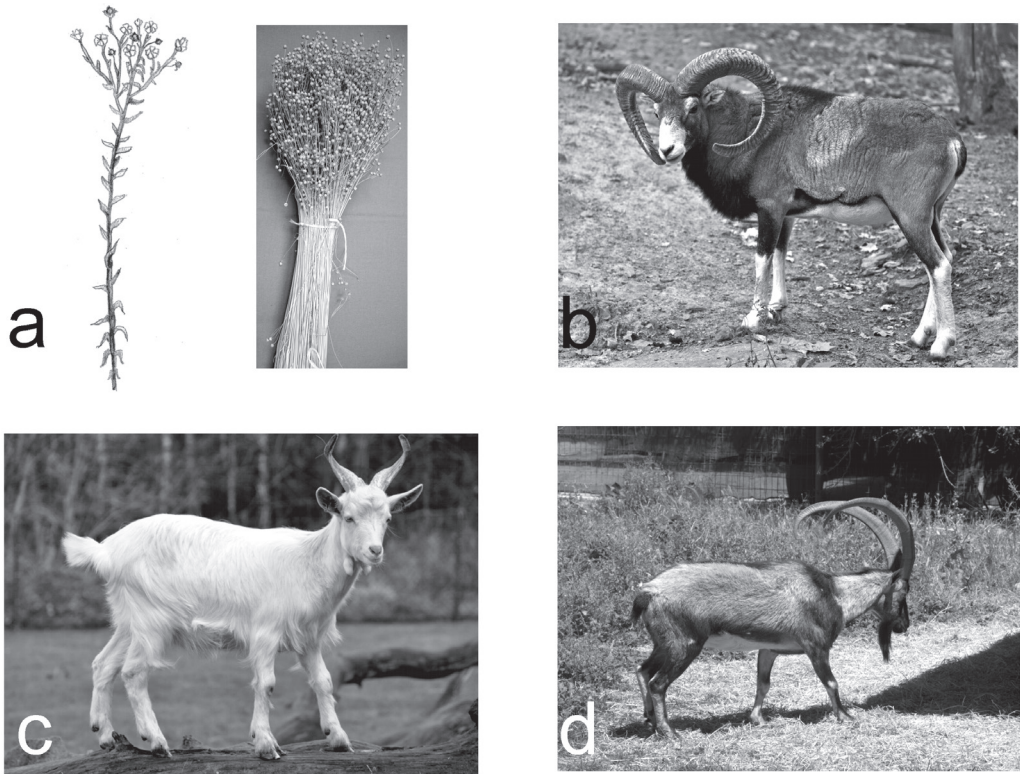


Fig. 5.1. a) Flax plant and dried stems with seed pods (photo and drawing by A. Ulanowska); b) *Ovis orientalis orientalis* (modified photo by Jörg Hempel, <https://www.flickr.com/photos/joerghempel/with/7136814325/>, accessed on 6th December 2019, CC BY-SA); c) *Capra aegagrus hircus* (modified photo by Quartl, https://commons.wikimedia.org/wiki/File:Capra_aegagrus_hircus_qtl6.jpg, accessed on 6 December 2019, CC BY-SA); d) *Capra aegagrus cretica* – *agrimi* (modified photo by C messier, https://commons.wikimedia.org/wiki/File:Κρι-κρι_Δημοτικός_Κήπος_Χανίων_8279.jpg, accessed on 6 December 2020, CC BY-SA).

comparanda were surveyed in other arts and cultures, with special focus on Mesopotamian glyptic art.

Finally, combinations of various textile production-related motifs on a single seal face, or their presence on more than one face of multi-faced seals are seen as a potential reinforcement of the hypothesis that textile production is indeed the theme that lies behind these combinations (Ulanowska 2020c).

As a note of caution, it should be stressed that several older identifications are, graphically and logically, no less reliable than the newly proposed ones; moreover, several of the new identifications remain tentative or not fully adhering to the described principles.

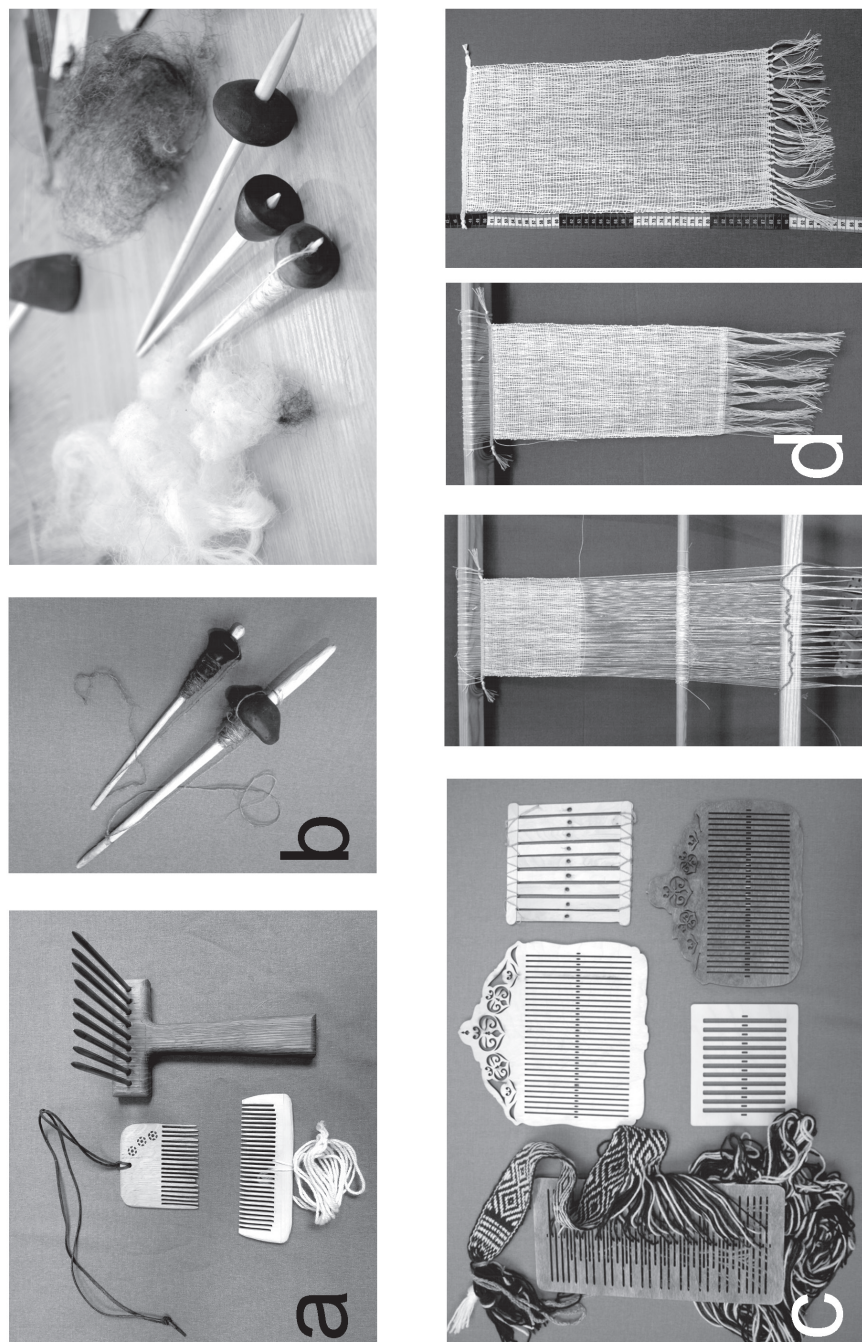


Fig. 5.2. Modern textile tools and fabric from a warp-weighted loom: a) combs for wool combing and weaving; b) spindles with linen and woollen spun yarns and bundles of woollen fibres; c) various forms of rigid heddles; d) a piece of a textile as taken from the warp-weighted loom (photos A. Ulanowska).

Eleven textile production-related motifs have been tentatively recognised in the imagery of MBA seals from Crete (Table 5.1, Figs 5.3–9, Ulanowska 2020b). According to the consecutive steps in the *chaîne opératoire*, they may be classified as follows:

- 1) references to raw materials: the flax plant and the ‘woolly animal’⁴ motifs;
- 2) references to processing of fibres: the comb motif;
- 3) references to purple dyes and purple dyeing: the murex shell motif;
- 4) references to production of yarns: the ‘spindle with whorl’ motif;
- 5) references to weaving and woven fabrics: loom weights, the warp-weighted loom, the ‘loom with a rigid heddle’, the ‘weft-beater’, the comb, textile with fringes motifs;
- 6) symbolic reference to textile production: the spider motif.

Textile production-related motifs appear predominantly or exclusively on MBA seals and sealings from Crete, primarily on three- and four-sided prisms (see Table 5.1). However, textile-related animal motifs, such as ‘woolly animals’, spiders and murex shells, are also found on seals dated to earlier and later periods.

Non-inscribed and ‘Hieroglyphic’ seals in MBA Crete

Prisms form the largest surviving group of MBA Cretan seals (Krzyszowska 2005, 92). The largest style sub-group within this class of seals, the Malia Steatite Group,⁵ currently includes ca 700 examples, of which three-sided prisms constitute ca 80% of the material (Anastasiadou 2011, 1, 63; 2016, 161–162). Prisms were produced and distributed in central and eastern Crete from ca MBA I to LBA IA, with a concentration in MBA II (e.g. Yule 1981, 66–69, 212–214; Poursat 1995; Krzyszowska 2005, 92–95; Anastasiadou 2011, 371). An important production centre of such objects, the so-called *Atelier des sceaux*, was recovered in the Quartier Mu, Malia and dated to MBA II (Detournay *et al.* 1980; Van Effenterre 1980, 543–578).

The geographical distribution of hieroglyphic seals is similar to that of steatite prisms and concentrates in central-north and eastern Crete, which also broadly corresponds to the distribution of the Cretan Hieroglyphic script (Krzyszowska 2005, 96; Anastasiadou 2016). With ca 154 surviving examples (Karnava 1999, 161; Krzyszowska 2012; 2017; cf. Anastasiadou 2016), hieroglyphic seals constitute ca 8% of all the evidence (Anastasiadou 2016, 162). There is a larger variety in forms of the hieroglyphic seals, especially within the Hieroglyphic Deposit Group, such as conoids, *Petschafte* (loop-handled seals with circular faces), rectangular plates, signets, but three- and four-sided prisms are again the most frequent forms among hieroglyphic seals (Karnava 1999, 165–173; Krzyszowska 2005, 96; Anastasiadou 2011, 66; 2016, 162, 165). The practice of producing multi-faced seals and inscribing them declined with the demise of the Hieroglyphic script, towards the end of the MBA (Karnava 1999, 1; Krzyszowska 2005, 98).

⁴ Tentative readings of problematic motifs are indicated by single inverted commas in their designations.

⁵ Steatite is the raw material of 95.4% of prisms, Anastasiadou 2011, 31.

Table 5.1. Textile production-related motifs on MBA seals in the 'Textiles and Seals' database, including real-world referents to Cretan Hieroglyphic signs (CH).

Motifs	General number of seals	MBA seals from Crete	CH sign according to CHIC	Number of seals with the motif used in CH inscription	Pre-existing identifications of the motif	Graphic homogeneity of the motif	Distinct characteristics of the real-world referents to the motif, features of functional importance, possible technical gestures
Flax	49 (2)	49 (2)	CHIC 031	48 (2)	Unspecific plant, 'plant with three branches', shamrock	Yes	High stem with narrow, lanceolate leaves (from 2–11), crowned by 3 twigs ended by small blobs or circles that resemble a bundle of seed pods.
'Woolly animals'	284 (204)	169 (137)	–	–	Goat, wild goat, agrimi, sheep, ram, bovine	No	Sheep: long spiral horns curved downwards, head in profile with a bump, short tail down, fleece occasionally shown at the neck and chest (e.g. CMS VI 177; 330; XII 136). Goats, wild goats and agrimia: small beards, slightly curved horns, possibly with ridges or fluting and growing out from one spot, short tails up. Goats: specific shape of goats' udders and teats (e.g. CMS II, 1 64c; II, 8 378).
The head of a 'woolly' animal in profile	56	49	CHIC 016	7		No	
Comb	41 (31)	40 (30)	–	5 (3)	Branch, saw branch	No	Elongated rectangular or slightly convex objects with teeth at one side. Depictions of a human figure holding such an object provided the basis for the identification of the motif (e.g. CMS II, 2 102a; 119a; VS1A 325a; VII 15a). Holding a comb with one hand and a standing position may allude to use of weaving combs. Sitting position may allude to wool combing.
'Spindle with whorl'	27 (9)	25 (8)	CHIC 050 CHIC 062 CHIC 063	CHIC 063 and 'Doppelspitzpunkt': 11 Others: 5 (4)	Lance or dart, peg, mace or sceptre, spear; 'Doppelspitzpunkt', 'circle with outgoing element',	Yes for CHIC 063 and 'Doppelspitzpunkt'	An elongated shaft with sharp ends and a whorl-like circular element in the middle or at one end of the shaft. An additional blob as possible skeins of fibres prepared for spinning, e.g. CMS II, 2 268a, IV 136a (CHIC #305a; #234).

(Continued)

Table 5.1. Textile production-related motifs on MBA seals in the 'Textiles and Seals' database, including real-world referents to Cretan Hieroglyphic signs (CH). (Continued)

Motifs	General number of seals	MBA seals from Crete	CH sign according to CHIC	Number of seals with the motif used in CH inscription	Pre-existing identifications of the motif	Graphic homogeneity of the motif	Distinct characteristics of the real-world referents to the motif, features of functional importance, possible technical gestures
Murex shell	7 (3)	5 (3)	-	1	'dot with ongoing element', 'pin with a circle in the middle', 'pin with a circle on the top'	No	An identification of the motif is based on a depiction from CMS II,8 86 (CHIC #141) where narrow crescents resemble loops of spun thread. Five depictions of human figure holding a spear head downwards are identified as a possible 'spindle with spinner' motif.
Loom weights	80 (5)	80 (5)	-	(1)	Triton shell, murex shell 'Stange mit Gefäßen', 'String vessels', 'pole slung with string vessels'	Yes	Sculptured shell with body whorls and spines The schematic form of loom weights bears resemblance to different types of actual loom weights used on Crete. A combination with bar(s) or parallel lines may allude to a shed bar, heddle bar, warp threads and heddles. The manner of showing a loom weight with a V-shape above it resembles the visual effect of warp threads tensioned and hanging over a shed bar. In combinations with a human figure, the posture of a standing 'weaver' who holds the bar with loom weights corresponds approximately to the working position in weaving on the warp-weighted loom and action of the shed.
Warp-weighted loom	3 (1)	3 (1)	-	-	Chess board with conical pawns, a ladder with three steps, ending in two points recalling a lyre, or two dumbbell motifs.	No	The schematic form of the warp-weighted loom approximately resembles the general construction of the loom: a rectangular frame with loom weights. A heddling mechanism is possibly rendered on CMS II,2 288b.

(Continued)

Table 5.1. (Continued)

Motifs	General number of seals	MBA seals from Crete	CH sign according to CHIC	Number of seals with the motif used in CH inscription	Pre-existing identifications of the motif	Graphic homogeneity of the motif	Distinct characteristics of the real-world referents to the motif, features of functional importance, possible technical gestures
'Loom with a rigid heddle'	(56)	(56)	CHIC 038	(53)	Gate, fence, ladder	No	Its form resembles a loom with a rigid heddle. One of its sides may be shown longer which brings to mind a handle. The slats are shown both parallel and perpendicularly to this potential handle.
'weft-beater'	(6)	(6)		-	Dagger, wedge	No	The schematic forms of a sword or dagger, and elongated pointed wedge or a slightly curved rod bear resemblance to bone or wooden tools used as weft-beaters.
Textile with fringes	9	9	CHIC 041	9	Palace, banner sign, textile	Yes	An elongated rectangle that ends on one shorter side by a series of short parallel lines resembles a piece of textile taken off the loom, with a border finished by fringes. This, in turn, suggest the warp-weighted loom technology. The graphic filling of the rectangle differs.
Spider	108 (10)	80 (8)	-	1	Spider	No	All spiders have eight conjoined legs and a body divided into two segments: a cephalothorax with jaws, and an abdomen with one to four pairs of spinnerets. The depictions of spiders in glyptic art are very simplified. Two body segments are usually present. The legs are shown conjoined, yet the number of legs may vary. The jaws and spinnerets may occasionally be depicted.

The number of motifs included with an uncertain identification is given in brackets, e.g. '48 (2)' means that there are recorded 48 seals with a flax motif depicted at least once on one of the seal faces, including two examples with uncertain identification. After Evans 1909; 1952; CMS; CHIC; Jasink 2009; Anastasiadou 2011; DBAS - CHS Cretan Hieroglyphic: <https://www.sagas.unifi.it/vp-394-dbas-chs-cretan-hieroglyphic-seals.html>, accessed 19 March 2019.

On three-sided steatite prisms, inscriptions are usually present on one or, more rarely, two faces (the remaining faces bear decorative or pictorial motifs), while seals made from harder stone were often inscribed on all faces (Karnava 1999, 192–194; Krzyszkowska 2005, 96; Anastasiadou 2011, 66–67; 2016, 162–163). The inscriptions themselves could be supplemented by decorative elements/motifs that have been considered as filling elements without the value of script signs (CHIC; Karnava 1999, 173–190; Krzyszkowska 2005, 96; cf. Jasink 2009; Decorte 2017).

The imagery of non-inscribed prisms bearing decorative and pictorial motifs was originally regarded as an early form of writing that preceded the Cretan Hieroglyphic script (Evans 1909; cf. Krzyszkowska 2005, 93; Anastasiadou 2011, 2–4). However, the simultaneous presence and sphragistic use of both hieroglyphic and non-inscribed seals in Quartier Mu and the *Atelier des sceaux*, suggests a co-existence of both groups and points rather to two different functions, meanings or uses of non-inscribed and inscribed seals, respectively (cf. Poursat 1989; Krzyszkowska 2005, 93). Recurrent combinations of motifs on non-inscribed seals suggests that motifs ‘were chosen from a fixed repertoire and employed more as signs of some sort than as narrative media’ (Anastasiadou 2016, 162). Therefore, combinations of motifs on prisms create the impression that the seal faces may have conveyed or imitated messages, analogously to the inscribed seals (Anastasiadou 2011, 373–374).

Textile production-related referents on seals inscribed in the Cretan Hieroglyphic script

The examination of textile production-related referents on the inscribed seals will be conducted according to the consecutive steps in the *chaîne opératoire* of textile making. It starts with potential referents to raw materials (representations of flax and heads in profile of ‘woolly animals’), through the procurement of fibres and yarns (comb, ‘spindle with whorl’), purple dyeing (murex shell), weaving (‘loom with a rigid heddle’), to finished products (textile with fringes motif), and ends with a symbolic reference to the entire *chaîne opératoire* of textile production represented by a spider. For each individual real-world referent and each motif, a short introduction is given to its potential use or role in textile production in MBA Crete or, more widely, in Bronze Age Greece (cf. Ulanowska 2020b). It should be noted that in our discussion on textile production-related motifs and real-world referents to the hieroglyphic signs, we exclusively focus on their iconographic appearance, with no attempt to interpret the role of the signs or filling motifs in the writing system.

We are using the ‘Textiles and Seals’ database as the infrastructure for our research. It is designed to facilitate identifying potential cross-references between the different types of data/evidence investigated by the ‘Textiles and Seals’ research project, such as seal-impressed textile tools, textile production-related imagery of seals, and impressions

of threads and textiles on the casts of the undersides of clay sealings.⁶ As regards textile production-related iconography, the ‘Textiles and Seals’ database collects published evidence from the CMS⁷ Arachne database, CHIC, Anastasiadou’s monograph on the three-sided steatite prisms (2011) and recent seal discoveries from Petras (Krzyszowska 2012; 2017). In the following discussion, the numbers of seals bearing individual motifs or referents are given according to the ‘Textiles and Seals’ database.

Flax

Flax and wool were the main raw materials in textile production in Bronze Age Greece, representing different, yet largely complementary properties of fibres of vegetal and animal origin (cf. Ulanowska 2020d). Exploitation of flax was older and is documented already in early Neolithic Knossos (Sarpaki 2009, 226; Livarda and Kotzamani 2013, 20). The extensive use of flax in Bronze Age Greece is attested by excavated textiles (Spantidaki and Moulherat 2012; Skals *et al.* 2015), textile iconography (*e.g.* Jones 2015), Linear B tablets (Del Freo *et al.* 2010; Nosch 2017), as well as by the remains of a large flax processing site at Kontopigado Alimos in Attica, dated towards the end of the LBA (Kaza-Papageorghiou 2011; Kardamaki 2012–13, 54–55). Compared to the procurement of animal fibres, the cultivation and exploitation of flax required richer soil, higher labour intensity, more specialised knowledge, including practical knowledge of biochemistry, and higher economic risks of failure (cf. McCorrison 1997, 524; Andersson Strand 2012; Becker *et al.* 2016; Bender Jørgensen and Rast-Eicher 2018; Ulanowska 2020d).

The flax plant is characterised by a long stem with slender, lanceolate lateral leaves. The stem ends in branches with small blue flowers that later produce golden seed pods (Fig. 5.1). The stem provides fibre for textiles, and the seeds were used for sowing and for linseed oil production. Stems and seed capsules are the main graphic features that may refer to the multiple uses of flax plants. In the MBA glyptic, a single stem with three branches that occasionally end in circles or dots, sometimes rendered with a series of narrow leaves on the stem, provide the basis for identifying this motif/referent as the flax plant (Fig. 5.3).

Flax is suggested as the real-world referent for sign CHIC 031 and as such it is attested on 48 inscribed seals in the ‘Textiles and Seals’ database (Table 5.1). The motif’s occurrence is, however, higher, and amounts to 68 individual depictions. The flax referent is sometimes duplicated on a single seal face and used as an ornament or ornamental filling as *e.g.*, on a non-inscribed face of the four-sided hieroglyphic

⁶ We thank the Digital Competence Centre of the University of Warsaw team: Piotr Kasprzyk, Dominik Purchala and Ewa Serafin-Pursator, for constructing the database and their further collaboration in adjusting the records, keywords and search engines. The database was constructed using free and open source software (Python and Django framework, PostgreSQL database, Bootstrap visualization interface) and is stored online with an aim of giving public access at the end of the project in 2021. The open access to the module with textile production-related iconography is planned in March 2021.

⁷ CMS = *Corpus der minoischen und mykenischen Siegel*.

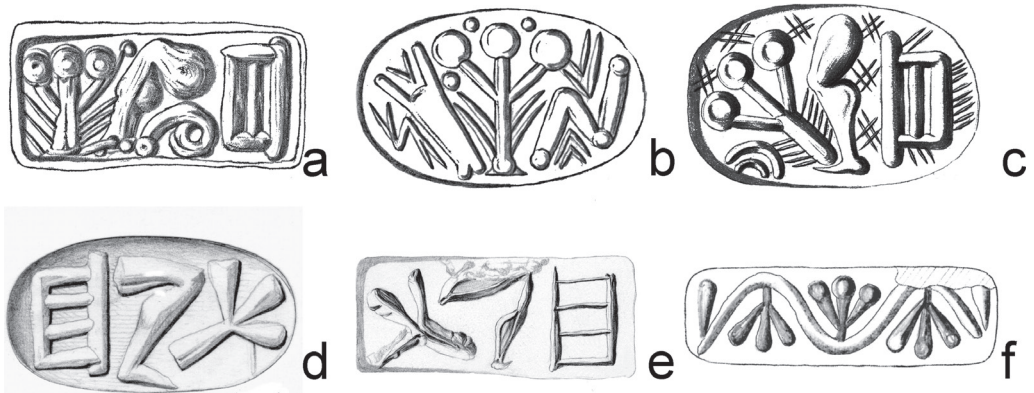


Fig. 5.3. Flax real-world referent/motif on MBA seals from Crete: a) CMS VII 40b/CHIC #299δ; b) X 312c/#273β; c) XII 105b/#254α; d) II,2 259a/#248α; e) XII 70d/#284β; f) III 237a/#280). Drawings, not to scale, enhanced after the CMS Arachne database, courtesy of D. Panagiotopoulos and the CMS Archive in Heidelberg, all rights reserved.

prism CMS III 237a (CHIC #280), or on the three-sided prism CMS III 227a–c (CHIC #242), where the flax referent appears on all three seal faces (Fig. 5.3, f).

Although the depictions may vary in details, the general graphic form of the flax referent/motif displays a considerable graphic homogeneity. The most detailed depictions render a long stem with narrow lateral leaves ranging in number from two to 11 and three top branches with dots and circles occasionally supplemented by additional dots, *e.g.*, CMS VII 40b (CHIC #299δ), X 312c (#273β), XII 105b (#254α), XII D10b (#263β, fig. 5.3, a–c). In its most simple form, only the stem with three branches is depicted, *e.g.*, CMS II,2 259a (CHIC #248α), VI Add.2b, XII 70d (#284β, fig. 5.3d–e). CHIC 031 frequently forms part of a longer formula or sign-group⁸ comprised of CHIC 038–010–031 which is attested on 23 seals in the ‘Textiles and Seals’ database (cf. Fig. 5.3, a, c–e), it seems therefore that its simple forms may also be recognised as a referent to flax.

The pre-existing names for this referent/motif indicate its similarities to plants, but without identifying a species, *e.g.*, ‘végétaux’ (CHIC, 15) ‘plant with three branches/“psi” sign’ (Jasink 2009, 75–77), ‘plant with three shoots’ (DBAS–CHS database),⁹ or denote it by a conventionally used plant name referring to plants with tripartite features, *e.g.*, ‘shamrock b and c’ (Anastasiadou 2011, 253, pl. 68).

In ancient Egyptian art, flax plants are shown in scenes of harvesting, rippling (*i.e.* removing seeds from the stems) and retting, beating and scutching the stems (Vogelsang-Eastwood 1992, 2–3, 7–12). The plants are abbreviated into a series of long

⁸ For definition of the term ‘formula’ with regard to the Cretan Hieroglyphic scripts, see Karnava (1999, 195–201).

⁹ http://www.aegean-museum.it/dbas/pub/CMpro/chs/res_icon.php?step=1&ID_Icon=51, accessed on 3 January 2020.

parallel lines, occasionally ending in single seedpods. Stems can be exaggerated in height in comparison to the scale of human figures. No branches are rendered, but occasionally narrow leaves are shown on the stems (Granger-Taylor 2003). Possible flax depictions on Mesopotamian seals and the *stelae* and vase from Uruk, dated to the third millennium BC, constitute a closer graphic analogy, showing plants reduced to stems with three branches ending in dots (Breniquet 2008, 272–274, figs 70.1, 70.4, 90.1). From third century BC Kafizin, Cyprus, are inscriptions about a flax and linseed company, *koinonia*, and the flax plants are illustrated: they are quite low and bushy, with many branches and dots representing the seeds. Clearly, these drawings represent flax plants used for oil and seed production, while flax for textile fibre would ideally have fewer side branches. Graphically, the artist emphasised stems, branches and seed pods (Nosch 2014b, 24–30).

Head in profile of a ‘woolly animal’

As demonstrated by the Linear B documents, wool was a raw material exploited systematically in LBA Greece (Nosch 2014a; 2015; Killen 2015). The appearance of woolly sheep, that is, sheep with longer, softer and spinable fibres, is dated in Crete to the third millennium BC (*e.g.* Benecke 1994, 137–138; Militello 2014; Becker *et al.* 2016, 109). Although the scale of exploitation of wool in MBA Crete is unknown, the above-mentioned practices of wool weighing, as well as a spread of the purple-dyeing technique in this period (Brogan *et al.* 2012) suggest the growing economic importance of wool as a textile fibre. Wool could be also obtained from goats, and goat hair has been identified in fragments of a LBA ribbon recovered in Chania (Möller-Wiering 2006; Moulhérat and Spantidaki 2009; Spantidaki and Moulhérat 2012, 189).

The ‘woolly animal’ motif comprises depictions of fibre yielding animals: sheep and goat, as well as other species of the *Caprinae* family, *i.e.* wild goats and feral goats – *agrimia* (Table 5.1; Fig. 5.1, b–d). The identification of specific *Caprinae* species in glyptic imagery is particularly difficult (*cf.* Vila and Helmer 2014, 30–34 for the iconography of sheep in the Orient). Provisionally, characteristic features of a BA sheep, such as long spiral horns curved downwards, a short tail turned down, the head in profile with a bump, perhaps a mane, and occasionally long fleece shown at the neck or chest of the animal can be observed (*cf.* Fig. 5.1, b). Other features, such as small beards, slightly curved horns with ridges or fluting that grow out from one spot, and short tails turned upwards may characterise goats, both domesticated, feral and wild goats (Fig. 5.1, b–d). Females of the domesticated goat, *Capra hircus* may be characterised by the specific shape of their udders and teats, occasionally rendered on seals, *e.g.* CMS II,1 64c, II,8 378.¹⁰ However, depictions of a ‘woolly animal’ are mostly very schematic, especially on three-sided steatite prisms (*cf.* Anastasiadou 2011) and potential characteristic features may not be recognisable. Moreover, a clear distinction between

¹⁰ We thank Anna Gręzak, archaeologist from the Institute of Archaeology, University of Warsaw, for describing the characteristic features of the different species of the *Caprinae*.

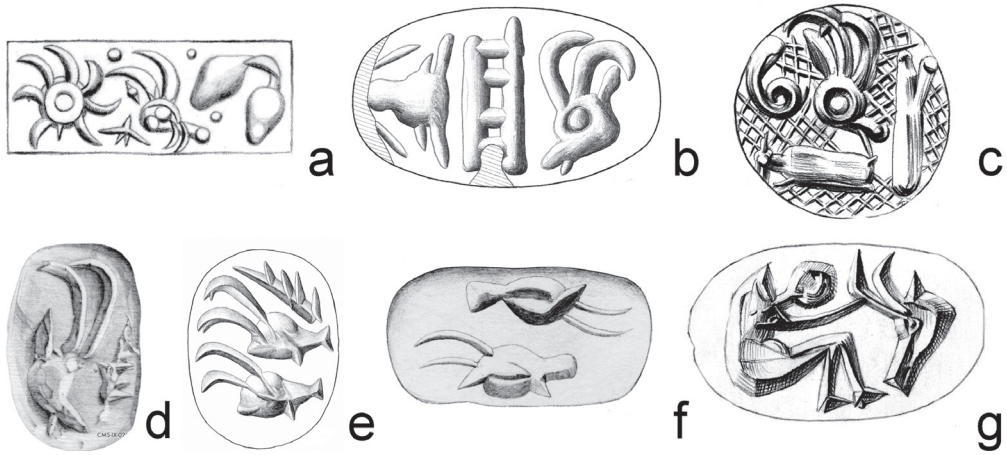


Fig. 5.4. Head in profile of a 'woolly animal' referent/motif: a) CMS IS 73b/CHIC #290δ; b) II, 6 187/#148; c) VI 124/#193; d) IX 20a; e) III 164c; f) II,2 85b; g) VI 36b. Drawings, not to scale, enhanced after the CMS Arachne database, courtesy of D. Panagiotopoulos and the CMS Archive in Heidelberg, all rights reserved.

species of the *Caprinae* and *Bovinae* families on seals may also be difficult or impossible (cf. *Rind oder Ziege* (bovine or goat) motif in the CMS Arachne).

The head of a 'woolly animal' in profile has been recognised as the real-world referent for CHIC 016. In CHIC, it is categorised within the very general group of '*mammifères et parties du corps de mammifères*' (mammals or body parts of the mammals; CHIC, 15, 328–329, 391–392). In *Scripta Minoa* (Evans 1909) and the DBAS – CHS database, it is termed 'goat head' (cf. Jasink 2009, 121). In the 'Textiles and Seals' database, the head of a 'woolly animal' in profile is attested on 49 MBA seals, including seven hieroglyphic seals (Fig. 5.4).

The individual signs of CHIC 016 differ graphically: they can be very schematic and reduced to just a head with horns (e.g. CHIC #294δ), or they can be more detailed, as e.g. on CMS IS 73b (CHIC #290δ), II,6 187 (#148), IV 136a (#305α); P.TSK05/291 (Krzyszowska 2012, 152–153, fig. 7b), with wide curves of horns, their eyes, ears and possibly beards rendered (Figs 5.4. a–c, 5.6, f). The heads of 'woolly animals' in profile that are not considered script signs are shown in a very similar manner (Fig. 5.4, d–g). They are depicted singly, as e.g. on CMS IV 125a, IX 20a, multiplied – II,2 125c, III 164c, multiplied and rotated – II,2 85b, in relation to a human figure – VI 36b, or together with the spider motif – VI 56b.

Sheep and goats were a frequent theme in Mesopotamian art, including glyptic, and depictions of caprines were also attested in Egypt (e.g. Barber 1991, 25, fig. 1.7; Vila and Helmer 2014, 31, 33, fig. 2.12). According to E. Vila and D. Helmer, the oldest Mesopotamian depictions, dated to the Uruk period, show hairy sheep with long spiral horns that spread out horizontally. Another type, with horns curved downwards

depicted on cylinder seals from Uruk-Warka in the EBA and MBA could also be shown with a fleece (Vila and Helmer 2014, 30–34).

Comb

In textile making, combs were used in two operational steps: for combing fibres, specifically wool, in order to prepare them for spinning, and for beating weft threads in weaving (cf. Fig. 5.2, a). Combs used for wool combing might have had longer teeth, while those used as weaving combs might have been broader and had shorter and more widely spaced teeth (Andersson Strand 2012, 31, 37; 2015, 43, 52). Since combs were made of organic materials, e.g. wood or bone, they are rarely preserved in the archaeological record. In Crete, a rectangular ivory hair comb with very closely-spaced teeth has been found in the Mycenaean Grave Enclosure at the cemetery at Phourni, Archanes (Sakellarakis and Sapouna-Sakellarakis 2002, 67–71, fig. 45).

Depictions of a human figure holding a comb-like object in one, both, or each hand provided the basis for identifying a comb motif in glyptic (Fig. 5.5, a–d). They are shown as elongated rectangular objects, indented on one of the longer sides, e.g. CMS II,2 102a, II,2 119a, and sometimes slightly curved inwards at the non-indented side, e.g. CMS VS1A 325a, VII 15a. There is little graphical homogeneity in rendering this motif – combs may be shown longer, shorter, thicker and thinner, their teeth are short or long. The rectangular comb in combination with a human figure can alternatively be interpreted as a part of the warp-weighted loom: a bar with warp threads/heddles, depicted analogously as a bar with warp-threads in combination with a loom weights motif (cf. Ulanowska forthcoming). However, on the prism cat. no. 597a (Fig. 5.5, d; Anastasiadou 2011, 661–662), a rectangular comb was shown together with the ‘weaver’ with loom weights motif, but placed in front of the loom weights, whereas in the loom weights motif, the additional bar with warp threads is always placed above the bar with loom weights. In combinations with human figures, the latter are shown standing, striding or sitting, which presumably corresponds, in an abbreviated form, to the standing position when weaving, and the sitting position when combing wool. The comb is always held or touched from the non-indented side, which may give further support for its utility as a tool.

In pre-existing identifications, this motif combined with a human figure is termed an *undefinierbar* (indefinable) tool (CMS Arachne database) or a ‘saw branch’ (Anastasiadou 2011, 257–258, pls 75–78). Anastasiadou’s ‘saw branch’ motif is a broad category that comprises 148 examples resembling plants and, possibly, objects (2011, 258). It is usually combined with other motifs, including depictions of ‘woolly animals’ (cf. Fig. 5.4, e). It would be tempting to consider the latter combination as another possible reference to textile production, but the many graphical variations of the comb/‘saw branch’ motif make its universal identification as a textile tool unlikely. In the CMS Arachne database, this motif is termed fir branch *Tannenzweig einseitig* (at one side) or, yet more generally, *Zweig* (branch). According to Jasink, a combination

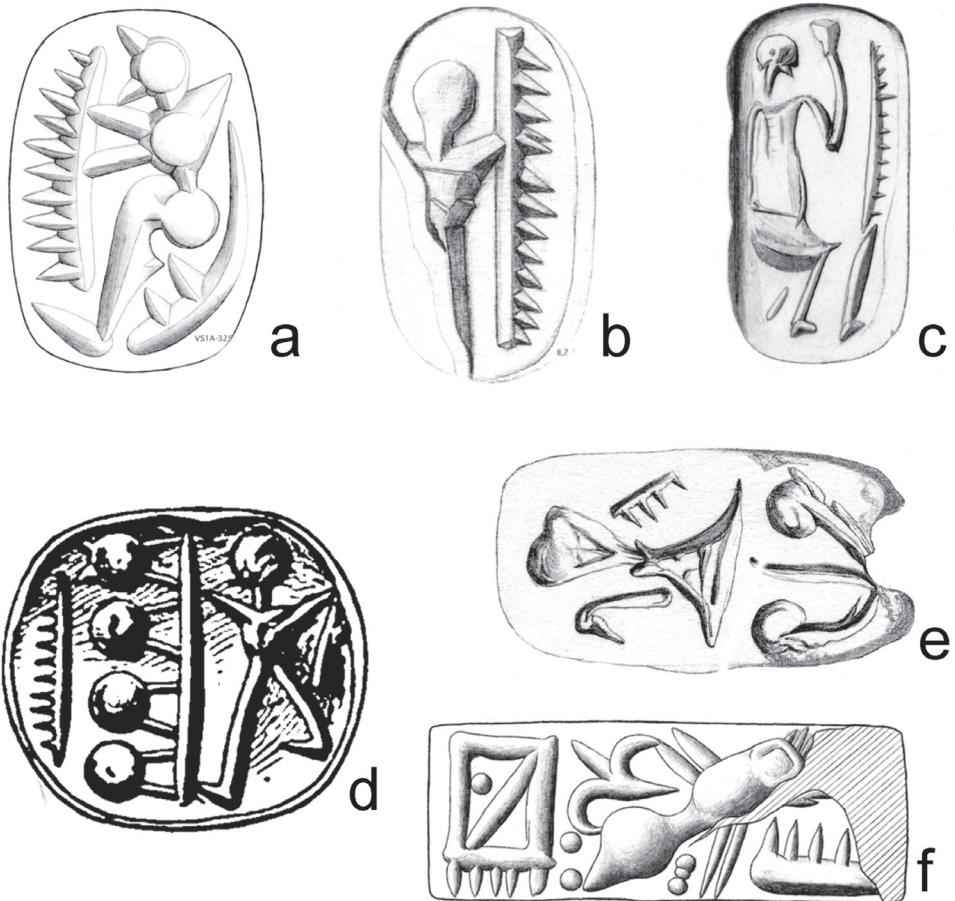


Fig. 5.5. Comb motif: a) CMS VS1A 325a; b) VII 15a; c) II,2 304c; d) Anastasiadou 2011, cat. no. 597a (661–662); e) XII 83c/CHIC#223γ; f) II,8 62/#160. Drawings, not to scale, enhanced after the CMS Arachne database, courtesy of D. Panagiotopoulos and the CMS Archive in Heidelberg, all rights reserved.

of two branches shown parallelly, *e.g.*, as on CMS VI 87c, can bear some ‘ideographic value’, graphically recalling CHIC 068 (2009, 100–101, 133).

Given the variety with which the comb/‘saw branch’ motif was depicted, a ‘safe’ identification of a comb in the ‘Textiles and Seals’ database is currently limited to the combinations of this motif with people and a depiction on the impression of a hieroglyphic seal CMS II,8 62 (CHIC #160, *cf.* Table 5.1, Fig. 5.5, f). Here, a clearly rendered rectangular shape and long teeth bear close resemblance to a real comb. Another possible appearance of a comb on a hieroglyphic seal comes from CMS XII 083c (CHIC #223γ, Fig. 5.5, d). In neither inscription is the comb motif considered a script sign.

No comparable depictions of a comb as a textile tool have been identified so far.

‘Spindle with whorl’

Spinning was one of the most time- and labour-consuming steps in the *chaîne opératoire* of textile production. In Bronze Age Greece, yarns were spun using a spindle with a spindle whorl placed on the lower part of the shaft. Spinning could be performed sitting, standing or even walking, always with both hands engaged –for drawing fibres and rotating the spindle. Fibres prepared for spinning can be kept in one hand in a bundle, or stored on a distaff. The main archaeological evidence for spinning comprises spindle whorls of various round forms, weights and sizes that corresponded to their expediency for producing yarns of specific qualities (e.g. Olofsson *et al.* 2015). Among the spindle whorls from Crete, conical, biconical, spherical, discoidal and cylindrical forms are attested (Andersson Strand and Nosch 2015).

The basis for identifying a spindle with a whorl as a real-world referent for CHIC 063 is provided by a depiction on sealing CMS II,8 86 (CHIC #141). The elongated form of a potential shaft with a whorl-like object, and a thread-like loop effect of a series of narrow crescents bear visual resemblance to an actual spindle with whorl and a cop of spun yarn (Fig. 5.6, a, cf. Fig. 5.2, b).

Similar objects in the form of an elongated rod with sharp ends and a dot in the middle or at the lower end of the rod, but without thread-like features, are present in other inscriptions, but are not considered script signs in CHIC, e.g., CMS II,2 230c (CHIC #229α), II,2 315c (#291γ), III 228b and c (#269β and γ), occasionally multiplied, e.g., XII 112a (#287α). The ‘spindle with whorl’ motif/referent can also appear on the faces of non-inscribed seals, e.g. CMS II,2 150a, XII 92b (Fig. 5.6, d, Table 5.1).

Sign CHIC 062 has similar visual features, but a dot or blob is always placed at the end of the elongated rod (CHIC, 415). On CMS IV 136a (CHIC #305α), this sign is combined with a smaller blob that resembles a bundle of fibres prepared for spinning. A similar combination of a spindle with a whorl-like object and a fibre bundle-like object is also visible on CMS II,2 168a (CHIC #234α; Fig. 5.6, e–f, cf. Fig. 5.2, b). In CHIC, it is read 017–050, where 017 stands for an animal head, and 050 for the elongated object itself. Indeed, also other graphic forms of CHIC 050 bear some resemblance to a potential ‘spindle with whorl’, e.g., CHIC #294β. By accepting a preliminary association between the graphic form of some CHIC 050 signs and a spindle, a few depictions of a human figure with a ‘spear’, shown with a spear head pointing downwards, as on CMS II,2 302a, 304c, 306c, 309a, XII 46c (Figs 5.5, c, 5.6, g–h), can tentatively be suggested as potential depictions of ‘spinners with spindles’.

Within the pre-existing identifications, CHIC 050 is always related to weapons, being termed a ‘lance or dart’ (Evans 1909, 186), ‘armes’ (CHIC, 16), ‘spear’ (Anastasiadou 2011, 232, pls 56–57; DBAS–CHS). Signs 062 and 063 are classified in CHIC as geometric (*signes géométriques*). Evans (1909, 190) interpreted what is now 062 as a peg, mace or sceptre. Jasink describes CHIC 062 and 063 more neutrally, calling it a ‘pin (nail/peg)’ and ‘pin with a dot in a middle’, respectively (89–92), but she also discusses similar forms that were not considered script signs, naming them ‘dots with ongoing elements’ variants a, b and c (Jasink 2009, 26–30).

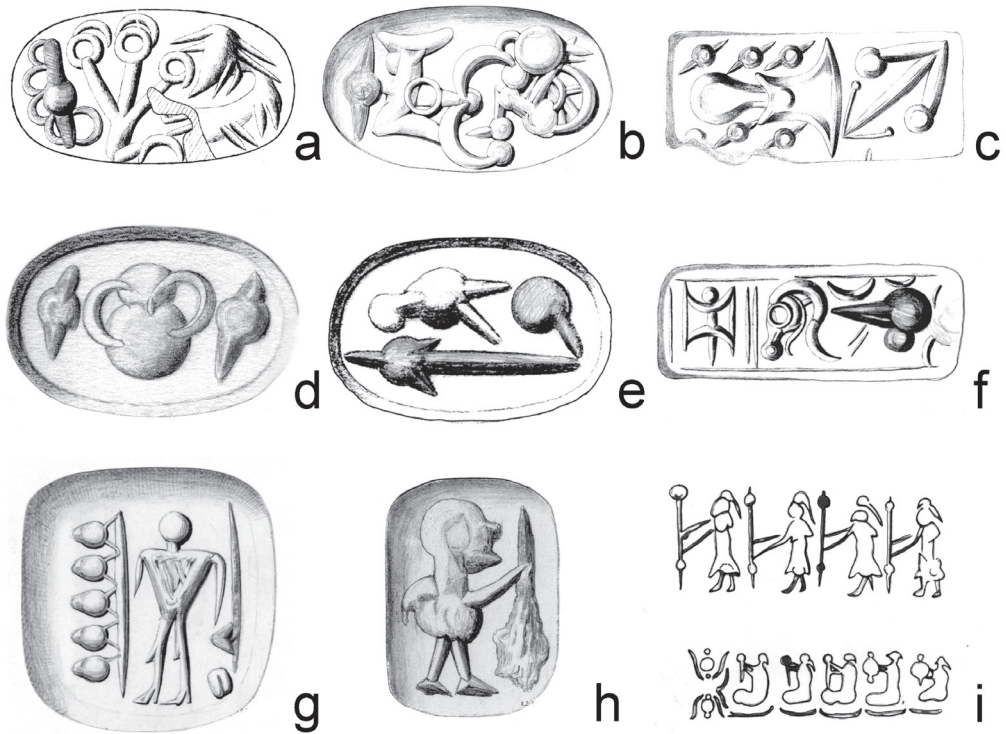


Fig. 5.6. ‘Spindle with whorl’ real referent/motif (marked in a darker shade). Drawings of Cretan seals, not to scale, enhanced after the CMS Arachne database, courtesy of D. Panagiotopoulos and the CMS Archive in Heidelberg, all rights reserved: a) CMS II,8 86/CHIC #141; b) II,2 230c/#229α; c) XII 112a/#287α; d) CMS II,2 150α; e) II, 2 168a/#234α; f) IV 136a/#305α; g) II,2 306c; h) II,2 309a; i) spinning on Mesopotamian seals: from the top a seal from Djemdet Nasr, a seal from Susa, after Breniquet (2008, figs 78.1, 79.1).

In the Bronze Age, spinning scenes are well attested in Egyptian wall paintings and tomb models, and, again, in the Mesopotamian glyptic (cf. Fig. 5.6, i). The Egyptian techniques of producing yarn were different from spinning in a drop-spindle technique, but a possible analogy to the specific shape of a cop of fibres, visually resembling a spear head pointing down, may be found in a wall painting from the Tomb of Khnumhope (Vogelsang-Eastwood 1992, 13–22, fig. 30). In Mesopotamian glyptic art, in the spinning scenes recognised by Breniquet, spinners (usually female) are shown striding or sitting (Breniquet 2008, fig. 5.11). In these simplified depictions, two hands on a spindle may represent a technical gesture when spinning, but spindles could also be shown held with one hand only (Breniquet 2008, 286–290, figs 78–90).

Murex shell

The evidence for a purple-dye industry is attested in Crete as early as MBA I–II or perhaps even in EBA III (Burke 2010, 36–37; Brogan *et al.* 2012, 187). Due to this early

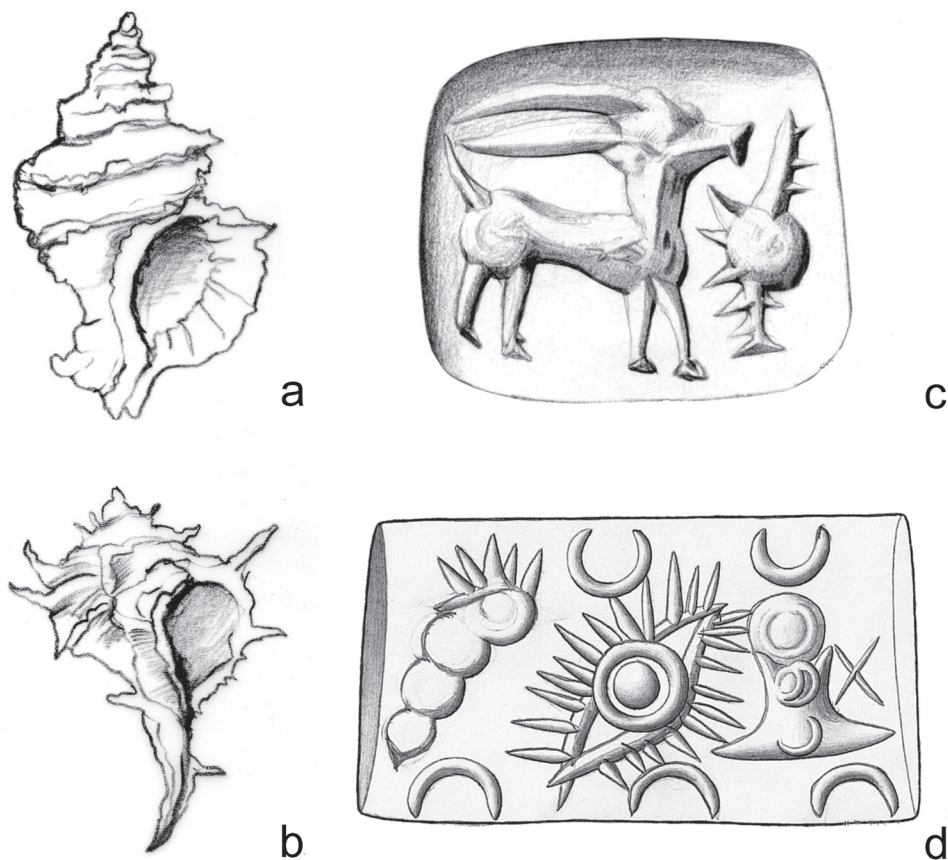


Fig. 5.7. *Murex* shell: a) *Murex trunculus*; b) *Murex brandaris* (drawings by A. Ulanowska after Burke 2010, fig. 23.a-b); c) CMS II,2 262a; d) II,7 215/CHIC #138. Drawings of seals not to scale, enhanced after the CMS Arachne database, courtesy of D. Panagiotopoulos and the CMS Archive in Heidelberg, all rights reserved.

date, it has been assumed that the technique of purple-dyeing may have been a Cretan invention (Burke 2010, 23). Technically, dyeing with purple entailed vat dyeing and required specialised knowledge and skills that must have comprised some knowledge of practical chemistry. Purple gave a range of deep, intensive colours to the textiles, from very dark navy, shades of blue, through purple to violet and shades of pink (cf. Kanold 2017). *Murex* shells were crushed in order to extract the pigment, and crushed shells might have been recycled for making fine lime putty and plaster (Brysbaert 2007). From the snail species of *Hexaplex trunculus*, *Murex brandaris* and *Purpura haemastoma* that were used to produce purple dye in the Mediterranean, *Hexaplex trunculus* was the preferred species on many east Cretan BA sites (Fig. 5.7, a-b; Brogan et al. 2012, 187). *Trunculi* are characterised by highly sculptured shells with spines.

In the CMS, a possible murex shell motif is attested on two seals only, including a MBA three-sided steatite prism, CMS II,2 262a (*Muschel?* in the CMS Arachne database, ‘Murex shell’ according to Anastasiadou 2011, 190, pl. 31), on which the shell is combined with a ‘woolly animal’ motif, a *Ziege* (goat) according to the CMS (fig. 6.3). However, there are other depictions classified as triton shells (cf. Gill 1985, 79, fig. 23), such as, e.g., CMS II,5 305, and CMS II,7 215 (CHIC #138, Fig. 5.7, d), that also feature certain characteristics of *Muricidae* – the sculptured shells with spikes on the shell body and around the aperture. In CHIC #138, the shell motif is a part of the inscription that is not considered a script sign.

It should be noted that triton shells from *Charonia* family are also well attested archaeologically in BA Crete. Shells might have been decorated, and imitations of shells were produced in stone and clay (Binnberg 2013; Sanavia and Weingarten 2016). The use of triton shells as trumpets, votive gifts, amulets, vessels and status symbols has primarily been associated with various cult activities (cf. Åström and Reese 1990; Binnberg 2013).

An iconographic distinction between the triton and murex shells is difficult, especially as regards the body shape of *Purpura haemastoma* and tritons. The main difference between the two families is the size (tritons are much larger than murex, but this, obviously, cannot be recognised in the imagery of seals) and their use and context. The body of murex shells seems to be more sculptured and most murex species feature spines, whereas triton shells do not have spines. The aperture of the triton shell is prominently turned out. No analogies to the murex shell motif have been found so far.

‘Rigid heddle’

In Europe and the Mediterranean, the earliest archaeological evidence of woven ribbons, narrow bands and starting borders is dated as early as 6000 BC (cf. Barber 1991, 116; Médard 2012, 370–376; Grömer 2016, 93, 96–97, 118–119). They were important products of textile manufacturing, used in multiple ways as, e.g., belts, girdles, ties, strips, ribbons, headbands or knee bindings, handles of bags, parts of harnesses, or trims on the fabrics or cloths (cf. Ulanowska 2018a). They could have been woven or braided in different techniques, using various types of looms, such as devices made of string heddles, tablets or rigid heddles (cf. Broudy 1979). Starting borders are bands strictly related to weaving on the warp-weighted loom. These are bands that formed the upper selvedge structuring the warp threads in a textile woven on the warp-weighted loom. They could be made using a different loom and, sometimes, another technique than weaving (cf. Hoffmann 1974, 141–150, 154, 175–183; Grömer 2013, 76–77). The length of such starting border corresponds to the width of the fabric to be woven on the warp-weighted loom, while its weft threads create long loops corresponding to the length of warp threads in the resulting fabric. Band looms, being made of perishable materials, such as strings, wood and bone, are rarely preserved in the archaeological record (cf. Gleba and Mannering 2012).

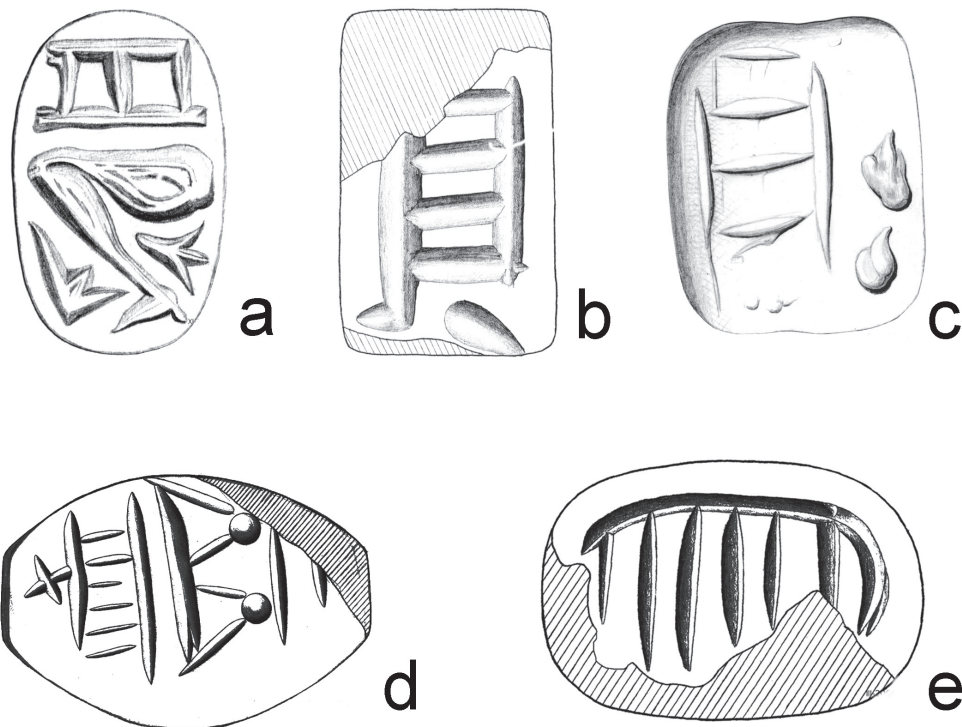


Fig. 5.8. Rigid heddle: a) CMS XI 299a/CHIC #214α; b) III 236a; c) II,2 288c; d) II,3 151α/#204α; e) III 206c. Drawings not to scale, enhanced after the CMS Arachne database, courtesy of D. Panagiotopoulos and the CMS Archive in Heidelberg, all rights reserved.

Although only one narrow ribbon from BA Chania, Crete is preserved, the evidence of textile tools attesting the use of the warp-weighted loom and the iconography of clothes and Linear B documents support the view that bands, ribbons and starting borders were important products of textile production in BA Greece (cf. Ulanowska 2018a).

The rigid heddle is a simple and efficient loom for band weaving still used today, but it is not attested archaeologically before the Roman era (Foulkes 2011). It has a frame-like construction, made of a row of slats or reeds with drilled holes and slots between them (Fig. 5.2, c). The form of the rigid heddle is indeed very functional and uniform, regardless of what material it was made of, and regardless of its date and geographical origin. It resembles the graphic form of sign CHIC 038, although there is no direct evidence that a rigid heddle was known in the BA. In the ‘Textiles and Seals’ database the ‘rigid heddle’ motif/referent is recorded on 56 seals, including 53 hieroglyphic seals (Table 5.1).

The ‘rigid heddle’ referent is rendered with a certain variability. In inscriptions, the sign is shown as a square or rectangular object, with or without a handle, and with a different number of slots and slats placed parallel or perpendicular to this possible

handle (Figs 5.3, a, c–e, 5.4, b, 5.8). If this feature referred to the real appearance of this tool, the perpendicularly placed handle would be useful to change sheds, and could be considered a functional feature. On non-inscribed seals, the handle is rarely indicated graphically, and the shape is more elongated; on CMS III 206c, the frame is oval (Fig. 5.8, e). In CHIC, sign 038 most frequently appears as part of the formula 038–010–031 (23 seals in the ‘Textiles and Seals’ database, cf. Fig. 5.3, a, c–e), and in a shorter formula 038–10 (seven seals in the ‘Textiles and Seals’ database, cf. Fig. 5.8, a).

In *Scripta Minoa*, the ‘rigid heddle’ motif is described as two types of a ‘gate’ and as a ‘fence’ (Evans 1909, 198–199). The identification as ‘gate’ is followed by Jasink (2009, 124–125) and in the DBAS–CHS database. Indeed, the graphic form of the signs that feature a handle resembles the doors in a door jamb. In CHIC, sign 038 is classified under *Édifices et parties d’édifices* (buildings and parts of buildings) while in the CMS and in Anastasiadou’s monograph, the motifs that are not recognised as script signs are termed ‘ladder’ (Anastasiadou 2011, 239, pl. 60).

Potential comparanda to this motif have been tentatively suggested in schematic depictions of fabrics shown together with possible ‘vertical looms’ on Mesopotamian seals dating to the Early Dynastic period (Ulanowska 2018a, 206–208, see Breniquet 2008, 297–303 for the interpretation of this motif in Mesopotamian glyptic). The graphic form of Mesopotamian ‘looms’ or ‘fabrics’ bear more similarities to the ‘rigid heddle’ motif on non-inscribed seals, but the visual resemblance of these two motifs may be conjectural and a potential thematic correlation between them may not exist.

Textile with fringes

Fabrics woven on ancient looms were usually rectangular in shape (cf. Nosch 2012, 314). A lower selvedge (finishing border) of a textile ending in fringes may be considered a technical characteristic of a fabric woven on the warp-weighted loom. When a textile is finished, there is an extra length of the warp threads left that have to be fixed to avoid unravelling (Fig. 5.2, d). Making fringes out of them is one of the simplest ways of finishing a textile, well attested archaeologically by textile finds from Central Europe (e.g. Gleba and Mannering 2012; Grömer 2016, 125–127). Although, according to our knowledge, no excavated textile with fringes is preserved from BA Greece, fringes are rendered in the iconography of Aegean clothing (cf. Dumas 1992, pls 7, 12; Jones 2015, especially 121–122, 143–153).

The graphic form of the sign CHIC 041 and the logogram *163 have already been recognised as a reference to a textile, and are considered a predecessor of the later ‘cloth’ logogram *159/TELA in the Linear B script, and have a parallel in Linear A logogram AB 54 (Oren *et al.* 1996, 101–102; Militello 2007, 43; Burke 2010, 74; Del Frio *et al.* 2010, 351, n. 55; Nosch 2012, 304–305). The identification of CHIC 041 as textile is generally accepted (e.g. CHIC, 16; CMS Arachne database, Jasink 2009, 126; Anastasiadou 2011, 245, pl. 63). However, in Evans’ first interpretation of this sign, it was considered a ‘palace’ (1909, 197–198; 1921, 358) and then a ‘banner sign’ (Evans 1952, 22; cf. Nosch 2012, 305).

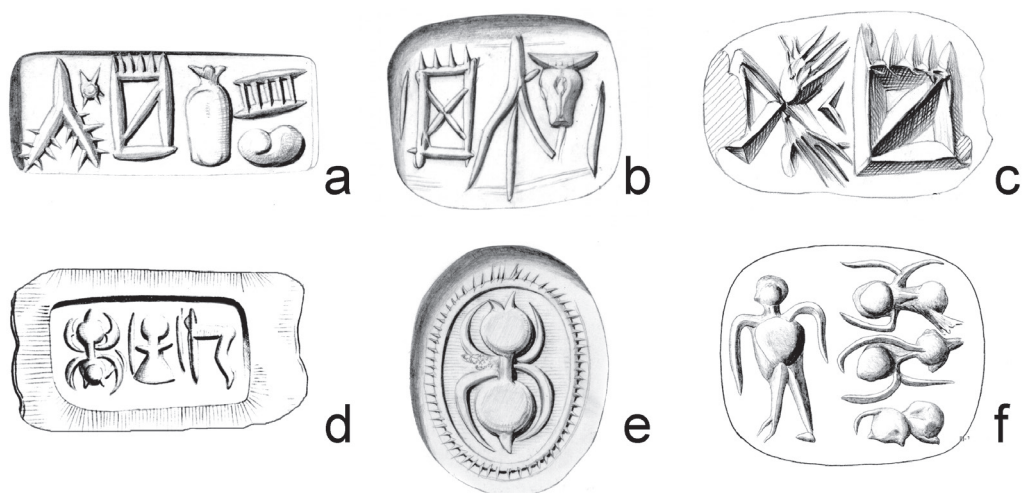


Fig. 5.9. Textile with fringes and spider referent/motif: a) CMS II,2 227/CHIC #200; b) II,2 244c/#271β; c) VI 27b/#246β; d) I 425d/#310γ; e) II,2 224b; f) III 173b. Drawings, not to scale, enhanced after the CMS *Arachne* database, courtesy of D. Panagiotopoulos and the CMS Archive in Heidelberg, all rights reserved.

In the ‘Textiles and Seals’ database, the textile with fringes is attested exclusively on hieroglyphic seals (nine examples, see Table 5.1). The sign has a rectangular form filled with one or two crossed diagonal lines, and a series of parallel lines at one of the outer shorter sides (Figs 5.5, f, 5.9, a–c). On CMS II,8 62 (CHIC #160), there is a dot in one of the rectangle’s sections (Fig. 5.5, f).

A possible analogy to this sign can perhaps be seen in a depiction of what has been interpreted as a warp-weighted loom on CMS II,1 64a (Ulanowska 2016a). Rectangular fabrics, occasionally with fringes, were shown in washing scenes in Middle and New Kingdom tombs in Egypt (Vogelsang-Eastwood 1992, 40–42, figs 50–52). In the Near East, a square piece of textile with fringes at all three selvages was shown, *e.g.*, on the Halafian vase from Tell Arpachiyah (Breniquet 2008, 376–375, fig. 108).

The spider

The symbolic link between spiders and textile production, specifically spinning and weaving, derives from nature, since spiders produce a protein fibre, spider silk, which is used to build the web. This observation is reflected in the mythology and art of various past cultures (cf. Broudy 1979, 10–11), *e.g.*, the Sumerian myth about Uttu, the spider goddess of spinning and weaving (Black and Green 1992, 182), and the famous myth of Arachne who was turned into a spider by Athena (for a recent discussion of this myth, see Tzachili 2012). We assume that this association is universal and thus also would have existed in the Aegean Bronze Age.

There is a vast number of species of spiders that look quite different. All spiders, however, have eight legs and a body divided into two segments: a cephalothorax (*prosoma*) with pedipalps (jaws), and an abdomen (*opisthoma*) with one to four pairs of spinnerets (Foelix 2011). Spiders are depicted on 80 Cretan seals and sealings dating to the MBA (Table 5.1). They were shown single, in pairs, triple and quadruple, sometimes in combination with a human figure, e.g. CMS III 173b (Fig. 5.9, d–e). Depictions of spiders are usually schematic and vary as regards the number of legs and details, such as potential jaws or spinnerets (cf. Ulanowska forthcoming). The spider motif is only once present as a part of an inscription on CMS I 425d (CHIC #310γ), but not considered a script sign (Fig. 5.9, d). It also occasionally appears on non-inscribed faces of hieroglyphic seals, e.g., CMS II,2 221a, IX 26b, XI 81c (#221), XI 299b (#214), cat. no 251 (Anastasiadou 2011, 560; #235).

A MBA seal bearing a depiction of two spiders, CMS II,6 192 was stamped on a spool-like textile tool from Malia (inv. no. MAL-69 M1662). This is a unique correlation of the possible symbolic meaning of the seal image, its sphragistic use, and a textile tool. Also in Mesopotamian glyptic, the spider motif was possibly shown in relation to spinning (Fig. 5.6, i; Breniquet 2008, 290, fig. 79.1, 6, 11, 13).

Summary of the iconographic analysis

References to textile fibres

Sign CHIC 031 clearly denotes the image of a plant, and hence belongs to plants (*végétaux* – CHIC, 15), ‘plant with three branches/“psi” sign’ (Jasink 2009, 75–77), ‘plant with three shoots’ (DBAS–CHS database), or ‘shamrock b and c’ (Anastasiadou 2011, 253, pl. 68). We have suggested the textile and oil plant flax, *linum usitatissimum*, as the real-world referent for this sign. As a sign, it is also *usitatissimum*, as it occurs frequently on inscribed seals and is also used as an ornament or ornamental filling. Sign 031 displays a considerable graphic homogeneity across its attestations. It is directly comparable to the real-world flax plant in terms of its distinguishing features of stem, branches and seed pods, and similar graphical renderings of flax may come from Cyprus, Egypt and Mesopotamia.

Wool-yielding domesticated animals, sheep and goat, and their wild counterparts, form part of the Aegean imagery, but depictions of ‘woolly animals’, especially on three-sided steatite prisms are mostly schematic. The head of a ‘woolly animal’ in profile has been recognised as a real-world referent for CHIC 016. However, in depictions of ‘woolly animals’, a characteristic textile feature, such as a fleece, is usually lacking, and the difference between specific species of the *Caprinae*, and *Caprinae* and *Bovinae* family is not always clear. Hence, iconographically, there must have been different mechanisms at work for both signs, since 031 is rendered with all constituent parts of the plant.

Textile tools

The identification of the comb in Aegean glyptic art is tentative, yet offers an attractive proposition for a graphical form with a very general interpretation. Depictions of a human figure holding a comb-like object provided the basis for this suggestion. Combs are multifunctional tools in textile production, for fibre processing and for weaving. They are shown as elongated rectangular indented objects without graphical homogeneity. The comb occurs with other textile related motifs, such as on prism cat. no. 597a (Anastasiadou 2011, 661–662), where a rectangular comb is shown together with a ‘weaver’ with loom weights motif (cf. Ulanowska 2020c). The comb motif is always held from the non-indented side, as a textile worker would hold it, which emphasises its function as a tool.

The basis for identifying a spindle with a whorl as a real-world referent for CHIC 063 was provided by sealing CMS II,8 86 (CHIC #141) representing a shaft with a whorl-like object and thread-like loops, which together bear resemblance to a spindle with a whorl and a cop of spun yarn. Similar depictions of rods with sharp ends and a dot in the middle or at the lower end of the rod are present in other inscriptions, but are not considered script signs in CHIC. The ‘spindle with whorl’ motif/referent can also occasionally appear on the faces of non-inscribed seals. In combinations with humans and animals, the ‘spindle with whorl’ motif/referent corresponds better to CHIC 050 and 062. Signs 062 and 063 have not been given any specific or functional interpretation in the earlier literature.

CHIC 050 is in the existing literature always related to weapons (‘lance or dart’ by Evans 1909, 186, ‘armes’ in CHIC, 16, ‘spear’ by Anastasiadou 2011, 232, pls 56–57; DBAS–CHS). If we accept the association between the graphic form of some CHIC 050 signs and a spindle, some humans figured with a ‘spear’ pointing downwards (Fig. 5.6, g–h) can instead tentatively be interpreted as depictions of ‘spinners with spindles’.¹¹

Finally, band-weaving tools were an indispensable part of textile production, and although they are unattested archaeologically, their existence is suggested by the find of a ribbon from Chania and depictions in frescoes (Ulanowska 2018a). A possible ‘rigid heddle’ referent/motif recalls the graphic form of sign CHIC 038. In scholarly works, it is described as a ‘gate’, ‘fence’ or ‘ladder’ (Evans 1909, 198–199; Jasink 2009, 124–125 and the DBAS–CHS database, Anastasiadou 2011, 239, pl. 60).

Textiles and dyes, symbolic imagery of textile production

Seal images also include the textile with fringes. This motif has a clear real-world-referent in woven fabrics with a lower fringed selvedge woven on the warp-weighted loom. The graphic form of sign CHIC 041 and logogram *163 are considered to be

¹¹ This is where our paper becomes gendered and turns the interpretations from the sword side to the distaff side.

references to a textile. The sign 041 is attested exclusively on hieroglyphic seals. It is thematically and graphically related to what has been interpreted as a warp-weighted loom on CMS II,1 64a (Ulanowska 2016a).

Murex, the source of the precious purple dye, may appear on a single MBA seal. In addition, we would like to suggest that some depictions classified as triton shells could alternatively indicate murex, and one of them appears as part of inscription (CMS II,7 215/CHIC #138, Fig. 5.7, d). We suggest that the spider motif, very frequently rendered on seals, was a symbolic proxy for all textile production. It is only once part of an inscription (CMS I 425d, CHIC #310γ), but not considered a script sign. The suggested symbolic meaning of the spider is possibly strengthened by its presence on a seal that was impressed on a textile tool (inv. no. MAL-69 M1662).

Remarks on the frequency of textile production-related motifs and referents for script signs

The discussed motifs and referents appear on the MBA seals with varying frequency. The most frequent motifs are spiders and loom weights, both being depicted on 80 MBA seals (see Table 5.1). ‘Woolly animals’ are represented on 169 seals, but more secure identifications narrow down this number only to 32 examples. Altogether, the ‘rigid heddle’ motif/referent is present on 56 seals, and the flax plant on 49 seals. Given the fact that the most frequently represented motifs: loom weights, spiders and potential ‘woolly animals’ are found on prisms, we can conclude that they are attested at least on one tenth of the preserved prisms. The comb motif has 46 possible attestations, but only 11 depictions show a comb held as a tool by a human figure or bear clear resemblance to actual combs. The ‘spindle with whorl’ is a motif/referent attested on 25 seals, but again only 15 of them seem more reliably interpreted as depictions of the tool. The textile with fringes motif is attested on nine seals, the *murex* shell motif only five times.

There are some noteworthy differences in the appearance of textile production-related motifs/referents on non-inscribed and hieroglyphic seals, respectively. It is not surprising that motifs that are not considered script signs rarely appear as parts of inscriptions, but they also rarely appear as fillings, or motifs on the non-inscribed faces of hieroglyphic seals. The loom weights motif, one of the most frequent textile production-related motifs, is only once safely attested on a seal that possibly bears a single CHIC 020 sign on its other face (CMS III 239 d and c). The equally frequent spiders appear only on seven hieroglyphic seals, and only once as a part of an inscription (CMS I 425d/#310γ). A comb motif possibly appears twice as a part of an inscription (CMS II,8 062/#160, XII 83c/#223γ).

On the other hand, it is also noteworthy that the graphic forms resembling the ‘rigid heddle’ (038) and flax (031) are extremely rare on non-inscribed seals, although the flax real-world referent was used as a decorative ornament or filling. Likewise, the sole ‘spindle with whorl’ motif/referent, also when not considered a script sign,

is attested only three times on non-inscribed seals (CMS II,2 150a, II,6 246, XII 092b). Another five examples show its possible combinations with a human figure. The only motif/real-world referent that appears both on inscribed and hieroglyphic seals with a more balanced frequency is the head in profile of a ‘woolly animal’, being attested in seven inscriptions and on 43 non-inscribed seals.

These observations may lend additional support to M. Anastasiadou’s view that non-inscribed seals had their own ‘repertoire’ of motifs (2016, 162), and they also suggest that soft-stone (more often non-inscribed) and hard-stone seals (more often inscribed) displayed different motifs/referents apart from the script signs or entire inscriptions themselves.

Consistency between Cretan Hieroglyphic script signs and graphic forms of textile production-related motifs and referents

The recognised textile production-related referents, such as flax and textile with fringes comprise forms that are graphically uniform, although their individual renderings can vary in details. They correspond to the features characterising CHIC 031 and 041 signs respectively.

The ‘rigid heddle’ referent was depicted with a larger variability in proportions, numbers of slats, the choice of positioning of the slats vertically or horizontally to its longer side, and the rendering, or not, of a ‘handle’. Nevertheless, graphically it still corresponds well to what was recognised as CHIC 038.

However, what we recognise as the ‘spindle with whorl’ motif/referent, bears resemblance to a few CHIC signs. The form of sign 063 seems to be the most exact rendering of a real spindle with whorl, but it is also graphically similar, if not identical, to other objects shown, sometimes multiplied, on both inscribed and non-inscribed seal faces (e.g. CMS XII 122a). These motifs/referents are also termed *Doppelspitzpunkt* or ‘dots with ongoing elements’ (CMS Arachne database; Jasink 2009, 91). In combinations with humans and animals, the ‘spindle with whorl’ motif/referent corresponds better to CHIC 050 and 062.

The graphic form of CHIC 016 is very similar to several, sometimes multiplied, depictions of the heads in profile of ‘woolly animals’ on three-sided steatite prisms that have never been considered as possible script signs. These observed inconsistencies may perhaps serve as an argument for the need for further elaboration of the corpus of Cretan hieroglyphic signs originally published in CHIC (cf. Jasink 2009; Decorte 2017).

Conclusions

All new identifications discussed in this contribution display the distinct characteristics or features of functional importance of their potential real-world referents. Moreover, flax, ‘woolly animals’, a ‘spindle with whorl’, a textile with fringes, spiders, and perhaps even the ‘rigid heddle’ have iconographic comparanda in other arts and cultures,

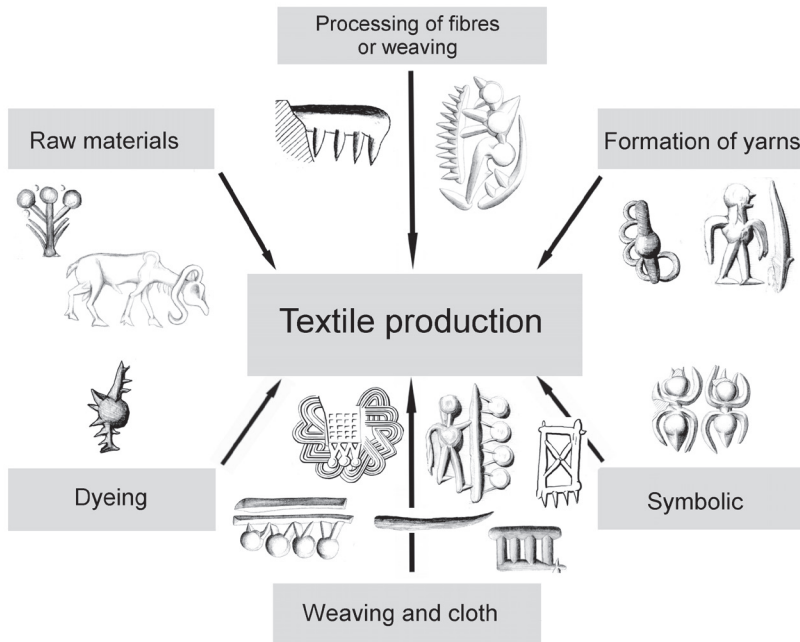


Fig. 5.10. Semantic network of potential real-world referents to textile production in the imagery of the MBA seals from Crete (by A. Ulanowska).

including surprisingly similar small-scale depictions in the Mesopotamian glyptic. Still, given the schematic character of the majority of motifs/referents and our limited understanding of the BA imagery of Cretan seals, the newly proposed interpretations cannot be regarded as definite.

However, the new reading of a series of motifs/real-world referents for CH signs, all based on a metanarrative rooted in textile production, suggests the existence of a semantic and symbolic network of iconographic references to this important craft (Fig. 5.10).

We believe that in MBA Cretan society, people, including seal users, seal-cutters and those using writing, had an intimate knowledge of textile technology, textiles and costumes that they used to communicate and read messages through the minute images (cf. Blakolmer 2018). Since signs and script draw their forms and defining features from a real-world materiality, as has been shown for several scripts where the signs derive from images and pictograms, we suggest that textile production, together with agriculture, animal breeding, sailing, warfare, etc., was another broad field of material culture that could have shaped seal imagery and graphic forms of script signs.

Chapter 6

Visual dimensions of Maya hieroglyphic writing: meanings beyond the surface

Christian M. Prager¹

This chapter addresses the semi-deciphered written language of the Classic Maya, whose cultural area extended over territories of the present-day nation states of Mexico, Guatemala, Belize and Honduras. Maya hieroglyphic writing, which was used between around 300 BC and AD 1500, is a mixed, morpho-graphic and syllabic system comparable to Egyptian hieroglyphs or cuneiform writing systems. Hieroglyphic texts, often associated with complex imagery and narrative scenes, have survived on more than 12,000 monuments, architectural elements and portable objects. The sign inventory comprises around 1000 pictorial elements depicting figurative and abstract objects from the natural environment, material culture, human and animal body parts, or portraits of supernaturals, among other contexts (Fig. 6.1).

Considerable breakthroughs have already been achieved in the decipherment of Classic Mayan writing during recent decades (Houston 2000; Houston and Martin 2016). Despite the great progress made, however, approximately 30% of the script's 1000 signs remain unreadable even today (Fig. 6.2). Maya texts still elude full understanding because Classic Mayan, the language of the hieroglyphs, has itself not survived; instead, it can only be reconstructed through historical linguistic comparison among the 30-odd Mayan languages that have been documented since European conquest, most of which are still spoken today (Wichmann 2006). Much Classic Mayan vocabulary has been lost since the decline of the written culture in the tenth century and the hieroglyphs' complete abandonment in the aftermath of European colonisation in the sixteenth century; meanings and translations must now be deduced from co-texts

¹ I would like to thank Sven Gronemeyer, Mallory Matsumoto, and Elisabeth Wagner for productive discussions and constructive criticism of the text. Mallory Matsumoto also kindly corrected the English of the original draft.

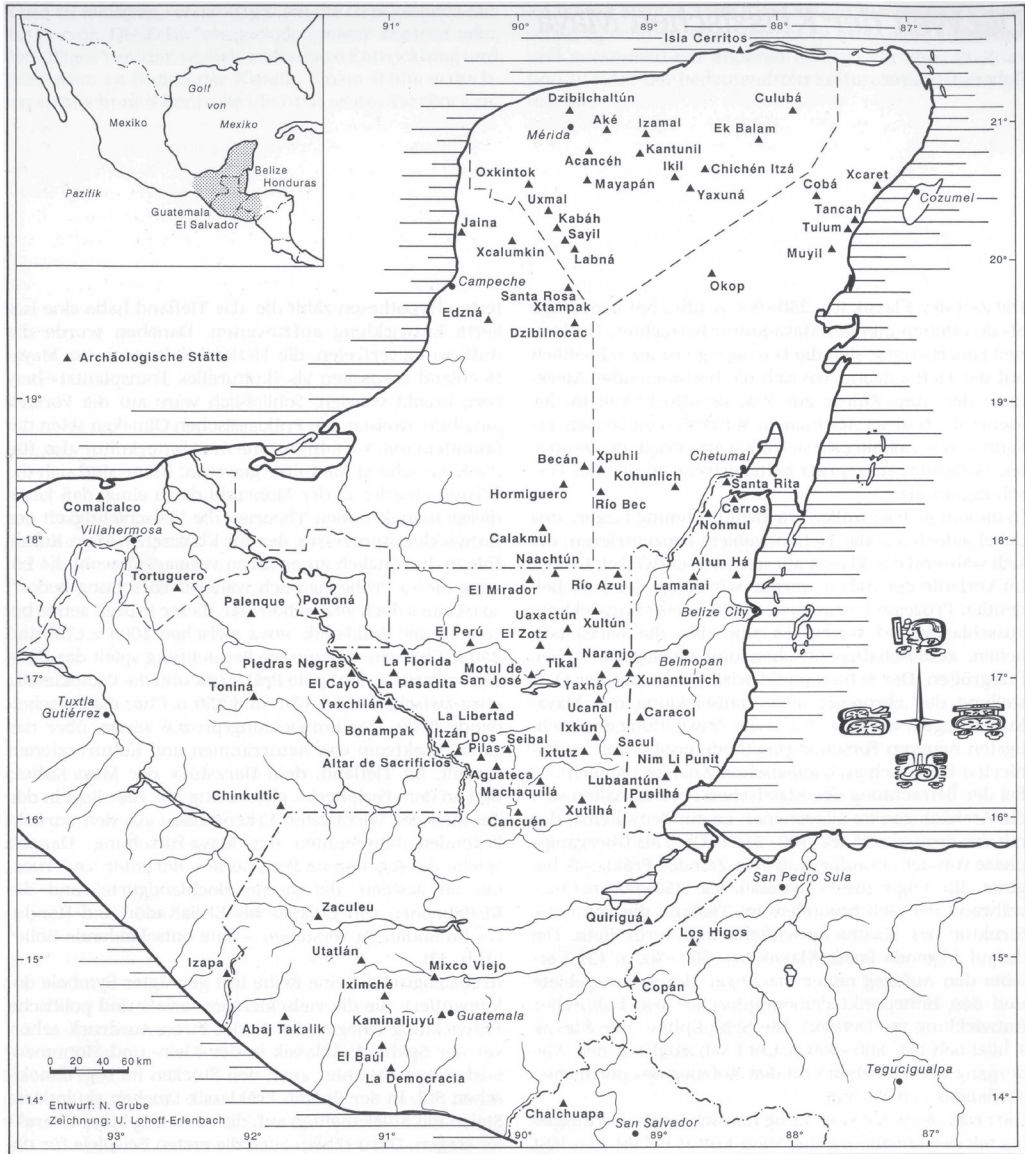


Fig. 6.1. Map of the Yucatan peninsula with major archaeological sites. Drawing by N. Grube and U. Lohoff-Erlenbach, all rights reserved.

and context. For this reason, although we can read large portions of text phonetically, the meaning of many words, phrases or even entire texts still remains unexplored.

In my contribution to this conference volume, I focus less on the linguistic, epigraphic and palaeographic domain of Maya writing and more on certain semiotic aspects that become apparent upon exploring Classic Maya imagery and hieroglyphic



Fig. 6.2. Extract from the Maya hieroglyphic catalogue showing signs representing birds, deers, jaguars, jaguar tail, and other objects. Drawings by C. Prager.

texts. Beside epigraphy and linguistics, semiotic approaches are key to the study of Classic Mayan written culture. The work of a historian not only addresses the material legacies of past societies, but also represents an archaeology of thoughts and minds: using written sources, historical research attempts to delve into past systems of ideas, values and conceptions to draw conclusions about the intellectual world underlying the cultural achievements of a so called ‘interpretative community’ (Fish 1980). Methodologically, this approach primarily relies on semiotic artefacts, which were intentionally used as instruments for indirectly communicating messages. Moreover, these artefacts functioned as indices that evoked stored knowledge and experiences and established analogies with other signs. Scientific research on the intellectual achievements of a past community thus focuses on all those public representations which, as communicative artefacts based on language or visual codes, encode and convey knowledge (Martin 2006). For Mesoamerican studies in general, these artefacts consist primarily of linguistic, semasiographical and iconic texts, as well as images on various media that provide insights into the beliefs, practices, intellectual world, conceptual systems of pre-Hispanic societies. If image and text are used in complement to each other, they constitute an overall message that is conveyed jointly by visual and linguistic codes (Reents-Budet 1989).

According to the theory of semiotics, texts themselves become signs that communicate meaning(s) that are not the signs themselves (Nöth 2000). The function and meaning of writing and texts as semiotic artefacts thus goes beyond their phonographic and discursive properties. Maya hieroglyphic texts are language made visible on writing surfaces that extend into two- and three-dimensional space. Writing thus has sensual, visual and communicative (and semiotic) potential for which there are no correspondences in spoken language. This visual-iconographic dimension of writing is best described as ‘notational iconicity’, making writing and text ‘a hybrid construct in which the discursive and the iconic intersect’ (Krämer 2003, 519).

Maya scribes made use of the hybrid property of writing when designing texts and introduced several semiotic modes or vehicles to transport meanings beyond the text. Aspects of notational iconicity that the Maya scribe used to imbue hieroglyph texts with a further level of communicative meaning included, but were not limited to: the shape and arrangement of text fields, the varying size of inscriptions, their elevation or embedding in the text carrier, the play of text and character sizes, the three-dimensionality and ‘animation’ of graphs, colourful accentuations, different sculpting styles within a single text carrier, and applying pseudo-writing or so called ‘ugly writing’ as decorative elements (Houston 2018a; 2018b; Martin 2006) (Fig. 6.3). Among the Classic Maya, big writing, for example, not only facilitated visibility and legibility from far away, but was also motivated by the notion that big writing, big text carriers and supersized glyphs existed as places or living objects (Houston 2015). A selection of other such ‘stylistic devices’ with semiotic functions that have been little researched to date will be presented and discussed in the following sections. I would like to begin my contribution with a brief overview of the writing system



Fig. 6.3. 3D model of Stela 1 from the archaeological site of La Amelia, Peten, Guatemala (scan by project Text Database and Dictionary of Classic Mayan).

in its cultural and historical context. I will continue the discussion with the idea that Mayan texts and images represent semiotic artifacts that convey non-linguistic meanings, ideas and intentions that are not expressed in words and images. The relationship between text and image and its semiotic potential is the focus of the concluding section, which contains a theoretical discussion complemented by text and image examples from the Classical period.

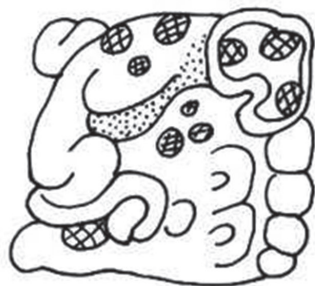
Maya writing and its context

As a visual language, Classic Mayan has survived in thousands of hieroglyphic texts that were created in and around royal palaces. Only scribes, painters, sculptors and court officials could write; there is no reason to assume widespread literacy (Houston 1994). Thus, most public and private inscriptions often exhibit biographical information on political elites and provide written evidence for inter- and intra-dynastic connections between the ruling families. Others attest to ceremonies and religious rituals carried out in the context of accessions to the throne, ancestor worship, calendrical anniversaries, inaugurations, processions and other occasions that marked royal daily life (Stuart 1998). According to texts from the Classic period (AD 250–900), rulers and vassals of petty states often competed for regional and superregional supremacy, as well as for control of resources and trade and communication routes (Martin and Grube 1995). Royal authority was based on religion, and rulers attained political power through marriage and political alliances, hegemonic strategies, resource control and warfare (Grube 2010). Rulers regarded themselves as divine kings (Stuart and Houston 1996); they made their claim to power through writing and images as well as the construction of imposing architecture in the centre of their city-states, all of which were used by divine kings as backdrops for public performances and expressions of their all-encompassing authority (Houston 1998). In this context, written and pictorial records, especially those on stone, wood, ceramics, bone and fig-bark paper, not only served as vehicles for cultural memory at the time, but today form the most important material basis for reconstructing elite history and culture.

The Maya writing system is considered a hieroglyphic script because of the iconic character of its approximately constituent 1000 graphs. Typologically, it is a logosyllabic, or rather a morphographic-syllabic writing system with two basic, functional sign types: syllabic signs and morphographs (Fig. 6.4). The latter denote concrete words and bound morphemes, whereas the former represent vowels and open (CV) syllables and thus permit syllabic spellings of lexical and grammatical morphemes. In addition, syllabic signs were used as phonetic complements that were pre- or post-fixed to morphographs. Thus, it was possible to write words entirely with syllabic signs, by using morphographs alone or by combining the two sign types. To create a hieroglyphic text, signs were ‘squeezed and stacked’ into quadratic or rectangular blocks, the basic structural unit of a Classic Mayan text that usually corresponded to the emic concept of a word. These blocks were usually arranged in

Morphographs

Syllabographs

bahlam 'jaguar'*morphemic*

BALAM

syllabic

ba-la-ma

morpho-syllabic

BALAM-ma

Fig. 6.4. Examples of basic sign functions in Maya writing. Concept by C. Prager.

double columns to be read from left to right and from top to bottom. The elements within a block can be subdivided into main and small graphs, with the main graphs being spatially larger and approximately square in shape, and the small graphs attached to the periphery of the main characters and oriented along their vertical

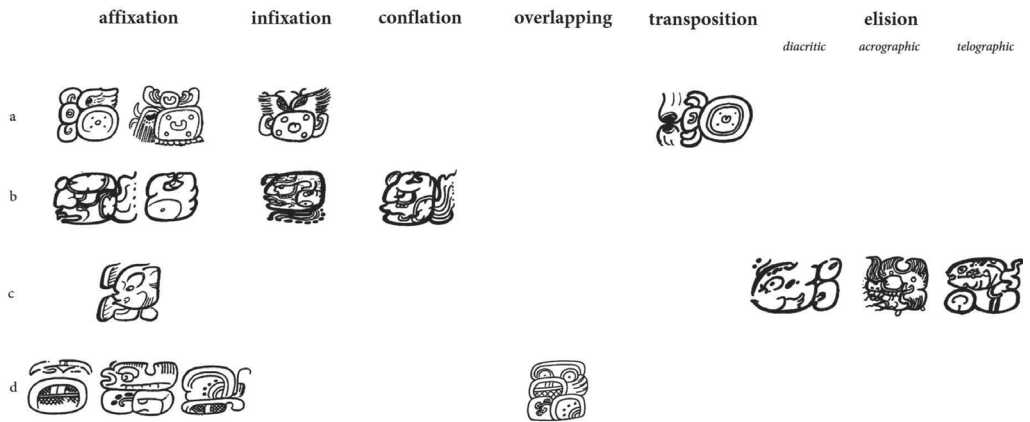


Fig. 6.5. Graphotactic patterns in Maya writing: a) syllabic spellings of *y=uk'ib* 'his drinking vessel'; b) Different spellings of *K'inich*, the proper name of the Classic Maya sun god; c) scribal plays for the word *kakaw* 'cacao'; d) two spellings of the word *u=pakbu tuunil* 'his stone-lintel'. Concept by C. Prager.

or horizontal axis. These writing principles are consistent throughout the history of Maya writing, but texts and signs demonstrate a high degree of complexity and variation.

Today, researchers have identified a range of calligraphic principles with which not only individual graphemes, but also Classic Mayan words could be realised in a variety of ways (Zender 1999). The scribes aimed for a maximum of visual splendour and optical variation, and they may have even experienced a *horror repetitionis* in addition to a graphic and artistic *horror vacui* (Prager and Gronemeyer 2018). This is probably due to the fact that, in addition to text content, the high aesthetic quality of an overall work was meant to catch the eye, as were the individual skills of its creator; monotony, conformity and repetition, it seems to today's viewer of the hieroglyphs, were to be avoided, with calligraphic variation defining the work of a scribe and his school (Coe and Kerr 1997). To this end, a wide range of graphetic and graphemic principles or strategies was available to the scribes and sculptors for generating calligraphic complexity and extravaganza (Stuart and Houston 1989; Zender 1999; Stuart *et al.* 1999; Mathews and Justeson 1984) (Fig. 6.5).

Semiotics of image and linguistic text

The main function of images and linguistic texts is to represent and transmit mental representations, such as ideas, thoughts or conceptions of the environment. A fundamental difference between image and text is the amount of information conveyed within the same time of perception. Since images are perceived holistically and simultaneously and have the potential to be associated with emotions, they are attention-grabbing

and more memorable; linguistic information, on the other hand, is conveyed successively and linearly, and an utterance's net information is therefore less than that may be conveyed by a single picture (Nöth 2000). According to Nöth, images and texts also possess different semiotic potentials which limit their possibilities of public representation in various areas. Images are ideal for spatial-visual representations that accurately reflect the position of objects within space; moreover, images are static and atemporal due to their two-dimensionality and are therefore better suited to representing a moment. Points of time, time periods and duration, on the other hand, can be more accurately described with language.

Semiotic differences between the media of image and text also come into play in representations of the visual and non-visual. One advantage of language is that although all images can be represented by language, 'not everything represented linguistically can be visualised by images' (Nöth 2000, 491). Whereas visual entities, such as objects, are represented by means of images or language, other sensory impressions are primarily represented by linguistic signs. Images and iconic symbols are used to objectify complex and difficult-to-process concepts whose interpretation is open and ambiguous, *i.e.*, has no limited or predictable potential for drawing conclusions (Sperber 1975,160). The semiotic fuzziness of images is a consequence of their semantic openness, according to which images 'are potentially infinitely interpretable and thus 'underlaid' with an infinite number of possible texts' (Burger 1990, 300) and thus have the character of an open message (Barthes 1964). In this sense, an image supports the construction of knowledge and cognition. In contrast, meta-language and self-reference belong to the domain of language and are difficult to represent pictorially. Speech acts, such as questions, requests, promises, or even negation, affirmation and logical relationships cannot be represented visually, according to Nöth (2000, 490–491).

Levels of understanding text and image

The meaning of a text or image lies in its use by an interpretative community (Fish 1980). Such communities are characterised by the fact that their members share a repertoire of agreed codes and conventions by means of which signs are 'understood', images are 'seen', texts are 'read' and messages are thus conveyed. Despite the different semiotic potential of text and image, both media assume a form that, due to its materiality, is perceived and processed first, before the user has grasped the intended content by interpreting the signs that it contains (Blazejewski 2002, 46). The design of images and texts thus constitutes a further level of meaning beyond what is represented in them; in other words, the style and layout can express an 'overall message' alongside the message conveyed by their contents. In the Classic Maya case, for instance, the colour and texture of image and text carriers, as well as the proportions used in designing image and text, convey an overarching idea in addition to the linguistic contents contained in the accompanying text (Kubler 1969; Martin 2006, 58 ff; Houston *et al.* 2009), as explained in the following section.

Signs are multimodal objects: they ideally have a constant materialisation and fulfil the indexical function of constituting relations between present and absent elements in certain contexts (*i.e.*, meaning) (Dürscheid 2006, 223). Symbols, icons, pictures, etc., are ‘occupied’ according to the semiotic perspective and thus represent something for someone. In order for people to be able to communicate and constitute interpretative communities by means of signs, standardisations, conventions or norms of action must be agreed upon and learned. These codes regulate the ‘meaning’, or the application, function and form of signs and images, and thus make them communicable and communicative. The shape of a sign or an image represents a multimodal level of action, with whose help various associations with memory content can be established. Not only the sign and image as an integral whole, but also its shape (design) and mode of representation (style) evoke a perceptual experience that is linked to certain memory contents, thus focusing the attention of the recipient and evoking corresponding knowledge (Dürscheid 2006, 234–238; Martin 2006, 59).

Relations between text and image

In many writing cultures, linguistic text and image engage in a collaborative, multimodal coexistence that compensates for the aforementioned communicative weaknesses of each form of communication alone. The merging of linguistic and image codes creates a complementary semiotic relationship, on which basis images contribute to the understanding of a text and vice versa. What cannot be expressed by the image, such as time, non-visual sensory impressions, modes of the speech act, relations or causalities, can be elucidated by an additional, linguistic text. With the help of this descriptive commentary, the open and ambiguous nature of the image is channelled and transferred to the desired context of meaning (Sperber 1985, 20–21; Nöth 2000, 492; Straßner 2002, 30 ff).

In principle, the image-text relation raises the question of an overall message. Does an image with an associated linguistic text duplicate the information conveyed in each case – are the statements thus redundant – or do the media forms complement each other and are understood as a coherent whole (Barthes 1964)? The text-image relationships that constitute an overall message can be classified according to their redundancy, dominance and complementarity (Nöth 2000, 492). In the case of image-text *redundancy*, the text does not add any new information to the image or vice versa; rather, both media forms refer to and thus duplicate the same information. Nöth describes this situation as double coding and assumes that it results in more effective retention by the viewer (2000, 492). When the image is more informative than the accompanying text, we speak of the *dominance* of image over text. But the opposite case may also occur in which the picture is subordinate to the text and only fulfils an illustrative function. Another relation is that of *complementarity*. Text and image can be classified as complementary if ‘both sources of information are necessary

to understand the overall meaning of the text-image combination (*i.e.* the text has gaps which are filled by the image and vice versa' (Nöth 2000, 493). A special form of complementarity is the indexical relation between text and image. In this case, both media forms are anchored together by a linguistic or iconic index. For instance, the linguistic text appears in a closed field and functions as an index that explicitly refers to the image or its components, thus controlling interpretation of that image.

Classic Maya text-image relations

Compared to linguistic texts, images are semiotically more productive for representing space and objects. In a communicative act, they fulfil the function of depicting and representing. Texts, on the other hand, are superior to pictorial representations for expressing causality, time sequences, abstract thoughts and social facts, and they thus assume the communicative functions of telling and reporting (Nöth 2000, 491–492). Individually or in combination, image and linguistic text constitute narrative representations in Mesoamerican traditions. Discourses are narratives when they report on an event or a series of events and are constituted from the components of place, time, action and actors (Martin 2006, 61). Such narrative texts are forms of action that convey content through communicative-linguistic transmission and are characterised by chronological sequences of action in which events cause changes in the situation (Martin 2006, 61). However, narrative representations are not necessarily bound to a linguistic code, *i.e.* to the media of spoken or written language; they may also be conveyed through image in the form of narrative pictographies or pictorial narratives, independent of language (Chatman 1978, 34). The message is represented by means of graphic conventions and codes and thus give members of an interpretative community something to understand (Martin 2006).

Visual narratives are semasiographies and represent content without linguistic coding (Gelb 1963 245). Such systems have been attested for Mesoamerica since the Preclassic period (2000 BC–AD 250) and had the function of representing narrative content pictorially or iconographically, especially in the Zapotec, Mixtec and Aztec traditions (Prem 1971; Grube 1994). Although glottography was used to some extent among the Aztecs (Zender 2008), these narrative texts did not literally record a spoken narrative, but were recorded in the form of images and episodes (Martin 2006). Only names of persons and places, as well as calendar-chronological records and, in the case of Zapotec, verbs, were denoted in the aforementioned interpretative communities by means of linguistic signs complementing pictorial information (Whittaker 1992). Classic Maya writing traditions differed from these glottographic writing systems by enabling phonetic reproduction of spoken texts. In addition to being able to linguistically name objects, persons and places, Classic Maya writing enabled public representation of narrative texts that could be recorded phonetically, word for word.

In Classic Maya traditions, linguistic text and image can each represent a message discreetly or in combination with each other (Fig. 6.6). In the latter case, text and image



Fig. 6.6. Drawing of Lintel 8 from Yaxchilan. Drawing by Tatiana Proskouriakoff, all rights reserved.

on an information carrier may be spatially separated from or integrated with each other (Berlo 1983; Schele and Miller 1986; Miller 1989; Reents-Budet 1989). In either constellation, such text-image relationships can be generally characterised according to the aforementioned aspects of redundancy, dominance and complementarity (Nöth 2000, 492). For Maya studies, a relation of redundancy offers a particularly important, insightful connection by allowing contemporary researchers to derive linguistic or iconic interpretations if the image content is known even if the text is unknown, and vice versa. In such cases, image and text refer to each other without additions that could influence the other's interpretation. In other instances, however, either the text or image is in a position of dominance over the other, or they are in a relationship of complementarity (Berlo 1983; Miller 1989; Teufel 2004, 235 ff.).

In general, Classic Maya images fulfil a representational and representative function. The space itself, objects placed within it, as well as the people or living beings depicted and their relations to each other are represented through visual codes. Texts, on the other hand, break the stasis of the picture and fulfil the communicative function of reporting about time sequences, movement through space, motivations, intentions, events or causalities. Coupling of image and text allowed Maya artists to depict space and simultaneously record movement, time periods, events, causalities and changes or to represent the persons' status through visual language and graphic conventions while also indicating biographical reasons for the status (Miller and Martin 2004, 130). Nonetheless, Classic Maya artists developed the means for so-called sequential text-image coupling in their visual language in order to indicate temporal sequences, movement or situation changes iconographically as well (Nielsen and Wichmann 2000, 62 ff).

The codes of scribes and kings

The thousands of Maya monuments inscribed with texts and imagery are more than just philological or iconographic artefacts from which we can derive culture-historical information. Each monument, with or without text or imagery, fundamentally constitutes a communicative unit and thus a semiotic artefact. In this capacity, it conveys linguistic and/or nonverbal conceptions, beliefs, memories, histories, ideas, correspondences, ontologies, thoughts, fantasies, intentions, norms, classifications and values; moreover, it concretises them publicly in a space of collective experience that is shared by an interpretative community. Drawing on culturally shared conventions and codes, members of an interpretative community can read and interpret the message that is expressed in these cultural representations. The task of current research is thus to recognise the codes and conventions entailed in these semiotic artefacts and to try to decode them in order to reconstruct past situations, ideas and norms.

In this chapter, I present certain conventions that Classic Maya scribes and sculptors used when producing stone monuments in order to convey implicit information that was not expressed in the texts or imagery and thus require understanding of these codes for correct interpretation. Stela 1 from the site La Amelia, a free-standing monument which was discovered in 1937 and is currently housed in the National Museum of Archaeology and Ethnology in Guatemala City, serves as an introductory example (Fig. 6.3 above). The preserved front side is carved in low relief with two vertically ordered registers; the upper register contains the image of a person and the lower one a jaguar in repose (Prager *et al.* 2019, 19–28).

According to the hieroglyphic texts, the stela represents the king of La Amelia, Lachan K'awiil Ajaw Bot, dancing on a platform or step with a jaguar in front of him. The ruler's attire indicates that he is presented as a dancing incarnation of the deity known as the 'Waterlily Serpent': his headdress is composed of a water lily pad or flower and his mask represents a serpent's muzzle. The king's other items of

clothing, in particular the wide belt and the knee brace on the right leg, represent the garments of a ball player. The connection between the Classic Maya theme of ball games and dance in Stela 1's iconography, as well as the jaguar and iconographic and hieroglyphic references to a staircase as an architectural context in which the scene takes place, collectively allude to a symbolic ball game field, also known as a 'false ball game field'. It is assumed that dance-dramas were performed in these ritual spaces, including mythical ball games, and that during such performances war captives were presented and ritually sacrificed (Looper 2009, 157–160).

Three fields of hieroglyphic text, carved in different styles, surround the image of the dancing king and provide information about the context of the recorded event and the monument's production (Fig. 6.7a). The most visually striking inscription occurs to the lower right of the figure and displays ten hieroglyphic blocks sculpted in relief; their dimensions are noticeably bigger than the blocks in the text fields on the upper right and lower left of the monument. Because of the blocks' dimensions and the raised relief carving, this text is easily visible from a distance, a feature that underscores the centrality of the information it contains. The inscription records that the king of La Amelia made a blood sacrifice for the dedication of his ballcourt on 13 August 807 (Prager *et al.* 2019, 25–28).

The same date also occurs in the upper right text field, which has been rotated 45° anticlockwise; however, because it is lightly incised on the surface, it is hardly visible to the viewer (Fig. 6.7b). This text field, whose hieroglyphs are also relatively small, contains a sculptor's signature (Stuart 1986) and proclaims that the monument was also completed on 13 August 807. This delicate inscription names the responsible sculptor, although it is now too damaged to be deciphered. In the lower left is another scribal signature accompanied by a declaration that the relief was dedicated on 13 August 807 (Fig. 6.7c). This text field has likewise been rotated 45° anticlockwise, but because it has been carved as an inset relief, its visibility is much better than that of the incised signature in the upper right. Both latter text fields share the same rotation, which makes visually explicit their shared theme of 'sculptor signature'. However, the signatures differ in mode of production, size of component hieroglyphs and position on the monumental surface. The signature in the lower left, which is much more noticeable than the one to the upper right, is at the same vertical level on the monument's surface as the main inscription in the lower right. They primarily differ in that the signature is carved in inset relief, whereas the main inscription that refers to the image and names the ruler was produced in raised relief and contains the largest hieroglyphs on the monument.

The significance of varying hieroglyph size and text positioning can be derived from studying a range of text and image carriers produced by Classic Mayas. Lintel 8 from Yaxchilan, for instance, illustrates the capture of two nobles by the king to the right and his vassal K'an Tok Wayib, who is shown on the viewer's left (Fig. 6.6). The scene is bordered by a text whose hieroglyphs are much larger than those in the text field between the two actors, as well as the glyphs on the captives' bodies. The text framing the scene records the historical event on the left and the name of

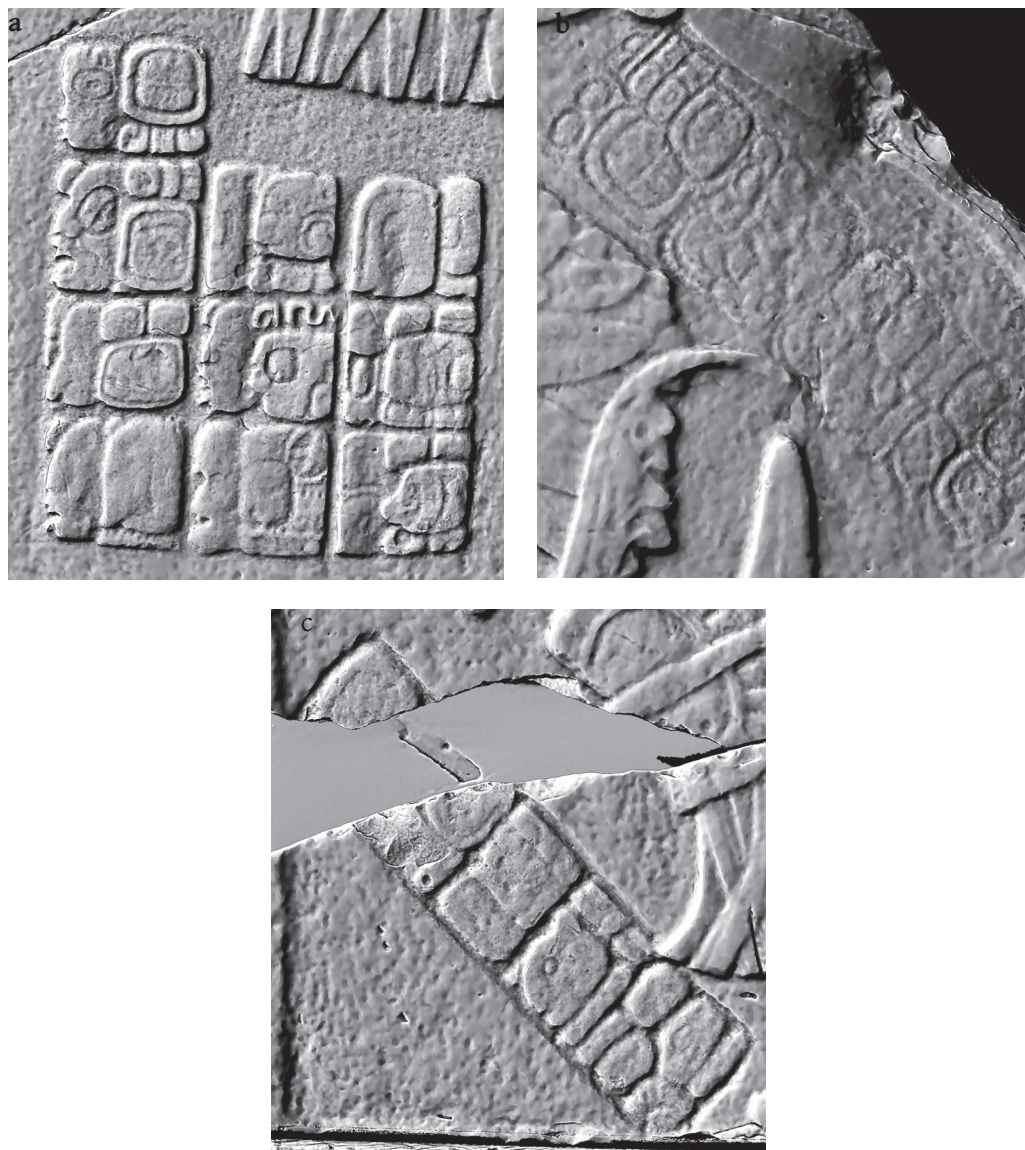
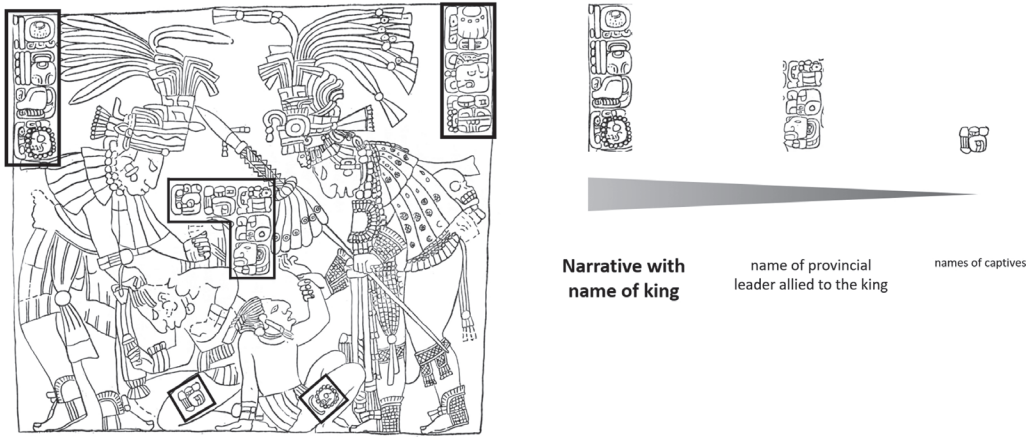


Fig. 6.7. a) Lower right glyph text from La Amelia, Stela 1; b) Upper right glyph text, incised; c) Left text field (3D models provided by project Text Database and Dictionary of Classic Mayan).

the Yaxchilan, Yaxun Balam IV, on the right. The text field between the king and his provincial ruler provides the latter's name and title. This field is not only smaller than that with the king's name above; it is also positioned lower in the scene and thus communicates the dominance of king Yaxun Balam IV over his vassal, K'an Tok Wayib (Fig. 6.8). The smallest hieroglyphs on the lintel are positioned on the thighs of the two noble captives whose names they record. Notably, these names do not receive their own text field; instead, the body serves as a writing surface, tagging

Text and glyph styles marking social status
size and style matters!



Yaxchilan, Lintel 10

Fig. 6.8. A comparison of the size of the hieroglyphic texts on the lintel 8 from Yaxchilan. Drawing by Tatiana Proskouriakoff, concept by C. Prager, all rights reserved.

the captive. In Classic Maya art, it is usually objects or artefacts that are tagged with glosses; for instance, bundles of cacao, corn or beans or tobacco jars are marked with their contents, or playing balls are measured at a particular size (Fig. 6.9). By directly incising the captives' names on to their bodies, they are ontologically transformed from humans to (possessable) things (Burdick 2016). This convention was frequently deployed in Classic Maya imagery, with the best-known example found on Monument 122 from Tonina. This monument portrays the king of Palenque, K'an Joy Chitam, as the captive of Ruler 4 from Tonina. The defeated king's personal name is recorded in an inset text field on his thigh (Fig. 6.9).

In the first example introduced from La Amelia (Fig. 6.3 above), we established that inset relief, which is framed and carved into the monumental surface, is significantly more visible than incised text. Visibility is a semiotic index for making visually perceptible or encoding high value, great significance or importance. In order to differentially value different components of a carved monument, for instance, the sculptor deployed varying styles, including incision, high and low relief or inset relief. Additionally, these nonverbal forms of (de)valuation could be expressed through other aspects such as dimension, position, layout relief style, sign font or colour. These features are meaning-bearing elements of image and text composition that communicate ideas, norms, conventions, beliefs, status, roles, themes, etc., that are not made verbally explicit on public monuments. Together with imagery and text, these artistic modes of expression constitute a level of messaging at which values,

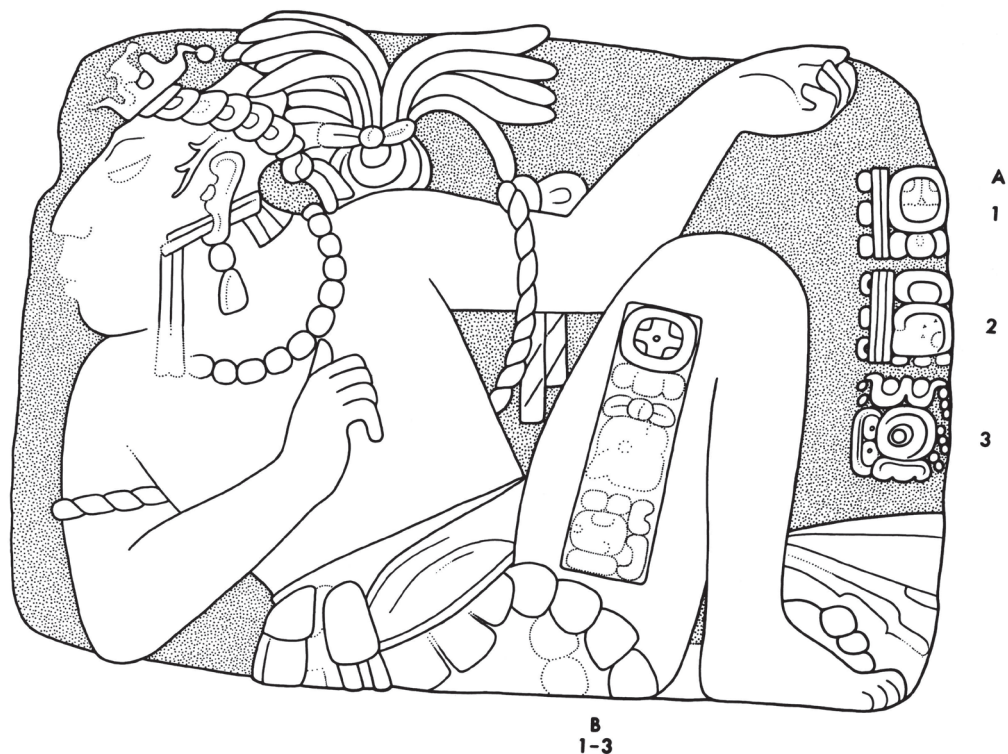


Fig. 6.9. The defeated king's personal name is recorded in an inset text field on his thigh as shown on Monument 122 from Tonina. Drawing by Ian Graham © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology. PM2004.15.6.16.15, all rights reserved.

meaning, relationships and hierarchies can be expressed through semiotic signs. Even the text or image carrier and its context become signs themselves, as in the case of stairways illustrating captives and hieroglyphically documenting war, conquest and destruction, for example.

The potential extent of this semiotic interplay of dimension, position, layout, style, etc., with all their facets and nuances, is especially apparent on Stela 12 from Piedras Negras (Fig. 6.10). The monument, which stands at over 3 m tall, is sculpted on one broad and two narrow sides with illustrated scenes and hieroglyphic texts (Stuart and Graham 2003, 60–63; Morley 1937–8, III, 262–271). The monument belongs to a cohort of stelae that were erected at Structure O-13 during the reign of Ruler 7 (AD 771–808) and constitute public memorials of that king (Martin and Grube 2008, 152–153). Dedicated in 795, Stela 12 commemorates Ruler 7's victories over Pomona, Piedras Negras' antagonistic neighbor, in 792 and 794, feats which he achieved with support from his vassals from nearby La Mar. The military events, participating actors and relevant places are documented in the long texts on both narrow sides and represented in part on the broad front. This latter face shows a complex scene

of conquest with the king in the middle, as well as his two noble vassals and conquered members of the royal court at Pomona.

Among and on the twelve figures illustrated on the front are scattered twenty text fields of varying size, execution, orientation and position (Fig. 6.11). Two fields represent glosses in micro-writing that refer to objects that are being presented to the king. Eight fields feature signatures from sculptors and polishers, and another ten contain the personal names and roles of the depicted figures, except for the king. Even in the early twentieth century, Herbert Spinden (1913) and Paul Schellhas (1945) suggested that Stela 12 contained depictions of historical figures whose names were recorded by the glyphs in the small text fields, a proposal confirmed by Heinrich Berlin (1959). David Stuart (1986) later succeeded in identifying the sculptors' signatures on the monument. Thanks to subsequent progress in the decipherment of Maya writing, most of the inscription can now be linguistically read and its contents interpreted (Teufel 2004, 365–376; Schele and Grube 1994).

Status, hierarchy, social differentiation or moral concepts are visualised on this monument using iconographic conventions and semiotic codes, especially figure composition. The proudly posing victors appear gigantic in comparison to the captives cowering at their feet at the bottom of the platform. The Piedras Negras king, dressed as a warrior and seated at ease atop the social pyramid, dominates the proceedings below him. His triumphant position at the top of the platform, with his imposing headdress of numerous elongated macaw and quetzal feathers, his body language and the three-quarter view of his

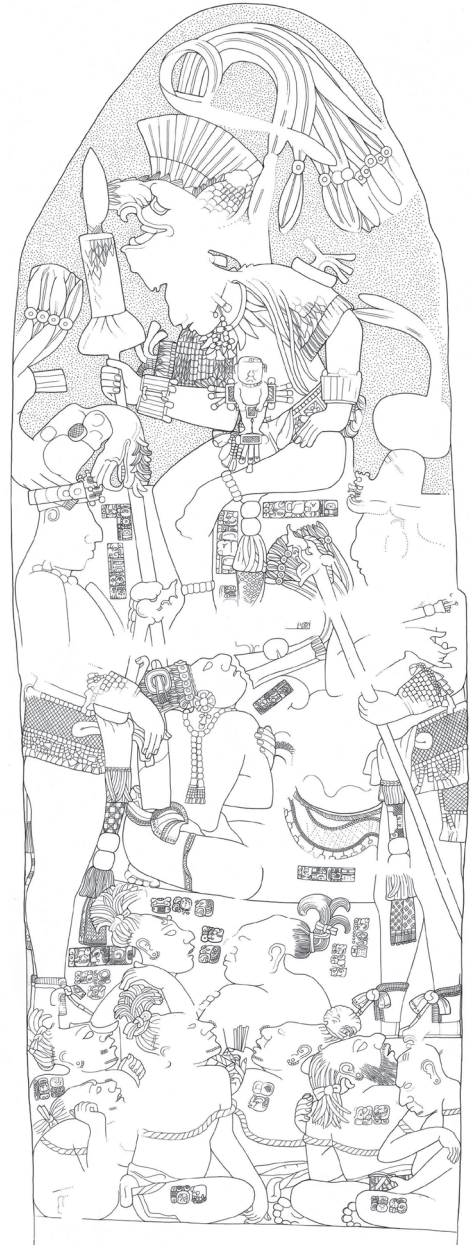


Fig. 6.10. Hierarchy and writing style as depicted on Stela 12 from Piedras Negras. Drawing by David Stuart © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology. PM2004.15.6.19.38, all rights reserved.

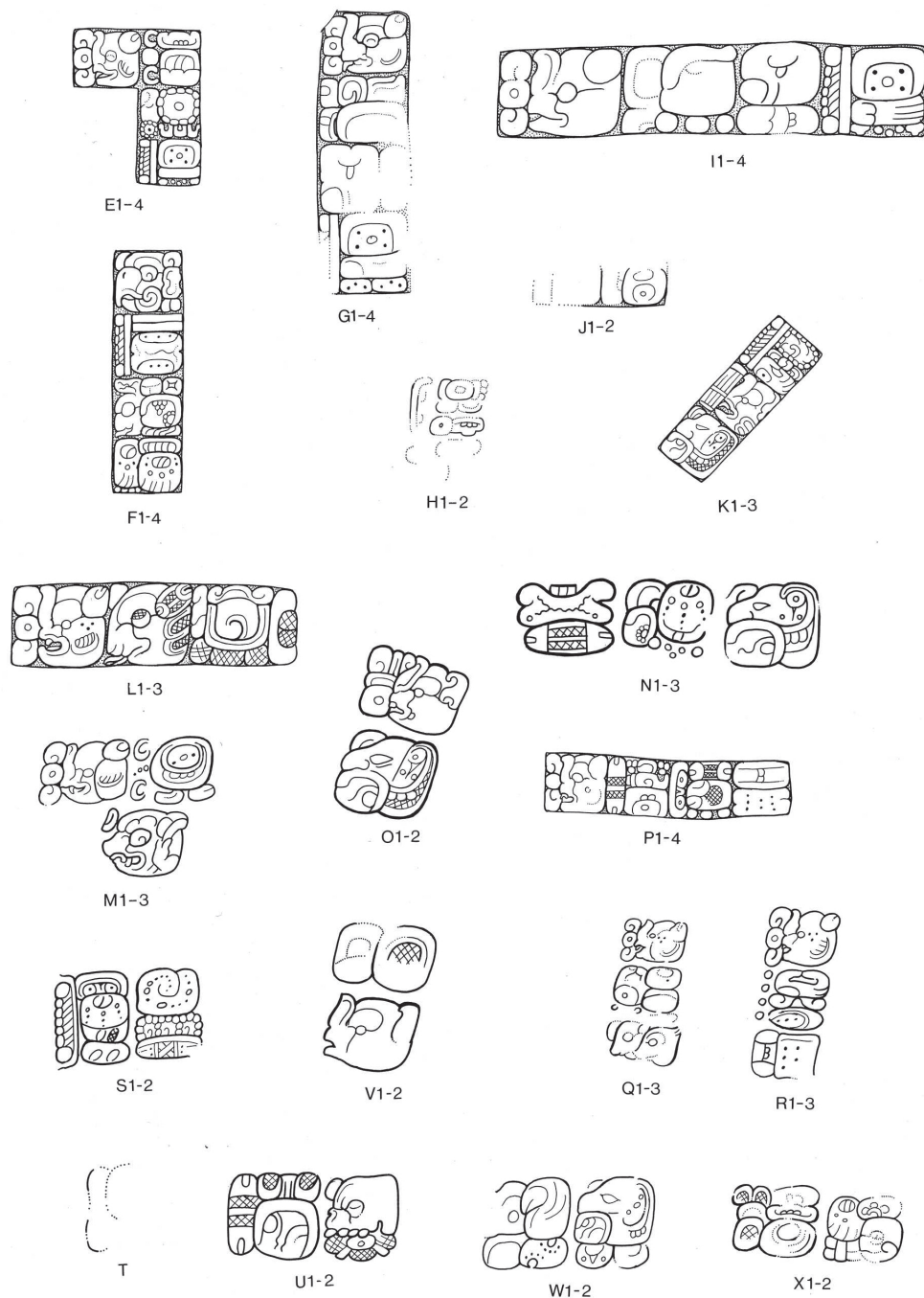


Fig. 6.11. Detail of Stela 12 from Piedras Negras: Name tags, signatures and explanatory inscriptions on the front. Drawing by David Stuart © President and Fellows of Harvard College, Peabody Museum of Archaeology and Ethnology. PM2004.15.6.19.41, all rights reserved.

front render him the most dominant figure in the image. He is the only person on the front who needs no label with a hieroglyphic name. Instead, his name concludes the historical narrative on the right side, before the text continues on the left narrow side with a listing the military victories during his reign. His vassals from La Mar stand a level below him on the platform, wearing insignias of their rank and presenting to the sovereign their important captives from the enemy court. A defeated local ruler seated between them is named in the inscription on the narrow side as an ally of the king of Pomona; he sits reverently before the Piedras Negras king and demonstrates deference with his folded arms. Unlike the captives cowering below him, however, he still wears his headdress and ornaments, which attest to his status as an important member of a royal court.

A visibly chaotic and dishevelled group of eight bound captives sits on the lowest level, all stripped of their headdresses, ear ornaments and other accoutrements, in contrast to the subjugated noble ally. Name glyphs or titles are incised on their shoulders, backs and thighs that allude to their royal activities and functions as scribes, musicians, local rulers and other persons who must have played important roles in the court of the defeated vassal. Here, stela's sculptors followed the convention of incising the captives' personal names on their bodies. Nonetheless, two captives stand out among the group: their names are placed not on their bodies, but on the blank surface in front of their heads. According to these labels, both men were so-called *sajal* or local rulers over smaller settlements in the periphery of city-states, who represented in these settlements the political and economic interests of the king and supported him in war. Their position in society must have been higher than that of the other captives portrayed farther down the stela, given their prominence within the group and their position above the very bottom of the depicted hierarchy.

At the level of these two men's portraits, additional text fields are either carved in inset relief or incised in the background, all with different glyph sizes (Fig. 6.10). These fields contain the names of sculptors who participated in the monument's production. It is notable that two names were carved in an inset field and two were incised on the stone surface. The dimensions of the incised hieroglyphs are smaller than those in the inset fields. Given the variable sign sizes can encode differences in value and meaning on text and image carriers, it can be assumed in this case that a hierarchy differentiated the participating scribes and sculptors, one that was expressed in the style, composition and form of their corresponding text fields. Stephen Houston suggested that the distribution of signatures on this monument not only exhibits the hierarchy among the artists, also their different tasks in preparing and processing the monument (Houston 2016).

The examples presented here suggest in particular that the incised text fields contain the names and titles of persons who were positioned lower in the social order. In addition, lower status was semiotically indicated by varying sizes of glyph blocks and positioning of the text fields (Fig. 6.8 above), a phenomenon also exemplified by Stela 12. Three text fields with sculptors' names are carved in inset

relief at the level of the portraits of the La Mar vassals. According to the inscription, all three sculptors originated from the place *Bik'al*. Many significant sculptors were based there during this period and achieved prominence under Ruler 7 (Stuart 2013). Their social status must have been high enough that they were permitted to place their signatures at the eye level of the La Mar nobles, memorialising their names below the seated king.

Framing inscriptions and carving them in inset relief made the hieroglyphs clearer and more visible, thereby directing the viewer's attention to the text passage. Significance, meaning, and hierarchies are thus expressed not only through visual language, but also through execution, elaboration and position of text fields, as well as composition. Systematic examination of all text fields on the front of Piedras Negras Stela 12 underscores how layout, form, size, position and carving style scaled and projected implied values that Classic Maya elite culture ascribed to particular persons, objects or themes. No text field was executed at the level of the seated Piedras Negras ruler. As the protagonist of text and imagery, the king alone claimed this position on the stela itself. One step below are the images of the La Mar vassals with their names carved in hieroglyphs in inset relief. At the same level, three sculptors also signed their names and titles, likewise using inset relief to publicly represent their equal standing with the depicted persons. Just below them is the image of the captured local noble, whose personal name is also carved in an inset field, although this field has been rotated 45° clockwise and populated with smaller-scale hieroglyphs. Various sculptors signed their names at the level of his name and portrait; their glyphs are noticeably smaller, however. Farther down are more signatures from sculptors who, instead of carving their names in inset relief, incised them in the surface next to or above the figures. The name glyphs of two captured local nobles who stand out among the captives have also been incised at this level, on the surface next to their portraits. Notable here is how only incised glyphs, rather than inset text fields, were executed here and in the lowest visual register.

The lowest level of the scene shows the group of beaten and humiliated captives who are visually positioned at the bottom of the social hierarchy represented on this monument. Their names and titles are incised on their bodies, in contrast to the situation of the other figures. Previously, we saw how captives lost their ontological status as people through this 'tagging' and in such cases functioned only as property or, more generally, 'things' (see also Fig. 6.12). The fact that they really do represent the lowest level of the depicted social ranking or hierarchy is also expressed by the absence of sculptor signatures from this register. One could speculate that no sculptor wanted to associate his name with the disgraced captives. In sum, the example of Stela 12 from Piedras Negras clearly highlights that not only visual language, *i.e.*, the composition of visual elements, can express hierarchies, values and status. In addition, layout, form, size and execution of inscriptions or text fields were semiotically charged to visually manifest these social phenomena. There is much evidence to suggest that these semiotic codes were intentionally deployed to this end.

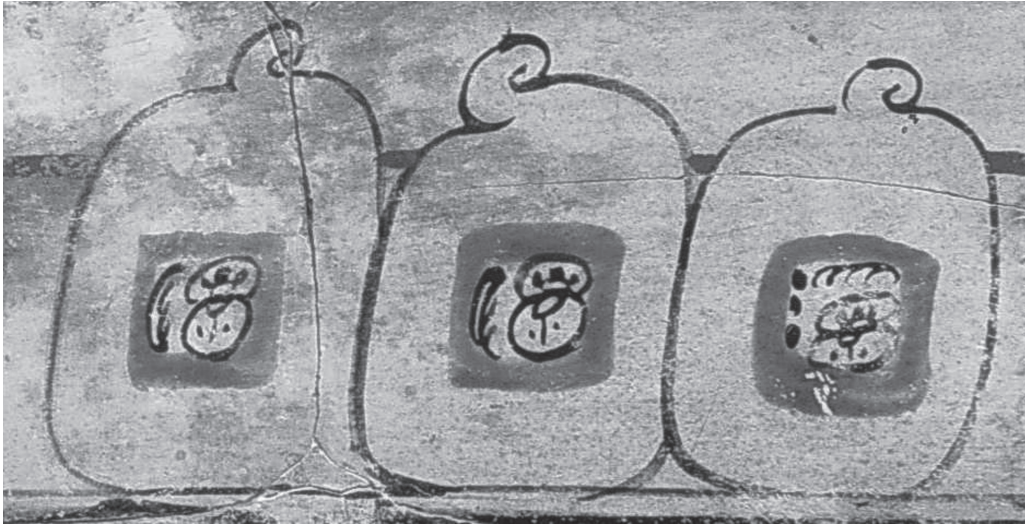


Fig. 6.12. Three sacks of beans and the explanatory note: *kabu'ul* 'our beans'. Detail from a ceramic vessel of unknown Provenance, Kerr 2914, http://research.mayavase.com/kerrmaya_hires.php?vase=2914 (photograph by Justin Kerr, all rights reserved).

Yet the varying dimensions of text field, hieroglyphic blocks or signs, degree of elevation from or inset into the surface, and text frames, among other factors, did not only make apparent the social status, position, meaning or importance of one person relative to other actors. In addition, they visually scaled the differing meanings of subjects on an image- or text-bearing object. One example of such semiotic interaction is apparent on a ceramic vessel discovered just a few years ago at Baking Pot, Belize. The vase is the so called Komkom vase which is covered with a painted narrative that is one of the longer known Maya inscriptions, with 202 hieroglyphic blocks (Helmke *et al.* 2017) (Fig. 6.13). The text begins with calendrical and astronomical references that introduce the historical narrative, which eventually concludes with kinship statements. The scribe did not only use different glyph sizes in the text, but also designated calendrical day signs in the text with red paint. This convention was noted in the earliest generation of Classic Maya research (Brinton 1895, 80) and is among the oldest known conventions in Maya writing, as it is attested as early as the late Preclassic era and was still in use in the region when the Spanish first arrived in 1517.

The red colour does not simply reference the sign icon that represents a bleeding heart (Houston *et al.* 2006, 93); it also serves as a structural marker that assists the reader in identifying a new text passage (Fig. 6.14). Generally, sections were structured according to calendrical references, whereby the red highlighting helped to orient the reader in the text. Varying sign size in the text also functioned to direct the viewer's attention and to give unequal weight to the inscription's contents. A simple glance at the ceramic text (Fig. 6.13) reveals that the scribe deployed four different sign and block sizes depending on the subject matter (Helmke *et al.* 2017, 231). The largest



Fig. 6.13. The so called Komkom vase from Baking Pot with different sizes of writing. Photograph by David Stuart, <https://mayadecipherment.com/2019/03/07/new-publication-of-the-komkom-vase>, all rights reserved.



Fig. 6.14. Red painted calendaric glyphs found on a dynastic vase of unknown provenance, Kerr 6751, http://research.mayavase.com/kerrmaya_hires.php?vase=6751 (photograph by Justin Kerr, all rights reserved).

text was used for the calendrical counts at the opening of the text. For the kinship references at the end, the scribe used a size that was somewhat smaller, but still noticeably large. The historical narrative, in turn, was composed in signs of a uniform but clearly smaller size. The astronomical information accompanying the oversized introductory calendrics was composed with the smallest signs, which are just one-third the size of the calendrical statement.

Thus, we can assume that larger text size underscored and visually emphasized the cultural significance of the content that it recorded. For Classic Maya, chronological counts were ascribed maximum value, because they could be used to document the past, structure the present and calculate the future. For this reason, temporal references in the form of the Long Count were often represented in inscriptions as excessively large. The signs' large size served not only to indicate the beginning of an inscription, but also to underscore the great cultural import of time and the calendar. This latter function is particularly obvious on the Baking Pot vessel: different topics were represented in different sizes in order to scale the cultural value of their contents and to visualise their significance.

Style, form, layout, execution, colour and position of text fields constituted semiotic artefacts that made explicit the social status of represented figures, underscored hierarchies, ascribed value to iconographic objects and scaled the significance of subjects that are addressed in Classic Maya inscription and imagery. Over the script's two millennia of use, Maya scribes developed a range of conventions and codes that allowed them to scale the value of people, things and topics and to visually emphasise their meaning in image and text. In addition to studying text, image, and language, decipherment of semiotic codes numbers among the future tasks of research on Classic Maya civilisation – this chapter marks a start to this endeavour.

Chapter 7

Visibility of runic writing and its relation to Viking Age society

Julia-Sophie Heier

Introduction

Runes are the writing system of the Germanic peoples and the oldest artefacts attesting runic writing date back to the second century AD. As it was an epigraphic script, runes were carved mainly into objects of various materials such as metal, wood or stone. The Viking raid on the monastery at Lindisfarne in 793 conventionally marks the beginning of the Viking Age, which lasts until the Norman conquest in 1066. This period is characterised by the Viking expansion to western and eastern Europe for raiding and trading. It is also the time when the kingdoms which would later be known as Denmark, Norway and Sweden were developing. During that time, Vikings came in contact with the Christian faith, manuscript culture and the Latin script (cf. Sawyer, B. 2000, 16–23; Sawyer, P. 2003).

Despite the introduction of the Latin alphabet, runes were not dismissed at once and were not fully replaced before the twelfth and thirteenth centuries. The runic writing system underwent some major changes at the beginning of the Viking Age in the North. The old system, which consisted of 24 characters, developed into the so-called Younger Futhark of only 16 characters. The reduction came hand in hand with a simplification of the single runic characters, which resulted in an easier carving process, but at the same time the degree of difficulty in deciphering the inscriptions became higher (cf. Düwel 2008, 88–94; see also Schulte 2009; 2011).

The majority of the inscriptions from the Viking Age are carved into stone, which marks this period as the great age of rune-stones. Around 220 rune-stone monuments from the period 750–1050 can be found within the area of Viking Age Denmark, which also included part of East Sweden for historical reasons (cf. Düwel 2008, 98). Sweden counts far more rune-stones – around 2600 – the majority of which were erected during the late eleventh and twelfth centuries (cf. Düwel 2008, 113).

In this paper the focus will be on the Danish rune-stones. These inscriptions display a formulaic style, reading ‘N.N. raised this stone (monument) in memory of N.N.’ Moltke (1985, 184) states, that ‘[r]une stones are monuments to the glory of men who erected them and of the men they commemorate; they are not gravestones lamenting the dead.’ The text on the inscription can occur in different reading directions and does not follow a normalised orthography. According to Sawyer (2000, 146–152) rune-stone monuments had different functions. They commemorate the dead individuals, but also serve as memorials for the living sponsor(s). Furthermore, they display wealth and status. Sawyer (2000, 151) also suggests that runic monuments were ‘a symptom of crisis’ and ‘their uneven distribution in Scandinavia ... is a good reflection of the political and religious transition that took place during the tenth and eleventh centuries.’ In accordance with Sawyer, Danielsson (2015) argues that rune-stones act as mnemonic agents. She takes the view, that ‘[b]y raising stones, both carved and uncarved, long-term social memory was created.’ (2015, 80).

The questions of how the knowledge of runic writing was transmitted and who was able to carve runes in the first place are still unresolved. Some inscriptions include references to rune masters, and according to Axelson (1993, 5) over 100 rune carvers in Sweden are known by name. By analysing orthographical and typological features, inscriptions that do not contain an individual’s name can be assigned to known carvers; this is the case of Öpir, one of the more productive carvers from Sweden (cf. Stille 1999, 148–199; for Öpir cf. Åhlén 1997; Källström 2010). Concerning their social standing, Källström (2007) notes that rune carvers did not belong to a special social class but were, rather, part of the ‘normal’ Viking Age population. Furthermore, he outlines the relationship between the sponsor family and the rune master and determines three different types of rune carvers: firstly, the ‘professional’ with no relation to the family, secondly the carver who is identical with the sponsor or belonged to the same family and finally carvers who were subordinate to the sponsor (cf. Källström 2007, 245–291). Recent studies using 3D-scanning and multivariate statistical analysis on rune-stone inscriptions discovered new findings about the relationship between rune carver and sponsor. In the case of the Danish island Bornholm results show that ‘rune carvers were linked to particular families, and that the individual rune carvers were following the different fashion currents of the time’ (Åhfeldt and Imer 2019, 17). The study suggests that on the island each family was probably connected with a rune carver and that there is ‘indirect evidence that the culture of runic writing was more widespread at the start of the Middle Ages than ... hitherto assumed’ (Åhfeldt and Imer 2019, 17).

This paper looks at Viking Age rune-stone inscriptions and writing in general from a different perspective, combining different disciplines. The aim is to investigate the role runic writing played in Viking Age society in Denmark. The concept of visibility of script is introduced by Strätling and Witte (2006) who consider script in a dichotomy of visibility and invisibility, calling it the paradox of *sichtbare Unsichtbarkeit*

(roughly translated as ‘visible invisibility’). Script has to be visible to be recognised, but simultaneously always carries the invisible information of the content of its text. Using this statement as a starting point, the paper explores the particular role visibility of both script and the archaeological artefact plays concerning the effect runic writing had on society.

Visibility and materiality of script

Thinking about the materiality of script, Ehlich (2002, 92) states the conditions that led to the development of this medium. The relationship between written and spoken language – script and speech – has been discussed by multiple scholars and can be seen in different ways, depending on the focus (cf. de Saussure 1983; Paul 1995). In a merely neutral sense writing can be described as an inventory of characters (cf. Dürscheid 2006, 19).

The starting point of Ehlich’s analysis (cf. Ehlich 2002, 92–97) is – as he puts it – ‘materiality’, *i.e.* the transfer of speech or spoken language into a material form. The main problem of speech is its cursoriness and transience. Memory is one method to overcome this obstacle, though it also poses difficulties because of one’s limited capacities of memorisation. The consequence is the need for a new medium that eliminates these limitations of oral tradition. Script adds a factor of permanency, but is always bound to materiality in the literal sense of the word. In simpler terms it means that writing does not exist without the presence of a writing surface and characters with their representative function (cf. also Waldspühl 2013, 47–60). As Ehlich (2002, 92) puts it ‘diese [Schrift] aber war auf unübersehbare Art an die Sichtbarkeit gebunden – und damit an Materialität in vielfältiger Weise und Form.’¹

The German term *Sichtbarkeit* (in the following English ‘visibility’) is understood in terms of visible perception and materialisation. In the introduction to the conference proceedings about writing *Die Sichtbarkeit der Schrift*, Strätling and Witte (2006, 7–18) present their concept of what ‘visibility’ of script entails. They postulate (2006, 7) that writing can be considered in a dichotomy of visibility and invisibility, calling it the paradox of *sichtbare Unsichtbarkeit*. This paradox is the crucial point when thinking about the characteristics of script. Starting from this perspective, three levels of distinct visibility are mentioned. The first and basic level is linked to the materiality of writing and corresponds to Ehlich’s observations. The act of applying a character on a suitable writing surface makes it become script. Accordingly, visibility is the fundamental condition for writing. The writing surface needs to comply with certain conditions: it demands a certain size in order to fit the characters on the surface, the ability of affixation and, as already mentioned, permanency. The latter condition is crucial for overcoming the cursoriness of spoken language (cf. Ehlich 2002, 96–97).

¹ ‘Script was bound to visibility in an evident manner and thereby bound to materiality in a number of ways and forms’ (my translation).

In addition, visibility at the basic level attracts the recipient's attention. A last point which has to be mentioned here is that visibility implies not only literal visibility, but also includes a form of haptic visibility such as embossed printing (cf. Strätling and Witte 2006, 7–8).

Apart from the dichotomy of visibility and invisibility, script features another opposition, between the two attributes *visibility* and *readability*. The visual perception of writing at the same time refers to its intended message. Defining reading as the mere cognitive perception of writing, the act of seeing script leads simultaneously to 'reading' script, even though the beholder may not grasp the actual content of the written text. This means that even illiterates are able to perform this form of 'reading', *i.e.* perceiving script, since it triggers the awareness of information encoded in the writing. Relating to the paradox of *sichtbare Unsichtbarkeit*, the writing for the beholder is visible, whereas the specific content – *i.e.* the message the writing bears – is invisible (cf. Strätling and Witte 2006, 8).

The third level of visibility refers to the actual reading process, *i.e.* the awareness that writing is encoded speech and the process of understanding the writing's content. The individual characters of a writing system transform into words, sentences and text and by that become invisible. The only thing that is now perceived is the content and the information that are encoded by the script itself. (cf. Strätling and Witte 2006, 9–10)

To sum up, writing can be characterised by its different features, which are materiality, visibility and readability, as well as by its central paradox of visible invisibility. These attributes are all dependent on each other and form various dichotomies. Script's materiality is closely connected to its visibility, whereas visibility and readability in the sense of cognitive perception of writing are also linked. This suggests that writing is not only meant for the literate part of society, but could also affect the illiterates in their perception of visible script. In the following, the Viking Age rune-stones are analysed focusing on the different levels of visibility to confirm this hypothesis. The following sections concentrating on various aspects of writing on rune-stones shall offer examples of those levels.

Carving and painting runes

Since runes are an epigraphic writing system, characters are chiselled or carved in metal, stone and wood. The only exception are manuscript runes, so called *Runica manuscripta*, which are usually scribbled with ink into the margins of manuscripts.² This tradition continued in Iceland until up to the beginning of the twentieth century. Regarding the Viking Age, runes are mainly carved in stone. From today's point of view, the inscriptions are often difficult to see and read. This is due to the fact that

² There exist one manuscript and one manuscript fragment written entirely in runes. The Old Danish *Codex runicus* (AM 28 8vo) dates to ca 1300 and contains the Scanian law texts. The fragment SKB A 120 contains a Marian Lamentation dating between 1400 and 1500. Both are individual attempts to use runes as bookscript (Bauer and Heizmann forthcoming).

most of the stone monuments, especially those which still stand in their original place, are weather-worn. This problem was already noted in the sixteenth century by Olaus Magnus in his *Historia de gentibus septentrionalibus* ('Description of the Northern Peoples'). In Book One, chapter 29 'On the military obelisks and upright stones of the Götar' he states, that '[a]lthough many letters at the bottom of the stones have been damaged and eroded by rain and mud because of their immense age, other similar records of achievements can be quite clearly read.' (Foote 1996, 66). Especially since the beginning of industrialisation, deterioration due to weathering has accelerated (cf. Åhfeldt 2002, 20–21). To preserve the monuments and to make them accessible to a wider audience, runes and decorative lines on the stones are painted, mostly in red. Otherwise 'they would become anonymous and lose their cultural heritage value, thereby becoming more vulnerable to damage' (Åhfeldt 2002, 22, see also Burström and Zachrisson 1996, 8).

In doing so, modern archaeologists seem to follow an ancient custom: both material and textual evidence shows that during the Viking Age, carved rune-stones were also painted. Traces of colours have been found on stones and some inscriptions directly mention the painting of runes. The Swedish rune-stone Överselö (Sö 206) in the province Södermanland dates to the Viking Age and its inscription reads:

**: hir : skal : stenta : staena : þisir : runum : ru-nir : raisti : k---auk : at syni :
sina : auk : hielmlauk : at bryþr : sina ·³**

Her skal standa stæinar þessir, runum ru[ð]nir, ræisti G[uð]aug at syni sina, ok Hialmlaug at brøðr sina.⁴

Here shall these stones stand, reddened with runes: Guðlaug raised (them) in memory of her sons; and Hjamlaug in memory of her brothers.

The phrase 'reddened with runes' refers explicitly to paint. Düwel (2008, 35) states ON *rjóða* 'to make something red' (cf. Old English *reodan* for 'make something bloody') is used in literary sources mostly in the context of blood rites. Two more inscriptions from Södermanland, the Gersta stone (Sö 347) and the Nybble stone (Sö 213), also offer epigraphic evidence for the painting of rune-stones (cf. Düwel 2008, 125; Jansson 1987, 154–156).

In addition, ON *fá*, originally meaning 'to paint', links painting and runic writing in the early language. The verb derives from Germ. **faihjan* (cf. de Vries 1977, 108) and is already used in the earliest runic inscriptions, even though more in the sense of 'write' (Jansson 1987, 156).⁵

³ Transliteration is a one-to-one correspondence between runic signs and roman letters. It does not imply the reproduction of a grammatical correct text, which is given with the transcription. The transliteration is rendered according to edition of the Danish Runic inscriptions (DR) and Swedish Runic inscriptions (Sö) respectively.

⁴ The transcription of all runic inscription is according to *Samnordisk runtextdatabas* (rundata 2.5) and displays the normalisation to Old Scandinavian, meaning a normalised form of Runic Swedish and Runic Danish respectively.

⁵ The verb can be found for example on the Vetteland stone (KJ60) or the Einang stone (KJ46).

Beside linguistic and epigraphic evidence, the literary sources also hint at the painting of runes. In the Eddaic poem *Hávamál* three stanzas, namely 80, 144 and 157, mention the painting of runes.⁶ For these instances *fá* is used in the sense of ‘painting’ (cf. Düwel 2008, 125; Jansson 1987, 158; La Farge *et al.* 2019, 696). In stanza 144 the narrator, probably Odin, asks:

Veiztu hvé rísta skal?
Veiztu hvé ráða skal?
Veiztu hvé fá skal?

‘Do you know how one must carve them?
 Do you know how one must construe them?
 Do you know how one must tint them?’

(Dronke 2011, 31).

Besides *Hávamál*, the phrase of ‘reddened runes’ also appears in another Eddaic poem, *i.e.* in stanza 22 of *Guðrúnarkviða ǫnnur*. Yet, as Jansson (1987, 158) clearly points out, ‘these literary references to the painting of runes have, of course, their own special interest, but they cannot supply any detailed information about the appearance of monumental stones when fresh from the hands of the rune-master.’

In 1953/54 an archaeological find was made in Köping church on the Swedish island Öland. Around 60 fragments of Viking Age rune-stones were found, which retained colour both in the carved lines of the inscriptions as well as on the intervening surface. Four main colours were identified: black, red, blue and brown. The black paint consisted of soot, while the red was lead-based (cf. Jansson 1954, 86). Additionally, in Denmark two coloured rune-stone inscriptions were found. This shows that the painting of runes was not a solely Swedish practice. During the restoration of a church in Bjerring (Jutland, Denmark) a rune-stone (MJy 10) was found, placed facedown to be used as a base for the Roman columned doorway. On the stone’s back a carved mask was discovered, which was painted in red lead (cf. Imer 2016, 71–72).

The question whether all rune-stones were painted still remains unanswered. An overall analysis of possible paint residues on Viking Age rune-stones has not been carried out yet. And it is uncertain if there are traces detectable with today’s technical methods on those stones which have been exposed to weathering and were painted over many times with modern paint. Nevertheless, this shows that runic inscriptions were in some cases made visible in two ways, that is to say, by carving them into stone and by additionally applying paint on them.

These two methods differ in their degree of permanence. The carving process represents a certain form of eternity. A carved inscription needs careful planning and chiselling work in order to avoid mistakes. The inscription is literarily ‘set in

⁶ *Hávamál* is documented in the main manuscript for the Poetic Edda *Codex Regius* (GkS 2365 4to) from ca 1270. It teaches about wisdom, the way of living and proper behaviour. The narrator in these poems is Odin himself, but this is first mentioned in stanza 111 (cf. La Farge *et al.* 2019).

stone' and modifications are very difficult to implement. Evidence shows, however, that not every inscription was carefully planned beforehand. The handling of the writing space was in many cases not determined in advance. For instance, there is a considerable amount of space left at the end of the Langå stone 3 inscription (DR 85). Other cases show the opposite, so that remaining words of the inscription had to be added somewhere else or the space between the runes becomes narrower, as for example on Skårby 1 stone (DR 280) in Scania (Jacobsen and Moltke 1942, col. 820).

Simple carving mistakes can also occur. Some of the runes have similar forms that can be mixed up by the carver. The **a**- and the **n**-rune differ only in the slope of the twig: While the **a**-rune consists of a vertical stave with the twig sloping up (†), the **n**-rune has the twig sloping down (‡). The Skivarp stone inscription (DR 270) displays such a carving mistake, where Old Danish *sten* 'stone' was written with an **a**-rune instead of an **n**-rune at the end. But there is a simple solution as Jansson (Jansson 1987, 159) suggests:

By painting in the runes, the writer also had the opportunity to correct errors he might have made with his chisel. If, for example, he had contrived to cut a †-rune instead of a ‡-rune, he would, after noticing his mistake, cut the correct diagonal stroke over the faulty letter. The result would be a **h**-rune (✱), but when he came to paint the inscription, he would pick out only the correct form of the rune and his error had vanished.

In this case the paint would have made the permanence of the carving mistake – at least temporarily – invisible. Of course, this is purely speculative since there exists no evidence. Those stone inscriptions which contain carving mistakes are not painted (any longer) and among the coloured stones no carving mistakes could be identified.

The question that remains unanswered is in what way the colouring of runes occurred. There is little to no evidence of the practices involved, whether it was something ritual-related and included a ceremony, or if it was mainly pragmatic. The same question applies to how the runes themselves were carved into the stone.

Nevertheless, since there are painted rune-stone monuments, one has to think about the effect these inscriptions had on people. Jansson (1987, 153) assumes, that 'the use of colour must have meant a remarkable addition to the beauty and artistic effect of the monuments'. This means that rune-stones must have been visible from a great distance. This proposition can be supported also by the position rune-stones had in the landscape. As Stille (2015, 138) puts it, the placing of rune-stones is the key to understanding the purpose of a rune-stone and to understanding the context in which the inscription itself was produced. The problem is that a lot of rune-stones do not stand in the location where they were originally erected. Some were used as church building material and some are lost altogether (cf. Stille 2015; Klos 2009). Another difficulty is the archaeological reconstruction of the Viking Age landscape. Nevertheless, several studies have shown that rune-stones appear to 'mark a manor or the boundaries of a manor or perhaps larger administrative areas. They point to roads and bridges built or maintained by persons with resources' (Stille 2015, 149).

This implies that rune-stones were not erected in hiding, but openly and in exposed terrain, where they were visible for everybody. Subsequently, the runic script was also visible for everybody.

The materiality of runic script was therefore twofold. They have a permanence, stemming from the carving of rune characters into stone. The writing is unchangeable and obtains a suggestion of eternity. Their other aspect is the painting of the carved runes. Painting is less permanent, but makes the inscription more visible to the beholder and attracts attention.

‘Reading’ the runes

The following section deals with the ‘readability’ of runic writing. As mentioned above, ‘reading’ is understood in the sense of the cognitive perception of writing. It implies the awareness about one of the main functions of script: writing encodes content. On this level the individual runic characters are still to the fore, meaning they are visible, while the content of the inscription, *i.e.* the text encoded in writing, is hidden and invisible. This is the level of script’s *Sichtbarkeit*, which is crucial for the illiterate part of Viking Age society.

Usually the inscriptions are carved on the broad side of the stone. In some cases, the Viking Age rune-stones in Denmark show different forms of how the inscription is arranged on the stones. The edition of Danish rune-stones *Danmarks runeindskrifter* (=DR) distinguishes between three designs (cf. Jacobsen and Moltke 1942, col. 820–825). The most common layout for Danish rune-stones according to DR (cf. col. 821) is *parallelordning*, *i.e.* the parallel design. The runes are arranged in vertical lines and are read either top down or in wavy lines. Among the parallel design two main types can be distinguished. This design is typical for inscriptions which were created before Christianisation set in but it can be found on stones throughout all periods. The benefit of this design is that the whole writing space is usable since it fits the largest number of signs. According to Imer (2016, 64), this design makes a rune-stone monument more monumental. Evolving from the parallel design is *konturordning* – contouring design – which can be found on the majority of Viking Age rune-stones. The inscription follows the shape of the stone. In most cases the text starts in the lower left corner. Sometimes the inscription is too long to fit the stone’s shape, so that additional text sequences are added horizontally either at the bottom of the stone or inside of the curve. Another design, which is rather uncommon in Denmark, is the *slangeordning*. The text is written inside a carved body of a winding snake. This kind of design is characteristic for Swedish rune-stones, wherefore stones with snake design point to Swedish rune carving influence (cf. Jacobsen and Moltke 1942, col. 821).

Bianchi’s analysis of rune-stones in the Swedish landscapes of Uppland and Södermanland shows that the ways in which the runic characters are arranged on the writing surface have semiotic meaning. By comparing the inscription’s text with the ornamental band, he states two things: 1) in most cases the runic inscription starts

in the lower left part of the surface and 2) there is a relation between the visual and syntactic structure of the runic text (cf. Bianchi 2010, 52–115). This shows that the inscriptions were not applied in a random way, but rather with a specific aim. Some of the late Viking Age rune-stones contain so called non-lexical inscriptions or nonsense inscriptions. Stones associated with these kinds of inscriptions contain all features of a typical rune-stone except for the fact that the runes or rune-like signs carved on it do not resemble any known words or text (cf. Bianchi 2010, 165).

Kategorin otolkningsbara inskrifter utgörs av dem som aldrig har varit avsedda att uttrycka ett språkligt meddelande och därför är icke-lexikala. Till dessa hör skrivövningar, nedteckningar av ramsor eller icke-lexikala sånger samt inskrifts- eller skriftimitationer. (Bianchi 2010, 168)⁷

Some scholars have interpreted the non-lexical inscriptions simply as a product of illiterate rune masters or an imitation of Viking Age rune-stones (cf. Musset 1965, 253–254; Meijer 1997, 104). According to Bianchi those explanations are too simple for two reasons. Firstly, the number of rune-stones with nonsense inscriptions are high enough to see them as more than ‘accidents’ or exceptional case of one illiterate rune carver. Secondly, some of the inscriptions date to the same time period as the ‘regular’ rune-stones. Taking a closer look, Bianchi states (2010, 221–222) that the rune-stones with nonsense inscriptions connect fully to the runic tradition apart from the verbal component. This is strengthened by the fact that runes in the inscriptions are used in the same way as in semantically meaningful inscriptions: they start in the lower left corner. But there are also some features that differ from ‘regular’ rune-stones. Some typical features, like the carving of crosses, are overrepresented in non-lexical inscriptions. Additionally, the ornamental features are carved partly in lower quality. Despite this, Bianchi (2010, 228) concludes that those stones still function as a semiotic resource and that a lexical and meaning producing inscription was not a requirement for interacting with the medium rune-stone. It was however important that there was writing on the monument even if it did not convey content. This fact suggests that rune-stones were not just for the elite of Swedish Viking Age society, but also for the illiterate part.

Conversely, rune-stones with non-lexical inscriptions are very rare in Viking Age Denmark. The nonsense inscriptions Bianchi analysed are mostly a Swedish and late Viking Age phenomenon. So, it is a bit challenging to compare the Late Viking Age Swedish rune tradition with the Viking Age Danish tradition, the latter being older and also different in their ornamental feature. The question arises why the situation in Denmark was different and whether runic monuments were meant mainly for the literate part of society. Assuming Danish rune-stones had informational value for the illiterate as well, I will take a closer look at stones which bear writing on several

⁷ ‘The category of non-interpretable inscriptions is made up of those which were never meant to express a verbal message and are therefore non-lexical. These include writing exercises, writing down of rants or non-lexical songs and imitation of inscriptions or writing’ (my translation).



Fig. 7.1. Fuglie 2 (DR 260), side A (Jacobsen and Moltke 1937, 240).

sides, especially on the top side of the stone. The reason behind that lies in the assumption that even though part of the inscription is not readable at first (or at all), the monument still functions as a rune-stone.

Fuglie 2 (DR 260) was found in 1876 by Ludvig Wimmer. The stone's height is around 121 cm and the runes are carved in a single line on the long side and they extend to the top (cf. DR col. 314). Because of its relative short height, the observer is able to see all runes, but not all at once (Figs 7.1 and 7.2). Unfortunately, the stone was not found at its original location. It was assumed by Christoffersson that it was originally placed on top of a Bronze Age burial mound (cf. Jacobsen and Moltke 1942, col. 314). Jacobsen and Moltke (1942, col. 314) argue that it is questionable whether a stone would have been carried for several hundred metres to be put into a stone wall, where it was found. They propose that the original location is unknown. To place a rune-stone on top of burial mounds was not uncommon during the Viking Age. Fuglie 1 (DR 259), which is one of the few rune-stones outside Bornholm with Christian elements is one of them. The stone was set by Ønd in memory of his brother Øde, who died on the island of Gotland. According to Moltke, the burial mound might have served as a cenotaph for the dead brother (cf. Moltke 1985, 240–241).

In addition to Fuglie 2, there are other Danish rune-stones where the inscription extends on to the top of the stone. The two stones Haithabu 2 and 4 (DR 2 respectively DR 4) were found near the Viking Age trading centre Haithabu and both bear very similar inscriptions. They are raised in memory of King Sigtryggr by his mother Ásfriðr. Haithabu 2 is partially carved with Swedish runes, whereas Haithabu 4 used Danish runes. The layout of Haithabu 2 is especially interesting. The stone is over 2 metres high and the inscription extends over the broad side to the top and the narrow side (Figs 7.3 and 7.4).

§A₁: **ǫsfriþr : karþi : kum**
 Top + §B₁: **bl · þaun**
 §A₂: **ǫft : siktriku :**
 §B₂: **sun [:] (s)in : ǫui : knubu**

Asfriðr gærþi kumbl þøn æft Sigtryg, sun sin ok Gnupu.

Ásfriðr made this monument in memory of Sigtryggr, her son and Gnupa's.



Fig. 7.2. Fuglie 2 (DR 260), top (Jacobsen and Moltke 1937, 240).



Fig. 7.3. Haithabu 2 (DR 2), side A and B (Jacobsen and Moltke 1937, 4).

The broad A-side is laid out in parallel design. The inscription starts at the bottom at the left line ($\$A_1$), but then extends over to the top side to the B-side ($\$B_1$). The second part starts at the bottom right line ($\$A_2$) and the third can be found at the B-side and begins at the bottom ($\$B_2$) (cf. *Danske Runeinskrifter*).⁸ As a result of this layout, Imer (2016, 156) points out that the first line of the inscription, which contains the name of the sponsor *Ásfríðr*, is placed in the middle of the entire inscription. But one has to note that it is almost impossible to read the content of the inscription. Due to its height and the fact that part of the text is carved on top of the stone, it is difficult to see every character. It is doubtful that the whole text was meant to be read. One could assume that rather the simple fact that something was carved into the stone was enough, especially since the runes carved on top of the stone are of lower information value. The demonstrative pronoun *þaun* 'this' and the two last letters of the

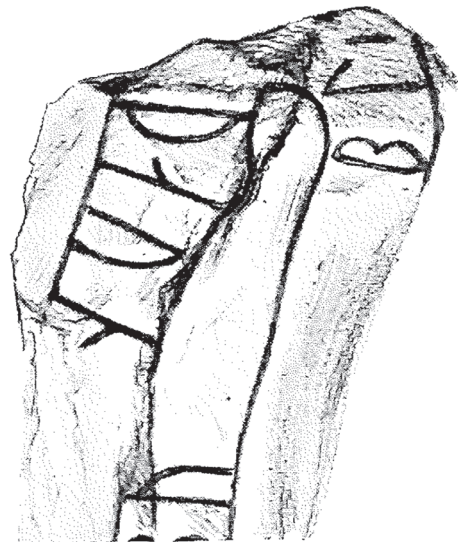


Fig. 7.4. Haithabu 2 (DR 2), top (Jacobsen and Moltke 1937, 5).

⁸ http://runer.ku.dk/VisGenstand.aspx?Titel=Haddeby-sten_2 (consulted 10 December 2019).

word *kumbl* ‘monument’ are from minor importance compared, for instance, with the name of the sponsor.

A last example of rune-stones which contain their inscriptions on several sides is Lund 1 (DR 314), which was found in the ruins of an old monastery in Lund, Scania where it was probably used as construction material. It is almost 4 metres in height and thus the tallest preserved rune-stone in Denmark (cf. *Danske Runeinskrifter*).⁹ The inscription is placed on two opposing sides, while on the remaining two sides images are carved into the stone. One side shows a mask and the other a mask in between two animals (cf. DR, cl. 362).

SA: + þu(r)[kisl : sun : i]sgis : biarnar : sunar : rispi : sti[na :
pisi] : (uf)tir : brubr +
SB: + sinā : baþa : ulaf : uk : utar : lanmitr : kuþa +

*Dorgisl, sun Æsgir Biarnar sonar, resþi stena þæssi æftir brøþr sina baþa
Olaf ok Ottar, landmænnr goþa.*

Dorgisl, son of Ásgeirr Björn’s son, raised these stones in memory of both of his brothers, Ólafur and Óttarr, good landholders.

The reading direction on both sides is upward. While the characters on the A side reach almost the top of the stone, the B side and the side with the two animals are empty in the upper third part. Similar to the Haithabu 2 stone, parts of the inscription are not easy to read because of its great height (Figs 7.5 and 7.6).

The ‘reader-unfriendly’ way the runes are arranged on the monuments, *i.e.* on top of the stone, up at a great height, on different sites or in wavy lines might lead to the assumption that actually reading the inscription was not particularly important. Especially when having the nonsense inscriptions in mind, it could be postulated that the importance of writing being on the stone was greater than its content. On this level of *Sichtbarkeit* the beholder acknowledges writing, *i.e.* in the sense of individual characters, but the actual content of writing in this scenario is of lesser importance. This means that both illiterate and literate people are able to interact with writing and that the rune-stone monument addresses everybody.



Fig. 7.5. Lund 1 (DR 314), side A (Jacobsen and Moltke 1937, 286).

⁹ http://runer.ku.dk/VisGenstand.aspx?Titel=Lund-sten_1 (consulted 10 December 2019).



Fig. 7.6. Lund 1 (DR 314), side Band C (Jacobsen and Moltke 1937, 287).

Grasping the meaning

We have established in the previous section that the content – to some extent and for some part of society – did not play a very important role for the function of runestone monuments. But there is the undeniable fact that the inscriptions of these monuments do carry concrete information and content, otherwise there would be only nonsense inscriptions. In this section we are going to show that also the content of runestone inscriptions mattered. On the third level of *Sichtbarkeit* of writing, the writing – meaning the singular characters – becomes invisible, while the content comes to the fore.

First, to the text of an inscription itself. As already mentioned, the majority follow the typical memorial formula ‘N.N. raised this stone (or monument) in memory of X.Y.’, and thus reveal the relationship between the commemorator and the commemorated (cf. Sawyer 2000, 146). There can be additions, of course; for example how or where the respective person died. This information is only available for those who are able to read and understand the runes. That does not mean that the illiterate part of society did not know at all what was written on the stones. The formulaic style suggests that the inscribed content or the formula itself respectively was known, but the actual names of the sponsor and the commemorated person were not available to the illiterate. There is no evidence on whether the content of runestones was transmitted in another way than writing. One possibility could be that inscriptions were read aloud for the public so that everybody was able to grasp the content. Yet, the relatively unspectacular and pragmatic content does not invite reading aloud, and we do not even know who could have been in charge of it. Since the sources do not tell anything about how and if the texts were read aloud, this is all purely speculative.

The fact that the inscription’s content was of importance can be witnessed on the stones themselves. Erecting a runestone was a sign of both social and economic status. Especially those who sponsored multiple monuments belonged to the most important families (cf. Sawyer 2000, 92–93). Imer (2016, 68) notes that there are several cases that the

beginning of a rune-stone text is placed in the middle of the stone. In this way, the sponsor was highlighted, by setting him in the centre of the events in the literal sense (cf. Imer 2016, 68). The already mentioned Haithabu 2 stone is one example. The name of queen *Ásfriðr* who acts as sponsor is placed in the middle of the inscription, while the rest of the text flows around it. Beside *Ásfriðr*, who has raised two rune-stones in honour of her late husband, there are several other sponsors of elite status in Denmark. One of them is Tue, who sponsored four stones, Toke the smith, Esbern, and Fader (cf. Sawyer 2000, 93). Another example is the Glavendrup stone (DR 209), which is carved on three sides. The stone contains the longest inscription of the Danish rune corpus with 210 runes (Johnsen and Moltke 1942, col. 251). It was found at its original location as part of a ship-setting (Moltke 1985, 524). The inscription says:

§A: **raknhil**tr · sa|ti · stainþansi · auft | ala · sauluakupa | uial(i)þshaiþuiarþanþia | kn
 §B: ala · sunir · karþu | kubl · þausi · aft · faþur | sin · auk · hæns · kuna · auft |
 uar · sin · in · suti · raist · run|ar · þasi · aft · trutin · sin | þur · uiki · þasi · runar
 §C: at · rita · sa · uarþi · is · stain þansi | ailti · iþa aft · anan · traki

Ragnhildr satti sten þænsi æft Alla Solwa, gopa wea, liþs heþwærþan þægn. Alla synir gærþu kumbl þæsi æft faþur sin ok hans kona æft wær sin. Æn Soti rest runar þæssi æft drottin sin. Þor wigi þæssi runar. At ræta(?) sa wærþi æs sten þænsi ælti(?) æþa æft annan dragi.

Ragnhildr placed this stone in memory of Alli the Pale, priest of the sanctuary, honourable þegn of the retinue. Alli's sons made this monument in memory of their father, and his wife in memory of her husband. And Sóti carved these runes in memory of his lord. Þórr hallow these runes. A warlock be he who damages(?) this stone or drags it (to stand) in memory of another.

The text of the inscription gives a lot of information. First, it tells about a woman named Ragnhildr who commissioned the stones and according to Moltke (1985, 224) belonged to a mighty family. Her name appears on another rune-stone, the Tryggevælde stone (DR 230) on which she is described as the sister of a man named Ulf and the wife of the eloquent Gunnulfr of Zealand, before she is later married to Alli the Pale, who is described as honourable. Additionally, the carver of the stone, Sóti, is both mentioned on Tryggevælde and Glavendrup stone. Both inscriptions end with a curse to protect the stones of any damages. The curse is preceded by a 'Thor hallow' formula, which puts the monument in a pagan context (cf. Moltke 1985, 224–228).

That Ragnhildr was an important person is accentuated by the fact that her name is carved into the centre of the inscription at Glavendrup stone (Fig. 7.7). This emphasises the fact that she was the one who raised the stone. The rest of the inscription is carved around her name. To emphasise even more this fact, the runes spelling out *Ragnhildr* are bigger than the rest of the runes and are spaced. With the help of the text's layout the content was made clear to the reader. Imer (2016, 68) even assumes that the name was painted in a different colour. In that way nobody was able to escape the information of who commemorated the monument.

Painting runes was therefore not only means to attract attention, but it also helped to grasp the content of the inscription. In some cases, single words were probably painted in different colours so that it was easier to decipher the inscription (cf. Jansson 1987, 159–160). As Jansson (1987, 153) puts it:

The use of colour must have meant a remarkable addition to the beauty and artistic effect of the monuments. Painting also served a practical purpose, for without colour the runes themselves would in the most cases have been all too difficult to pick out and the often intricate ornament difficult to follow.

Finally, there would be the fact that most of the inscriptions contain features like word division. They appear in forms like colons, three vertical points or crosses. In my opinion this points to the assumption, that the inscription was meant to be read, and the content written on the stone was important.



Fig. 7.7. Glavendrup (DR 209), side A (Jacobsen and Moltke 1937, 185).

Conclusion

By using Strätling and Witte's concept of the *Sichtbarkeit* of writing, and of three different levels of visibility, the following conclusions can be drawn about the visibility of the runic script and how rune-stone monuments were perceived in Viking Age society.

At a basic level, there is a form of double visibility of runic writing. On the one hand, characters are carved into stone but are additionally made visible by colouring. The carving process granted the runes a permanence. Once carved, they can only be removed with considerable effort. The painted runes, on the other hand, can help mask carving mistakes, although they are not as permanent as their carved counterparts. Weathering can wash them out and they probably needed to be renewed every now and then. Nevertheless, a painted rune-stone attracts attention and by placing them in exposed position they were visible to everybody.

The second level sees writing just as signs on a writing surface, while the content of the inscription stays hidden. 'Reading' means only the visual perception of writing

and the recognition that script is present. The ways runes can be laid out on the writing surface are manifold. The inscription can either follow the shape of the stone, be applied in vertical lines or the more Swedish design in the form of a snake that winds across the stone. This is the level which applies foremost to the illiterate part of society, because even though they did not know what was written on the stone, they were aware of its importance. That the rune-stone was a medium also for the illiterate is emphasised by the fact that especially in Sweden nonsense inscription are not an uncommon phenomenon, as shown by Bianchi.

The last level deals with the inscription's content, which is written in a formulaic style. The text was probably only accessible to a small part of society, the 'literate' elite, but nevertheless it mattered. It was an expression of demonstrating power and commemorating oneself and one's kin. The layout helped in this aim, for instance by using different colours for different words, using word division and highlighting the sponsor's name by putting it in the centre of the inscription, the content is made even more visible.

To conclude, rune-stones and runic writing were able to address all social levels of Viking Age society, from the illiterate up to the rune carver and the elite. As Bianchi has stated, runes are part of a visual composition; they are multimodal and convey meaning by their visual and linguistic features. The rune-stones and their level of *Sichtbarkeit* had their specific importance for each social group – meaning the literate and illiterate parts of society. The rune-stone could be seen – to say it in modern words – as a democratic medium. It was something for 'everybody'. Even though the runes could not be read by every person, nevertheless everybody could come in contact with them. Rune-stones were not only a status symbol for the elite. The most important aspect was perceiving the script. Carving runes into stone in a certain way with a certain formula made a rune-stone a rune-stone. Only then can it take its place in Viking Age society and become a feature where people could interact with each other and the object.

Chapter 8

Words beyond writings: how to decrypt the secret writings of the Masters of psalmody (Yunnan, China)?

Aurélie Névot

Yi script, *yíwén* 彝文, is the Chinese appellation given to different writings from Southwestern China that can be observed in the present day in Sichuan, Yunnan, Guizhou and Guangxi provinces. *Yí* refers to the official appellation given to the largest Tibeto-Burman nationality in China which numbers about eight million people. The latter do not call themselves Yi in their own languages, despite what is mentioned on their Chinese identity cards. Indeed, they belong to different branches that do not share the same idioms and do not refer to themselves as an ethnic group neither; it is the aim of the rulers of the People's Republic of China to build a homogeneous 'Yi nationality', not theirs. As for *wén*, it is a very specific Chinese word used to transcribe the notion of script. It means 'simple character of writing' and refers to 'written tradition' and to 'culture' as well. Etymologically, it relates to different visible pattern coming from the mineral, vegetal, animal or cosmic world: to veins in stone or wood, to traces of animals in the ground, to drawings on the carapaces of tortoises, to cracks in divinatory bones and shells, to features connecting the stars. *Wén* also designates tattoos and figures made by crossed lines. Hence Chinese writing refers to images – according to mythology, one of its creator, Cang Jie, is represented with two pairs of eyes, observing the sky and the ground.

Whereas the expression *yíwén* may suggest that there is, as for the Chinese writing which is itself the result of various standardisation processes, *one* common Yi writing that would be moreover connected to the Chinese classical perception of writing, it comprises, in fact, several religious scripts that are used by shamans, in charge of domestic and collective rituals, to ritualise and to communicate with gods. The manuscripts they chant to contact their deities are composed of sheets covered with writings specific to the Yi branch from which they come. Hence, the so called 'Yi writing' not only differs from the Chinese writing system, but also from one

branch to another. According to Chinese linguists, there are six Yi scripts; as for the linguist David Bradley (2009, 171), four groups within the Yi nationality have distinct logographic traditions: the Nuosu, Nasu, Nisu and Sani branches. Depending on the local languages, their shamans are called *peimao*, *pimo*, *bemo*, etc., which are translated by *bimo* in Chinese. I propose to use this term not only for simplicity but also because, in my fieldwork, *i.e.* in the Stone Forest county (Shilin) of the Yunnan province where the Yi-Sani people live, their own appellation could be translated by *pimo* or *bimo* (*p* having to be pronounced near to *b* and reversely). This expression means ‘Master of psalmody’ in their language.

The purpose of these semantic clarifications is to focus, as a preamble, on the complexity of the Yi local cultures that refer to differentiation and not homogeneity, contrary to what the Chinese government promotes by standardising the scripts of their shamans. So there are strong political issues at play that have to be kept in mind while reading this article that will focus on the Yi-Sani script in particular, *i.e.* on the script used by the shamans belonging to the Sani branch of the Yi nationality – which includes about 78 thousand people located, as previously mentioned, in Shilin. The Yi-Sani *bimo* number between one hundred to three hundred individuals, depending who my informant was, and their writing has its own scriptural variants. It has been more than a century since the graphic variability of certain characters of the shamans’ *corpus* has been noticed by different encounters. Linguist scholars are therefore knowledgeable about these Yi-Sani specificities, although the anthropological reason for this variability had never been analysed head-on until I began to investigate this topic.

Thanks to the training I received from some *bimo* living in Shilin, I had the opportunity to learn their shamanic writing(s) and thus to focus on this graphic variability. I propose here to refer to what I have observed and understood thanks to this apprenticeship – not a shamanic one but a writing one, I shall insist. In fact, I was allowed to study manuscripts beside a shaman in particular from 1999 onwards because, as I was to be informed later, asking for learning is believed to be a call from the shamanic spirits. Hence, according to the man who was my main master from 1999 to 2011, I went to China to meet him because I followed the way the spirits of psalmody (*bimo* auxiliary spirits) had shown me. He agreed to teach me writing, that is to say to study some of his texts and to clarify them, so as not to offend these agents of the invisible world and to respect their choice.

Bimo scriptural transmission supposes oral transmission as far as *bimo* manuscripts are elliptic: composed of pentasyllables and containing secret words, they enclose a ritual language. How to access the written ‘secrets’ and speech? In order to answer this question, I have to share my experience as an ethnographer; I assume here the need to expose part of the intimacy of the anthropologist who is ‘cooking’ and ‘tinkering’ at the same time. Jean Pouillon rightly wrote that ‘knowledge is prepared, elaborated, in short: cooked’ (1993, 17). This cooking recalls a famous passage from *La pensée sauvage* (1962) in which Claude Lévi-Strauss mirrors modern

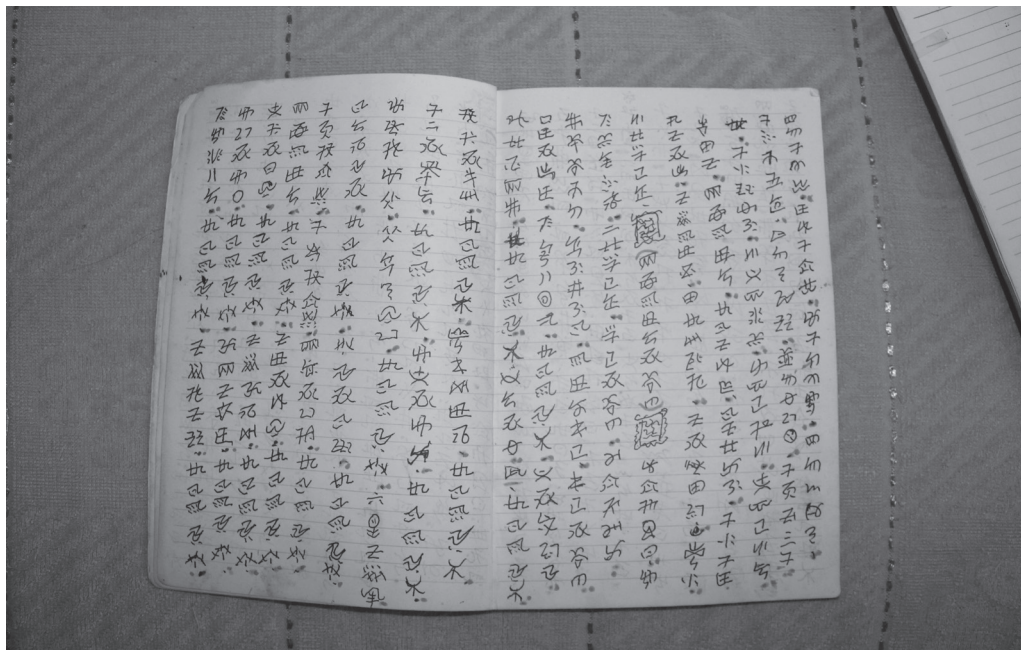


Fig. 8.1. Manuscript of Great Master Jiang's grandson (Shilin, 11.11.2015, © Névot, all rights reserved).

scientific thought, which has many materials and tools, and mythical thought, associated with bricolage. Lévi-Strauss imagines the anthropologist on the model of the engineer 'who designs and builds a machine through a series of rational operations: it must nevertheless work, logical certainty is not enough' (1962, 18). Is anthropological analysis not the result of a personal experience, a researcher's 'grumbling', an intellect filled with the Other (the Ones he/she meets) and oneself at the same time – product of his/her subjectivity and of his/her cultural background episteme – even if the observing subject is supposed to disappear in front of the observed subject and the specific bricolage of the latter? As Jacques Derrida wrote, '[i]t would, of course, remain to be asked whether the ethnologist thinks of himself as an "engineer" or as a "handyman"' (1967a, 154). I would say both, quoting one more time Derrida:

As soon as we stop believing in such an engineer and in a discourse that breaks with historical reception, as soon as we admit that any finished discourse is forced to a certain bricolage, as soon as the engineer or scientist are also a kind of handyman, then the very idea of bricolage is threatened, the difference in which it took meaning is decomposed (1967b, 417).

The aim of this article is to expose and to discuss my own cooking and bricolage, that is to say the methodological approach I had to develop spontaneously in/thanks to the field in order to understand *bimo's* texts and thus to analyse them, and the huge problem of translation I constantly have to face because of the specificity of the

religious context in which those writings are involved. Indeed, if the apprenticeship I followed beside a *bimo* in particular allowed me to fully translate one of his ritual manuscript dedicated to a territorial cult (Névot 2013), I understood later, by having to translate other manuscripts coming from other ritual lineages, that learning with a shaman does not help to understand all the Yi-Sani *corpus*. I had then to refer to other Masters of psalmody. Thanks to these two main facets of my ethnography – the opportunity to learn with a *bimo* informant, from 1999 to 2011, and then to contact other shamans from that year onward (after asking my master’s permission) – I have gradually built up a network that allows me to develop a comparative approach of *bimo* writings. This textual comparatism is crucial to understanding the local system based on writing lability. Little by little, I put into perspective not only the texts but also the different discourses of the *bimo* I met; the analysis of their comments on what their writing is gave finally access to their own logics of thought in relation to patrilineage blood substance and to secrecy. Indeed, a key concept is placed at the core of the Masters of psalmody’s practices and introduced in the present article, that of *se*, a graphic sign which at the same time means writing and blood and that I thus translate by ‘writing-blood’.

Four steps will help to follow the process I myself followed in the field to decrypt the *bimo* writing and thought. We will see how I progressively came to understand that Yi-Sani script is connected to lineage transmission – black ink writing ‘represents’ the lineage blood transmitted from master-father to disciple-son. And because writing is ritual lineage blood, each lineage has scriptural specificities – hence the local scriptural variability. Then, we will observe that *bimo*’s lineages reinforce the secret nature of their ritual speech by omitting to write certain characters which therefore remain invisible. Because *bimo* writing is encrypted, the presence of the owner of the manuscript is necessary to its translation. In other words, the latter implies transmission between individuals – in this case, ethnographer/informant relationship – and the use of oral communication through texts. To be initiated to *bimo* writing does not suffice for the understanding of the Yi-Sani shamanistic texts. Oral transmission is as important as scriptural transmission to enter the scriptural world of the Masters of psalmody, which must be approached, indeed, through the prism of its orality. That is the right place to start.

A vocal script

Chinese writing is composed of pictograms, simple ideograms, compound ideograms, and phono-semantic compounds; most of the characters have semantic and phonetic indicators, *i.e.* radicals under which the characters are listed in dictionaries. The Yi-Sani *bimo* writing is different. In the *Yi-Han Abridged Dictionary* published in 1984 in order to promote the standardisation of the Yi-Sani writing, 1390 graphically distinct character forms are listed. According to the missionary ethnographer Paul Vial (1855–1917), who lived among Yi-Sani people from 1887 to 1917 and took into

account all the written forms used by the shamanic tradition before the Chinese State imposed standardisation (Nénot 2008; 2011; 2014; 2019a), this writing numbers no less than 3000 characters.

The *bimo* writing is 'syllabic' or 'phonographic'. Indeed, the characters do not have any radical, and no scriptural logics are related to the meaning or sounds. One character corresponds to one morpheme (a word), and its pronunciation corresponds to one syllable. It thus refers to a phonetic form and to a semantic unity. But contrary to Chinese writing, it does not have a phonic sign. It gives priority to 'monomial forms': a word corresponds to one single syllable, contrary to the Yi-Sani language in which a term is usually 'binomial', *i.e.* composed of two syllables. This ritual written language based on pentasyllables has thus a laconic style.

A single pronunciation is linked to one character but several characters may have the same syllabic pronunciation (thus a common phonic unity), which makes the *bimo* ritual language difficult to understand, all the more so as it is chanted in a manner that does not respect the five tones of the vernacular language. Each syllable corresponds to a note and prosodic variations do not depend on the voiced characters. Moreover, a character is not necessarily chanted in the same tone in one verse as it was in the previous one. A certain vocal autonomy is associated with psalmody with regards the semantic frame anchored in the writing, with each character having the possibility of being sung in any tone that corresponds to the shaman's chant. Thus, melodic variations are independent of the syllables. The melody is independent of the semantic language and of the tones of the vernacular language.

When they chant, *i.e.* when *bimo* read out aloud character for character of their ritual texts, they say they speak actually a 'secret language' (*ka di dje di bé*) and compare it to the screech of a falcon or to the quack of a wild duck. It is unintelligible by the uninitiated people who themselves compare this chant to caterwauling. While the secret is kept by ritual speech, it is also etched in *bimo* writing, which is unreadable to laypersons. These features are linked to the nature of the exclusive communication which is established between the Masters of psalmody and the spirits. In fact, the chants are supposed to carry the voices of the spirits. The orality of the shamanic script is inscribed in communication and in conversation processes with gods. Accordingly, situated at the crossroads between the visible and the invisible, the writing of Masters of psalmody is a ritual and divine language (Nénot 2019b).

This communication through ritual texts between shamans and gods requires no understanding from the audience which is rarely attentive. Indeed, this utterance does not concern people who may play cards and chat while the shaman is chanting. What prevails for them is the prosody and the recurrence of elements, of course incomprehensible but always the same, like formulas, syntactic methods. The enunciation is performative by itself and the ritual chant has a perlocutionary effect. Or, to put it another way, a *bimo* possesses texts whose meaning cannot be 'heard' vocally: what is heard by the uninitiated persons is only his psalmody. Only graphic signs express the meaning. Thus, only the *bimo* grasps the meaning which is visible

and kept secret in his manuscripts but stays explicitly inaudible to common people. How can one be initiated?

For the Yi-Sani, as for the Han (who constitute the majority of the Chinese population), the father is said to pass on bones to his descendants while the mother passes on flesh. A *bimo* believes that he passes on his bones to his sons. Moreover, he is expected to pass on his *se*, i.e. ‘writing-blood’, to one of his sons. A disciple first learns to read and to write texts from his ancestors’ lineage by copying them as many times as possible. His initiation is thus based on the exact copying of ritual and secret writing. He learns not only to understand and to memorise knowledge, but also to access his lineage power. Indeed, this apprenticeship implies what we might understand as a slow embodiment of the master’s blood, or else an imbibition of texts – a process that I qualify as *transubstantial* because it refers to the body-to-body exchange. A disciple becomes filled with his master’s scriptural substance in order to evolve.

The disciple may psalmody for the first time during rituals where his master officiates. The latter may invite him to accompany his chanting. On the basis of this two-voice training, the future shaman has a good idea of what a psalmody is. But it is only at the end of his apprenticeship that he is able to chant on his own. His ultimate voicing is regarded as not having been learned but as occurring by itself. A disciple must improvise his chant in order to be consecrated *bimo*. He is said to have vocal affinities with his master – they share the same blood lineage substances – but these affinities will not lead to any confusion in their identity. Though not a composer, because he has a melodic model, each *bimo* is a performer. This ‘individuation’ by the voicing of texts, emanating from the learning of a scriptural ritual language, which demarcates the disciple’s tone from his master’s, is based on a writing-blood transmission process.

The movement of ‘outing’, of expulsion of the *bimo*’s voice, is recurrent in four verses (which have been translated literally and taken from a ritual text):

<i>ni bi se bé bi djo</i>	They are the <i>bimo</i> of the Yi-Sani who ‘speak’ (<i>bé</i>) the written characters,
<i>se bé djo nè li</i>	This speech of the written characters (<i>sebé</i>) comes out.
<i>se nè ke tseu djo</i>	The spirits who come out take hold of the latter,
<i>jo nè ke tseu li</i>	I go out and come to take hold of the latter.

A *bimo*’s chant, based only on texts, will not vary according to the theme it refers to; it will be the same whatever linguistic form it takes (dialogue with spirits, narrative, etc.) and whatever ritual text it may concern – I did not notice any singing differences regarding the ritual text involved, the *bimo* always sing to the same rhythm and melody. Indeed, as has already been mentioned, the shaman bursts into song using the same tones but without respecting the tones of the word that may be used in the vernacular language. During a ritual, the shaman may then assume multiple identities (he makes the spirits speak) while keeping his own vocal identity. In spite of this form of monotony of singing, the chant is perceived as unique (even if, as already mentioned,

each *bimo* has a vocal model), expressing the ritual efficacy of the shaman whereas the texts, which are also specific to him because they are linked to his own writing-blood, nevertheless come from a transmission process based on copies of texts containing the writing-blood emanating from a 'connected Other' via the bones (of his father). The lineage-specific writing doubles as a chant that is proper to the shaman who has inherited the lineage power. It is therefore through chanting that a disciple becomes a *bimo*, that is to say by the ritual enunciation carried by his master's text. He must follow the lines of his ancestors' writing, share the same bones and, so to speak, 'speak and write the same blood' in order to acquire voice and travel in the cosmos. As a result, it is the acquisition of his chant (which is a voice somewhere between human and divine) that proves his inner transformation.

We can now better understand why these shamans are not named in reference to their scriptural ability. They are called *bimo*, which means 'Master of psalmody' in the Yi-Sani language, because their secret writing has to be 'self' melodised. The Yi-Sani shaman is defined as an enunciator of writings who masters a secret speech. He is the master, *mo*, of psalmody, *bi*, he reads aloud, *teu*. Writing and orality are never conceptually differentiated in the *bimo*'s thinking, with different expressions describing the dual influence of speech and of the script. The chant is visual. The writing is heard in a musical form. The *bimo*'s chant comes from the acquisition of writing and reading techniques, then from enunciation. A *bimo* has to master this vocality by learning his master's writing and chants because it is through the writing that the sound passes, not by the sound that the writing passes.

Scriptural chaos?

The aforementioned French Catholic priest Paul Vial was the first Westerner who deciphered Yi-Sani *bimo* books. He reported the difficulties he encountered when trying to read manuscripts in 1898:

Even if one knew their language, one would not have yet overcome all the difficulties encountered when translating Lolo [Yi-Sani] books; there are other difficulties that I am going to explain in a few words. 1) The first is to know where a sentence begins and where it ends. The set way Lolo scholars [*bimo*] have of reading their books by breaking off every five characters forced them to more or less adjust the meaning to this meter. Here, you have one word less that would have fully explained the idea, here one word too many that must not be translated; and because the language abounds with composed words, you may sometimes have to discover behind a single character the meaning given by three joint words. 2) Many locutions are obsolete; others are only used in certain areas. Others, however, have been lost or may have died out. The books themselves have not changed; they are copied as they are, with no explanation of the text and with no regard for the meaning but, because lots of books are the same, only a comparative approach might allow you to grasp the meaning of most of the sentences. 3) As all these books are handwritten, some characters may have been modified, others forgotten, or sometimes whole lines forgotten. It would be good to refer to the oldest books; but as the dates are not specified or very unclear, we are

reduced to guesswork. 4) One last difficulty concerns the characters themselves; they are not completely ideographic or completely phonetic; we are at a loss as to how to take them. It would be good to have the books read to us, if one could find a reader intelligent enough to cut the phrases according to the meaning, not according to the meter. But that is impossible, a thousand times more impossible than reading French verses without respecting the rhyme. (Vial 1898, 66–67)

Indeed, to be in front of a *bimo* manuscript is confusing for a non-specialist reader as for a sinologist: how to position it, where to begin? Whereas the writing differs from Chinese, any experience of the ‘Chinese world’ would prompt us to open the book with its spine on the right-hand side by making a start at the top right-hand side of the first page, and then to read it from right to left and from top to bottom – as far as a page is in the form of vertical columns of characters. Yet a *bimo* manuscript has to be read by opening the book with its spine on the left-hand side and then reading it from left to right (and from top to bottom).

Studying ritual texts with a *bimo* is helpful, of course, but it may also throw the observer into another kind of confusion, this time about the meaning. Esoteric, cryptic and following their own syntactic rules – those of ritual language – shamanic writings are difficult to understand, even for the Masters of psalmody who are asked to clarify them. It seems that commentaries, exegesis or reflexive texts by the *bimo* about their own texts do not exist. Their books deal with ritual activities and are composed of performative texts that may relate to recitative registers about Sani myths, to the actions of the shamans walking or riding in the cosmos, or to the dialogs between the *bimo* reader and different local spirits.

A contemporary of Vial, the French explorer Henry d’Ollone, had also faced the heterogeneity of the Yi writings and the difficulty to understand them. He used the word ‘chaos’ to report on his observations (1912, 17). Studying *bimo* writings in Sichuan, Young wrote twenty years later:

Another difficulty comes from the fact that the tribes do not all have exactly the same characters; some differ rather a lot from tribe to tribe so that they cannot be identified; moreover, some tribes have infinitely more characters than others which are unknown to their neighbours; homophonic characters are used indiscriminately; in the end, since the language itself is far from being the same everywhere, different characters are bound to represent the same idea when the latter is translated by different words and, on the contrary, identical characters will have different sounds and meanings. (Young 1935, 28)

More recently, another Chinese scholar stated, concerning the writings of the Yi of Guizhou, that:

Bimo or Yi sorcerers in different areas often changed the forms of the characters as they pleased by adding or subtracting strokes when they copied the scriptures. As a result, many variants of the same character were passed on from generation to generation among the Yi people. Therefore the characters of the traditional writing were in confusion with too many local variants, which naturally made the compilation and the standardization of the traditional writing very difficult. (Pu 2004, 268)

As for the linguist David Bradley previously mentioned, he observed:

In traditional materials, many variants can be found for the characters representing frequently occurring words. The most extreme example is the character meaning ‘not’ in Nisu, for which Pu Zhangkai (2005, 53) lists 103 possible alternative forms, drawn from a very wide range of Nisu manuscripts from the entire Nisu area. Eleven of these are found in the Azhe text in Guo (2004, 180–217). Jin (1983, 35) gives seven alternative forms for the corresponding character in Sani. Bai (1995, 22) gives four alternative Nasu forms. Vermander (1998) shows a total of 22 alternative forms in one very long Yino Nosu text written by one shaman, and this is typical of traditional texts. The same frequent word in adjacent lines of a text is often written with a different character, whether as a stylistic flourish or as a means of disguise. It is notable that for the character meaning ‘not’, a form similar to the standard selected form in Guizhou Nasu and Yunnan. Reformed Yi is also among the alternatives seen in traditional Nisu and Nosu, though it is not the most frequent form there. With such variation within a text, in the absence of a standard prior to recent reforms, and with individual transmission and recopying from one shaman to his successors over many centuries, it is not surprising that diversification in the forms of characters was so extreme in traditional Yi orthographies. (2009, 174–175)

Basically, these different statements suggest that variability predominates in Yi writings, that is to say in *bimo* writings, wherever they come from. But are the latter so exposed to the arbitrary decision of every script-writer? Are the characters really invented and used in an ‘anarchic’ and chaotically way, according to the will of each *bimo*? Would religious individuality predominate? It is pretty hard for an anthropologist to stick with that simple statement without thinking about bringing a logic to light. The idea is to go further in the analysis and to make the situation more understandable. Indeed, beyond the inherent spelling mistakes in any work involving copying, how are we to apprehend, anthropologically speaking, such a supposed scriptural instability or even writing disorder?

With regard to the Yi-Sani script in particular, I confront major difficulties as well: how to understand two facts that seem paradoxical, *i.e.* the fact, on the one hand, that transmission is based on a very definite process – identical copywriting from father to son for the patrilineage transmission – and the fact, on the other hand, that writing may vary between *bimo*?

Lapsus

A first step in answer to these questions has to be found in analysing the confusion or incoherence I felt while deciphering a *bimo* text and, above all, in the fact that the shaman with whom I was studying felt the same. Here is the anecdote: in 2011, my master shaman and I were both working for the first time on the translation of texts that did not come from his own ritual lineages (his maternal uncle’s one and his wife’s father one)¹ nor from his village (until then, I only studied the texts copied by

¹ He followed two initiations, and a third one, as we will see, from the first official *bimo*, paid by the Chinese State to standardise the *bimo* cults and writings.

this *bimo* himself). We both stumbled over some characters that were ‘specific to the locality from which they came’, as my master shaman underlined. Other characters were lacking. That is how I understood that Yi-Sani *bimo* do not share exactly the same writing and some verses may be reduced to three or four feet. But was this variability only geographical, territorial, linked to each Yi-Sani village? What about these missing characters, are they the result of copy mistakes? I had this question in mind when something else happened: lapsus.

It should be stressed that my *bimo* master and I were speaking in Chinese about his practice. By not using his mother tongue, he momentarily took a step back by translating manuscripts. This language distancing through Chinese has created a form of reflexivity about his own culture. It is through this means that I had access to certain senses and raised many lapsus in this shaman’s words. Indeed, I noticed that, on a regular basis, he translated into Chinese either by ‘blood’ or by ‘writing’ the character he first said meant ‘writing’. Concomitantly, I noticed that in his books, the script used to mean ‘blood’ may sometimes be also used for the word ‘writing’. Writing and blood being both said *se* in the first tone in the Yi-Sani language (used during teaching session and thus outside the ritual activities when *bimo* psalmody), I was totally confused: when is it blood, when is it writing, why are those characters homophonic (a simple coincidence?), why does this shaman use one script for the other? Is it just a careless mistake?

My master shaman stipulated that in the *Yi-Han Abridged Dictionary* – published in 1984, let us recall, to help the standardisation of the Yi-Sani writings – the two characters have two specific and clearly defined orthographies. So, he explained that if he used one script for the other or one translation for the other, it was only a mistake. In expressing himself in this way, my shaman master was sharing the state shamanic norm, *i.e.* what he had learned from the first official shaman in 1999, when a common teaching for *bimo* began to be promoted in Shilin in order to accelerate the process of homogenisation of the various lineage scripts. Nevertheless, I found very surprising that he based his argument on official data and insisted on the graphic heterogeneity of ‘blood’ and ‘writing’. He emphasised this characteristic. He gave the impression that he had to explain himself, as if I had pierced some kind of strangeness in the scriptural system. I was also astonished that he never referred to what he may have learned from his maternal uncle before the Cultural Revolution and later from his wife’s father. He has always refused to talk about them or to show me the texts he inherited. I had the intuition that something more had to be said, as if I had stumbled upon a knot that I had to undo, all the more so as this shaman underlined the close relationship established between *bimo* writing and the shamanic body. Let us not forget that we are in China where writing has something to do with body and substances: the image of a Chinese calligraphy that beats to the rhythm of the calligrapher’s arteries is well known.

Labile and missing characters

In 2013, I began to study with the oldest shamans of the area who think that the new generation of shamans has lost the *bimo* knowledge. They turned out to be crucial informants and allowed me to go further in my analysis – based on an intuition itself based on lapsus. They explicitly say that the character used for ‘blood’ and ‘writing’ is one and the same. I also observed that the script used to designate the word ‘blood-writing’ differs from one initiatory lineage to another. By and by, I also extended my research to villages I had not yet visited in order to create a catalogue of characters used by each ritual lineage to designate itself the shamanistic concept of ‘blood-writing’.

I came to understand that the *bimo*’s ritual and initiatory writing is, in the case of lineage transmission, intimately related to what passes through (and thus what is shared by) generations of male religious specialists: blood, *se*. Writing (the quintessence of power) is so closely linked to the trans-corporeality of the Masters of psalmody who belong to the same patrilineage that ‘writing’ and ‘blood’ are concepts written using the same script, while this script may differ from one shamanistic lineage to another.

In a parallel fashion but only rarely occurring, I learned that a *bimo* is allowed to transmit part of his knowledge to other disciples who do not belong to his own lineage but who nevertheless have asked for an initiation. But this does not achieve much recognition. Those initiated in this way are not allowed to copy manuscripts but receive a few texts copied by the master himself for their attention. In this case, the Master of psalmody does not transmit his blood-writing but a different writing: he has to transform certain scripts so that those nonhereditary disciples does not inherit his lineage’s power, *i.e.* blood. In particular, a digraphy has to occur between the signs ‘blood’ and ‘writing’: those concepts shall not share the same graphical sign. And a *bimo* can modify his scripts each time he transmits texts following exo-lineage transmission, *i.e.*, all his exo-lineage disciples, if he has any, does not necessarily share all the same graphical signs. So different lines of transmission developed in the field, the majority of them following patrilineage rules in which heterogeneity is based on lineages and others following exo-lineage rules in which heterogeneity is based on each particular master-disciple relationship, which latter was even stronger than the former model of transmission.

While meeting the oldest Yi-Sani *bimo*, I got closer to the second official *bimo*, who succeeded the first, who passed away. This *bimo* underlined that his shaman forefather was the first man to promote a large-scale teaching of shamanic writing in 1864. By doing so, he wished to facilitate the learning of disciples coming from other initiatory lineages than his own in order to counter the project of Chinese civilisation supported locally by the creation of schools where the Chinese language and writing were taught. As this *bimo* was not authorised to transmit the writing

characters specific to his ritual lineage except to one of his sons, he taught, for certain writing characters, scripts specific to each of his disciples, different from those transmitted to others. This shaman notably transcribed the word 'writing', on the one hand, and the word 'blood', on the other hand, while creating new graphic signs for each concept each time he had a new disciple. This man promoted a plurigraphic process and developed local scriptural heterogeneity. Was he at the origin of the digraphy process of the concept of 'writing-blood'? I do not know but this may be a hypothesis. The official *bimo* then stressed that the son of this *bimo* who promoted a form of shamanic ecumenism, learned French thanks to the priest Vial and taught him *bimo* writing in return.

Field research allowed me to understand that Vial was probably inscribed in a particular type of transmission by the shamans with whom he studied. The missionary did not inherit the script associated with the transmission of the lineage blood in the same way as a man inscribed in ritual filiation, but a singular version, reserved for cases of transmission where a disciple is not the son of the master. Thus, Vial learned that the ideas of 'writing' and 'blood' had to be written differently. Then, he promoted the teaching in schools of the script he studied and thus brought about the secularisation of the writing; by imposing a graphic standard that would be common to all Christian Yi-Sani, he also circumvented the modes of transmission for which the script retains graphic specificities within each ritual lineage. It is therefore understandable that the dictionary he published in 1909 is not representative of the graphic complexity specific to *bimo*. Moreover, research conducted within the Bureau of Religious Affairs showed that the cultural policies implemented since the late 1990s among the Yi-Sani are grafted onto the secularisation of writing in schools initiated by Vial, and that the graphic standard now imposed on the Yi-Sani is based on the priest's dictionary.

Thus, if certain writing characters still differ today from one ritual lineage to another in the sense that they translate the scriptural and therefore bloodline particularity of each lineage, the graphic standard imposed on *bimo* and taught in parallel to Yi-Sani schoolchildren by local members of the Chinese state apparatus implies the homogenisation of this writing which is defeated of its lineage roots. Yi-Sani who wish or have to learn the official Yi-Sani script, whether they are ritual officiants or not, must in fact write the terms 'blood' and 'script' separately, using the scripts published in the 1984 dictionary and coming from Vial's own scriptural initiation.

So, I came to the conclusion that specific graphic signs reflect the specificity of the blood of the lineage of the initiated men and it is related to the shamanic secret: one *bimo* said in particular: 'We write "blood" and "writing" using the same writing character because we do not want others to know'. The notion of shamanistic secret is not only based on graphic variability between lineages but also on the missing characters, textual characteristic that was also mentioned by the missionary Vial as we noticed before.

Whereas each verse usually includes five characters, it may happen that some of them are truncated, hence the difficulty in reading them. In addition to scriptural specificities, *bimo* lineages in fact reinforce the secret nature of their ritual speech by voluntarily omitting the writing of certain characters which therefore remain invisible. They are 'secret', the *bimo* say, because they are not transcribed on paper. Though truncated visually, the versification is not, however, truncated orally – the unwritten characters are communicated from master to disciple. Without sharing the secrets of the lineage, it is impossible to know where a verse begins and ends. A man has to inherit his father's blood to be able to psalmody the text that has to remain 'between them'.

The fact that certain characters are seen as invisible has to be analysed because they are graphically absent and present at the same time, as far as the *bimo* knows where they are supposed to be missing in the verse and thus where they have to be pronounced during his chant. Through his voicing, the character is spelled and then fill the hole of the verse. The *bimo* depict missing, unwritten characters, the existence of writing removed from the visible, but they never consider that their books are made of quatrains or three-feet verses. Consequently, a manuscript contains visible and invisible characters which suppose and call upon the memory of the officiant – it is explicitly claimed that invisible characters have to be memorised. But it is not said that visible characters have to be memorised in order to know the ritual language by heart, as it is not said that *bimo* texts have to be known by heart. In this sense, the invisible characters create an incompleteness that the voicing, thus their visual memorisation expressed orally, comes to fill in without nevertheless making these characters visible. Consequently, psalmody gives consistency to the character which nevertheless remains invisible. Visible characters imply speaking while invisible characters take shape and are materialised by speaking. A written character gives sound, though a word with no textual support shall never be transformed into any script. Hence, through his voice, a *bimo* renders invisible written characters manifest and public even though the latter remain invisible. Their visibility stays in the voice. Voice provides access to vision for initiated men alone.

To put it another way: by copying his master's manuscripts, the disciple is aware of the missing characters that lend a hollowness to the verse, a hollowness that he has to fill in with his chant. The *bimo* apprentice therefore learns vocal techniques and he has to memorise a few secret characters. When there is orality without writing, memory ensures the presence of the missing character. Hence, by copying his master's texts as many times as possible, the disciple not only acquires scriptural and verbal knowledge but he also gradually incorporates the rhythm of his chant while learning how to temporalise and fill his text. In sum, he tends to appropriate his own manuscripts that 'live' with him until death. That is when they will be burned to accompany the dead *bimo* who will keep on ritualising in the world beyond on the basis of his script.

Conclusion

Radical changes have modified the Yi-Sani writing system and thus the lability of their shamanic writing. During the period of the Cultural Revolution whose effects extended far beyond the death of Mao Zedong in 1976, *bimo* manuscripts were on the list of prohibited items. So the *bimo* had to silence their texts, or at least to voice them secretly, without the authorities knowing. Many of them completely lost the capacity to use their ritual languages because most of their books were burned. After the Cultural Revolution and with the return of a degree of religious freedom in the 1980s, a process of rewriting and a *bimo* renewal was driven by *bimo* descendants or by *bimo* themselves. Because the religious practices had been banned for a period of over three decades, this movement brought about a huge transformation in the manner of writing verses as most of the written models had been destroyed. In the absence of written ritual speech, some Masters of psalmody decided to write from oral ritual speech, *i.e.* from what they remembered. Yet because shamanic texts are not supposed to be memorised but to be copied, the irreparable loss caused by the policies of the Maoist period can easily be imagined. Only those who had managed to hide books in the mud-walls of their houses or in mountain caves still had them as models to copy in the 1980s. Then the Chinese government rapidly took charge of this rewriting process of *bimo* rituals.

The Bureau of Religious Affairs of the Yi-Sani district is a key administrative unit. It has homogenised the *bimo* ritual writings and transcribed the vernacular language of the Yi-Sani into a unified script. The ‘secret speech’ (*ka bé*), ordinarily incomprehensible to the uninitiated people, has thus been transmuted into a lay language for communication, accessible to all and taught at school. The state simultaneously promotes increasing the number of *bimo* in the religious context. This ritual manner of transmission, controlled by the Chinese authorities, pays little attention to patrilineage transmission but favours exo-lineage transmission. It encourages the *bimo* to pass on their knowledge to as many disciples as possible beyond their lineage. The state follows the rules of *bimo* writing in this: a digraphic process between ‘blood’ and ‘writing’ is introduced, but at the same time, only one character of writing is associated with each word. To put it another way: two scripts, shared by all the Yi-Sani *bimo* should now express *se* differently. The *bimo* concept of ‘writing-blood’ is to be divided into two concepts: ‘blood’ and ‘writing’. Therefore, the *bimo* must transmit the same writing, a Yi-Sani *bimo* common writing, while dissociating the sign given for the word ‘blood’ from the sign given for the word ‘writing’. The ritual homogenisation of the Sani tends to supplant the heterogeneity that constituted the characteristic feature of their ritualists.

From now on, the script that is officially used to transcribe the idea of ‘writing’ also refers to the notion of ‘image’/‘figure’. Its original link to ‘blood’ has been totally erased. The individual scriptural specificities of each lineage have also been erased and some of the lineage secrets, reserved for oral transmission, have been divulged through state scriptural processes. Such disclosure leads to new textual configurations; that is to say, to the appearance of horizontal lines that are added to the traditionally visible

vertical lines. At the same time, the transmission process between master and disciple has tended to change: photocopying rather than copying the master's manuscripts is now commonplace. In the last five years, the process of standardisation has intensified: the disciples no longer even have photocopies of their masters' manuscripts in hand, but photocopies of texts from the Bureau of Religious Affairs that are distributed by the local central authority. They have to follow the official teaching in order to get a *bimo* diploma and to be able to practice 'freely' their religious activities. Henceforth, the *bimo* now share practically all the same standardised writings. The process of transformation of this scriptural shamanism is taking place so rapidly and is so massively anchored in Shilin that everything I write about the *bimo*'s writing system must be understood as on the verge of disappearing.

Chapter 9

A script ‘good to drink’. The invention of writing systems among the Sora and other tribes of India

Cécile Guillaume-Pey

The god foresaw that at the end of time there would be devastation and ruin, and on the first day of Creation he wrote a magical sentence with the power to ward off those evils. He wrote it so that it would reach the most distant generations and to insure that chance would not touch it. No one knows in what characters it is written nor where it is written, but it is certain that it exists as a secret and that a chosen one shall read it. I considered that we were now, as always, at the end of time and that my destiny as the last priest of the god would give me access to the privilege of intuiting the script.

Jorge Luis Borges, ‘The God’s script’, in *El Aleph* (1967[1949])

Introduction

About to dissect a dead body in the hospital where he was working, Mangaya Gomang, a man belonging to the Sora tribe, became aware of the significance of possessing a script, his disciples recount today. ‘What is missing from this body for it to be alive?’ Mangaya wondered: ‘This body is like the Sora: even if they are rejected, insulted, they do not react, they do not rise up against those who persecute them and laugh at them’. Comparing the body without life to a language without a script, Mangaya prayed to obtain ‘clothes for the voice’, a script to shield the Sora from derision and sarcasm. In 1936, he allegedly discovered alphabetic characters engraved on a stone near his village and founded a religious movement whose adepts worship these letters.

Among the tribal groups of India, the Adivasi¹ – a term meaning ‘first dwellers’ – we observe many cases of script invention since the colonial period. The proliferation of

¹ ‘Scheduled Tribe’ is the official designation used by the Government of India. The term ‘Adivasi’ was invented in Central India at the beginning of the twentieth century by Christian students belonging to the Munda group and was adopted later by other tribal groups of Central India (Carrin 1996). Nowadays,

tribal scripts in contemporary India is linked to the identitarian strategies deployed by social groups who are linguistically, religiously, politically and economically marginalised. These new graphic systems enable them to promote their language, to elaborate new ritual forms and to assert territorial claims in proto-nationalist movements (Carrin 2016; Guillaume-Pey 2018b). From letters engraved on funeral stones to school books, from signboards to websites or artistic installations in foreign galleries and museums, scripts created by Adivasi groups are transmitted and 'exhibited' (Petrucci 1986) in spaces and on media whose diversity reflects the plurality of their uses.

This paper focuses on the issues raised by the invention and the circulation of writing systems among these minority-language communities and, more particularly, among the Sora, a group of farmers who live mainly in rural areas at the border between Odisha and Andhra Pradesh (East central India) (Fig 9.1). The Sora originally speak a Munda language – a branch of the Austroasiatic language family – whereas neighbouring castes speak Indo-European or Dravidian languages: Odia in Odisha and Telugu in Andhra Pradesh, official languages recognised by the Constitution of India that the Sora children learn in public schools.

While in some tribal/Adivasi groups the invention of a graphic system gave birth to a militant literature spread by various media, such as village theatre and newspapers (Carrin 2002; 2016), the Sora script is used in a ritual context and its circulation is controlled by religious specialists. Nowadays, in Odisha and Andhra Pradesh, the Sora are followers of Matharvanam, the religious movement born in the late 1930s and whose founder, Mangaya Gomang, is said to have discovered an alphabet of 24 characters to transcribe his native language. Each letter of this script embodies a spirit which the devotees incorporate into themselves through an alphabetic potion drunk during rituals. The discoverer of the script is worshipped today along with the god Jagannath, the main deity embodied in the alphabet. Promoted to the rank of tutelary deity of the Odisha kingdom in the twelfth century, Jagannath is, to this day, a central religious figure in the state (Eschmann *et al.* 1978; Kulke & Schnepel 2001). Present-day Matharvanam followers claim that the Brahmins and Rajas formerly stole Jagannath from them before the god, leaving Hindu temples, returned to his original Sora devotees in alphabetic form. The Matharvanam movement therefore offers a striking image by a tribal community of the reappropriation both of Jagannath, a deity integrated for centuries into the Hindu mainstream, and of writing, a medium intimately linked to colonial power. The once purloined god returns in alphabetic form, shaping ritual practices centred on an embodied script that defies colonial investments in literacies of different sorts.

Why do scripts play a crucial part for Adivasi in India? How do the Sora apprehend an alphabet that most of them cannot read, but that they can touch and even drink?

tribal activists try to establish an equivalence between the word 'Adivasi' and the term 'indigenous people' used on an international scale (Karlsson 2003).



Fig. 9.1. The Sora, a Munda-speaking group living mainly in rural areas at the border between Odisha and Andhra Pradesh (East central India) (Andhra Pradesh 2013). Photo by C. Guillaume-Pey.

What impact does the embodiment of deities in letters have upon modes of ritual communication?

In this chapter,² I will show how the Sora have reshaped writing through ritual, and how the creative appropriation of writing in return plays an important part in the redefinition of their religious practices and their identity. In order to understand how, among this group, spirits happened to be embodied in letters, I will first highlight the conditions of emergence of both the Sora alphabet and other graphic systems devised by charismatic leaders in tribal India. Then, I will examine the divine

² This chapter is based on data collected among the Sora of Andhra Pradesh and Odisha during my PhD fieldwork on Sora ritual practices (2007–2008), and research projects financed by the Fyssen Foundation, the FMSH (CEFRES), the Labex HASTEC and the CNRS (2012–2018). The research reflected here has benefited from discussions at Yale University (Institute of Sacred Music and Sensory Cultures of Religion Research Group), Queen's University Belfast (School of History, Anthropology, Philosophy and Politics), CEFRES–French Research Centre in Humanities and Social Sciences and Charles University of Prague, Sorbonne Université (École doctorale V Concepts et langages – GRIPIC – CELSA), The Laboratory of Social Anthropology (Collège de France/CNRS/EHESS, Paris), and the University of Cambridge (Faculty of Classics). I am also grateful to an anonymous reviewer of this chapter for their constructive comments.

bricolage made by the Sora script's creator and the changes generated by the worship of 'spirit-letters' in the Sora's ritual practices. Finally, I will address the issues raised by the circulation of the Sora alphabet and other Adivasi scripts. Special attention will be given to competing media: the competition between co-existing writing systems used to transcribe the same language but also between scripts and other graphic forms such as paintings or oral modes of ritual communication.

Writing from the margins. The appropriation of literacy and the emergence of tribal movements in India

In colonised societies, there are numerous cases in which the colonised will appropriate literacy, which remains an instrument of knowledge and power associated with administration, Christian missions, and the education given by the latter (Guha 1983; Hawkins 2002; Kirsch 2008). For groups among whom literacy campaigns went hand in hand with religious conversion, learning how to read and write often meant becoming Christian and vice versa (Kulick and Stroud 1993; Kirsch 2008). The ritual uses of writing are consequently numerous. Incorporated by societies who already had tacit and non-tacit conventions regarding ritual communication, writing has therefore been more or less diverted from its ordinary function as a mechanism for encoding spoken language (Lévi-Strauss 1955a; Probst 1993; Keane 2013). How, therefore, do the Sora and other Adivasi groups appropriate writing?

Rebels armed with blank papers: Petitions and divine missives

Ranajit Guha (1983), in his pioneering study dedicated to peasant insurgency in Colonial India – a founding text for Subaltern Studies – describes the extreme reactions of dominated groups toward literacy, a medium that may either provoke an unconditional rejection, leading to a massive destruction of written and printed material³ or, on the contrary, pique interest and inspire charismatic leaders. Among the Santal, a tribal group of Central India, Sidhu and Kanhu, two brothers who led a rebellion against the British in 1855 claimed that they had a vision of a god. This divine being, who appeared as a white man, wrote his commands on papers that he subsequently gave to them. The written documents carried by the brothers as 'both an emblem of authority and an instrument of mobilization' (Guha 1983, 248), included a book about locomotives, a few visiting cards of an English engineer, a translation in some Indian language of St John's Gospel and blank papers said 'to have dropped from heaven' (Guha 1983, 248). The two brothers were supposed to distribute these papers that fell on their head to the Santal in order to prepare the insurrection (Carrin 2002). Before taking up arms against the British, Sidhu and Kanhu also tried to send petitions to administrators and

³ 'There was hardly a peasant uprising on any significant scale in colonial India that did not cause the destruction of large quantities of written or printed material including rent rolls, deeds and bonds, and public records of all kinds' (Guha 1983, 51).

landlords (Carrin 2006). As they were illiterate, they were helped by scribes belonging to the Dom community, a low-status caste that, like the Santal, was oppressed by the Hindu dominant castes (Guha 1983, 187–188).

Between the nineteenth century and the beginning of the twentieth, some tribal leaders who were educated by Christian missionaries used the Roman alphabet or Indian regional scripts to send petitions to the colonial administration in order to claim the land of which they had been dispossessed (Roy 1912; Fuchs 1965, 27). Others, illiterate like Sidhu and Kanhu, made a symbolical appropriation of writing. Among the Santal and the Oraon, another tribal group of Central India, some chiefs claimed to have received letters sent by a god to guide their group. Thus, a leader of the Tana Bhagat, an Oraon reformist movement, affirmed that a god wrote to him, commanding him to establish a kingdom for his followers and to liberate them from their oppressors: British officers, land owners, money-lenders, Christian missionaries and Muslims (Dasgupta 1999, 32). During the First World War, adepts of the Tana Bhagat movement even hoped that the German Kaiser would liberate them from British domination and would teach them how to read and write (Dasgupta 1999, 41).

An alphabet of its own: Script competition and 'amphibious translators'

Later, from the end of the 1930s, modes of appropriation of literacy changed with the emergence of religious movements led by charismatic leaders who, instead of borrowing existing writing systems, created scripts to transcribe their languages. Before the invention of a specific writing system, tribal languages had generally been transcribed with various Indian regional scripts or with the Roman alphabet. It is in a context of competition between several writings – one of them, the Roman alphabet, being intimately linked to the spread of Christianity – that tribal leaders devised scripts of their own. Unlike other Indian writing systems, these scripts were not alphasyllabaries but alphabets. Regarding the shape of the letters, their inventors were inspired by both characters of the Roman alphabet or Indian regional scripts and vernacular graphic forms such as ritual diagrams used to communicate with their ancestors and deities, as shown by Marine Carrin (2016) and Nishaant Choksi (2017) in the Santal's case. Thus, India appears as the birthplace of many new scripts, first created and propagated by religious leaders belonging to an educated elite (Zide 1999; Carrin 2002). Such inventors could be compared to the figure of the 'amphibian translator' as defined by James Scott (2009, 126): 'In the great Taiping Rebellion, in the hundreds of cargo cult uprisings in the Pacific Islands, in the rebellions of New World prophets against Europeans, the key figures are often culturally amphibious translators who move relatively easily between the worlds they inhabit'. Mangaya Gomang, who is credited with the spread of the Sora alphabet by most of the Sora⁴, fits

⁴ Religious specialists of the Matharvanam movement generally attribute the 'discovery' to his father-in-law, Malia Gomang, an influential Sora leader who then entrusted Mangaya Gomang the spreading of the script. Nevertheless, Mangaya Gomang nowadays outshines his father-in-law.



Fig. 9.2. The Sora graphemes allegedly discovered engraved on a rock by Mangaya Gomang in 1936 (Marichiguda, Odisha 2017). Photo by C. Guillaume-Pey.

perfectly with this definition. Circulating between schools, hospitals and sanctuaries, this man presents an atypical profile for a Sora villager in the 1930s. A schoolteacher and a compounder at a pharmacy, Mangaya became an influential social reformer and religious leader after having created an alphabet to transcribe the Sora language.

Before the invention of the Sora alphabet, various scripts were competing for the transcription of the Sora's Munda language. In the early 1930s, the Telugu linguist Gidugu Ramamurti used the International Phonetic Alphabet with an educative project in mind. With the support of the Government, he published a Sora-English dictionary and a Manual of Grammar. Nowadays, some non-Sora, who have heard about the script worshipped by Matharvanam followers, confuse the script spread by Mangaya and Ramamurti's transcription. The linguist's project was not warmly welcomed by the Odia and the Telugu people, who wanted to impose their respective alphasyllabaries on their Sora neighbours living at the frontier between two politico-linguistic spaces. This scriptural conflict reflects the local tensions when regional frontiers were redefined. In 1936, the very year when the Orissa region was created, regrouping the speakers of the Odia language, the Sora script was invented or, according to Matharvanam

devotees, 'discovered' by Mangaya. After fasting in the forest, the Sora leader allegedly found some graphic signs near his village, engraved on a rock where tigers used to kill their prey. Inspired by a deity, Mangaya could decipher these graphemes and founded a religious movement, Matharvanam, whose adepts, even now, continue to worship this script (Fig 9.2).

Besides prayers and astrology booklets, Mangaya wrote, according to his disciples, books dedicated to mathematics, medicinal plants, architecture, the history of the Sora and the history of India. Driven by an encyclopedic set of interests, Mangaya shares, in this respect, some affinities with many script inventors from dominated or colonised groups in India and elsewhere who, during the last century, used their writing to create complex and protean works, reinventing the history of their group, recording their knowledge and even codifying the knowledge of their oppressors (Smalley and Wimuttikosol 1998; Amselle 2001; Escudier 2008; Kelly 2012; Bruly Bouabré *et al.* 2013).

Inventions or discoveries? When 'Prophet-Champollions' decipher stones

In other Adivasi groups of Central India, inventions of scripts – considered as 'discoveries' of graphemes engraved on stones – also follow the emergence of socio-religious and reformist movements. Among the Ho in the 1950s in Bihar, Lako Bodra, born into a wealthy family, studied in a Catholic school, became a catechist and devised a script called the *Varang kshiti*. One night during a full moon, he discovered luminous letters inscribed on a memorial stone (*sasan-diri*) dedicated to his ancestors. The Ho prophet claimed that the alphabet he found had been in fact created in the thirteenth century by a shaman named Dhawan Turi, whose visions he revisited in his own dreams (Carrin 2002, 248). Lako Bodra consequently founded a religion that centres, in large part, upon tribal deities. Inspired by his books, his disciples elaborated rituals aimed at gathering Ho people around the *sarna* or 'sacred grove', a religious space shared by Munda-speaking tribal groups in central India (Carrin 2002, 248). During the same period, in Bengal, a Santal schoolteacher named Ragunnath Murmu discovered, in a forest nearby his village, graphic signs also engraved on stones. The discovery of these signs, said to have been hidden by the Santal deities themselves, could be considered a 'capture' (*sap*) (Carrin 2016, 305). Thus, Murmu employed this Santali term used by the religious specialists in his community to describe the act of shamanic predation that consists of locking up deities in their hair. If, unlike the Sora letters, Santali graphemes do not embody spirits, they are nevertheless 'implicitly compared to deities who, finally, pervade the mind of the prophet like indelible marks' (Carrin 2016, 305).⁵

A parallel can be drawn with the invention of scripts that occurred in colonised groups in Africa (Turner 1967; Peel 1968; Swiderski 1984), in America (Dubelaar and Pakosie 1988; Déléage 2013), or elsewhere in Asia (Smalley *et al.* 1990; Culas 2005; Kelly 2018a) where most of these creations are linked to the emergence of socio-religious

⁵ Personal translation of the following sentence: 'Les lettres sont donc implicitement comparées à des divinités qui ont finalement imprégné l'esprit du prophète comme des marques indélébiles'.

movements in reaction to a dominant religion and/or an endogenous rival institution (Guillaume-Pey 2016). As David Dalby (1968) stresses in the case of West Africa and Surinam, the elaboration of new graphic systems, far from being considered as a mere appropriation by their users, is conceptualised as a ‘revelation’⁶ or a ‘discovery’. Signs seen in dreams or engraved on stones and other media, like divine hieroglyphs, are deciphered by inspired religious leaders who can be seen as moderns ‘Champollions’, as Jean-Loup Amselle (2001) qualified them in the case of West African prophetic movements.

As in numerous cases of script creation reported elsewhere in colonised or dominated groups, script inventions in tribal India are therefore legitimised by divine intervention and, in some cases, myths recounting their creation even convey the *topos* of the ‘purloined letter’, whose prominence Amselle (2001) emphasises in similar cases in Africa: the community that develops its own writing system would have possessed a prior script in a long-ago past, which was destroyed or stolen by a dominant group. Narratives related to the loss or theft of a script are also numerous among ethnic minorities located at the border crossing between China, Thailand, and Myanmar (Tapp 1990; Walker 2003; Culas 2005; Scott 2009) and can be found as well in India. Among the Kurukh,⁷ a story on a website dedicated to a script created in 1999 recounts that this group had once used a script and had a rich literature, both annihilated by invaders like the Aryan and the Mughal.⁸ In the Sora script’s myth of origin we do find such a dispossession theme, but it is not exactly a graphic system, as an instrument of power and knowledge, that is then seized by a dominant group: it is a divinity that is appropriated, as we shall see now.

When deities become letters

Various myths recount the origin of the Sora script. At the sanctuary of Marichiguda, the very place where the script was ‘discovered’ by Mangaya, his eldest son Warnay distributed printed versions of this story in Sora, Odia and English languages.⁹ It is said that the Sora used to worship Jagannath as a wooden statue until the god disappeared. After having been taken from his Sora worshippers and held by a Brahmin, Jagannath finally returned among his first devotees in alphabetic form, as *Akshara Brahma*:

Akshara-brahma form of lord Jagannath, the most beloved deity of the Sabaras

S.P. Mangei gives the following statements regarding the origin of the script.

⁶ On revelatory scripts see also John Monaghan (2008).

⁷ Ethnonym used by some Oraon to designate themselves.

⁸ <https://kurukhworld.wordpress.com/language-literature/> [last access, July 2020].

⁹ Warnay died a few years ago.

'The Savara people used to worship "Daru-Brahma" (wooden image of God). But when Lalita (The Savara Princess), falling in love with a Brahmin, revealed to him the secrets of the worship, the Brahmin won over the Lord [Jagannāth]. The Lord vanished and no more responded to the prayers of the Savara people. Then, the Savara said, 'Wonderful.' You don't listen to me, you don't respond to me. But you listen to the Brahmin, who is an outsider. Allright, I say, from today I will offer you only blood and liquor. When you come back again to us and teach us to be wise and good, we will worship you then only with due sanctity. The Savara people took a resolution like that and since then they were sacrificing cocks, goats, buffaloes and human beings too at the rituals. They worship, pay obeisance, and then pour down blood and liquor on the deity's head. However, after many days, at the end of the age of Kali, the Lord came back and said, "Now I have come to you, not as Daru-Brahma but as Akshara-Brahma (Alphabetic Image of God). You worship me in this form. I will be visible on the Matter *bnom vijnan* 'hills'." The Savara then went and saw. The twenty-four letters appeared in his vision. Then a shrine was built on that site and the worship of the 'Akshara-Brahma' commenced that day'.

Mangei, thus, spiritualizes his invention of a Sora script and sets up a new religious order which is designated as 'Matter *Bnom Dmri*'—the religion that opens the eyes and makes people good and wise. His script symbolizing the Akshara-Brahma is enshrined on a hill near Marichiguda, about 20 km. far from the nearest town of Gunupur. The image is in the shape of 'OM' in oriya character having the 24 letters, 9 numerals and a crest inscribed on it. During the past 40 years, Mangei has proselytized a good number of his tribesmen and has established sub-centres all over the Sora speaking tracts in Orissa and Andhra Pradesh. In many villages regular evening schools are being run to make people literate in the script. Particularly, in the Padampur-Gunupur; the area centering around Marichiguda-Dambasara villages, the literacy has spread to a recognizable extent and the script is, in fact, being used in intra-community communication and literary activities (Gomango n.d.)¹⁰

The Sanskrit term *akṣara*, attached to the word *brahmā* – referring to the creator aspect of the divine – can be understood in various ways. As an adjective, it signifies 'imperishable', and as a noun, it means 'syllable', a term which in the *Rg-veda* also designates the sacred (Naudou 2011). But for most of the adepts of Matharvanam, the expression *akshara brahma* refers firstly to a very concrete visual form: to signs inscribed on a material medium, made of stone or paper, and which they worship, *de facto*, 'as an image'.

A new body for the King of Odisha

The choice of Jagannath is not insignificant. Indeed, this deity is a major religious figure in the region since the medieval period (Eschmann *et al.* 1978). More than 900 temples in Odisha are dedicated to the god (von Stietencron 1978, 469). The most important is in Puri, a city located in the coastal area. With the construction of this temple in the twelfth century, Jagannath became the most important deity of a medieval empire under the Ganga dynasty. The ruler, recognised as the 'king of the Orissan Empire'

¹⁰ The one-page English version of this text published by Mangaya's son also appeared in a brief article written by the Odia scholar K. Mahapatra (1979).

(*Odisa-rajya-rajā*), considered himself a ‘deputy’ (*rauta*) or a ‘son’ (*putral*) of Jagannath (Kulke 1978, 140). However, most of the temples dedicated to the god were built centuries later. During the colonial period, and more precisely in the middle of the nineteenth century, the rajas of the Princely States ordered the construction of sanctuaries for Jagannath whose cult they imposed onto their subjects. Their construction generated a significant increase of taxes (Banerjee-Dube 2001). Besides, lands occupied by tribes were then conceded to temples and administered by Brahmins. Jagannath therefore came to provide, as emphasised by Ishita Banerjee-Dube (2001, 166), ‘the divine-ritual sanction for exploitation’. Thus, the spreading of his cult could be considered as an emblem of oppression from Hindu kingdoms on tribal margins (Kulke 1978; Banerjee-Dube 2001; Beltz 2007).

In the Jagannath temples, the god is worshipped, along with his sister Subhadra and his brother Balabhadra, in the form of wooden images which, as many scholars have noted, appear ‘unfinished, premature, aboriginal, savage, exotic’ (Nayak 2001, 28).¹¹ Numerous texts – in Sanskrit and Odia – refer to the tribal origins of the Jagannath cult. The Puri temple legend narrates that Jagannath was originally worshipped in the woods by Visvvasu, a Sabara aboriginal chief, before a Brahmin, sent by the King Indradyumna, took the deity to Puri to worship in a temple (Geib 1975). This is the very legend that the Sora have reinterpreted, adding a new chapter recounting the return of the God among his supposed first devotees.

While the Sora reclaim a deity that they consider as their own, we must point out that the choice of the graphic form representing Jagannath echoes some Hindu discourses and practices related to writing. Thus, Hindu classic texts like the *Purana* (V.51) refer to a ‘goddess of writing’ (*Lipidevi*) characterised by a ‘body made of letters’ (Malamoud 2002). Moreover, in some currents of Hinduism, tantric in particular, we find ritual practices centred around letters, which are sometimes associated with the organs of a divine body (Colas 1997; Vasudeva 1997). Traced inside diagrams (*yantra*), graphemes could be worshipped like images. In Hinduism, however, writing remains generally subordinated to the word and the letter is primarily valued as a sound, including in Tantrism where a hermeneutics of the alphabet is elaborated the most (Colas 2007). Considered first and foremost as a technique to transcribe speech, writing has been depreciated to the benefit of oral transmission for a long time in India (Colas and Gerschleimer 2009). Evoking his macabre association with the scribe of *Yama*, the god of the death, Malamoud emphasises the particularly ambiguous place of writing in Brahmanical Hinduism where ‘whatever concerns writing is considered with suspicion, feared, and even held in contempt’.¹²

The myth of the Sora alphabet fits more particularly to the scheme of some Odia philosophical discourses which had primarily associated Jagannath to a written

¹¹ Eschmann (1978) for example considers that with their large heads and limbless bodies, these images undoubtedly offer ‘a tribal look’.

¹² Malamoud (2002, 128). Personal translation of the following sentence from the French edition: ‘ce qui touche à l’écriture est tenu en suspicion, redouté et même méprisé’.

medium. Thus, according to Tripathi (1978), the divine trio has been linked to a *Veda* and, above all, to the sacred syllable AUM: the letter /A/ to Balabhadra, the /U/ to Subhadra and the /M/ to Jagannath himself. It seems likely that Mangaya, an educated Sora, was aware of such an association between letters and deities. The form in which the characters of the Sora script are traced is, indeed, alternatively a heart and 'the shape of 'OM' in Odia characters', as mentioned in the version of the script's origin myth that Mangaya's eldest son distributed.

Matharvanam followers consider that the embodiment of the god into their script, sign of a new era – the end of the *Kali Yuga*¹³ – coincides with the god's departure from the Hindu temples. The deity, henceforth embodied in an alphabetic medium, is said to have left Puri temple to 'return' to the Sora. A ritual specialist of Matharvanam told me: 'In the past, Brahmin and Hindu Kings came to our villages to steal Jagannath. But since the days of Mangaya, Jagannath has abandoned the Puri temple's statues to come back into our village in the form of a script. Why should we go to Puri? The temple's statues are empty!'. But the rejection of the statues of Jagannath do not generate the general condemnation of divine images. Mangaya's disciples are less hostile to the worship of anthropomorphic statues than to the hegemony of Puri, centre of Brahmanical power in Odisha (Kanungo 2003).

The Matharvanam movement is thus a remarkable case of the re-appropriation of a major deity by a tribal community, in which present-day followers consider themselves heirs of the 'Sabara', those who were, according to ancient texts, the god's first worshippers (Guillaume-Pey 2011).

The alphabet of the spirits

Although they reinterpret the myth of Jagannath and give an alphabetical form to a god integrated for centuries into the Hindu mainstream, Mangaya's disciples do not reject all the deities of the Sora pantheon that they used to worship. While the script is considered as the embodiment of Jagannath, it is commonly called 'script of the spirits' (*sonum sompeng*) by the adepts of Matharvanam who live in Odisha; in Andhra Pradesh, the devotees also employ the expression *nyonan-lipi*, which can be translated as 'spirit-letters'.

Around half of the 24 letters of the script are associated, according to an acrophonic principle, with a sound that corresponds to the first phoneme of a term that designates a spirit. For example, the second letter of the alphabet, /Ta/, corresponds to the spirit of the paths, *Tangorsum*. The consonant /Ba/ is associated to *Babusum*, the name given to the tutelary deity of the village, while the vowels /E/ and /I/ refer to the ancestors (*elda/day*). If worshippers consider that the characters of the sacred script 'are spirits' (*sonum/nyonan*),¹⁴ we observe nonetheless that the 'spirit-letters' composing this writing system are, to say the least, a miscellaneous set. While some

¹³ Chaotic era that corresponds to the current epoch in Hindu cosmogony.

¹⁴ In Andhra Pradesh, the term *nyonan* is generally used to designate the spirits whereas in Odisha *sonum* is more common.

of them are directly associated with deities of the Sora pantheon, several characters do not exactly correspond to *sonum/nyonan* but to objects or spaces which can be related to them in a ritual context. Thus, the central pillar of the Sora house, *soundang*, where offerings are made for spirits, is represented by the first letter of the alphabet: /Sa/. In the same way, the mortar hole, *on'al*, gives its name to the vowel /O/. These elements are not considered as divine agents themselves but represent a contact point between the human world and that of the spirits. Other characters refer to actions or objects which are not specifically associated with spirits. Thus, the letters /Ha/ or /Nya/ for example, like many characters of the Santal or the Ho script, are linked to elements of everyday life (Zide 1999; Carrin 2016). The first one is associated with 'rice' and the second one with the verb 'to walk'.

Besides, in the script promoted by Mangaya, the spirits of the Sora pantheon coexist with elements borrowed from Hinduism, the dominant religion, or Christianity. Thus, all the numbers of the Sora script embody Hindu deities. The *Navagraha*, the nine spiritual entities worshipped in Hindu astrology, are each associated with a number. Moreover, some elements could be related to interactions with Christianity: this is the case for the symbol in the shape of a heart, inside which the characters of the Sora script are often inscribed, and for the letter /Ka/ associated with *Kitung*. In the 1940s, this term designated for the Sora of South Odisha a class of deities or cultural heroes who created both human beings and social institutions (Elwin 1955, 85–95). While in some myths collected by Verrier Elwin, *Kitung* appears as a kind of trickster that created sexual pleasure, alcohol beverages and tickles (Elwin 1955, 90), nowadays, for the Sora, this term first evokes Christianity. Thus, the term *Kitung* has been appropriated by Christian missionaries to translate the word 'god'.

Last but not least, the letter /Pa/ designates the slate, an item which acquires importance in the reformed ritual practices of the Matharvanam movement, as it is used to prepare an alphabetic potion made of 'spirit-letters' as we shall see below.

This revealed script, incarnation of Jagannath, the Navagraha and the *sonum/nyonan*, thus constitutes a curious mix of peripheral and mainstream religions. The embodiment of deities in the Sora script leads to a standardisation of the traditionally very flexible and place-specific pantheon, henceforth homogeneous for all Matharvanam worshippers, no matter their locality of origin. The ways in which actors experience and apprehend the 'spirit-letters' sharply contrast with the ways the non-converted Sora usually comprehend the *sonum/nyonan*. The objects in which the spirits materialise, the kind of offerings and the mode of communication with the divine therefore change considerably.

To read or to drink: the ritual uses of the 'spirit-letters'

In his comparative essay about scripts devised by religious leaders during the colonial period, John Monaghan emphasises that 'the critical issue for a revelatory script is its entry into conventional usage as means of communication' (2008,

331) and remarks that most of the divinely inspired writings 'disappear without leaving much of a trace' (2008, 323). Nowadays, contrary to what the last lines of the printed version of the myth quoted above suggest, Matharvanam followers barely use the Sora script to communicate inside their community on an everyday basis. The writing systems employed by the most educated Sora, whatever their religion, are Odia, Telugu, and Roman scripts. As a schoolteacher preoccupied with the dropout-rates of Sora youth, Mangaya was most probably eager to spread his alphabet widely, but this project remains, to this day, a *lettre morte*: The Sora script is mostly used for religious purposes.

The ritual innovations that emerged around scripts invented by inspired leaders have been largely ignored in studies devoted to the religious practices of the Adivasi. Thus, the Sora are mainly known for dialogues where the living engage with the dead by the mediation of a possessed specialist and for the construction of megalithic monuments during second funerals, rituals marked by buffalo sacrifices (Elwin 1955; Vitebsky 1991; Beggiora 2003). How does the invention of a writing system by the Sora reshape their religious practices centred on spirit possession and blood sacrifice? How does the worship of an alphabet influence both the forms of communication with ancestors or local deities and the ways to make them present?

Propagating and incorporating letters: stones, booklets and alphabetic potions

The media upon which the Sora script is engraved, painted, traced or printed are ritual objects or tools used for the propagation of its cult. In Sora villages, the main places where the 'script of the spirits' figures, engraved in rock or drawn with chalk, are the sanctuaries of the Matharvanam movement. The first one was built in Marichiguda, in South Odisha, at the very place where Mangaya is said to have discovered the script carved on a stone (Fig. 9.3). To this day, this place is the main religious centre of the Matharvanam movement. The sanctuary is a circular building which the worshippers reach by a flight of stairs. Before entering its only room, they ring a bell, which, like in Hindu temples, hangs in front of the entrance. In the centre, a big hemispherical dome made of stone occupies most of the space. Sheltered in it, a rock is engraved with all the characters of the sacred script. Mangaya's eldest son officiated there until his death a few years ago.

Several sanctuaries, based on this same model, were built in South Odisha and North Andhra Pradesh. These secondary centres contribute to the spreading of the cult. Some ritual specialists of the movement (*purpurmar*) – the young men in particular – leave their home every Wednesday to visit the surrounding villages and promote the cult of the alphabet. In the evening, they teach the Sora script to villagers, who learn its letters in the form of poems and prayers. During these evening classes, the officiant chants hymns to the glory of the alphabet, accompanied by *tabla*, music instruments borrowed from the neighbouring castes. These performances echo more the Hindu devotional songs (*bhajan*) than the ritual songs chanted by the religious specialists of the non-converted Sora. The itinerant officiants spend the night in the



Fig. 9.3. Sanctuary built around the stone on which the Sora letters were found by Mangaya (Marichiguda, Odisha 2008). Photo by C. Guillaume-Pey.

village where they wish to introduce the cult and, in the morning, celebrate a ritual there before returning home.

As in Marichiguda, rituals are celebrated in village sanctuaries twice a week. Devotees worship the script by offering fruits, rice mixed with turmeric and incense, and by chanting hymns (Fig. 9.4). These hymns are written in booklets brandished by religious specialists who generally know their content by heart. Thus, they barely watch the texts they have in hand whereas common worshippers repeat the prayers chanted by the officiants. Most of them do not have prayer booklets. In devotees' households, the domestic altar, where daily offerings are placed in front of the 'spirit-letters' and Mangaya's portrait, is generally the only place where the Sora script is found. Women are in charge of this altar, arranging flowers, incense and food offerings, and tracing the characters of the alphabet on the ground with rice powder or chalk (Fig. 9.5). If they know how to write the alphabetic characters in order, they are not necessarily able to identify the phonemes and the spirits associated to the letters. Most of the followers of Matharvanam movement, indeed, are unable to read fluently,



Fig. 9.4. Matharvanam followers worshipping the Sora script in a village sanctuary (Odisha 2018). Photo by C. Guillaume-Pey.

and this is despite the fact that in some villages the script is taught during evening classes or just before rituals. Reading and writing are skills held by the religious specialists of the Matharvanam movement who tend to monopolise access to the prayer booklets and books written by Mangaya.

During a ritual celebrated at a sanctuary located in Odisha, a *purpurmar* described the letters as a vital principle, a power that penetrates the body of the devotees and animates it: 'The twenty-four letters and the *marir*¹⁵ are in the air, like the wind, and enter into our body, in our stomach, in our heart. This is the letters who make us live, talk, walk, work and pray. This is by them that we became alive. If someone take the letters from us, we die, like if someone was trying to prevent us from breathing'. According to the *purpurmar*, the knowledge of Mangaya's alphabet even gives access to an authentic humanity: 'Jagannath said: "I came back. Learn the letters, and you will prosper ... otherwise, you will never be completely human".'

¹⁵ Honorific title given to a wise person and which refers here to Mangaya.



Fig. 9.5. Woman tracing the Sora letters in her domestic altar (Odisha 2017). Photo by C. Guillaume-Pey.

The letter against the trance

The ‘return’ of Jagannath in an alphabetic form goes along with major ritual reforms through which Sora practices are made to resemble normative high-caste Hindu practices. The cult of the Sora alphabet follows the line of numerous reformist movements which emerged in the nineteenth century in India (Guillaume-Pey 2011). Matharvanam adepts, in accordance with Hindu reformist values, condemn blood sacrifice and alcohol libations and worship their script only with vegetable offerings. The consumption of buffalo, the most prestigious sacrificial victim offered to the dead for the funerals, is also condemned. The Sora script’s myth of origin suggests that before the appropriation of Jagannath by a Brahmin sent by a Raja, blood and alcohol were not commonly offered to the deity. These offerings appeared as a way of taking revenge on a god who abandoned his worshippers and remained mute.

In addition, modes of ritual communication and ways of interacting with divine agents and making them present drastically change. The sacralisation of writing generates the repression of another graphic form: the mural paintings made with rice powder in the central room of the Sora houses (Fig. 9.6). These images are



Fig. 9.6. Ritual painting (*idisu'ung*) made for spirits in a Sora house (Andhra Pradesh 2008). Photo by C. Guillaume-Pey.

called *idisu'ung*, a word that can be translated as 'painted house'. In the Austroasiatic language spoken by the Sora, *id* is the root of a verb referring to the action of 'tracing', 'painting' or 'writing' and *su'ung* means 'house'. These paintings, in front of which sacrifices are performed, are a kind of dwelling made for the ancestors and deities of the Sora pantheon. Their designing is part of a complex ritual performance that requires close collaboration between a ritual painter and other religious specialists who, through songs and dialogues with the spirits, pray to ancestors and local deities to inhabit the picture (Guillaume-Pey 2018b; 2019). The latter are represented by white geometrical figures with anthropomorphic contours engaging in agrarian operations, rituals, and sexual intercourse. Those images, associated with animal sacrifice, are then replaced on the walls by the Sora script, which is, ironically, finally worshipped itself like an image.

Another major consequence of the sacralisation of the script is the de-legitimation of an oral repertory whose role was prominent in the rituals until the script's invention: the dialogues with spirits. Indeed, among the Sora who are not converted to the Matharvanam movement, the living still speak with their ancestors and

with local deities through a possessed medium, *kuram* (mn)/*kurambo* (fn) (Fig. 9.7). These specialists play a central part in Sora ritual practices (Elwin 1955; Vitebsky 1993; Guillaume-Pey 2011). But once the spirits become letters, they remain mute. Trance and spirit possession, practices generally associated with low-status groups in India, were indeed condemned by Mangaya. Some *purpurmar* even consider *kuram* as charlatans willing to scam naive villagers. This reprehension goes along with the exclusion of women from the priesthood. The only way to incorporate spirits is the absorption of a potion prepared by male ritual specialists. This potion is called *paji'ingda'a*, that may be translated by 'water of spirits' footprints'. The term *paji'ing* means, indeed, 'footprint' and *da'a* signifies 'water'. This liquid is also considered to be the 'dust of spirit-letters' (*sompeng a duli*). At the end of weekly offices celebrated in sanctuaries or at the occasion of therapeutic rituals, an officiant recites the alphabet, pronouncing the name of each spirit-letter, while another ritual specialist simultaneously traces the characters on a slate with chalk. Then, the slate is washed with turmeric water and the potion distributed to devotees who drink it, thus incorporating the divine letters. In the context of therapeutic ritual,



Fig. 9.7. Female medium possessed by spirits during second funerals (*guar*) (Andhra Pradesh 2013). Photo by C. Guillaume-Pey.

the efficacy of the alphabetic potion can be increased by carrying amulets. These objects are made with copper foils on which religious specialists have inscribed some spells (*mantra*) with the Sora script.

Growing stones and conversations with the late script inventor: a blunting of the letters' charisma?

For the Sora, joining the Matharvanam movement is considered as a way of proudly assuming a new religious identity, now purged of practices like animal sacrifice for which the Sora are stigmatised by some of their caste neighbours. However, we can wonder if the divine *bricolage* made by a Sora schoolteacher, as ingenious as it is, is really satisfactory for the mere devotees who are not able to read the letters they worship.

In a society where the living normally communicate with spirits through the voice of a ritual specialist, a script 'good to drink' but not 'good to read' is not always considered an adequate medium to embody and communicate with local deities and ancestors, for whom second funerals (*guar*) are no longer celebrated.¹⁶ The rituals centred on the worship of a script seem to give rise to a feeling of loss among Matharvanam followers. And nowadays, the appropriation of new media and the re-introduction of objects and means of communication once replaced by the script aim at surmounting the blunting of the letters' charisma (Guillaume-Pey 2016).

Thus, in some villages more or less distant from the ritual centre of Matharvanam movement, stones appear – or 'grow' – with engraved letters and their cult goes along with the rehabilitation of ritual forms condemned by Mangaya. In 2013, I met a Sora villager in Odisha who showed me on his mobile phone a picture of a tree that was sprinkling a white liquid. He told me that the previous year, milk poured down from this tree for a period of forty-four days and then, two stones started to grow at the very place where the milk fell. 'They have already grown bigger since last year', he explained. On the bigger one, the first letter of the Sora script (/Sa/) is engraved (Fig. 9.8). In his village, the growing or 'birth' of the stones coincides with the reinstatement of spirit possession and stimulates ritual innovations. There, women can, once again, play a crucial part in the rituals as mediators with spirits that speak through them. Besides making the 'spirit-letters' talk, villagers also decided to organise a new ritual every year on Mangaya's date of birth. Here, they even have the possibility to dialogue, through a ritual specialist in a trance, with the script creator, who died in 1980. Moreover, some villagers claim that they learnt how to read in dreams or during a trance, emancipating themselves from the authority of the *purpurmar* who tended, until then, to monopolise the letters' transmission.

¹⁶ This ritual, which involves the construction of megalithic monuments and dialogues with ancestors through ritual specialists, is celebrated once in a decade and organised by a group of villages who share the same funeral sites (Guillaume-Pey 2011). The term '*guar*' is compounded by the verbal form *gu*, which means 'to plant' or 'to seed' and by the abbreviated form *ar*, referring to 'stone' (*areng*).

Paralleling the reemergence of media such as stones and the rehabilitation of the body of a ritual specialist in trance, Sora appropriate new technologies to propagate their alphabet. The creation of fonts to write the Sora script and the access to computers in some villages stimulate the printing of alphabet primers and booklets distributed in schools and its spread in the different states of India where the Sora have migrated, as we shall see below. In addition, some Sora have also started to use platforms like Facebook and YouTube to promote their script and its cult.

Script-making and the ambiguities of identity assertions

During a ritual celebrating the construction of a Matharvanam sanctuary in Gunupur, a town located in

South Odisha, a script worshipper told me: ‘Once we will have built this temple, the Yo’oy [non-Sora people] will see our script. Then, they will understand that we are not ‘people of the jungle’’. Another adept of the Matharvanam movement predicted with excitement: ‘One day, our script will be visible on banknotes!’ On Indian banknotes, the value in rupees appears in the first fifteen languages and scripts that have been recognised by the Constitution of India. Besides Hindi and English – the official languages of India – the government has recognised twenty-two languages said to be ‘constitutional’, which are the main languages spoken in the States of the Indian Union. Most of them are written with a specific graphic system, used in administration, the courts, education and the media. Except for Santali and Bodo, none of the languages spoken by tribal groups have been recognised by the Constitution, even if some of them, like Gondi in Central India, have millions of speakers. For the Sora and other tribal groups disadvantaged by this linguistic policy, to have a script of their own – and to showcase it – is a way to promote their language and assert their identity.

Script as tool of unification for ethnic and linguistic minorities in a multilingual society

As is the case with numerous oppressed groups, script inventions among the Adivasi were first associated with religious movements. But in the Indian context,



Fig. 9.8. First letter of the Sora script engraved on a stone ‘born’ near a tree (Odisha 2013). Photo by C. Guillaume-Pey.

these inventions came to be enmeshed in the framework of a particular political configuration: Indian federalism, characterised by a strong interconnection of power, territory, and language. Many tribal scripts have been created in the decade following the 1947 Indian Independence Act, a period when the Indian states were reorganised on a linguistic basis.

In Central India, among the Santal and the Ho, the circulation of scripts 'discovered' on rocks by religious leaders quickly became 'a political project built around a language' (Carrin 1986, 81). Thus, in the 1950s, Lako Bodra founded the *Adi Samaj*, a movement in charge of both promoting his alphabet and implementing social and political reforms. He published books in which he urged his community to reconcile the cult of tribal deities and political activism. During the same period, in Odisha, some Santal created a newspaper printed in *Ol Chiki*. The success of this publication was such that they distributed it among the Santal living in neighbouring states. In 1972, 20 years after its creation, the government of Odisha, worried about the separatist intentions caused by this project, ceased to support it. But the Santal managed to teach their alphabet in primary schools and even at the university level (Carrin 2002; 2016).

If in the Sora's case the dissemination of the script is intimately linked to the spreading of its cult, like the Santal and the Ho scripts, the Sora alphabet is a tool of unification for a group scattered in several states and whose members are confronted with different languages and writing systems. Nowadays, the circulation of the Sora script allegedly discovered on a stone in the 1930s is not restricted to Sora villages located at the Odisha-Andhra Pradesh border. This alphabet devised by a religious leader during the colonial era is winning over cities. Thus, a sanctuary dedicated to the cult of the Sora alphabet has been built next to a Jagannath temple in the district headquarters of Koraput in South Odisha and a second one is under construction in Gunupur, the headquarters of another district, as mentioned above. In addition, a bust of Mangaya has been installed along with statues of famous freedom fighters in Bhubaneswar, the capital of Odisha. In this state, the propagation of the Sora script has started to become visible in urban spaces with the construction of sanctuaries and is supported by those Sora politicians who are Mangaya's relatives.

The Sora alphabet also circulates, through different media – engraved, painted, printed – among the Sora who settled in other Indian states. Since the end of the nineteenth century, members of this group have migrated to North-East India to work on tea plantations (Elwin 1955; Chaussin 1978; Kar 1981). Some Matharvanam religious specialists travel to Assam to spread the worship of the Sora script. Every year, Sora from various places in Odisha, Andhra Pradesh and Assam gather to celebrate rituals in Marichiguda, the script's place of 'discovery' and the location where the Matharvanam movement was born. On the commemoration of Mangaya's 100th birthday in June 2016, Sora from these different states were then present. If some Matharvanam followers refer to Mangaya as a 'king' who, one day, will come back on earth to claim a kingdom for his disciples, nationalist demands stay, however, relatively discreet when compared to other tribal groups who do not restrict the use of their script to religious purposes.

Around scriptural projects, communities have emerged of varying sizes, whose number, organisation, and claims may change according to migratory dynamics, as is the case for the Sora who live across several Indian states and use a script created in a village of Odisha. While several Adivasi scripts have been forgotten – as some communities have finally adopted official regional scripts (Zide 1999) – others are now taught at school and have become strong symbols of identity that inspire new creations amongst Adivasi groups who have not yet invented a script of their own. This dynamic is far from slowing down. Since the year 2000, more than thirty scripts have been created. For marginalised groups, to have a script of their own is, up to now, a way to defend their language and support their will to found a sub-national community.

When letters raise conflict

While Adivasi scripts can bring populations together that are divided across state borders, they may also produce distinction and generate conflict among groups split by religious tensions. Among the Santal, some supporters of the *Ol Chiki* have been in opposition to certain members of their group who converted to Christianity and who promote the use of the Roman script, employed since the nineteenth century to collect oral literature and transcribe the Bible in Santali (Carrin 2016).

In the same manner, Mangaya's alphabet has caused frustration, division and conflict among the Sora. Matharvanam religious specialists, very protective toward their script, are especially concerned about attempts of appropriation by those Sora who converted to Christianity. The latter often show an ambivalent attitude toward Matharvanam followers, admiring their script but mocking their use of it. Gabriel, a Christian Sora in his late 60s who learnt the Sora alphabet by himself, claims that the founder of the Matharvanam movement 'has copied Moses', considering that the myth of the Sora alphabet's discovery is a pastiche of the famous biblical event when the Prophet went to Mount Sinai and saw the Ten Commandments engraved on a stone. Gabriel also considers the cult dedicated to the script as a Brahmanical conspiracy: 'The Brahmins feared that the Sora rise above them, so they told them to worship the letters otherwise Christian missionaries would convert them ... Matharvanam people think that they must kneel down in front of the letters and before the *purpurmar* but this is all Brahmin politics (*bambela politics*) to weaken the letters!' (pers. comm.). Gabriel regrets that its cult restrains the learning of the script outside a ritual context. Born in Assam, this man, now settled in Odisha, currently publishes learning manuals of the Sora alphabet for distribution among members of his tribe who have migrated to northeastern states – Assam, Tripura, Meghalaya and Arunachal Pradesh – and even to Bangladesh where he travelled a few years ago for this purpose (Figs 9.9 and 9.10).

Another attempt at appropriation of the Sora alphabet has been made by Ismael, a Sora living in Odisha who converted to the Baptist form of Protestantism. This ex-deacon also learnt the Sora script by himself while he was working as secretary

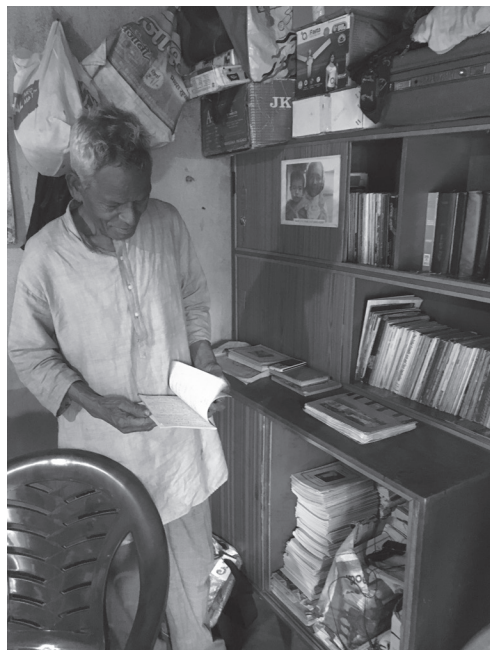


Fig. 9.9. Gabriel and his Sora writing training manuals (Odisha 2018). Photo by C. Guillaume-Pey.

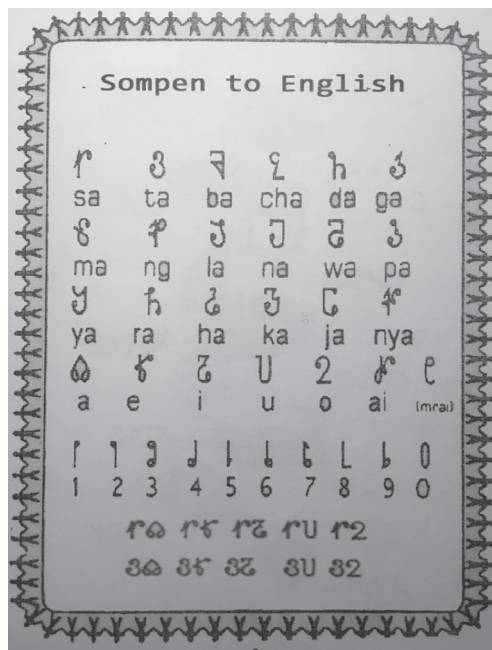


Fig. 9.10. Sora script in a booklet printed by Gabriel for the commemoration of Mangaya's 100th birthday in June 2016. Photo by C. Guillaume-Pey.

in a Sora NGO dedicated to the promotion of the Sora language. A few years ago, he decided to use Mangaya's alphabet to translate the Bible into Sora and started to transcribe Saint John's Gospel in an old diary. In the 1960s, his own father, who was a pastor, was hired by Christian missionaries to translate the same gospel into the Sora language with the Roman script. Ismael regrets that a later translation came to prevail. He judges, in fact, this version incorrect from a linguistic point of view: 'Children don't learn a correct Sora when they go to Church, and now they forget their language' (pers. comm.). Ismael explains that he started his translation project with the Sora alphabet to prevent this loss. This initiative generated a conflict with Matharvanam followers who cannot tolerate that their 'spirit-letters' might be used by Christians to transcribe their own sacred texts.

Some Matharvanam followers are further worried about the competing graphic system devised in 1997 by Ravi Gomang, a Catholic Sora teacher, that is taught in the primary schools of Andhra Pradesh. Responding to Mangaya's script, whose circulation is restricted to a religious context, the latter transcribed the Sora language with 26 Telugu characters, adding diacritic marks to some of them to fit the phonic particularities of his native language. Following the example of G. Ramamurti, Ravi Gomang first wrote handbooks for non-Sora teachers working in tribal areas. In 2005, he managed, with government support, to edit and distribute schoolbooks in the Sora

language written with his script. Ravi explains that since Mangaya's disciples became aware of the success of his project, they have tried to convince him to promote their script instead. Ravi is not completely reluctant to this idea provided he can modify it to fit Sora pronunciation. For the time being, the *purpurmar* flatly refuse to let Ravi carry out even the slightest modification, claiming that their script is the perfect form since it embodies deities. To this day, no compromise has been found. Ravi, despite his condescending attitude toward the Matharvanam cult, grants it a place in his schoolbooks. The heart-shaped Matharvanam symbol is featured on the cover, along with other drawings representing traditional musical instruments and second funerals. Thus, failing to be an adequate means of disseminating the Sora language, the revealed script is nevertheless considered here as a full-fledged component of 'Sora culture' (Fig. 9.11).

Mangaya's alphabet also causes division among the Sora because its cult changes not only the relationships between deities and their worshipers but also affects villagers' way of life, to the point that the neighbouring castes sometimes cannot consider them as really 'tribal' (Guillaume-Pey 2014). I was told, for example, by the director of an NGO in Andhra Pradesh, that the script's worshippers 'are like Brahmins. They look anything but Sora!'. In a village of Andhra Pradesh where a Matharvanam sanctuary was established in the 2000s, religious specialists as well as mere devotees oppose their way of life before and after the introduction of the movement. They describe the arrival of the 'spirit-letters' as the beginning of a new era marked by a change regarding not only ritual offerings but also the care given to the body, clothes, preparation and consumption of food, cleanliness of the houses and of the village space. In addition, further attention is given to the language that must be purified of any borrowings from Odia and Telugu, dominant languages spoken by the non-Sora (Yo'oy).

Matharvanam devotees, who, in many respects, appropriate normative high-caste Hindu practices, often scorn Sora who still practice a religion without name characterised by blood sacrifice and spirit possession. The rituals of the latter are

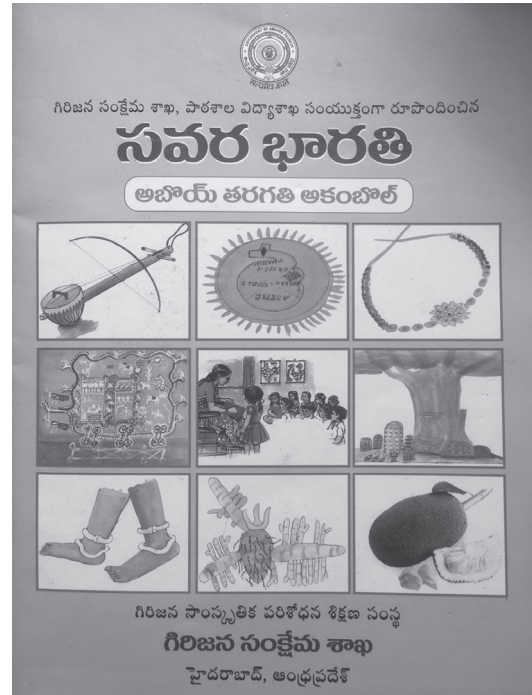


Fig. 9.11. The heart-shaped Matharvanam symbol featured on the cover of a schoolbook edited by Ravi Gomang. Photo by C. Guillaume-Pey.

considered impure and their dietary habits degrading. They evoke with disgust the consumption of buffalo, an animal which was the sacrificial victim *par excellence* until their conversion to the Matharvanam movement.

Thus, for the devotees, the affiliation to Matharvanam – like the conversion to Christianity – is considered as a symbol of 'development' and 'modernity', terms used by the villagers themselves. While this religious movement borrows numerous elements from reformed Hinduism, its followers insist on the uniqueness of their cult and distinguish their religious practices from those of both the Hindu castes and the Christians. Besides, the script worshippers consider themselves both superior to and more 'Sora' than members of their group who follow other religions. The latter are said to be more influenced by Hindu castes on a linguistic level, for example. Thus, Matharvanam followers insist on the richness of their vocabulary compared to other Sora who are said to mix their native language either with Telugu or Odia. 'Mangaya used to say that if a person is educated but not able to speak her mother tongue, it is not tasty (*ragal*) for the mouth', says a *purpurmar* living in Andhra Pradesh. 'That's why we must go to the sanctuary: to remember the softness and the taste of the letters', explains that man to the devotees gathered for a weekly service before offering them alphabetic characters to drink. Thus, the Sora script is considered both the best guarantor of the Sora traditions and a salutary symbol of change.

Conclusion

Since the nineteenth century, the appropriation of literacy by tribal leaders has taken various concrete and imaginary forms. During the colonial period, some tribal chiefs borrowed scripts used by the British and Hindu castes to write petitions. Others appropriated the power of the letter through various media belonging to dominant social groups, or by narratives in which they introduced themselves as recipients of divine missives, chosen to deliver their group from their oppressors and to offer them a kingdom. Later, socio-religious reformers created scripts to transcribe their language, inventions presented as 'discoveries' of letters inscribed on rocks. These writing systems have crystallised the assertions of identity by those groups marginalised from a linguistic, religious and political point of view. The Adivasi have therefore continued to create new alphabets after the Independence and the reorganisation of Indian states on a linguistic basis. For these groups, to have a script of their own is a way to promote their language, but also, to assert territorial rights. In India, therefore, linguistic and scriptural claims accompany the emergence of irredentist movements. These graphics systems, which represent a variety of uses - linguistic, religious and political - constitute real matrices for thinking about the construction of hybrid and labile identities in a highly hierarchically multilingual and multi-graphic society.

Among the Sora, the alphabet spread by Mangaya and his disciples appears as an emblem which is brandished, worshipped but rarely used out of a ritual context. Most of the Sora, indeed, are not able to read or to write the letters drunk by Matharvanam

followers during rituals. The invention of a writing system reshapes the Sora's religious practices centered on spirit possession and blood sacrifice and enables them to assert their identity in a pluri-religious context. The worship of the script influences the way villagers interact with spirits, now embodied in alphabetic characters, as well as their relation to the body and to language. This cult also redefines the relationships between (Hindu) centre and (tribal) periphery through the appropriation of a tutelary god of the late Odisha kingdom. Nowadays, the Sora script, born in a village of Odisha during the colonial period, brings together a population divided across state borders whereas, at a local level, it generates tensions between the Sora who converted to different religions. The 'spirit-letters', as 'tasty' as they are according to some of their worshippers, also lead to growing frustrations as evidenced by the invention of a competitive script to transcribe the Sora language and by the recent ritual adjustments made by the alphabet worshippers themselves.

Chapter 10

Why did people in medieval Java use so many different script variants?

A.J. West

Introduction

People in medieval Java used a wide range of different forms of script that varied dramatically in style and appearance. All are Brahmic alphasyllabaries with near-identical grapheme inventories, and the variants are perhaps not distinct enough to be referred to as scripts in their own right – but the forms often vary to the extent that knowing one script does not allow one to easily parse text in another from a similar time and place. No manuscripts have survived from Java from before the fourteenth century AD and nearly all of these script variants are known only from inscriptions. The styles vary from thin curving hands written left-to-right to rectangular blocks written vertically and read from bottom to top, with all manner of variants in between. The variety is extraordinary when one considers that almost all of these styles developed locally over the course of a single millennium on an island smaller than Great Britain. The more peculiar variants were developed over about 500 years in East Java, an Indonesian province about half the size of Ireland. This phenomenon has received less attention than it deserves, in part because palaeography in Indonesia has been treated principally as an aid in the reading of texts; that scripts might encode or express values seems only rarely to have been considered in academic work. The purpose of this paper is to showcase some of these extraordinary Javan writing styles and to pose the question of how this diversity came about.

First I will provide an outline of the geography and history of Java in order to put its scripts into context. I will then briefly go over how Brahmic alphasyllabaries work before outlining some of the diachronic changes in Javan writing systems and showcasing some of the more interesting variants. The bulk of the material consists of an impressionistic survey of script forms, many of the images of which have been

taken from photographs in Leiden University Library (UBL).¹ The terminology used in describing the script is somewhat imprecise and it would be difficult to quantify the number of relevant variants, which makes it hard to summarise the diversity of these scripts concisely. In lieu of a precise classification I will resort to an impressionistic survey based on photographs and descriptions of specific types, which will make up the bulk of the paper. I will then speculate as to the reasons behind the variation that we see.

The model I propose is predicated on the low survival rate of palm leaves as writing material in the humid tropics. While other writing materials are likely to have been used in medieval Java, including *pudak* (the petal sheath of the pandan flower, mentioned in Javanese literature as a medium for writing private notes to lovers) and *daluwañ* (modern Javanese *dluwang*, the bark of *Broussonetia papyrifera*), no manuscripts written on these have survived, and the latter is not mentioned in any surviving texts. Palm leaves – specifically the dried leaves of *lontar* (*Borassus flabellifer*) and *gebang/gěbañ* (*Corypha utan*) palms – appear to have been the principal writing surfaces in medieval Java. As palm-leaf manuscripts decayed rapidly, mutations in the graphemes crept in faster than they did in many other parts of the pre-modern world, and different scriptoria – many of them religious foundations – amplified and propagated the more interesting versions of these scripts for their own ends. The resulting variants were then used in official stone and copper inscriptions, with little institutional memory of earlier versions. A crucial role may have been played in the formation of some of the more elaborate decorative scripts by Javanese elites who enjoyed aesthetic variation and novelty.

Background

The Island of Java

Located between the islands of Sumatra and Bali in what is now the Republic of Indonesia, Java today has around 140 million inhabitants, comprising the bulk of Indonesia's population and making Java the most populous island in the world (Fig. 10.1). It is only slightly larger than England, at around 139,000 km², and is thus extremely densely populated. This density is a recent phenomenon: although foreign commentators in the Middle Ages, like Marco Polo, believed Java to be superlatively populous, population density across the island before the sixteenth century was lower than in Europe at the same time (Reid 1988, 15; Andaya and Andaya 2015, 37–39). Java is also the world's most volcanically active island (Whitten *et al.* 1996, 93). The island is subject to year-round heat and humidity. Rainfall is greatest in the mountainous west, where the wet season can persist for as long as eleven months, and lowest in the east, where the dry season can last nine months. In the past this influenced Java's

¹ The photographs in this paper have been taken from the Leiden Digital Collections website (<https://digitalcollections.universiteitleiden.nl/>) and are referred to here by 'UBL' (*Universiteitsbibliotheek Leiden*) followed by the shelfmark.

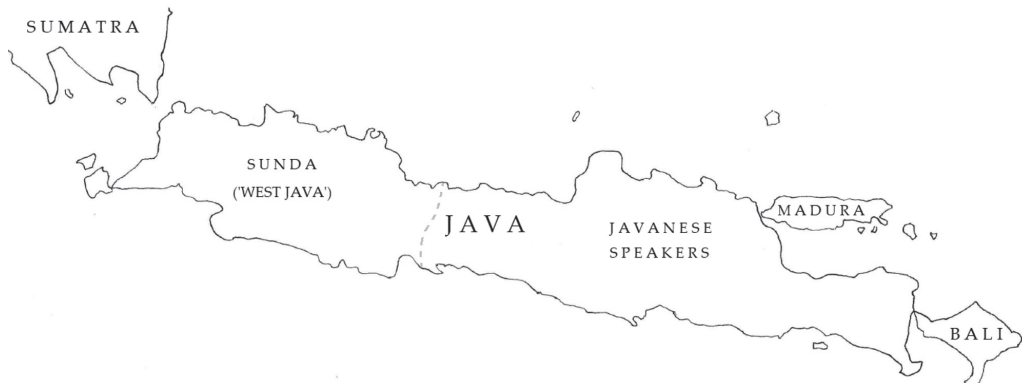


Fig. 10.1. A sketch map of Java and its neighbours.

demography; in East Java, where the soil is less leached by rain, the land was more densely settled than in West Java (Cribb 2000, 19).

Java is home to three languages in the Malayo-Polynesian branch of the Austronesian language family: Javanese, with over 90 million speakers concentrated in Central and East Java; Sundanese, with around 40 million speakers in the provinces of West Java and Banten (and the west of Central Java); and Malay/Indonesian, the *lingua franca* of the island and indeed the entire country (Cribb 2000, 31–38). The ancestral forms of these languages are all attested in medieval inscriptions from Java, as is Sanskrit, the cosmopolitan language of the island's medieval elites.² Because Java is inhabited by speakers of both Sundanese and Javanese, in addition to dialects of Malay, I will use the adjective 'Javanese' when discussing Javanese speakers and their societies and the useful (but seldom used) adjective 'Javan' for the island or its societies in general.

The historiography of Java

The early history of Java is not well-evidenced, in large part due to the paucity of manuscripts brought about by heat, humidity, and insects. One Old Javanese manuscript with a date of AD 1334 has survived in Cirebon, West Java, and there may be a handful of others of similar age in the Merapi-Merbabu archive in Central Java (Wiryamartana and van der Molen 2001). Most of the longer Javanese texts written before the sixteenth century are known only from manuscripts of much later date, however. The range of genres represented by these later copies is rather narrow; there are no cookbooks, for example, or fighting manuals. For certain topics we are reliant on accounts written by foreigners, most commonly in Classical Chinese but also in other languages, including Arabic and Latin (see Soedjatmoko 1965 for an early look at these issues). The nature of medieval history in the region is inference made on the basis of sparse evidence.

² See Pollock (2006) for an account of the role of Sanskrit in pre-modern India and Southeast Asia, and Gonda (1952) for Sanskrit in Indonesia specifically.

Indianisation

Written history in island Southeast Asia begins with the introduction of writing from India in the form of Sanskrit inscriptions in the Pallava, although it is better known as Late Southern Brāhmī, script in the third or fourth century AD (Hunter 1996). The first Pallava inscriptions in the archipelago appear at Kutai in eastern Borneo, and shortly thereafter in West Java and the Malay Peninsula. This was part of a process commonly termed ‘Indianisation’ wherein elites across Southeast Asia adopted certain features of Indian culture, including Hindu and Buddhist cults, concepts of law and justice, temple architecture, and even the use of war elephants (see Trautmann 2015, chap. 7). The idea of Indianisation was originally developed by the French archaeologist George Coëdès (1944), in whose original formulation the states of Southeast Asia were described as *hindouisés* – ‘Hinduised’ rather than ‘Indianised’, better reflecting the elite and religious nature of the process. While the terminology suggests Indian impetus, ‘Indianisation’ is now seen as having been led by Southeast Asian elites themselves, picking Indian traits to emulate instead of adopting Indic culture wholesale. Indian influence on Java was nevertheless considerable: All of Java’s languages contain large numbers of Sanskrit loanwords, and occasional Tamil ones as well, including core vocabulary. Significantly, the scripts discussed in this paper were ultimately developed from Indian prototypes.

Medieval Java

It is standard to refer to the era under discussion here as the ‘Hindu-Buddhist’ period, defined in contrast to the later ‘Islamic’ and colonial eras (see, for example, Lunsingh Scheurleer 2012). In truth Java played host to many religious traditions during the Middle Ages, including Hindu, Buddhist, and indigenous cults – and, from at least the fourteenth century, Islam. I use the term ‘medieval’ to refer to this period as it emphasises Java’s connections with the wider world of Afro-Eurasia in the Middle Ages and because it avoids the religious connotations of the prevalent terminology.³ Whatever one calls it, this period begins with the introduction of writing and the process of Indianisation in the middle of the first millennium AD and tapers off at the beginning of the sixteenth century with the arrival of Portuguese *conquistadores* in Southeast Asia in 1509 (Garcia 2016), the onset of the Columbian Exchange in the wake of European contacts with the Americas (Crosby 1972), and the rapid and at-times-violent growth of Islam in the Indo-Malaysian archipelago after the Portuguese conquest of Melaka in 1511 (Graaf and Pigeaud 2003).

Java’s medieval history is typically divided into three phases: an indeterminate early period (beginnings to ca AD 700); the Central Javanese period (ca 700–928) and the East Javanese period (929–ca 1500) (see Kinney *et al.* 2003, 21; Rahardjo 2011). In the Central Javanese period, power is believed to have been concentrated in what is now the Indonesian province of Central Java, evidenced by a plethora of Sanskrit and

³ See Ali (2014) for a similar defence of the use of ‘medieval’ in a South Asian context. The term ‘medieval’ has been used in reference to Java before (Vlekke 1945, 27–48), but not in the sense here.

Old Javanese inscriptions and stone buildings, including the mid-ninth-century Hindu temples at Prambanan and the Buddhist *candi*⁴ of Borobudur (the largest Buddhist monument in the world) (Miksic 2010). An unexplained break in inscriptions and stone construction in Central Java occurs in AD 928, after which no inscriptions appear in that part of the island until AD 1437. A succession of Javanese-speaking kingdoms based in East Java dominated Java from 929 to the late fifteenth century. The first such kingdom was deliberately split apart by its ruler, Airlaṅga, in the 1040s. The remnants vied for supremacy over the succeeding centuries, beginning with the hegemony of Kaḍiri (1049–1222) and Siṅhasari (1222–1292) and ending with Majapahit (1293–1486?), the latter having been established after a failed Mongol invasion in 1292. These kingdoms were arguably incarnations of what was in reality a single Javanese polity, and it is clear from inscriptions that the rulers of Majapahit saw themselves as the heirs of Siṅhasari. These labels are, however, standard in Indonesian historiography and have been used in the classification of scripts (particularly so-called ‘Kaḍiri quadratic’).

In West Java, where people spoke Sundanese, the earliest inscriptions are in Sanskrit in Pallava script and document the existence of a kingdom called *Tārūmanagara* (‘Kingdom of Indigo’), perhaps based at the Citarum River, in around the fifth century AD. There are few of these inscriptions, however, and *Tārūmanagara* is ultimately mysterious. After a gap of some centuries, it appears that a kingdom known as Sunda had been established in West Java by the ninth century, as evidenced by the (now lost) Kebonkopi II inscription of AD 854. Modern Sundanese oral tradition refers to a heavily mythologised version of this kingdom as Pajajaran, originally one of the names given to Sunda’s capital city. Sunda was largely independent of the Javanese kingdoms, but Javanese influence on Sunda has been much greater than vice versa, due in part to the lower population density in West Java, a product of the region’s nutrient-poor latosols. The massacre of a Sundanese delegation by the Javanese at Bubat in East Java in 1357 led to lasting enmity between the two peoples (Muhibiddin 2018); these strained relations may have influenced the development of Sundanese literature and script culture after the fourteenth century.

Javan scripts

Inscriptions and manuscripts

The kingdoms of medieval Java left inscriptions in stone (usually andesite), bronze, copper, and gold, several hundred of which bear dates in the Śaka calendar (Nakada 1982).⁵ These inscriptions typically establish religious zones, grant tax exemptions, or

⁴ *Candi* is the standard name in Indonesia for non-Islamic monuments in stone.

⁵ The zero-year of the Śaka calendar begins in AD 78, making conversion between the systems trivial. Most of these dates are inscribed using ‘Hindu’ numerals, which appeared in Southeast Asia some centuries before their first occurrence in Europe. In Java, however, Śaka dates were often written using a complicated and deliberately cryptic system, *candra sangkala*, in which words represented the numerals, usually in reverse order (see below).

commemorate civic works. The earliest dated inscription in Java, the Sañjaya stele, was written in Śaka 654 (equivalent to AD 732), and the last dated medieval Old Javanese inscriptions were made in Śaka 1408 (AD 1486). The number of surviving Javan stone inscriptions is not known but surely pales in comparison to, say, the roughly 28,000 known ancient and medieval inscriptions from Tamil Nadu, a region of comparable size and climate (Subbarayalu 2012, 18). The number is in the hundreds rather than the thousands. The largely open-air inscription garden in the Museum Nasional in Jakarta houses many of the stone inscriptions, meaning that they are exposed to the elements and survive in varying degrees of preservation. Fortunately the majority of these Museum Nasional inscriptions have been published (Wurjantoro 2018). Other inscriptions are either still *in situ* (as with the oldest Sundanese inscription stones); in regional Indonesian museums (Museum Ranggawarsita in Semarang, for instance – Griffiths 2012); or in foreign collections. The British Library holds a collection of Old Javanese copper plates, for example, most of which have now been digitised.

The majority of pre-modern Javan texts were probably written on palm leaves, the most popular species being palmyra palm or *lontar* (*Borassus flabellifer*). The paucity of surviving manuscripts does not allow for any precision in terms of numbers, however, and it is possible that other palm leaves (like *gebang*, leaves of *Corypha elata*) or tree barks (*daluwan*, bark of *Broussonetia papyrifera*) were equally common, although no Javan manuscripts written on the latter surface have come down to us from before the sixteenth century (Ekadjati 1996, 103; Gunawan 2015).⁶ Regardless, there are too few surviving manuscripts to make strong judgements about the relationship between scripts used on perishable materials and those found on stones and copper plates. The lack of medieval manuscripts has obvious implications for the historiography of Java as a whole but the weakness of palm leaves as writing material is also a problem with which people in early Java grappled at the time and which had implications for the development of their scripts (as I argue below).

The texts that have survived are overwhelmingly official inscriptions intended for some kind of public consumption rather than private notes or other texts that might represent idiosyncratic hands. The lack of uniformity among the script variants found in the inscriptions is therefore noteworthy. The differences cannot be attributed to idiosyncrasy or individual processes of cursivisation, and it would seem inappropriate to refer to the varying forms as ‘hands’, at least as Sproat (2000, 25) uses that term. They probably should not be thought as distinct scripts, as they are essentially variants of one or two scripts; at the same time the variants are distinct enough that many cannot be read easily by modern philologists, and in a European context similarly distinct variants *are* typically referred to as ‘scripts’ (as in Brown 1990). The prevailing terminology does not seem well-adapted to neatly circumscribing the kind of variation that we see in medieval Javan inscriptions, in any case.

⁶ The oldest surviving Malay manuscript, radiocarbon-dated to ca AD 1380 and kept as an heirloom in Kerinci, Jambi, Sumatra, was written on *daluwan*, however (Kozok 2016).

Palaeography in Indo-Malaysia

Archaeological work in Java has concentrated on art historical analysis of the surviving Hindu and Buddhist temples (or *candi*). Palaeographic work for its own sake has not been popular. In an Indonesian context the content of inscriptions has usually been considered more important than the scripts in which they are written, and palaeography in Java has traditionally been more a philological exercise in reading texts than an art historical enterprise focused on studying the scripts themselves (cf. Casparis 1975, 1 – palaeography as ‘an auxiliary technique for reading and approximately dating inscriptions’). That the use of different writing styles could tell us about the social context of the people using them is rarely considered.

Several of the most important works on early Indonesian scripts are now decades-old. Holle’s *Tabel van Oud- en Nieuw-Indische Alphetten* (1882), a multi-page table of Indo-Malaysian scripts, is still used as a reference today in spite of its deficiencies (as with the mirror-handle script – see below). Willem van der Molen’s *Javaans Schrift* (1993) is the standard work on modern Javanese script and its terminology is widely used in describing earlier iterations. Dick van der Meij’s 2017 book-length overview of manuscripts from Java and its neighbours is particularly helpful for understanding the production of texts both in modern and earlier times, but it has little to say about scripts *per se*. J.G. de Casparis’s *Indonesian Palaeography* (1975) is perhaps the most recent attempt at a general categorisation and the framework used in that work is discussed in some detail below, although a less programmatic overview of Indo-Malaysian scripts in general can be found in *Illuminations*, edited by Ann Kumar and John McGlynn (1996). A discussion of developments in fourteenth and fifteenth century scripts, based in part on manuscript evidence, can be found in van der Molen’s *Javaanse Tekstkritiek* (1983, 95–98). Editions of Old Javanese texts typically include a table summarising the script used in the manuscripts consulted; see, for instance, the brief overview in Wurjantoro (2018, xxi–xxvii). Rarely, though, is there any exhaustive palaeographic analysis and many of the categories employed in even academic discussions of scripts/hands (‘Kawi’, ‘Aksara Buda’) are overly broad, especially when compared to the more detail-oriented analysis of script common in Europe (see *e.g.* Brown 1990 or Derolez 2003).

Brahmic scripts

All of Java’s modern languages are now written with the Roman alphabet and all have in the past been written with adaptations of the Arabic script, a practice first evidenced in the archipelago in a fourteenth century inscription from Terengganu on the Malay Peninsula (Paterson 1924). For most of the period under discussion here, however, these languages were all written using Brahmic alphasyllabaries – that is to say, using writing systems descended from or inspired by Brāhmī, an alphasyllabary

developed in India in the mid-first millennium BC wherein the primary graphemes represent whole syllables rather than phonemes.⁷

The structure of Brahmic scripts

The fundamental graphemes of the Javan alphasyllabaries are syllables consisting of an independent vowel or a consonant combined with an inherent vowel [a] modified by a range of diacritics, which are normally smaller than the syllabic graphemes (Fig. 10.2). The syllable [ka], for example, is represented by a single grapheme <ka>, and the syllable [ki] is represented by two: the sign for the syllable <ka> with an added diacritic <-i>. In an Indonesian context the main graphemes are usually referred to as *aksara* (from the Sanskrit *aḥṣara* ‘letter, syllable’) and the diacritics more specifically as *aksara sandhangan* (from the Javanese word for ‘clothing’, on the principle that the *sandhangan* can be found in any position surrounding the *aksara* and thus ‘clothe’ it).⁸ *Sandhangan* marks can be used to change the vowel of an *aksara* (ka > ki); to add certain consonants to the syllable coda (a > ah); and to cancel the inherent vowel (ka > k∅). These features are all found in the South Asian scripts from which the Javan ones were derived.

A typical script for writing Old Javanese has around 60 graphemes, including diacritics. Some of the graphemes are vanishingly rare, particularly *sandhangan* <-ḥ> and <-ṛ>. The extant Old Sundanese scripts have a maximum of 42 graphemes. The variation we see is more to do with *aspect* and *ductus* (that is to say, the way the

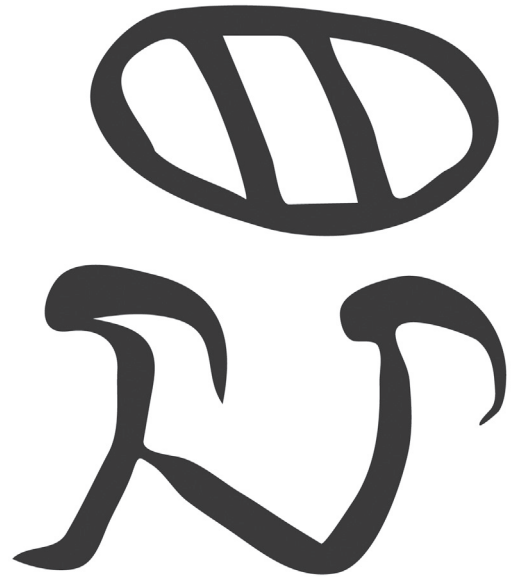


Fig. 10.2. A syllable copied from a Javanese copperplate inscription made at some point between the thirteenth and fifteenth centuries AD (London, British Library, MS Jav 106, f.1rb). The sandhangan <-e> is the double-barred oval on top, and below it is the aksara <sa>. Together the syllable is pronounced sê [sə].

⁷ Brāhmī may have come about through stimulus diffusion from the Near East, and Brāhmī letters may themselves be derived from Proto-Sinaitic and ultimately from Egyptian hieroglyphs. This is controversial, however (Salomon 1998, 19–30). Not all Brahmic scripts can best be described as based on aksaras consisting of a consonant with an inherent vowel; in all the cases examined in this paper, however, this is the most convenient description, and standard in the field (van der Meij 2017, 323).

⁸ I have simplified this terminology for readability's sake, and there are in fact several kinds of what are here referred to simply as aksara. The consonants without diacritics are usually known as aksara ngalagena ‘naked aksara’, the counterpart to aksara sandhangan. For simplicity's sake I retain here a basic distinct between aksara and (aksara) sandhangan.

Table 10.1. J.G. de Casparis' seriation of Javanese scripts.

Pallava		Early Pallava (ca AD 400–600?) Late Pallava (ca AD 600–750?)
Kawi	Early Kawi	'Archaic' Early Kawi (ca AD 750–850) 'Full-fledged' Early Kawi (ca AD 850–925)
		Later Kawi (ca AD 925–1250)
Majapahit, Regional		Post-Kawi Javanese scripts (ca AD 1250–1480)
Modern		Modern Javanese script (post-AD 1500)

script looks and the way it is written) than with grapheme inventories, and there was relatively little change in terms of the structure of the scripts or the sounds they were able to represent.

Pallava, Kawi, and other misleading categories

The consensus on the development of Javan(ese) scripts is based on Casparis (1975) (Table 10.1). The categories he used in describing and classifying scripts are now used on museum labels and catalogues, as well as in popular discussions in Indonesian media. The earliest script found in the archipelago is a South Indian Brahmi variant typically known as *Pallava*; the precise relationship between Pallava and the later Javanese scripts, usually referred to collectively as 'Kawi', is hard to say, and there may have been some North Indian influence in this process. In any case, Casparis viewed Javanese scripts as developing in a series from an early 'Kawi' script that first appeared in the late first millennium AD, culminating in the modern Javanese script(s) at some point in the sixteenth century. In my view, however, this is not a helpful framework and it conceals the diversity of Javan script styles instead of revealing it.

The framework has some empirical problems, and the descriptions Casparis gives of the scripts are more nuanced than the categories into which they are forced. For instance, Casparis put the end of 'Later Kawi' at 1250 while acknowledging that the Siñhasari scripts (first evidenced on copper plates dated 1264) are extremely similar to the Kaḍiri scripts, the last inscription in which is dated to 1205 (1975, 47). The term 'Kawi' as it is commonly used is particularly flimsy, and functions as an almost all-encompassing term that has been used in reference to almost every single script used in Java after the eighth century AD (with the exception of Nāgarī – see below).

These categories seem to be impositions on what was a more varied and interesting scribal landscape. Casparis also noted that the scheme devised for Java did not work in other parts of island Southeast Asia, including Sumatra and southern Thailand, where scripts retaining ‘archaic’ features persisted after they had stopped being used in Java (Casparis 1975, 45–46). This suggests something of the peculiar rapidity of script development in medieval Java when compared to the island’s neighbours.

My intent here is not to produce a new classification of Javan script styles. I intend instead to go beyond Casparis’s framework to show that these scripts varied dramatically in form, and that the variation seen among them is itself worthy of investigation. My argument rests principally on a naïve visual comparison of the styles; it ought to be sufficient simply to look at the images below to see that such script variants in medieval Java could be very different from one another indeed. I will, however, make use of some of Casparis’s categories in structuring the account below; I will work through the forms roughly chronologically, beginning with Pallava and progressing through ‘Kawi’ to the more eclectic scripts of the East Javanese period.

Pallava

The first inscriptions in Java appear around the end of the fourth century AD, a date established on palaeographic grounds (Fig. 10.3). These inscriptions, known initially only from West Java, were written in Sanskrit in a South Indian script known as Pallava, in common with other early inscriptions in Southeast Asia, like the *yūpa* stones from Kutai in eastern Borneo and the Buddhagupta and Cherok Tokun inscriptions from Kedah on the Malay Peninsula (Vogel 1918; Jacq-Hergoualc’h 1992, 217–224). Casparis divides Pallava into Early and Late periods, but notes that there is some variation in the inscriptions on both sides of the Early Pallava/Late Pallava divide (1975, 28–29).

Pallava inscriptions typically display long ascenders and descenders that sometimes intrude onto the lines above and below; they have a curly and rounded aspect; and many *aksaras* have horn-like finials. The Pallava in the Tārumānāgara inscriptions is slightly different to that found in Borneo and the mainland (Casparis discusses these differences at length) but the scripts can be described as ultimately variants of the same kind. Within a few centuries of the first Pallava inscriptions in Java, however, new styles developed in Java



Fig. 10.3. The Ciaruteun inscription, a Sanskrit text in Pallava script from West Java. Photograph taken by G.F.J. Bley - Tropenmuseum, part of the National Museum of World Cultures, the Netherlands, all rights reserved.

– so-called ‘Kawi’ – that were markedly different; their precise relationship with Pallava is not clear at present.

‘Kawi’

Kawi, derived from the Sanskrit *kavī* (‘sage, seer, prophet’ – Monier-Williams 1899, 264 *sub* कवि), is one of the names given to the language usually known in English as Old Javanese. The word is also used to refer to the post-Pallava scripts used in Old Javanese inscriptions after ca 750. The term has both broad and narrow senses: broadly, almost any pre-sixteenth-century post-Pallava Javanese script can be considered ‘Kawi’; narrowly, ‘Kawi’ scripts are the courtly scripts used in early (pre-fourteenth century) inscriptions. In truth these broad and narrow uses frequently overlap. The so-called ‘quadratic’ scripts (see below) are often referred to as variants of Kawi as well, which rather stretches the credibility of the term.

The scripts of the Central Javanese period (up to AD 928) are more consistent and easily classifiable than the scripts of the East Javanese period (929–ca 1500), and the term ‘Kawi’ may productively be applied to these earlier scripts. By 750, scripts recognisable as different from Pallava-based scripts used elsewhere in South and Southeast Asia – and thus uniquely Javanese – had come into existence (Fig. 10.4). One distinguishing feature is the absence of long ascenders and descenders; another is the addition of graphemes for the vowels <ě> and <ö>. By the middle of the ninth century AD a consistent script had developed, one that survives with little variation in a number of inscriptions from Central Java and which Casparis labelled ‘full-fledged’ Early Kawi (Fig. 10.5).

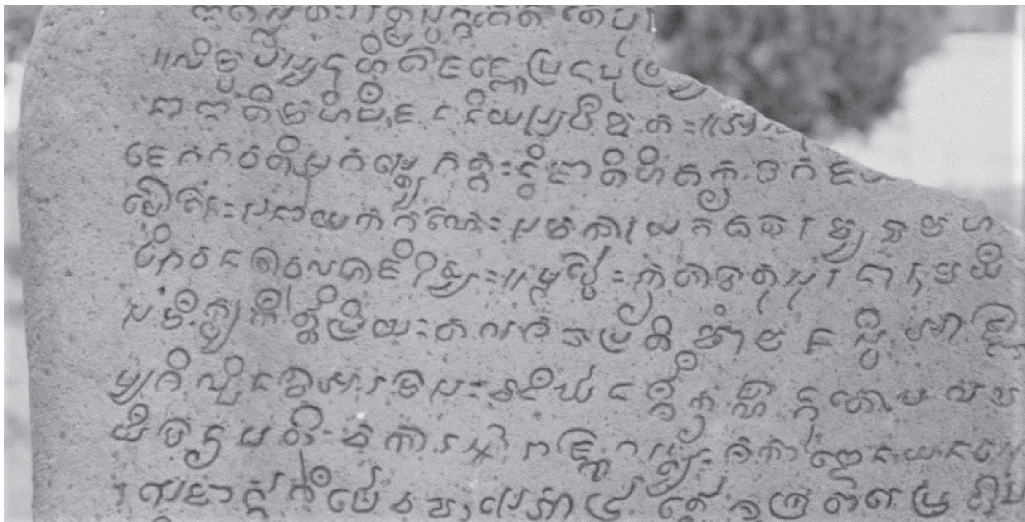


Fig. 10.4. Part of the Dinoyo inscription – the oldest known inscription from East Java, dated AD 760. UBL, OD-743.

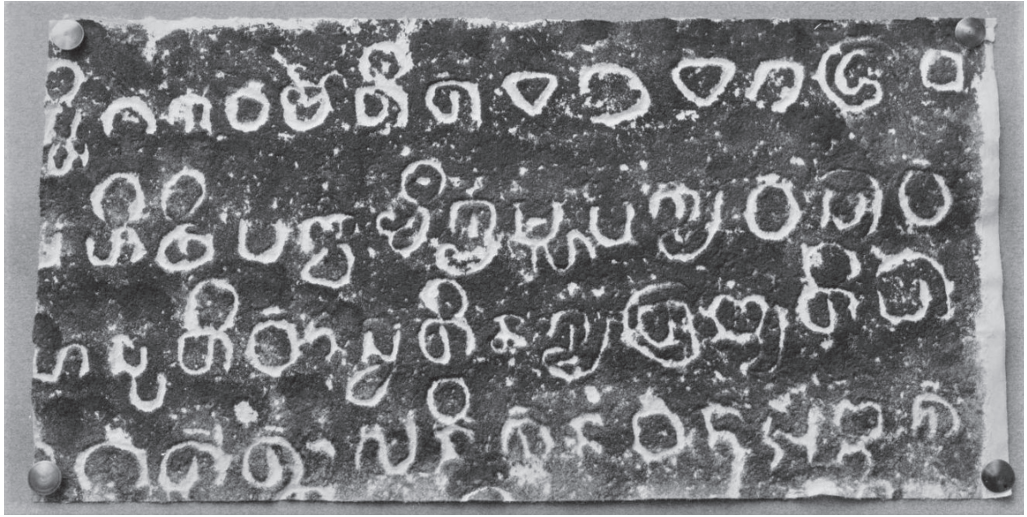


Fig. 10.5. Photograph of part of an Abklatsch of the Kandañan inscription, dated 828 Śaka (AD 906). Jakarta, Museum Nasional, inv. no. D.17. See Wurjantoro (2018, 109–114. UBL, OD-1510).

There is some variation in the layout and aspect of these ‘Early Kawi’ inscriptions and one can probably find as much difference between the script of the Dinoyo inscription (AD 760 – Fig. 10.4) and that of the Hriñ inscription (AD 843 – Wurjantoro 2018, 239–253) as between the Dinoyo script and the Pallava script which preceded it chronologically. This development seems broadly linear, however, perhaps reflecting a rather unified court culture.

Later/Post-‘Kawi’

In the East Javanese period, script styles seem to have developed more quickly and in bewildering directions, particularly with the early development of the ‘quadratic’ scripts discussed below. Space does not allow for a discussion of all of these developments. Numerous small changes in different versions distinguish these East Javanese-era scripts both from one another and from the more unified ‘Kawi’ of the Central Javanese period.

The Kaḍiri kingdom (1049–1222) is often associated with squared and angular text but there is no consistent theme across the East Javanese period. Some variants, like that on the Majapahit-era Gajah Mada inscription (Fig. 10.6), have a curved aspect and appear to be derived from forms written with ink and reed pen on some palm-leaf manuscripts. In other inscriptions, like the twelfth century Ngantang inscription (Fig. 10.7), the letters are squared and squeezed together, creating a highly regular appearance with few curving elements. Some—particularly Majapahit-era (1293–ca 1486) copper plates, but also inscriptions from earlier kingdoms – have reflex-deflex designs added to the lines of the *aksaras* (Fig. 10.8) or (what one could call) serifs added to their tops.

The differences could be extreme even between texts inscribed at the same time at nearby sites. Figure 10.9 shows the first line of the mid-fifteenth century Ngadoman inscription from Salatiga, a little to the north of Mount Merbabu, a volcano mentioned by its old name (*Damalung*) in the text. The inscription is religious in content, in keeping with *Damalung*'s role as a hermitage and spiritual centre. The style is unique and bears some interesting features, including open-box-shaped *wulu* (*sandhangan* <i>):

When the Ngadoman inscription was written, the western slopes of Lawu, also in Central Java, were occupied by two enigmatic linked sites now known as Suku and Ceto at which a number of inscriptions have been found in a strange script (Fig. 10.10; see Kinney *et al.* 2003, 265–281 for an overview of Suku and Ceto). The style is consistent across the half-century of documented use, indicating that it was self-consciously adopted by the people there. It consists of *aksaras* that protrude from the surface of the stone, many of which have odd and otherwise undocumented shapes (particularly *aksara* <na> and <ka>):

On a clear day one can see Lawu from the summit of Merbabu and *vice versa*; between them is a plain now inhabited by around 4 million people; and travel between the two sites is not particularly arduous. One would naively assume some basic similarity in the script used at Salatiga and Suku.

A cursory examination of the two, however, shows that they are wholly different. The reason may lie in the differences in use of the two sites: The inscription in fig. 10.10 records a battle between the people of Rajëgwësi (presumably a town) and

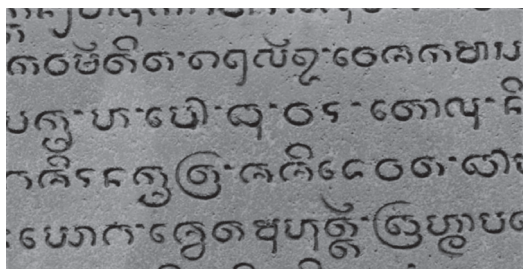


Fig. 10.6. The Gajah Mada inscription of AD 1351. Jakarta, Museum Nasional, inv. no. D.111. Photograph: UBL, OD-741a, all rights reserved.

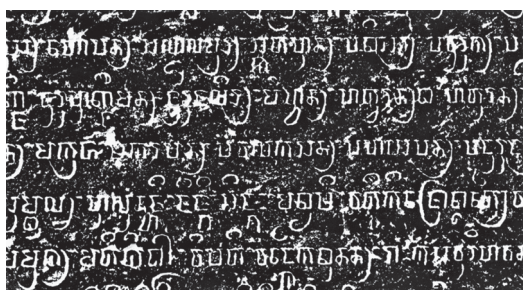


Fig. 10.7. Part of an Abklatsch of the inscription from Ngantang, near Malang, East Java. Jakarta, Museum Nasional, inv. no. D.9. The stone bears a Śaka date equivalent to AD 1135. Casparis notes, '[t]he elegant and elongated shape of the aksaras is typical for the Kaḍiri period' (1975, 92). UBL, KITLV 162802, all rights reserved.

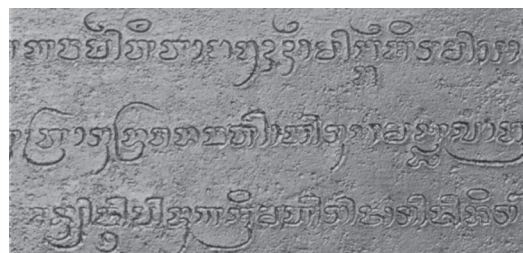


Fig. 10.8. A Majapahit-era copper plate inscription with a date of AD 1322/23. UBL, OD-1517, all rights reserved.

the people of Mědañ, and Sukuh has been interpreted as the main temple of a martial cult or even a group in open revolt against the Majapahit centre (Kinney *et al.* 2003, 272). This is unlike the presumably peaceful ascetic community at Merbabu. If this is at the root of the differences in script, though, it suggests that scripts played a role in defining groups in late-medieval Java—that script variants were political artefacts. I will return to this below.

‘Quadratic’

A number of different script-forms have been grouped together under the name of ‘quadratic’ or ‘Kadiri quadratic’, or even simply ‘Kadiri script’, Kaḍiri being the common name for one of the East Javanese kingdoms (AD 1049–1222). There is no reason to believe the scripts so named had any particular association with Kaḍiri; they appear earlier in the East Javanese period, as evidenced by the monumental inscription at the bathing place of *candi* Jalatunda (aka Jolotundo), established in AD 977 (Kinney *et al.* 2003, 51–61), and the even chunkier Poh Sarang inscription of AD 1002 (see UBL, OD-2693; OD-2694).

One of these square-ish scripts is quite consistent in form, with angular letters of similar shape that protrude from the surfaces of both stone and bronze objects, and it is perhaps possible to date these inscriptions to some point between the late tenth and early thirteenth centuries AD (Figs 10.11 and 10.12). There is, however, a great range of variation in other so-called ‘quadratic’ types – and indeed the category has been referred to as ‘so-called quadratic’ in academic work going back to the colonial period, as in Crucq (1939). The defining feature of these scripts is supposed to be the



Fig. 10.9. The first line of the Ngadoman inscription: om sri sarasoti kṛta wukir hadi damalung uri-. This script is known only from this single text. Salatiga, Central Java, AD 1449/1450. Drawn after Casparis (1975, pl. X).

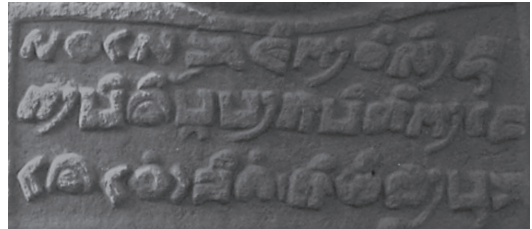


Fig. 10.10. An andesite inscription from *candi* Sukuh, Mount Lawu, Central Java: lawase rajëg wësi du/k pinërrëp kapëtëg de|ne woñ mēdañ [...]. A date at the bottom gives 1363 Śaka (= AD 1441). UBL, OD-7168, all rights reserved.

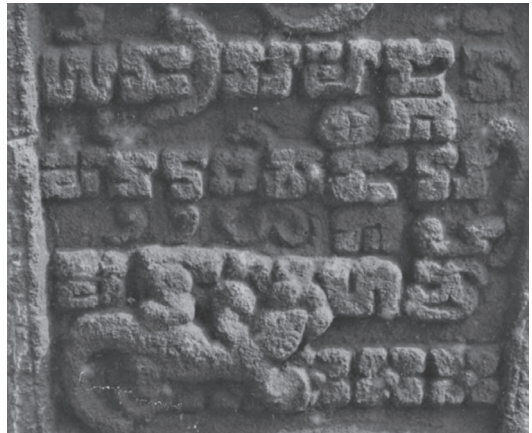


Fig. 10.11. Detail from the Sapu Angin inscription (AD 1190). Note the gecko and the row of flowers at the bottom, suggesting an artistic intent behind this ‘quadratic’ script. Jakarta, Museum Nasional, inv. no. D.139. UBL, OD-20105, all rights reserved.

use of chunky box-like shapes inscribed in relief, but many of the quadratric scripts are not ‘quadratric’ *sensu stricto* and those that *do* use square shapes often differ dramatically in their forms (Fig. 10.13).

The taste for blocky scripts in the East Javanese period is nonetheless notable. A single stone inscription with protruding letters is known from Sukhothai in Thailand, but they are otherwise rare in mainland Southeast Asia.⁹ In Java they are frequently encountered, especially in inscribed dates, and their adoption at the beginning of the East Javanese period parallels similar changes in the design of pictorial reliefs in stone, particularly the move away from the naturalistic Indian styles of the Central Javanese *candis*: East Javanese-era reliefs often show unrealistically spindly human figures with large heads and long noses in an exaggerated manner still found in *wayang kulit* (shadow theatre) puppets (Kinney *et al.* 2003, 40–41). The adoption of blocky scripts may have been part of a similar artistic movement.

Elaborate ‘quadratric’ scripts are frequently found on bronze and gold implements, including rings, bells, and slit-drums. The bronze inscriptions are usually little more than one word in length, and they often present significant problems of interpretation – particularly with the mirror-handle inscriptions. These inscriptions seem to have been principally decorative, but they are nonetheless part of written culture and demonstrate their users’ and makers’ clear interest in novel script-forms.



Fig. 10.12. The inscription on a bronze bell of unknown date: <srāhḥana> from the Old Javanese lemma *srah* ‘gift’. Jakarta, Museum Nasional, inv. no. 986a. UBL, OD-11126, all rights reserved.



Fig. 10.13. An inscription with square-shaped aksaras. Note how different the aspect is from those in the figures above. Jakarta, Museum Nasional, inv. no. D.133. UBL, OD-774, all rights reserved.

⁹ François Lagirarde of the EFEO drew attention to this inscription at a recent roundtable on Southeast Asian palm-leaf manuscript cultures (Leiden, 17 July 2019). A blocky script can also be found on the Butuan Ivory Seal, an inscribed ring from the Philippines now in the National Museum of the Philippines; the script is almost certainly derived from a Javanese style, however, and aside from these examples chunky monumental scripts are an exclusively Javanese phenomenon in medieval Southeast Asia.

The Sadapaingan slit-drum

Slit-drums are percussion instruments made from hollow logs with slits cut lengthwise down the middle, and they are venerable instruments in Southeast Asia and the Pacific; hanging wooden slit-drums are still seen in Java today. A number of cast bronze slit-drums survive from medieval Java and Bali, some of which are inscribed. Here I will focus on the Sadapaingan slit-drum (Jakarta, Museum Nasional, inv. no. 970), which bears two inscriptions in a unique script (Fontein 1990, 275; UBL, P-023964; Fig. 10.14). The slit-drum is from Galuh, West Java, although the inscriptions are in Javanese. One of these inscriptions is read from bottom-to-top and runs up the right-hand side of the slit (when hanging vertically) and another, a date in the cryptic *candra sangkala* system in which words represent numerals, is inscribed left-to-right around the top and gives a date equivalent to AD 1229. The script consists of indented teased-out rectangles. The reading of the inscription on the side of the slit-drum, <ma ja ya n.> *majayan* (see Griffiths and Lunsingh-Scheurleer 2014 for possible meanings), was established by comparison with the *aksaras* in the *candra sangkala* text around the top, which, being extremely formulaic, gave more secure readings (see van der Meij 2017, 443–446, for a list of common terms in Javanese chronograms). The *aksara* <ma> here – the one at the bottom in Figure 10.14 – is strange, and it is hard to see precisely how it came to have this shape. The others are more clearly adaptations of the shapes found in other inscriptions.

The swirling lines to the right represent a *virāma* (Jv: *patèn*), a diacritic cancelling the inherent vowel of the *aksara* <na> at the top. Elaborate *virāmas* are frequently encountered in the bronze inscriptions from both Java and Bali, as with the bronze mirror handles discussed below. A particularly flamboyant example can be seen on a probably fifteenth-century slit-drum from Pujungan in Bali, which was inscribed in Old Javanese in a unique and ornate ‘quadratic’ script (see UBL, OD-10896, OD-10897; Griffiths and Lunsingh Scheurleer 2014).



Fig. 10.14. The inscriptions on the thirteenth-century Sadapaingan slit-drum. UBL, KITLV A665, all rights reserved. See Fontein (1990, 274).

Mirror handles

Another unique script is found on a number of surviving T-shaped bronze mirror handles. Many medieval Javanese mirror handles are simply decorative or depict scenes from Hindu mythology, like Jakarta, Museum Nasional, inv. no. 5745, a T-shaped mirror handle cast in bronze showing two episodes in the life of Garuḍa from the *Mahābhārata* (Fontein 1990, 277). A significant number, however, are inscribed bottom-to-top with texts in rectangular *aksaras* canted at a slight angle, similar to the text on the Sadapaingan slit-drum. The texts were read from the bottom of the handle to the top, where a round mirror of polished bronze would be attached. Some *aksaras* are clear and legible; others have yet to be deciphered. A few handles appear in Holle's *Tabel* (1882), but they are presented upside-down and with incorrect readings. A review article on the inscriptions was written by K.C. Crucq in 1939, not long before he was imprisoned in Java by the Japanese, but little else has been written on the topic. The mirror-handle script is frequently described as 'Kadiri script', although it should be clear from Figure 10.15 that it is not the same as the 'quadratic' forms above.

The 'quadratic' scripts rather represent an approach to decorative calligraphic writing that emphasised boldness and visual interest over legibility, similar in a sense to modern graffiti tags. The counter-intuitive reading direction and trickiness of some of these inscriptions may have been part of the appeal.

Non-'Kawi' scripts

Nāgarī

'Kawi'-derived scripts made up the majority of the writing systems used in medieval Java, but another Brahmic script was introduced to the island from North India and used at a limited range of Javanese sites, principally in the ninth century AD and then again in the thirteenth (Fig. 10.16). This script, or family of scripts, is usually known as *Nāgarī*; the Bengali script and Devanagari are among its modern descendants. Its Javanese incarnation, sometimes referred to as 'pre-*Nāgarī*' or

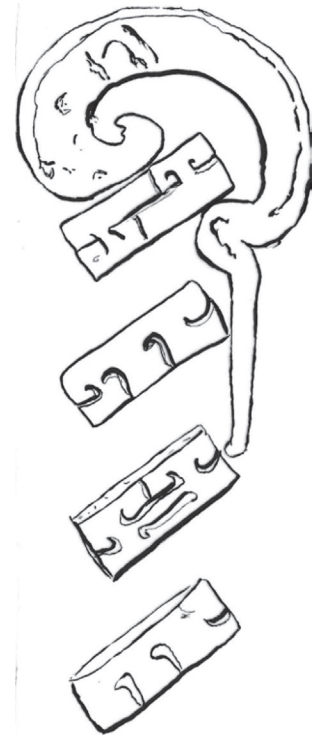


Fig. 10.15. Author's drawing of the inscription from an East Javanese bronze mirror handle (Oxford, Ashmolean Museum, inv. no. EA1991.71). The reading of the text is not clear, although like some other bronze inscriptions it ends in a decorative *virāma*.

Pranāgarī, was studied in some detail by Bosch (1928). The script appears to have been introduced to Java in the ninth century; Bosch (1928, 6) theorised that it was chiefly used in Buddhist scriptoria, and that the thirteenth century version had developed on Java itself in the intervening centuries. This would explain some disparities between the later Javanese form and the (Deva) nagari scripts used in North India (Casparis 1975, 35–37, 60–62; but see Fontein 1990, 154). *Nāgarī* is notable as the only non-‘Kawi’-derived Brahmic script to have been used in Java after the eighth century, a fact that speaks to the tremendous creativity of script development on the island itself.



Fig. 10.16. Part of an inscription on a statue of a Buddhist goddess from Candi Jago, East Java, carved between 1268 and 1280. It says <māmakī>, the name of the goddess depicted. London, British Museum, inv. no. 1859,1228.171.

Old Sundanese script(s)

While these developments were occurring in East Java, people in West Java developed scripts of their own for recording texts in Old Sundanese, almost certainly from Javanese prototypes (see Darsa 1997 for a useful overview of Sundanese scripts). A small number of manuscripts and inscriptions survive in Old Sundanese: the *in situ* Batutulis¹⁰ inscription, whose controversial chronogram gives a probable date equivalent to AD 1333 (Fig. 10.17); the Rumatak inscription, also from the 1330s and written in a similar script; a set of stone inscriptions from Kawali, Ciamis, dated to the late fourteenth century; some copper plates, particularly the Kebantenan inscriptions (Jakarta, Museum Nasional, inv. no. E.42A–E.45), also from the fourteenth century; and some manuscripts on *lontar* and *gebang* leaves, a small number of which have fifteenth and sixteenth century dates. A section of the Old Sundanese text, *Sanghyang Sasana Maha Guru* (Jakarta, PNRI, *kropak* 621, f.14v), tells us that *lontar* manuscripts with *aksaras* cut into the leaves were intended for common use and public consumption; those on *gebang* leaves, with the *aksaras* written in ink, were for storage in an archive (or *kabuyutan*) (Fig. 10.18).¹¹

The Old Sundanese scripts appear to have been altered deliberately to separate them from the scripts used for Javanese and Malay, including changes both to the forms of the graphemes and to the grapheme inventory. *Aksaras* for retroflex and aspirated consonants (*ḍ*, *ṇ*, *bh*, etc.) appear in none of the Old Sundanese texts, not even in Sanskrit and Old Javanese loanwords; one, *aksara* <ṭa>, was adopted for writing

¹⁰ *Batutulis* is written as a single word in this context, and not two as normally in Malay/Indonesian (*batu* ‘stone’, *tulis* ‘write’; *batu tulis* ‘inscribed stone’).

¹¹ This is one of a handful of explicit references to different writing surfaces in early Indo-Malaysian texts – see Creese (2004, 15) for some others, particularly the use of *pudak* (pandan flower) as a medium for love letters.

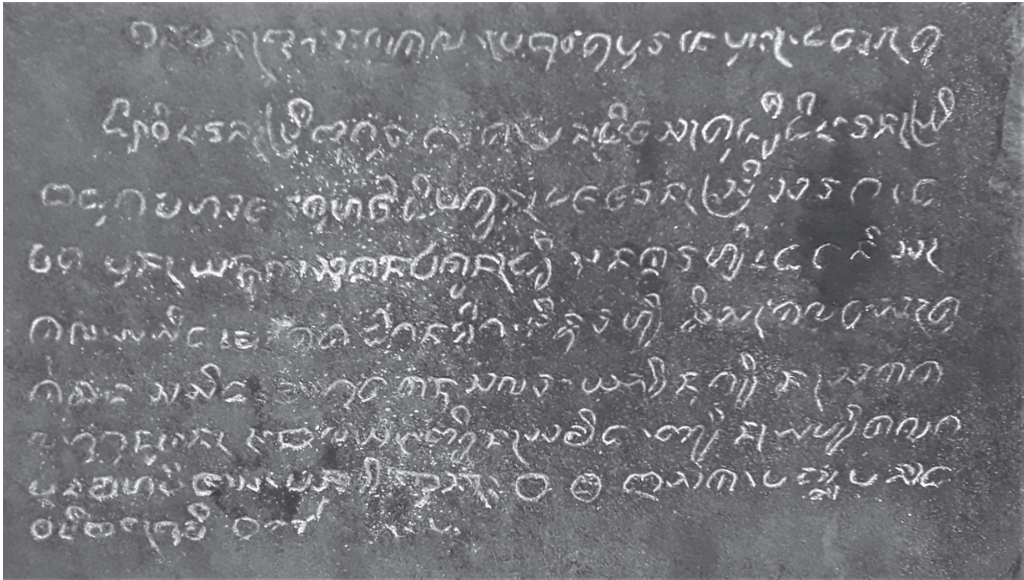


Fig. 10.17. The Batutulis inscription (1333 AD). Author's photograph. November 16, 2018.

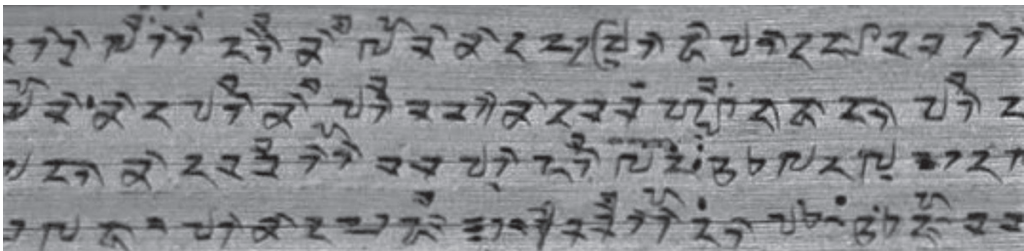


Fig. 10.18. A detail of the Old Sundanese lontar script in a fifteenth or sixteenth century manuscript of Sanghyang Swawarcinta (Jakarta, PNRI, kropak 626, f.15v).

the syllable [tra]. Long vowels (\bar{a} , \bar{u} , etc.) are similarly absent. Only those graphemes positively required by Old Sundanese phonology were kept in the script. Old Javanese phonology may or may not have had long vowels and aspirates; they are present in the scripts used for writing Old Javanese regardless. Malay is closely related to Sundanese and its phonology has always lacked retroflexes and long vowels; these features are nonetheless present in all the non-Arabic-derived scripts used to write Malay. It is therefore significant that they are absent from Old Sundanese. The use of a script adapted in some way to write Old Sundanese may have been motivated by a desire to mark the political separation between Sunda and Java at a time of growing Javanese dominance in the Indo-Malaysian archipelago, although other factors may be involved.

Styles compared

The variation impressionistically hinted at above is difficult to summarise simply, although recourse can be made to Holle's *Tabel* (1882) or to the plates in Casparis (1975) for more capacious overviews. In the figures below I nonetheless attempt to distill some variants of *aksaras* across a range of inscriptions and manuscripts. Figure 10.19 shows variants of the *aksara* <ma> over a roughly thousand year period in scripts from Java and Bali; the variation is significant but the forms do not stray too far from one another (with the possible exceptions of #8 and #13). The forms of the *aksara* <sa> in Figure 10.20 have a clear family relationship but display more extreme differences; in fact these variants were all produced over the course of roughly one century, between ca AD 1350 and 1450. The earliest distinguishable forms of modern Javanese scripts appear roughly a century after this.

Explanations and models

I hope the reader will now agree that medieval Javan scripts show extraordinary variation in aspect. Most of this variation came about in the East Javanese period and seems to have become ever more extreme as the period wore on. The scripts used to write Old Javanese in the fifteenth century often give the impression of belonging to different languages, and several scripts are tied to specific regions or even temples. From the sixteenth century on, however, it is apparent that there is greater standardisation in the forms of the Javanese *hanacaraka* (as it is now known) (Fig. 10.21). It is possible to overstate this – there has of course been change in modern Javanese scripts over the last five centuries, and Tim Behrend has noted, for example, the impossibility of pinning down a single authoritative version of 'the Javanese script' given the variation seen across the Javanese language area (Behrend 1996, 162; see also Ricklefs 1976, 129). I suggest that this variation pales in

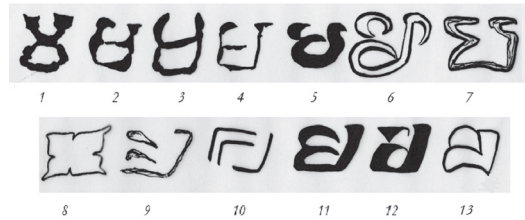


Fig. 10.19. The *aksara* <ma>: 1) Pallava (OD-15163); 2, 3, and 4) inscribed *liṅgas* from Central Java (OD-19924, OD-21155, OD-19926); 5) the *Gajah Mada* inscription (East Java, AD 1351, OD-741a); 6) inscribed copper plate (Buleleng, Bali, OD-5495); 7) Majapahit-era inscribed copper plate (London, British Library, *Ind Ch* 57, f.2v); 8) *Sadapaingan* slit-drum; 9) Old Sundanese *lontar* manuscript (Bodleian Library, *MS Jav. b.3. (R)*); 10) Old Sundanese stone inscription (Kawali, West Java); 11) Old Sundanese manuscript (Sanghyang Siksakandang Karesian, 1518 AD); 12) Old Sundanese *gebang* manuscript (Sanghyang Hayu, 1509 AD); 13) the *Sukuh/Ceto* script (C. Java, fifteenth century AD).



Fig. 10.20. The *aksara* <sa> in several Javan inscriptions. 1) The *Gajah Mada* inscription (1351 AD); 2) the *Pujungan* slit-drum (Tabanan, Bali, fifteenth-century); 3) the *Sukuh/Ceto* script (C. Java, fifteenth century); 4) *Ngadoman* inscription (C. Java, 1449/1450 AD); 5) the Old Sundanese script (Kawali, W. Java; Bodleian Library, *MS Jav. b.3. (R)*; and others).

comparison to that seen in texts from before ca AD 1500, however, and the diversity of medieval Javan scripts is a notable phenomenon that requires explanation – and which may in itself help us understand some features of social life and aesthetics.

Casparis's view was that the undeniable diversity of Javanese scripts, particularly in the Majapahit period, was the result of a tendency towards the appreciation of diversity apparent in all aspects of culture. This was reflected in the Old Javanese phrase *bhinneka tunggal ika*, conventionally translated as 'unity in diversity', used in the late-fourteenth-century *kakawin Sutasoma*, a narrative poem in Old Javanese about a *bodhisattva* (Casparis 1975, 52).¹² This seems unsatisfactory given the significant variation in earlier scripts, particularly the 'quadratic' ones, but an acceptance of variance does seem to have played a part in the explosion of types in the East Javanese period. Javanese elites seem to have enjoyed novelty and sophisticated expressions of beauty: Frequently invoked in Old Javanese literature is the concept of *kalañwan*, from the adjective *lañö*, defined in Zoetmulder's *Old Javanese-English Dictionary* (OJED – 1982, 976.10) as 'the feeling of longing or being entranced (by beauty or love), aesthetic experience ...' (see also Creese 2004, 271–278 for a handy glossary).¹³ So vital is the concept of *kalañwan* in medieval Javanese aesthetics that P.J. Zoetmulder used it as the title of his book on early Javanese literature (1974). It may be that the elaborate 'quadratic' styles were intended to trigger just such aesthetic rapture.

It seems unlikely that all of the variation in script above can be explained with reference to Majapahit courtly aesthetics, however, and artistic, religious, and political motives will need to be examined on a case-by-case basis. Here, however, I will present a general model based on the fragility of palm-leaf manuscripts.

Palm-leaf manuscripts and hermitages

As mentioned above, few Javan manuscripts can be dated to before the sixteenth century, in part because the larvae of several insect species in Java seem to find even cured *lontar* (and other palm) leaves delicious. Organic material is more difficult to preserve in a humid tropical environment than in a drier temperate one, and careful deliberate steps are required to conserve manuscripts for posterity. These steps were seldom taken in pre-modern times: Particularly valuable information was sometimes copied onto copper plates, resulting in a small number of surviving copper-plate inscriptions from Java and Bali known to have been copied from manuscripts, but

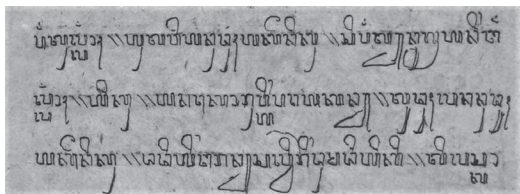


Fig. 10.21. Detail from a pre-1594 Javanese daluang manuscript of Pangeran Bonang (Leiden, UBL, Cod.Or. 1928, p.2). The script is remarkably similar to modern Javanese scripts.

¹² This is now the national motto of Indonesia.

¹³ A searchable version of OJED is accessible online: <http://sealang.net/ojed>.

most palm-leaf texts were copied frequently and longer works are usually known from nineteenth-century manuscripts. As Dick van der Meij said at a recent roundtable in Leiden, the most common and effective means of ‘preserving’ a palm-leaf manuscript was to copy it.¹⁴

Part of the explanation for the variation within medieval Javan script(s) must reside in the frequency of copying and the irrevocable loss of manuscript material, which allowed variants to flourish simultaneously in different scriptoria. ‘Mutations’ in the forms of the *aksaras* would build up over time; all manuscripts would be copies of recent copies of recent copies, and no stability could be provided by reference to significantly older manuscripts. Given that no manuscript was likely to be particularly old, each script/manuscript variant could be considered authoritative. The higher status of *ṛṣis* (sages or hermits) and the proliferation of hermitages in the East Javanese period (Kinney *et al.* 2003, 40) may also have encouraged the development of local script forms. Why these variations give the appearance of having been restricted to certain regions is unclear, though, particularly as travel between such hermitages is known to have occurred in the pre-Islamic period (as, for instance, in the fifteenth-century Old Sundanese narrative poem *Bujangga Manik*, which concerns the wanderings of an ascetic across Java).

An interesting comparison may be made with Europe: We have only a handful of texts on organic materials from medieval Indo-Malaysia due to the problem of preservation, but the number of surviving medieval European manuscripts is in seven figures (de Hamel 2016, 569). The problem of preserving European texts was not as extreme and copying did not have to be as frequent, with the result that older manuscripts anchored newer developments in script. In the late fourteenth century, for instance, Italian humanist scholars developed what is now known as *humanist minuscule* on the basis of ninth century Carolingian minuscules preserved in numerous manuscript copies (Eisenstein 2006, 134; Ullman 1960). This would have been considerably harder to do in a humid tropical environment and was based on an ideology of veneration for the historical past not necessarily in evidence in the same way in medieval Java.

The climate conditions and materiality of palm-leaf manuscripts allowed scripts variants to flourish in ways not seen elsewhere, but this is not in itself a complete explanation for the forms and use of any specific script. I suggest this model as only the beginning of a programme of research on *why* Java’s scripts developed the way they did. More specific models would have to be applied in individual cases; the use of *Nāgarī* by Buddhists, for example, may have been intended to signal links with Buddhism’s homeland in North India. Certainly scripts in Java encoded and expressed values and desires just as they do and did elsewhere in the world.

¹⁴ ‘Materiality of Palm-Leaf Manuscripts – A Systematic Approach’, a panel convened by Doris Jedamski and Dick van der Meij at the International Convention of Asia Scholars (ICAS) in Leiden, 17 July 2019. See also my article on manuscript preservation in the tropics (West 2019).

Concluding remarks

Java is only slightly larger than England in land area, yet the people of Java used an extraordinarily wide range of calligraphic styles in the Middle Ages. Different scripts were employed in Java even in the Central Javanese period, with the side-by-side use of Kawi and (pre-)Nāgarī, but toying with scripts was a hallmark of the East Javanese period. Why this was particularly apparent as the Javanese kingdom reached its political zenith in the fourteenth century is still unexplained. The more unified scripts of the Central Javanese period (up to AD 928 – so-called ‘Early Kawi’) and of early modern Java (*hanacaraka* as we now know it) suggest that the extreme variation seen in the East Javanese-era scripts was not the product of an essential Javanese syncretism but was rather a historical phenomenon, a phase in the art history of the island which demands explanation and which can in itself help us understand the social worlds of medieval Java.

More precise terminology is needed to bring out the range and significance of these scripts. They did not develop in a simple series, nor in a vacuum shut off from the world: the use of unique scripts at sites like Sukuh and Ceto and the development of seemingly self-consciously Sundanese scripts in the fourteenth century should tell us that written text was as much a political and cultural product as a means of conveying information. Finally, the medieval Javan calligraphic inscriptions are artforms deserving of more focused attention in and of themselves. There is much more they could be telling us.

Chapter 11

Cultures of writing: rethinking the ‘spread’ and ‘development’ of writing systems in the Bronze Age Mediterranean

*Theodore Nash*¹

Introduction

Writing systems are not gases, which inevitably ‘spread’ from areas of higher concentration to lower. The process is instead driven from the outside, as neighbouring peoples become aware of writing and respond in diverse ways (cf. Ferrara 2017; Kelly 2018b). Neither the adoption of a known script nor the development of a new one is an inevitable or monolithic phenomenon. Indeed, apathy is an equally possible option. Each person who engages with a known writing system, however they choose to do so, is defining the possibilities and uses of writing in a new context. It is this series of responses to a writing system, resulting in what is typically called its ‘spread’, that I propose to call a ‘culture of writing’. Rather than a simple, top-down imposition or passive reception of a new technology, the adoption or development of a new writing system can therefore be understood as an active response by human actors to a novel social practice (Ferrara 2017, 7). In addition to offering a better picture of how and why societies become literate, focusing on the agency of those responding to the knowledge of writing allows the development of new writing systems to be considered alongside new uses of old.

¹ I am grateful to the conference organisers, Dr Philip Boyes and Dr Pippa Steele, as well as all other participants, for three days of stimulating discussion and conviviality. Thanks are due to Dr Ester Salgarella, Prof. Stephen Houston, and Prof. Felipe Rojas, for graciously sharing unpublished work, and to Carol Hershenson and the Department of Classics at the University of Cincinnati for permission to reproduce Fig. 11.1. Prof. Lisa Nevett, and my classmates in her theory seminar, read an earlier draft and provided useful feedback and discussion. Later drafts were greatly improved by Prof. Natalie Abell. Richard Bott read it at every stage, and his critical eye saved me from many inconsistencies and errors; all that remain are my own.

The Bronze Age Mediterranean presents useful evidence for such a discussion. Here, in the early- to mid-second millennium BC, two scripts first attested on Crete are found across the islands of the Aegean Sea and the Greek mainland: Linear A and Cretan Hieroglyphic. When the differing uses to which they were put in each location are juxtaposed, the diverse processes which led to the use of writing at each site can better be understood. These scripts also provided the model for two cases of script development: the Mycenaean Linear B syllabary on Crete, and the Cypro-Minoan script on Cyprus. The different processes of script development, and the factors motivating those behind it, are likewise highlighted by juxtaposition. What have therefore been understood as three separate processes (the spread of the Minoan scripts, the development of Cypro-Minoan, and the development of Linear B) can be contextualised rather as elements of an eastern Mediterranean culture of writing, each understood best in this holistic context. Engaging in the same strategies of emulation and opposition, the responses – from adoption to invention – are different only in scale, not in kind.

The study of writing systems, especially as cultural phenomena, demands inherently interdisciplinary approaches: ‘In an ideal world, [a scholar of the Aegean scripts] would be equally competent in epigraphy, linguistics, history, archaeology, technology, etc.’ (Palmer 2008, 51). Ancient writing was never the disembodied words of so many modern corpora, but a material practice known today only because of the recovery of inscribed artefacts (cf. Petrovic *et al.* 2019). Interpretations must therefore account for the original historical and cultural contexts of the act of writing, as well as the specific material features of the inscription – what is the support, how was the text written, and how do these combine to create meaning? (cf. Steele 2017b.) When such questions are asked, the assessment of ancient writing systems has something to say, not just to epigraphers and to philologists, but also to archaeologists and anthropologists. Studies using writing systems to address questions central to archaeological investigation, such as human agency (Englehardt 2013a) and the construction of identity (Luraghi 2010; Ferrara 2017; Steele 2018) demonstrate the advantages of considering writing systems in an archaeological light. I hope here to further demonstrate the advantages of emphasising such questions. Central to this endeavour is a focus on the individual actors who first decided to take up stylus and write in a place where the act was previously unknown, whether a local exercising newly-gained knowledge or a literate traveller performing the act in a new social context.

The knowledge of writing in a new region can only emerge from close interaction between individuals, perhaps speakers of different languages, from diverse cultural backgrounds. Inherent in this is human mobility, either to or from a region where writing is known. With the focus firmly on the individual, the concept of agency is important, though I do not wish to engage with the full, tangled web of agency theory. Rather, I understand the term, with deliberate simplicity, in the formulation of Anthony

Giddens: the ability to ‘act otherwise’ (1984, 14).² Understood within the context of a culture of writing, a fuller range of available options becomes visible in the form of those taken at one site but not another. Working within this framework, with an eye to decisions both made and not made, individuals and their agency can be reintroduced to the processes often abstracted as the ‘spread’ and ‘development’ of writing.

The Cretan scripts and Bronze Age Mediterranean culture of writing

When examining responses to literacy, the Bronze Age Mediterranean presents much useful evidence for discussion (general background: Shelmerdine 2008; Cline 2010). This was the time of the so-called Minoan civilisation on the island of Crete, characterised by the large administrative, social, and ritual complexes now commonly called palaces. The term was coined by Sir Arthur Evans, excavator of Knossos in the early twentieth century, which despite its infelicities has yet to be supplanted by any posited alternative (cf. McEnroe 2010, viii). The palatial period began ca 2100 BC (Middle Minoan IB in local terms) and came to an end for most of the island in the early Late Bronze Age, ca 1470 BC (the end of Late Minoan IB; dates after Manning 2010a). After this point, only Knossos of the old palaces remained in use, with significant social, cultural and administrative changes (Preston 2008). Prior to the destructions at the end of Late Minoan IB, two writing systems saw significant use throughout the island: Linear A and Cretan Hieroglyphic.³ The earliest texts, written with the so-called Arkhanes Script, date to Middle Minoan IA, ca 2100–1900 BC (Decorte 2018b, 363–4). Although the relation of the Arkhanes Script to Linear A and Cretan Hieroglyphic is not entirely clear, shared signs and sign groups between all three make it evident they are not independent developments (Decorte 2018b). Cretan Hieroglyphics were so named because the pictographic signs recalled Egyptian hieroglyphs to Evans, while the more linear scripts discovered at Knossos were divided into classes A and B – now our Linear A and Linear B.⁴ Both Cretan Hieroglyphic and Linear A were used for centralised administration, written on a large range of unfired clay documents, and found mainly in burnt destruction layers where the conflagration served as an accidental kiln. These scripts, however, also have a broader range of uses: Cretan Hieroglyphic is well attested on seal stones (Jasink 2009; Civitillo 2016), and Linear A on apparently votive objects as well as jewellery (the Za, Zf, and Zg inscriptions in GORILA 4; cf. Davis 2014). The Minoans were therefore exploiting writing as both technology and cultural practice.

² I do not, however, import with this Giddens’s entire concept of structuration, which has been applied productively in the context of Linear B (Nakassis 2013) but has less, I think, to offer here.

³ Though the best attested, these are not the only two systems used in this period. The famous Phaistos Disc represents another, related to but perhaps distinct from that inscribed on the Arkalakhori Axe. Isolated and enigmatic, these will not be discussed here.

⁴ Beyond their general pictographic character, Cretan and Egyptian ‘hieroglyphs’ have no formal similarities (Ferrara 2015, 41–42).

Both Cretan Hieroglyphic and Linear A are undeciphered, which makes the assessment of documents written in these scripts difficult. Happily, however, we have known since 1952 how to read Linear B, a writing system closely related to Linear A. The validity of retrojecting sound values from Linear B to Linear A is frequently questioned, but recent work on both the relation of the two scripts (Salgarella 2020) and contextual assessment of the signs (Steele and Meißner 2017) support the general validity of this approach. Even the most optimistic application of this method, however, has cast no light on the underlying language; Linear A should rather be approached much like Etruscan, where the script (essentially a regional version of the Greek alphabet) is legible, but the language remains unknown (Wallace 2015, 203–207). Since the exact equivalencies between Linear A and Cretan Hieroglyphic signs are often unclear, sound values in the latter script cannot be firmly established, though many signs are clearly related.

While the story of writing on Crete is rich and complex (cf. recently Ferrara 2015; Anastasiadou 2016; Decorte 2018a), the present discussion will focus on attestations of these scripts elsewhere in the Aegean, whither they may be thought to have ‘spread’. This is often tied to the question of ‘Minoanisation’, or the extension of Minoan culture beyond Crete. This phenomenon, no longer understood as simple or unidirectional, remains a serious topic of discussion among archaeologists (Gorogianni *et al.* 2016). But while writing is often used as evidence of Minoan culture overseas, holistic assessments of inscribed artefacts are rarely offered as part of the discussion (important exceptions are Palaima 1982 and Karnava 2008). The presence of writing, no less than any other cultural practice, outside of Crete demonstrates human mobility and cultural interaction, shaped by local concerns, rather than the traditional idea of the ‘spread’ of literacy or as a material correlate of Minoan colonisation (cf. Karnava 2008, 384–385). Although not the primary focus of this paper, it is therefore hoped that a detailed discussion of writing found in such contexts will contribute something to these discussions.

Coverage will aim, for reasons of space, to be representative rather than exhaustive. Of particular interest are features and forms of the Minoan scripts found only outside of Crete, but evidence even as vestigial as an uninscribed tablet from the island of Kea attests a response to writing and its forms (Caskey 1970, 109). Administrative documents will be assessed first, with consideration given to the model of administration adopted, followed by non-administrative. In this way, writing will be considered both as a technology and a cultural practice. In both cases, careful palaeographic assessment and comparisons with the usage of the same scripts on Crete help to reveal the agency and innovations of those responding to writing in the wider Aegean.

Evidence for Linear A bureaucracy has been found at Akrotiri on Thera, Agia Irini on Kea, Phylakopi on Melos, and Mikro Vouni on Samothrace. The first three, all in the Cyclades, will be considered together first. Though the exact relation of each to the centres of power on contemporary Crete is far from clear, the presence of Cretan artefacts, architectural forms, and arts (such as wall-painting) suggest strong cultural

contacts (Davis 2008). Artefacts inscribed with Linear A at each site can be added to this list, but should not (as they sometimes are) be taken as direct evidence of political control (e.g. Niemeier 1995, 94). The tablet from Phylakopi on Melos was found in the so-called ‘Mansion’ and so may well be an *in situ* find associated with centralised administration (Renfrew 1977, 117 and *passim*).⁵ The administrative documents from Kea, however, are harder to assess. The tablet KE 1 dates to the end of Period V at the site (during Middle Minoan III on Crete, 1875–1700 BC) and bears only two signs; it was found just inside the fortification walls at the north end of the site (Caskey 1970, 108–109; U-128 in Davis 1986). The context was heavily disturbed, either by the destruction itself or later rebuilding, and while it may represent material collapsed from an upper story, it may also represent secondary deposition of debris from elsewhere in the site (Davis 1986, 39). Two other inscribed objects were found in the same deposit: an inscribed nodule (KE Wc 2; U-129 in Davis 1986) and a lamp with three signs inscribed before firing (KE Zb 4; U-40 in Davis 1986).⁶ If this material is something like *in situ*, then there may have been an administrative building here in Period V. If so, it is noteworthy that this would have been at the very edge of the settlement, in a somewhat peripheral position that seems unlikely for a central administrative building (Karnava 2008, 381 and fig. 36.5).⁷ In this case, we may be able to posit multiple administrative units spread across the site. But not a single building of Period V has all four walls preserved (Davis 1986, 101), and so internal organisation is hard to assess, to say nothing of the questions concerning the integrity of this deposit. Whatever the case, however, the evidence from both Agia Irini and Phylakopi cannot on its own suggest that this administration was imposed by Minoan ‘colonists’.

The tablets from Akrotiri on Thera (THE 7–12) are both more numerous and were discovered in a better-preserved context, a storeroom in an apparently residential building (Δ18α: Karnava 2018, 83–94). As with the rest of the site, they were preserved by the famous eruption near the end of Late Minoan IA that buried the town (one of the largest in human history: Manning 2010b). These six fragments, all made from local clay, belong to potentially as many tablets, but likely fewer (Boulotis 1998, 408). Their content is typical of Linear A records: THE 7 records 46 sheep, while THE 8 records a large quantity of textiles, and so together may represent interest in the various stages

⁵ The question remains as to whether this administration may have been local or Minoan. But whatever process lay behind the adoption of Linear A, it appears to have been distinct from the adoption of Minoan architectural features elsewhere at the site: the Mansion, though poorly preserved, does not contain any discernible Minoan features, in sharp contrast with the Pillar Rooms Complex (Earle 2016, 97).

⁶ Unfortunately, no indication is given of whether the lamp is a local product or an import.

⁷ Nor are we near the main gateway, where the desire to record goods entering and leaving the town may have occasioned administrative records, as is the case at Mycenaean Pylos, where the palace itself could not be entered without passing the archive rooms.

of production (Boulotis 1998, 409).⁸ Particularly notable is that they were found, not in the context of centralised administration, but in a domestic setting. They may, therefore, be better related to private commercial interests. Adding to the picture is the presence, in the neighbouring room, of 58 impressed flat-based nodules (Δ18β: Karnava 2018, 102–107). These were used to seal leather documents, the traces of which suggest the largest was only 4.6 × 3 cm when unfolded (Karnava 2018, 148). The small size of these lost documents hardly offered enough room for anything but abbreviated accounting documents of the same nature as the preserved tablets (Karnava 2018, 148).

The most striking aspect of these nodules, however, is their Cretan connection: some bear impressions from the same ring used to stamp flat based nodules at Agia Triada and Sklavokambos on Crete in the following Late Minoan IB period, and all are made of the same non-local clay, probably Cretan in origin (Karnava 2018, 151). How exactly these sealings should be associated with the tablets in the neighbouring room is not entirely clear; it is possible that they all originally belonged together in the adjacent room Δ21, where other luxury items were found with the tablets, including an alabaster rhyton, bronze dagger, bronze vessel, and a lead object, perhaps a weight (Karnava 2018, 86–87). The room Δ21 may in this case have been a centre of mercantile exchange (Karnava 2018, 144–145). While the exact usage of fragmentary tablets and lost perishable records will never be recoverable, the combination of an apparently residential context and imported documents precludes a straightforward interpretation of top-down imposition of Minoan administrative practices. More likely, a resident trader – either local Theran or immigrant Cretan – applied the new technology to their business accounts (Boulotis 1998, 410–411). The idea of commercial use of Linear A in the Cyclades was suggested already by Thomas Palaima in 1982 (18), and these more recent discoveries further support his hypothesis: islanders were able to encounter writing outside of the context of administration and adopt it for their own personal use.

Evidence for Minoan administrative practices has also been found much further to the north at Samothrace. A nodulus (SAM We 1, CHIC #137) and two roundels (SA Wc 1, SA Wc 2; CHIC #135 and #136), all with Cretan Hieroglyphic sealings, were found at the site of Mikro Vouni; the nodule also bears a Linear A inscription (Matsas 1991; 1995). None, however, was found *in situ* (Matsas 1995, 235–6). This is the only site outside of Crete where Cretan Hieroglyphic has been recovered archaeologically, and one of very few sites where both writing systems are attested together.⁹ Radiocarbon dates associated with the objects place them in the nineteenth or eighteenth centuries BC, which would correspond to Middle Minoan II in Aegean terms (Matsas 1995, 236).

⁸ The textiles are represented by a ligatured sign of the logogram for textiles, *TELA*, with the syllabic sign *SE*; this specific combination is not attested on Crete, which is interesting but not perhaps meaningful, given the limited size of the Linear A corpus (Karnava 2018, 226 with n. 1013). On THE 11 and 12 Boulotis reads the sign for olive oil (*OLE*), but Notti (2012, 150 and n. 10) casts doubts on this.

⁹ A Cretan Hieroglyphic seal now in the British Museum (CHIC #267) was apparently found on Kythera, but the absence of a secure provenience precludes its consideration here.

There is only one parallel for a roundel bearing Cretan Hieroglyphic sealings on Crete (PEHc 2), where the form is more closely associated with Linear A (Hallager 1999, 101–3). Though exceptional, therefore, nothing about the Mikro Vouni roundels distinguishes them formally from those found at Knossos on Crete, suggesting they were produced by someone fully aware of Minoan practices (Hallager 1996, I.107–8). Of particular note are the specific signs attested: each of the sealings has the sequence 042-019, the beginning of the famous ‘Arkhanes Formula’ (see recently Anastasiadou 2016; Decorte 2018b). This often continues 019-095-052 on another face of the seal; when read together, the entire sequence of signs (042-019-019-095-052) has an almost exact parallel in the first word of the Linear A ‘Libation Formula’ found on stone offering tables, read (J)A-SA-SA-RA-ME with Linear B sound values.¹⁰ Though the exact correspondence of these ‘formulae’ is not clear, that both are so frequently repeated is striking, especially given the identification of the ‘Arkhanes Script’ with both Cretan Hieroglyphic (Decorte 2018b, 364–367) and Linear A (Anastasiadou 2016, 174–177). The close relation of the writing systems (cf. Ferrara 2015, 35–36) strongly suggests that this is the same word in both scripts, which probably share a common origin.¹¹ Given this connection to the Linear A ‘Libation Formula’, the excavator has associated the roundels with a form of religious administration (Matsas 2010, 35–6). This interpretation is not inevitable – it could mean something different in this context, or the religious content of the seals could be independent of their function in administration – but the word is still suggestive.

One of the roundels, in addition to the Cretan Hieroglyphic sealing, may also bear a Linear A sign, apparently written in ink (Matsas 1991, 170; reported without conviction by Hallager 1996, II.199). If this is indeed Linear A, then it represents only the third known inked inscription (alongside KN Zc 6 and 7), and one of two items bearing both writing systems. The other is the Samothrace nodulus (SAM We 1), on which the Linear A inscription is much more certain (Matsas 1995, 241; cf. *CHIC* 18). There was then (at least) one administrator, literate in Linear A but with a Cretan Hieroglyphic seal, cognizant of Minoan sealing practice, working on Samothrace. What do we make of them? It is possible, perhaps even likely, that they travelled there from Crete (cf. Hallager 1996, II.201). But whatever their origin, the significance of their Cretan Hieroglyphic seal goes beyond their knowledge of and participation in Minoan administrative practices. Seals, both the physical object and the impression they leave,

¹⁰ The Cretan Hieroglyphic signs of the ‘Arkhanes Formula’, if given Linear B values *exempli gratia*, read A-SA-SA-RA-NE. The consistent division of the two halves in Cretan Hieroglyphic need not be taken as evidence that it is distinct from the single Linear A word (Perna 2019, 56).

¹¹ The Linear A ‘Libation Formula’, as an apparently complete sentence, has been subjected occasionally to syntactic assessments (Finkelberg 1990–1, Davis 2013), in both of which A-SA-SA-RA-ME (or its variant form) is analysed as the direct object (Davis: ‘offering’; Finkelberg: ‘libation vessel’). It does not seem to me that this squares entirely with the attestation of the word alone on Cretan Hieroglyphic seals; that they represent separate words is perhaps possible, but unlikely (cf. Godart 1999).

are intimately linked with the social identity of their user (Anderson 2016, 55).¹² Recent work on Minoan seals has, moreover, shifted the focus from how they were used to why specific design decisions – such as the use of writing – were made (Ferrara and Jasink 2017). Once Cretan Hieroglyphic became part of sphragistic practice, it became the essential element in ‘displaying social role, position, and cultural differentiation’ (Ferrara and Jasink 2017, 46). Outside of Crete, that final element must have been especially significant. This may explain why the seal was used – untraditionally – on the roundel: no opportunity to impress its Cretan Hieroglyphic inscription and re-enforce the connection of the user(s) with the literate culture of palatial Crete was to be passed up on this distant island. Within a culture of writing, numerous forces may motivate the adoption or use of writing, and self-representation may be no less a motivator than practical issues of bureaucracy.

These different pictures across the Aegean can all be contextualised against contemporary practices on Crete. The difference between administrative and private usage, as identified by Ilse Schoep, may be particularly illustrative (Schoep 1996; 2000). While the difference between private and administrative use can be difficult to ascertain (cf. Hallager and Vlasakis 1986, 118), Schoep has made the case that the distinction can be drawn based on the distribution of administrative documents (1996, 82). With the caveat that her interpretations are based on the comparisons of multiple inscribed objects at single sites (77), she concludes that ‘tablets, noduli (We), direct object sealings (Wb) and possibly also flat-based nodules (Wb)’ (82) are all features of private use; in contrast, ‘roundels (Wc) and hanging nodules (Wa, Wd)... were tools of the central administration’ (82). Following these criteria, the roundel from Kea (KE Wc 1) would suggest (de)centralised administration.¹³ At Phylakopi, where the tablet is associated with a major civic building, we should probably also think of administrative practice. At Samothrace, the presence of roundels likewise suggests administration, but assessment is hindered by lack of context. But the range of documents at Akrotiri would be compatible with private use, which corresponds with their archaeological context. There was therefore not a single model of literacy and bureaucracy adopted across the islands. Writing was not passively received by Cycladic islanders, but exploited as needed in different contexts.

Further evidence for active and unconstrained responses to the possibilities of writing is an inscribed sherd from Thera, inscribed post-firing with Linear A signs and numerals (THE Zg 5: Michailidou 1992–3). This ostrakon appears to be a(n essentially) complete document – the inscription starts at the edge, no signs are broken, and the signs are positioned to maximise space for numerals. It is

¹² Anderson’s work explores an earlier corpus of Minoan seals, but her focus on their social role applies equally well in this context. For a general overview of Aegean sealing practices, see Weingarten (2018) and Younger (2018).

¹³ Depending on whether we assume our remains are from the only administrative building or not. The Kea roundel dates to Middle Minoan III, whereas Schoep’s work focuses on Late Minoan IB evidence, so some caution is warranted, but this is the best comparison our limited evidence offers.

therefore the only example of an Aegean script being used on this support to produce a full record. All other accounts of this type were made on tablets, and if it were standard practice to produce records on fired ceramic (proverbially indestructible) rather than soft clay, we should expect to have rather more of the former and fewer of the latter. As Linear A remains undeciphered, it is not clear what exactly is being recorded; the signs could be abbreviations, logograms, or even monosyllabic words (Michailidou 1992–3, 15–16). Nor does context help, as in the absence of joins it ended up in a mixed pottery lot and no precise findspot was recorded (Michailidou 1992–3, 8).

Roughly palm-sized, the sherd gives every indication of being an *ad hoc* solution by someone recording commodities: the sign shapes are clumsy, suggesting haste or unfamiliarity with writing on a hard surface, and some numerals are formatted strangely, either constrained by neighbouring signs or from uncertainty as to the eventual total while writing.¹⁴ Whatever the nature of this document, it does not correspond to Minoan administrative practices as understood from Crete, where records are always made on the wet clay of tablets (Michailidou 1992–3, 20), but is rather a unique and local response to the potential of writing. This, then, seems like a strong candidate for evidence of local innovation rather than the top-down imposition of writing and administrative structures, a conclusion supported by the apparently private use of Linear A elsewhere on the site.

On Kea, too, we have an unexpected manifestation of writing which has every indication of being a visual pun (Fig. 11.1). On a Minoanising straight-sided cup made of the local coarse fabric, a Linear A sign representing a straight-sided cup was inscribed before firing (KE Zb 3: Caskey 1970, 110; GORILA 4, 71; the sign is AB67, KI, with Linear B sound values). The effect appears to be intentional: the sign is written with the handle on the right-hand side, rather than the left as is much more common, so that it aligns with the cup's own handle (already noted in Palaima 1988a, 301). Little can be said about its context; it was found in a floor deposit from Period VII at the site (LM IB in Minoan terms), but the area has yet to receive full publication (Bikaki 1984, 32). As it was inscribed before firing, the craftsman must have been, if not fully literate, at least knowledgeable of Linear A signs. Moreover, its coarse, plain fabric suggests it was not produced for elite consumption. This use of writing has no clear parallel. Two other objects – both, perhaps notably, from the Cyclades – come the closest. The first is a two-sign inscription on the bottom of a cup from Phylakopi on Melos (MI Zb 1: GORILA 5, 91; AB67-26, KI-RU). However, the cups are

¹⁴ The writing of nine on line two with four tallies above five, rather than vice versa as should be expected, is almost certainly due to a lack of space created by the next sign, suggesting this next commodity was already being tallied before the previous was done. In line one, five is recorded with five consecutive tallies, rather than three above two; if the two horizontal scratches above are in fact deliberate and meant to represent tens, giving a total of 25, then the writer must have begun expecting a much smaller total (typically the horizontal tens would precede the vertical tallies; cf. the discussion in Michailidou (1992–3, 12–5)).



Fig. 11.1. Inscribed straight-sided cup from Kea (KE Zb 3). Courtesy of the Department of Classics, University of Cincinnati. All rights reserved.

not of the same type, and an inscription on the base of a cup is quite different from one on the side.¹⁵ The former is not generally visible, whereas the latter takes on additional significance when the cup is used (cf. Abell 2016, 85); either the potter or the person for whom it was produced wished to be linked, in their usage of the cup, with knowledge of Minoan writing.¹⁶

The other possible parallel is an amphora from Akrotiri on Thera, with what appears to be a small and coarsely drawn amphora on its shoulder (Nikolakopoulou 2019, 231, cat. no. 1105).¹⁷ This was found in a Phase C deposit, corresponding to MM III on Crete.

¹⁵ Published descriptions of the Phylakopi cup are vague (only a 'réceptier', 'container', in CVA Denmark 1 [34.4]). Photos show exclusively its base, with no profile illustrations, but it appears to have a distinct foot, which is not a feature of the straight-sided cup (I am grateful to Natalie Abell for discussion on this point). The sign AB67 does, however, occasionally have such a distinct foot, including on KE Zb 3. Given this palaeographical flexibility, and its attestation on both cups, it is possible that KI-RU was a generic word for cup, abbreviated on KE Zb 3; but the sequence is not recorded elsewhere, so the hypothesis cannot be tested; it could just as easily be a name, and its appearance on both cups coincidence.

¹⁶ A third cup incised with this sign, found at Kalo Chorafi, was published too late for discussion here (Tzigounaki and Karnava 2020). The inscription is on the bottom, making it more like the cup from Phylakopi than Agia Irini.

¹⁷ I am grateful to Natalie Abell for bringing this to my attention.

While this has the same correspondence between sign and support, there are two significant differences. First, the sign is so clumsily drawn that ‘it is hard to argue for a correlation with linear A signs A 415 or A 415’ (Nikolakopoulou 2019, 220). It is not, therefore, in the same category as the clear and deliberately manipulated sign of KE Zb 3. Secondly, it does not create the same visual effect, having a much smaller size in proportion to the body of the vessel. Despite some similarities, then, the combination of visibility and iconicity on KE Zb 3 is not truly paralleled in any other Minoan inscription. The unique and original visual pun was almost certainly the motivating factor. Even more than the ostrakon from Thera, this artefact represents a novel response to writing,

unmotivated by any practical concerns. What was possible within the culture of writing was dictated, not by external forces, but the creativity of a potter.

Attestations of writing on the Greek mainland prior to the Mycenaean palatial period (LH IIIA–B) are limited to very brief inscriptions on durable materials, an interesting contrast to the innovations and active responses found on the islands. The first of these is a sign incised on a bronze vessel from a LH I tomb at Mycenae (Fig. 11.2: the ‘kessel’ from Shaft Grave IV; Palaima 2003b). The identity of this sign has been debated, and it is not included in GORILA, the standard corpus of Linear A texts. It has been chiselled into the bronze rather roughly, by someone unpractised in writing on this medium, at least, if not in general (cf. Palaima 2003b, 194). The sign is not generally identified with any other in Linear A, though it appears close to Cretan Hieroglyphic 008 (Palaima 2003b, 193), which is nearly identical in some instances to the Linear A sign 28 (Fig. 11.3).¹⁸ It has also been suggested that this represents the sole attestation of a Linear A sign that would provide the model for Linear B *43, a_3 , the diphthong *ai*, if not already that Linear B sign (Palaima 2003b, 195–196). But this is difficult, especially as it seems closer to Linear B *52, *no*, (Fig. 11.4) sometimes also connected with Linear A A28 and Cretan Hieroglyphic 008 (CHIC 19).¹⁹

The argument for correspondence with *43, a_3 , is that the additional curved stroke of the kessel sign (the ‘thumb’) is on the left, as in *43 (Fig. 11.5), and that Linear A was not thought at the time to represent the vowel *o* (so even if this were A28, it could correspond to *52, *no*). But the ‘thumb’ of A28 is not always on the right



Fig. 11.2. The sign on the bronze ‘kessel’ from Shaft Grave IV at Mycenae. Drawing by the author.

¹⁸ This connection is accepted by the editors of CHIC (19), a fact strangely missed by Palaima (2003b, 193).

¹⁹ Elsewhere, however, A28 is connected with Linear B *28, *i* (Driessen 2000, 340; cf. below).

(cf. Fig. 11.3), and more recent work has stressed the likelihood that Linear A had an *o*-series (Meißner and Steele 2017), so this may not speak against *52, *no*. In any case, the ‘thumb’ is a descender on the kessel, rather the required ascender of *43, and since some Linear A signs are reversible (cf. AB67 above), this could still be the model for *52, *no*, with its ‘thumb’ on the right. Moreover, the sign *43 is written with a third ‘leg’ by the early hand 124-S at Knossos, and the lower horizontal is not drawn without it except by later scribes at Pylos (Fig. 11.5). However, *52, *no*, does have the lower horizontal without a third leg when drawn by the early Hand 91 at Pylos (Fig. 11.4).



Fig. 11.3. Left: CH 008 (#297.β1). Right: LA 28 (KN Zf 31). Drawings by the author.

The diachronic development of Linear B sign shapes has not yet been systematically studied, but it is generally accepted that deposits from archaeologically earlier contexts often have signs closer to their Linear A models.²⁰ Hand 124-S at Knossos is one of the scribes of the Room of the Chariot Tablets, a deposit dated to LM IIIA (Driessen 2000; for general chronology, Driessen 2008). Hand 91 at Pylos can be dated to LH IIIA, and their tablets are part of the small corpus earlier than the main LH IIIB/IIIC archive at the palace (Palaima 1988b, 111–113; Skelton 2010, 110–112 and *passim*).²¹ As earlier deposits show closer palaeographic links with Linear A and fewer innovations unique to Linear B (cf. Salgarella 2020, 276–282), it is here that similarities and differences are most meaningful. Though this assessment is only preliminary, it is therefore likely that the sign on the kessel should be equated with LA 28 and later LB *52, *no*, rather than *43, *a*.²² In either case, however, it is still much closer to LA 28 than *52, *no*,

²⁰ The closest thing is Firth and Skelton (2016), though it presents multiple problems. For a response to its methods, as well as general discussion of the role of palaeography in dating Linear B tablets, see Judson (2020, 215–232).

²¹ It may be noted in passing that Skelton is not entirely correct in her assessment that *te* with angled ‘branches’ is unattested in Linear B beyond the megaron tablets; though now lost, Evans’ drawing of KN Xd <319> (reproduced in COMIK 1, 125) shows a *te* with the same angled lines carefully depicted. As his other drawings preserve variations between signs (compare his treatment of *80, *ma*, in KN Vc(1) <295>, Xd <301>, and Vc(1) <317>), he was clearly not standardising, and this sign should be taken seriously. Too often, palaeographic assessment is limited to examples by identifiable scribes, and valuable evidence like this overlooked.

²² The relation of LA 28 to LB *28, *i*, complicates the picture, and the entire question is vexed (Salgarella 2020, 336–338). It is worth noting that a sign in the Cypriot Syllabary apparently corresponding to LA 28 also has the value *i*, so this must have been the value of the Linear A sign (Steele and Meißner 2017, 98). But it is also the case that any putative Linear A sign corresponding to LB *52, *no*, may have been very rare (Meißner and Steele 2017, 106). It may be, moreover, that the palaeographic variants of LA 28 may in fact disguise two signs, which would be all the easier if one were only attested once or twice (Salgarella 2020, 336–338). I note in passing that two signs on PS Za 2, quite distinct in shape,

and should not be considered an early attestation of Linear B (Palaima 2003b, 195–196). Beyond this, uncertainty as to whether the vessel was a local product or import makes further assessment very difficult, as only the former requires local knowledge of writing. The sign may have added to the kessel's prestige, but the paucity of other inscribed objects on the mainland prevents us from pushing this line of thought too far.

The only other evidence for Linear A on the mainland, a short inscription (08-80, A-MA) on a schist tab from Agios Stephanos in Lakonia, provides little evidence for discussion (HS Zg 1: Janko 1982; Taylour and Janko 2008, 441–443). The object was found in a mixed context with material from MH III – LH IIIC, but is probably best dated to MH III – LH I (Taylour and Janko 2008, 441). It has no clear purpose, and as it is not pierced for suspension even a talismanic function is hard to posit.²³ Though its mixed context does suggest that it could date to a period when Linear B was in use, the signs are certainly Linear A, and the shape of the second sign (80, MA) precludes any strong link with its Linear B equivalent (Taylour and Janko 2008, 443; the highly schematic treatment is common in Linear A, but cannot be the model for the Linear B sign; cf. Driessen 2000, pl. 94).²⁴ Even more so than the Mycenae kessel, this small, portable object need not have been inscribed at Agios Stephanos. The site shows strong archaeological connections



Fig. 11.4. LB*52, no, from a LH IIIA context at Pylos (PY Xa 1419.2, H 91). Drawing by the author.

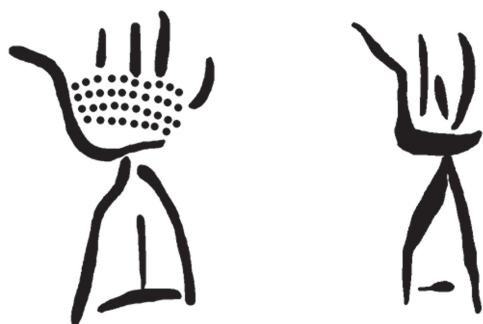


Fig. 11.5. Left: LB*43, a₃, from the LM IIIA1 Room of the Chariot Tablets deposit at Knossos (KN Vc(5) 7612, H 124-S). Right: LB*43, a₃, from the LH IIIB2/IIIC main archive at Pylos (PY Es 650.5, H 11). Drawings by the author.

are both identified by the editors of GORILA as LA 28. Nevertheless, the kessel sign shows clear links with both LA 28 and *52, no, and is much further from *28, i. The essential point, however, is that a connection with *43, a₃, is probably best abandoned.

²³ The suggestion that it may be an amulet is quickly offered and rejected as 'a counsel of despair'; the only practical option is a weight, but the parallels are not particularly strong (Taylour and Janko 2008, 442).

²⁴ It is interesting that the sign AB80, MA, is so schematic, when it is so often elaborated when carved into hard surfaces on Crete (see GORILA 5, xli).

with Crete (Taylour and Janko 2008, 579–589), and it is perhaps more likely that the inscription was produced by a Cretan, either before travelling or while visiting, than a local. But the writing must have had some value, if even simply recording a name; difficult to link with bureaucracy or commerce, it may be the simple fact of the inscription that was important.²⁵

The picture on the mainland is, therefore, very different from that on the Cyclades, with writing attested in a very different social context. Though this may be an accident of preservation, inscribed objects seem only to have been used as markers of social status, and even this in a limited capacity. As it is, we have no incontrovertible evidence for literacy on the Greek mainland. Though the same script is being used here as on the Cyclades, it was valued for different reasons, and apparently not put to wider use. While modern scholarship too often considers the desirability of writing to be self-evident, its absence represents not a failure to adapt an invariably attractive technology but a decision not to adopt a cultural practice. The great prestige placed on works of Minoan (or Minoan-style) craftsmanship at mainland centres in this period, and the influence of Minoan pottery shapes and motifs, attest to a connection between Crete and the mainland so close that it is hard to believe mainlanders could not have learned to write, had they wanted to (Wright 2008). This broadly apathetic response, or perhaps even deliberate rejection, is highlighted when the mainland is considered, not in isolation, but as part of the same culture of writing as Crete and the Cyclades.

Careful consideration of the contexts in which these inscriptions were discovered and produced allows for a much more nuanced discussion of what is often simply considered the ‘spread’ of writing. Rather than a monolithic phenomenon, diffusing and reproducing itself identically in new contexts, the variety of responses across the Aegean islands and Greek mainland attest the human agency and contextual concerns that truly drive the ‘spread’ of literacy. Administration, commerce, prestige and visual puns: there was no single process dictating responses to writing at all sites. This range of uses is particularly striking when it is considered that all the cases hitherto adduced record adoptions and adaptations of the same scripts; there is no reason to think that any structural changes have occurred.²⁶ What might therefore be considered, in a broader view, simple adoption, comes into much sharper focus when each attestation is considered holistically, within its social, archaeological, and cultural context. When the full range of responses to writing are considered alongside each other as a culture of writing, the choices made by individuals in one location can be contextualised against those made elsewhere. With the full range of possibilities in view, the various attestations of writing at different sites illustrate the agency of the individuals choosing how, exactly, to respond to the novel technology and cultural practice.

²⁵ The same sequence does appear, apparently as a name, at Malia (MA 1.b).

²⁶ The brevity of the inscriptions, and linguistic obscurity of the Minoan scripts, precludes any comment on the language(s?) being used.

Secondary script development

As interesting and varied as adoptions of the same script can be, a more radical response is represented by the development of a new, separate script. No less a response to an existing model, these too can be better understood when contextualised against contemporary responses to writing. This discussion is in many ways a contribution to recent discussions of script development, in which a distinction has been increasingly drawn between ‘primary’ and ‘secondary’ scripts (Houston 2004b, 3; de Voogt 2011; Ferrara 2015, 42–4; 2017; Ferrara and Valério 2018; compare Senner 1989, where no such distinction is drawn). The work of Peter Daniels has been especially influential (Daniels 2000; 2006; 2007; 2018, 140–2). Primary scripts are those which emerge *ex nihilo* (that is to say, the *idea* of writing and the script were developed simultaneously). These are represented by at least three (and probably more) examples: Chinese writing, Mesoamerican writing, and either Near Eastern Cuneiform, Egyptian Hieroglyphs, or both (Trigger 2004, 61). The processes by which these were developed are of longstanding interest; both practical and theoretical questions are well-served by the scholarly literature (Senner 1989; Daniels 1992; Postgate *et al.* 1995; papers in Houston 2004b). These writing systems are sometimes called ‘pristine’ (e.g. Woods 2010, 15), but this offers unwelcome connotations. Instead, ‘primary scripts’ is preferred here, which both disposes with unnecessary notions of purity, and offers ‘secondary scripts’ as a label for those developed in a context where the idea of writing was already known. The process of their invention may therefore be termed ‘secondary script development’. These terms are not new, in and of themselves, but have yet to be standardised in scholarship.²⁷

This is perhaps because secondary script development has received explicit scholarly attention only recently. While secondary scripts have been the focus of many recent works focussed on the contexts and inventions of writing systems in the ancient Mediterranean (Steele 2017a; Ferrara and Valério 2018; Boyes and Steele 2019a), theoretical and comparative approaches remain more limited (de Voogt 2011; Salomon 2012; Ferrara 2017; Kelly 2018b). In many ways these respond to the models developed by Peter Daniels (most recently 2018, 140–142; cf. above). In his characterisation, every case of secondary script development is the result of either ‘adaptive reuse’, ‘misunderstanding’, or ‘scholarly input’. This analysis is primarily linguistic; the main concern is how the new script encodes language in comparison with its model. In cases of ‘adaptive reuse’, the fundamental structure of the script is not changed, but signs are added or adjusted as necessary to represent sounds absent from the model but required by the borrowing language. The Coptic alphabet, which adds to its Greek base six letters from the Egyptian Demotic script to represent phonemes absent in Greek, is an excellent example (Daniels 2007, 59). Scripts developed on the basis of ‘misunderstanding’, his second model, represent

²⁷ So, for example, both ‘primary inventions’ and ‘pristine creations’ can occur on the same page of one recent work (Ferrara 2017, 11).

cases where the structure changes in a more radical way because (apparently) the borrowers do not quite grasp how the model script worked to encode language. Daniels' main example is the invention of the Greek alphabet (which represents both vowels and consonants separately) from the Phoenician abjad (which represented only consonants). The third model, 'scholarly input', is perhaps the most interesting. According to Daniels, it is the 'only one that involves *deliberate* change, by people who have given deep attention to the nature of their writing system' (2007, 61; emphasis original). This is not dissimilar to adaptive reuse, but involves the addition not of new signs for new sounds, but rather (*e.g.*) more sophisticated marking elements such as vowels; his examples include Gandahāran Kharoṣṭī, which adapted its model (Aramaic) to mark all four of its vowels (Daniels 2007, 61).

While these models may go some way towards describing script development at the linguistic level, they pay no attention to the context of these developments and are striking in the degree to which individual volition and external considerations are elided. His treatment of Proto-Sinaitic (Daniels 2018, 142–143) is particularly illustrative. This script was based on Egyptian Hieroglyphs, and maintained their consonantal structure, but re-analysed the signs acrophonically to give new sound values based on Semitic words. For Daniels, this 'failure' to appreciate the workings of the Egyptian system represents simple misunderstanding, and no consideration is given to the possibility that new values were deliberately applied to bring the entire system in line with the new language represented (see further Lam 2010, 190 with n. 8). When discussing writing systems, the linguistic element is only part of the picture, and not the only arena for deliberate change. Any interpretation hoping to convince must consider the context of the development alongside the potential goals of those involved.

These aspects are given greater explanatory force in a new model posited by Houston and Rojas (forthcoming), which provides much more scope for holistic analysis than Daniels': 'The stress in this scheme is less on language, or details of sound-to-sign correspondence, than the intentions of makers and users.' Their categories are therefore based to a greater extent on the strategies of emulation and opposition employed in the development of a new script. The first is 'accommodation', 'a slow and long term adjustment of a writing system within a single stream of tradition, regardless of language'. The second is 'contrast', which involves more of opposition: 'it acknowledges a source but sets up a categorical shift in nature'. The third category, 'rupture', involves radical changes such as those involved in the invention of runes from the Roman alphabet; while the essential system of linguistic notation did not change (both mark consonants and vowels separately), the visual appearance is markedly different. With their focus on contextual elements and human agency, these models are much more useful for a holistic assessment of secondary script development.²⁸ In emphasising writing as an element of cultural practice, Houston

²⁸ For other recent engagement with Houston and Rojas' work, see Ferrara (2017) and Kelly (2018b).

and Rojas' model allows for much more productive discussion of these processes within a culture of writing than does Daniels'.

We can expand the discussion of secondary script development by stressing the contextual significance of its defining element, so often taken for granted: the previous knowledge of writing. This, in the most literal sense, centres the 'archaeological, historical, epigraphic, and anthropological contexts that make [secondary script development] possible', the importance of which was emphasised by Ferrara (2017, 31). In foregrounding the range of possible responses, the simple fact of secondary script development can be more clearly perceived: it is never inevitable, but always the result of decisions made by specifically motivated human actors who always might have done differently.

Cypro-Minoan

Writing on Cyprus is first visible during a time when cultural contact with Crete is not strongly attested. This occurred during the Late Cypriot I period, or the sixteenth to fifteenth centuries BC (Steele 2018, 11–19). This undeciphered script was named Cypro-Minoan by Sir Arthur Evans, observing its debt to Linear A, but this name obscures influence from other directions (Sherratt 2013). It is attested on a range of media, including jewellery, seals, and various clay supports (Olivier 2013, 7–15). There are significant differences between the sign inventories of different inscriptions, to the extent that Cypro-Minoan has occasionally been divided into as many as four distinct scripts. These are: Cypro-Minoan 0 (CM0), attested on the archaic tablet from Enkomi; Cypro-Minoan 1 (CM1), the most widely-attested form of the script; Cypro-Minoan 2 (CM2), attested only on later tablets from Enkomi; and Cypro-Minoan 3 (CM3), representing all inscriptions found at Ugarit (Ras Shamra) in the Levant. These distinctions are contentious, and scholars still argue both for their retention (Duhoux 2013) and rejection (Ferrara 2012; 2013a; 2013b). So long as the script(s) remain undeciphered, it seems unlikely that a consensus will be reached more certain than that a unified graphic tradition was never established. We are probably best thinking, with Steele (2018, 32), of 'different smaller-scale contexts, probably changing significantly over time and not necessarily with any great degree of continuity, in which documents such as clay tablets may have been used to record administrative or economic information'.

It is the CM0 tablet, perhaps the earliest attested use of the script, (##001; Duhoux 2009) that displays the closest affinities with Linear A at the palaeographic level, but with enough variation that it is certainly a different script (Valério 2017; see also Steele 2018, 19–24). While not found in primary deposition, but rather in the fill between floors of a building associated with copper smelting, it may still be linked with this industrial context (Steele 2018, 12). But if this is an administrative document, it is not quite like those found on Crete, with no numerals nor (apparently) logograms. At this earliest stage, with so many signs clearly based on Linear A models, this may be termed in Daniels' conception 'adaptive reuse'. But this focuses on the sign repertory to the exclusion of important contextual data. The first two signs on the tablet are

repeated on the side, as if for indexing purposes; this is a feature of cuneiform tablets, but not attested in the Aegean (Duhoux 2009, 25–6). Other early instances of writing show stronger Near Eastern influences, such as the cylinder seal from Enkomi (##225). Such supports have a long and clear pedigree in regions east of Cyprus, but even this must be balanced against the Aegean style of the signs and imagery (Steele 2018, 14–6). Unlike in the Cyclades, where administrative documents reflect only Minoan influence, here there are multiple points of departure, and Minoan influence is felt only in the decoration and inscription; the shape itself has its origin in the Near East. Not only the development of a new script, but its applications and uses were the result of deliberate action and negotiation; the result is something strikingly new, distinctively ‘Cypriot’ in its combination of models (cf. Ferrara 2017, 26).

Does the model presented by Houston and Rojas allow for better analysis? In the case of tablet ##001, the striking similarity with Linear A may suggest ‘accommodation’, minimal modification of the model. But later attestations clearly show influence from eastern models, and the script is never again as close to Linear A as it is on this first tablet (11 of the 21 signs are never found again in Cypro-Minoan, including three with convincing Linear A parallels; Steele 2018, table 1.2, 21). Their ‘contrast’ model, with its need to ‘accentuate cultural breaks’ explains the situation better, but the departure is not from a single model; ancient Cypriots sat at the boundary of two cultures of writing, and as in the case of the cylinder seal ##225 did not accept either as found but sought to distinguish themselves from both. The fact that different texts seem to represent different relationships with their sources suggests that these categories do not have hard boundaries, but that even within the same script individuals may respond to their models in different ways. Though the cylinder seal already discussed blends the administrative and prestigious aspects of writing, other inscriptions on prestigious objects offer no practical purpose (Ferrara 2017, 25). Writing on Cyprus, therefore, was not used merely for administration and bureaucracy but also as a mark of identity, a novel and native development whose visibility and use emphasised the social status of those who had access to it (Ferrara 2017, 26).

Linear B

Linear B represents another case of secondary script development, but one which demonstrates, very unlike Cypro-Minoan, how close to the existing model a new script and its uses can be. The first writing system used to record the Greek language, Linear B is the best attested of the Bronze Age Aegean scripts, and the only one that has been deciphered (Palaima 2010). Unlike the other scripts mentioned so far, Linear B was written almost exclusively on clay, and had perishingly little existence outside of the administrative sphere (these isolated examples are catalogued and discussed in Pluta 2011, 89–118). In this respect it differs from the known attestations of Linear A on mainland Greece, and these seem to have had little to do with its development. This paradoxical preservation should be taken as strong evidence that the almost purely administrative nature of the extant evidence is in keeping with the fundamental nature of the script (cf. Karagianni 2015). Suggested dates for its development range

from Middle Minoan III to Late Minoan II, but the early date has now largely been abandoned with the demonstration that Linear B is closest to Linear A as it was written in Late Minoan IB (Palaima 1988a; Driessen 2000, 102–157). This aligns with the dated attestations of the two scripts: Linear A disappears almost completely after Late Minoan IB (Bennet 2008), and the first Linear B deposit dates to Late Minoan IIIA1 (Driessen 2008). The intervening Late Minoan II period represented a significant shift in the material culture on Crete, which became much closer to that seen on the Mycenaean mainland than ever before (Preston 2008). Whether taken as evidence for Mycenaean invasion or not, it represents a significant shift in elite constructions and expressions of identity. It can further be demonstrated that certain features of Linear B administration, such as tablet formats and sealing practices, have better parallels in Cretan Hieroglyphic documents than Linear A (Petrakis 2017; Tomas 2017a). With no Cretan Hieroglyphic attested on the mainland, this suggests a solution to the aporia once expressed by Palaima: ‘I cannot see any way of choosing, or even of favouring, Crete or the Mainland as the place of origin of Linear B’ (1988a, 339). Knossos, as the most significant site in the LM II period, and one of few where were both Minoan scripts are attested, therefore represents the most plausible site for the development of Linear B (cf. Petrakis 2017, 92).

That this should happen was not inevitable. There must have been continued knowledge of Linear A as the model for the new script, and so an alternative – the continued use of this earlier script – is readily apparent. But there is no evidence that Linear A continued in an administrative context (Bennet 2008). Our understanding of the circumstances under which Linear B was developed continue to evolve, and recent work is beginning to challenge long-held assumptions. Contrary to prior scepticism, it has been persuasively argued that Linear B systematically borrowed sound values from Linear A alongside the shapes themselves (Steele and Meißner 2017), even in the case of the *o*-series, more traditionally thought be an invention of the new script (Meißner and Steele 2017).²⁹ The identification of identical palaeographic variants of the same signs in both Linear A and Linear B has made it much more unlikely that there was ever a ‘master list’ of Linear B signs from which new scribes learned; rather, the first records were either written by former Linear A scribes, or those instructed by them (Salgarella 2020). To these may be added the longstanding view that few phonetic features of the script were altered, even where this conservatism caused various infelicities for the recording of Greek (voicing and aspiration were unmarked in most cases, vowel length in all).

But while these aspects all minimise difference, Linear B should still be considered a new script. The format and layout of documents changed, perhaps showing the influence of Cretan Hieroglyphic administrative practices at Knossos (Petrakis 2017; Tomas 2017a). More radically, the full system of weights and measures was restructured, suggesting the deliberate goal of administrative streamlining (Driessen and Schoep 1999, 392). To this may also be added the extraordinary presence of CCV signs in

²⁹ Though cf. above for the difficulties in identifying the model of *52, *no*.

the syllabary, such as *pte* and *nwa*, which may reflect the Greek re-interpretation of unfamiliar phonemes represented by what would have been conventional CV signs in Linear A (palatalised and labialised consonants, respectively: Meißner and Steele 2017, 100). This situation demonstrates the necessity of holistic and contextual assessments when thinking about writing systems. At a phonemic level, the changes between Linear A and Linear B can best be considered an example of Daniels' 'adaptive re-use'; it is a similarly clear case of 'accommodation' in Houston and Rojas' conception. But the adjustment of weights and measures is something like Daniels' 'scholarly input' model, only applied to a non-linguistic feature, and it does not fit any of Houston and Rojas' categories neatly. We must recall that in every case they might have done differently; they were reacting to but not constrained by Linear A models, as is especially clear in the case of the new system of mensuration. Even if it appears that necessity was largely the mother of invention, the simplest solution would have remained a more straightforward adoption of Linear A. The new language was clearly important, likely as an expression of identity.

But when considered against Cypro-Minoan, the extent to which this was not exploited becomes much clearer. Linear B was not used as an elite marker of prestige goods, nor does it seem it was ever used as a visible marker of elite identity; writing was only ever known to (and by) a small proportion of the population (Palaima 2011, 121–123). Given that Linear A did have a wider range of uses, the more restricted range of Linear B inscriptions represents a conscious narrowing of its utility. In this regard, though adoption of a script may traditionally be judged less creative, in some ways the ostrakon from Thera (THE Zg 5) and the inscribed cup from Kea (KE Zb 3), represent more novel responses to writing than the newly developed Linear B script. The paths not taken by Linear B scribes become much clearer when considered against the whole culture of writing, not just the other novel development on Cyprus, but also other responses to Linear A through the Aegean. But this limited use need not be considered the result of decisions any less conscious; the Mycenaean could use writing for other purposes, when they felt the need (Pluta 2011, 89–118). But in most cases, it seems, they did not.

Conclusion

I have argued that three much-discussed processes – the use of Minoan writing outside of Crete, the development of Cypro-Minoan, and the development of Linear B – are better understood together as part of the same 'culture of writing'. This has the benefit of uniting the study of related scripts, too often separated in the scholarly perspective by differences of language or geography. Taking a holistic view, which incorporates the archaeological, epigraphic, and linguistic contexts of ancient writing systems, allows each attestation to be understood in its full cultural context. Further, by foregrounding the individuals who introduced and responded to writing as both a technology and a cultural practice, we can go beyond the notions of a passive and inevitable 'spread'

of literacy. While these responses might be collectively conceived on a continuum from rejection to adoption to development, I have demonstrated that these categories are not monolithic: the adoption on Linear A looked different at Agia Irini than at Akrotiri; the development on Linear B looked little like that of Cypro-Minoan. But the enterprising Theran trader hastily scratching his inventory onto a convenient sherd was not doing something fundamentally different from the Kean potter experimenting with the visual aspect of a Linear A sign. Both were actively shaping the possibilities of writing, as were the Cypriots and Knossians who developed new scripts from the same model. These responses were different only in scale, not in kind. By considering them together as an eastern Mediterranean ‘culture of writing’, I hope to have offered a new framework for understanding the related processes of script adoption, adaptation, and development within their social and cultural contexts.

Chapter 12

Script, image, and culture in the Maya world: a southeastern perspective

Kathryn M. Hudson and John S. Henderson

Introduction

Through an examination of Maya writing in the southeastern Maya lowlands, this paper explores the complex interrelationships between the extent to which Maya writing combined linguistic elements and imagery and the degree of cultural and linguistic variability in the region where the system was deployed. The Maya script was used in parts of Mexico, Guatemala, Belize, El Salvador, and Honduras from at least the third century AD until shortly after the Spanish invasion in the sixteenth century AD. During this period, it underwent several major transformations; it was also used – and shaped – by societies with substantial cultural and linguistic differences. The issue of how Maya writing was embedded within these varied sociocultural systems is thus particularly complex and can illuminate how context can shape orthographic practice and engagement. The rapid advances in decipherment of Maya writing in the late twentieth century have made it possible to begin to explore such issues as literacy, scribal practice, orthography, language varieties, syntax, and discourse (*e.g.*, Houston 1994; Hofling 2000; Wichmann 2006). Wichmann (2006, 288–290) has even proposed that the unusual phonetic transparency of the script is rooted in scribal desire to represent regional variability. In general, though, epigraphers have focused on the commonalities of Mayan texts, a tendency that may be intensified by the broad acceptance of the hypothesis that the texts record ‘a single, remarkably uniform language’ (Law and Stuart 2017, 133).

Maya writing corresponded to a distinct Maya culture that was developed and used by the ruling aristocracies of lowland city-states (Henderson and Hudson 2015). This group represented an elite culture that, as attested by documentation of marriage ties in hieroglyphic texts (Martin and Grube 2008), cut across Maya societies and polities. Their elite culture and, arguably, its accompanying language were distinct

from local practices and speech. Where these differences were most pronounced, departures from common scribal practice might reflect attempts to make texts accessible to a constituency that was not only non-literate but not entirely fluent in any Mayan language. Mesoamerica's southeastern lowlands – which are situated near a zone of transition between Maya practices and the cultural patterns of lower Central America – offer an ideal vantage point from which to consider this complex and culturally embedded process.

Historical and geographic context

Quiriguá, in Guatemala's lower Motagua Valley, and Copán, in the uplands of northwestern Honduras (Fig. 12.1), are the easternmost of the major lowland Maya city-states of the Classic period (ca AD 250–900). They reflect a southeastern variant of the international elite culture that was shared by aristocracies throughout the Maya lowlands. To the southeast, beyond the political spheres of these two southeastern capitals, many cultural patterns – especially in settlement organisation, subsistence systems and craft production – remained the same despite marked differences in sociopolitical organisation. In these more outlying regions, political and economic organisation functioned largely at the level of villages and small chiefly centres. Wealth and status differences were not pronounced and there were no city-states with centralised political power and extreme socio-economic hierarchies.

The territories to the southeast of these Maya centres were also linguistically distinct (Lehmann 1920, vol. 2). At the time of the Spanish invasion in the sixteenth century, Quiriguá and Copán were at the southeastern end of a band of Ch'olan languages that stretched from the base of the Yucatan peninsula to the southern fringe of the area of lowland Maya civilisation and included Chontal, Ch'ol, and Ch'orti'. Beyond Copán, to the south and east, were speakers of a range of non-Mayan languages. Lenca – an extinct language isolate – occupied most or all of west-central Honduras and was the immediate eastern neighbor of Copán's Ch'orti'. Tol (Jicaque) was spoken in central Honduras; to the east was a block of Chibchan languages that included Sumu, Pech (Paya), and the extinct Matagalpa. Further afield, languages with western Mesoamerican affiliations – including Nicarao, Chorotega, and Subtiaba – were spoken in Pacific Nicaragua and northwestern Costa Rica.

Within the spheres of Quiriguá and Copán, the use of a Mayan language (Ch'orti') from at least the middle of the first millennium mirrored the development of a sociopolitical system that was closely connected to Maya patterns. The fundamental form of lowland Maya city-states crystallised in Guatemala's Petén region – located to the north and west of Quiriguá and Copán – in the last centuries of the first millennium BC. This city-state pattern was characterised primarily by institutions that legitimised and maintained the power of hereditary kings. The material manifestations of these institutions – including temples, palaces, and sculptural monuments (especially stelae) with portraits of dynastic lords and texts that recorded their biographies – appeared substantially later in the



Fig. 12.1. Map of the Maya world.

southeast. The appearance of the full array of Maya city-state institutions were definitely present at Copán early in the fifth century AD and at Quiriguá at about the same time. This was not an autochthonous development, however, but rather the result of intense interaction with Tikal and probably other city-states in the central Petén region.

Archaeological data are much fuller at Copán and there are more early texts, so the historical processes that underlay this development are significantly clearer there than elsewhere in the southeast. The appearance of lowland Maya city-state institutions at Copán was accompanied by styles of architecture, architectural decoration, and craft products that indicate intense interaction with the central Petén. Chemical analysis of skeletal remains indicates that some of the individuals interred in aristocratic tombs at Copán spent their early lives in the central Petén. Contemporary texts indicate that Yax K'uk' Mo', the earliest identifiable ruler of Copán and the occupant of one of the foreign tombs, had close connections with Tikal. The arrival of Yax K'uk' Mo' – subsequently regarded as the founder of Copán's royal dynasty – corresponds with the appearance of buildings, architectural decoration, mortuary practices, costume elements, pottery and other craft items that were imported from Teotihuacan, a powerful city in distant central Mexico, or locally produced in styles distinctive of that city (Sharer 2003; Bell *et al.* 2004; Stuart 2004; Martin and Grube 2008, 192–196; Price *et al.* 2008; 2010; 2014). This phenomenon was identified a few decades earlier at Tikal, when a foreign group with strong Teotihuacan ties deposed the reigning king and installed one of their own on the throne (Stuart 2000; Martin 2003; Martin and Grube 2008, 29–36). The newcomers at both Tikal and Copán strongly identified with Teotihuacan, though it is not certain how direct their connection with the central Mexican city was. The relationship might have been mediated by other Maya societies, but there was a definite foreign presence.

The successors of Yax K'uk' Mo' continued to celebrate these and other foreign connections until the collapse of the Copán dynasty in the early ninth century (Hudson *et al.* 2019). Some of them were born and spent their childhoods elsewhere (Price *et al.* 2008; 2010; 2014), and these foreign connections are an unmistakable aspect of their public personae that was reflected in monumental architecture and sculpture. The persistence of central Mexican stylistic features in architecture and sculpture after the decline of Teotihuacan itself may reflect new connections as well as references to historical ties with Teotihuacan and its sociopolitical capital. Copán's ruling elite clearly identified with other Maya societies and, at least indirectly, with distant Teotihuacan. These associations, and the legitimacy they conveyed, were a central part of Maya statecraft as it existed in the southeast.

At Quiriguá, Classic Maya city-state institutions appeared in much the same way (Sharer 1988;Looper 2003; Ashmore 2015). The Classic period dynasty was established early in the fifth century AD by the ruler nicknamed Tok Casper. His installation occurred only a few days after that of Yax K'uk' Mo' and probably took place under the authority of the new Copán lord. Architectural and sculptural styles place the accession in the context of the onset of intense new connections with central Petén cities, notably Tikal, where Maya city-state institutions had been established centuries earlier. Like Yax K'uk' Mo', Tok Casper was interred in a prominent location in the acropolis complex, but the platform covering his tomb was not the focus of grand memorial enlargement in subsequent centuries. This may be a reflection of Quiriguá's

subordinate status in relation to nearby Copán, which controlled the valuable Motagua trade route that ran through the site during the three centuries following Tok Casper's installation (Sharer and Traxler 2006).

Despite the appearance of the Maya city-state system, there was considerable cultural and linguistic diversity in the southeastern region. It is very likely that some of Quiriguá's aristocrats – like their Copán counterparts – were not local, though confirming evidence from bone chemistry is not available. However, the site's local population may or may not have been culturally and linguistically Maya before the intrusion of the central Petén state pattern. At Copán, it is clear that all segments of the population, aristocratic and non-noble alike, were ethnically varied and arguably spoke multiple dialects and languages. The populace was likely comparably diverse in the Quiriguá region, or nearly so. In both cases, this diversity had significant implications for the diversity of the script and imagery systems that developed within the city-states.

Script, imagery, and cultural-linguistic variability in the Southeast

A striking feature of Maya writing is the degree to which script and imagery are intertwined to form a single system of signification tailored to the cultural understandings of a particular audience. This is partly a response to the geographic and temporal scope of the societies in which the script was used, and to the cultural and linguistic variability within them. This diversity made orthographic flexibility necessary, since a rigid and singular system – and the cultural and linguistic literacies it requires – would have been inaccessible to many individuals in the Maya cultural sphere. By combining script with imagery, Maya scribes – and, by extension, the elite individuals who employed them – were able to present their narratives in ways accessible to local populations with variable native languages and degrees of literacy.

In the Maya script, graphemes had strong pictographic dimensions and imagery conveyed linguistic information. Both dimensions of the script worked in tandem as two dimensions of a single polygraphic system (Hudson and Henderson 2018b). This is arguably a result of the development of the script from pictorial elements through the association of increasingly stylised and conventionalised iconographic elements with stable, widely shared meanings. Maya writing was a thoroughly hybrid system in which script and imagery were used jointly to convey richer and more complex messages than would be possible with separate systems. Linguistic information is conveyed in greater detail in the script register while non-linguistic information is more salient in the imagery register, but each graphic dimension conveys both kinds of information. The graphemes of the Maya script have clear pictorial dimensions and most texts are thoroughly integrated with pictorial imagery. Graphemes appear in imagery as labels indicating the material or qualities of objects and the names and titles of persons. They also occur as costume elements, especially in headdresses; in this context they signify names, titles, and other aspects of individual identities.

Figures can also hold, sit or stand on, and otherwise interact with, graphemes that serve as stand-ins for objects that might have been represented pictorially. In these and other contexts, imagery refers not just to concepts in rebus fashion but also to specific lexical items and their semantic domains.

The obvious pictorial features of most graphemes convey a rich array of meanings that are read connotatively (*i.e.* through information suggested by a text and its graphic form but not linguistically stated). Compositions without graphemes as isolable elements in the imagery field can convey linguistic information through recognisable relationships between iconographic elements and particular graphemes as well as through graphic features of text presentation and spatial relations between imagery and graphemes. Script adapts to imagery and imagery incorporates script and linguistic elements; both processes enhance semantic richness in ways that increase readability for audiences with variable linguistic backgrounds and degrees of literacy. Additionally, the spatial arrangement of graphemes in relation to other graphemes can also be considered as a pictorial feature, and spatial disposition can carry semantic information.

During the Early Classic period (ca AD 250–600), when Classic Maya city-states and use of Maya scripts first appeared in the southeast, cultural variability in the southeastern region was extreme. Along with aristocrats from Guatemala's Petén region who probably spoke Ch'ol, Teotihuacanos and/or Teotihuacanisised Maya immigrants from the western Maya lowlands moved into the region and settled among local groups. Some of these local populations were culturally and linguistically Maya, some spoke non-Mayan languages but were arguably culturally Maya, and some spoke non-Mayan languages and adhered to generally non-Maya cultural traditions (Henderson and Hudson 2015). At Copán and Quiriguá and in their hinterlands, foreigners acquired status and political power and soon constituted an elite group; the appearance of archaeological markers of Classic Maya city-state organisation marks not only a major shift in political organisation but also the establishment of a foreign elite with ties to the Maya international elite culture. In the Copán region, which may previously have been largely or entirely non-Maya, the contrast in cultural practice and speech between the new aristocracy and the local population was more extreme than in other parts of the Maya world. Despite this discrepancy, the descendants of the elite celebrated their foreign heritages through the following centuries of the Classic period.

If language distributions in the centuries when lowland Maya city-states were emerging were similar – and it is not certain that they were – this would have amounted to a transfer of an organisational system developed in societies dominated by western Ch'olan (and possibly Yucatecan) speakers into an area occupied by speakers of Ch'orti', a related eastern Ch'olan language. Speakers of Lenca inhabited most of the region immediately to the south and east of Copán and may have occupied the Copán region alongside Ch'orti' speakers (Lehmann 1920, vol. 2, 636–641, 668–722). These differences mirrored variations in local sociocultural and political systems:

sites that were arguably affiliated with these groups but located outside of the Copán and Quiriguá spheres of influence prospered and complexified during this period but lacked features such as the centralised political control and rigid social stratification typical of settlements associated with the Maya international system.

The hypothesis that the Maya script recorded a single language everywhere it was used (Houston *et al.* 2000; Law and Stuart 2017) would alter the picture of linguistic variability substantially. In this view, the language of the script – called Classic Ch’olti’an – was ancestral to both Ch’olti’ and Ch’orti’ and with them formed an eastern Ch’olan group that was quite distinct from western Ch’olan. In addition to linguistic patterns that have been cited as inconsistent with this hypothesis (*e.g.*, Wichmann 2002; Mora-Marín 2003), it also seems at odds with the historical trajectories and cultural geography reflected in the archaeological record. How did Classic Ch’olti’an come to be a prestige language shared by ruling aristocracies and associated with state political and ceremonial activities? Classic Maya city-states and their accompanying elite culture appeared in the area historically occupied by the hypothetical descendants of Classic Ch’olti’an several centuries after they emerged in the central Petén region, well to the north. It is possible, as the proponents of this hypothesis speculate (Houston *et al.* 2000, 338), that Preclassic Ch’olti’an (the ancestor of Classic Ch’olti’an) was spoken in central Petén in the centuries when the Maya city-state pattern was crystallising, but there is no archaeological evidence to support this. Nor is there any archaeological evidence to indicate that the Classic period southeastern city-states and their nobilities had the kind of power or prestige that would motivate other aristocrats to adopt their language. In the absence of evidence of this sort, the Classic Ch’olti’an hypothesis remains plausible but not compelling.

Evidence for a widespread elite culture shared by aristocrats at most Classic period Maya city-states is clear, however (Hudson and Henderson 2015). The Maya script was part of that elite culture, along with a host of other cultural features – including monumental architecture and public art – that functioned to maintain, enhance, and legitimise the status and political power of the aristocracy. Even if the script originated along with the rest of the city-state institutions within an eastern Ch’olan distribution that was much more extensive than that documented historically, there would have been substantial differences between the language of the script and the eastern Ch’olan variety spoken in the southeast by the time these institutions were introduced at Quiriguá and Copán.

In any event, the cultural and linguistic diversity in the southeast, both within local populations and among members of the foreign elite, was substantial and likely greater than in most other regions of the Maya lowlands (Urban and Schortman 1986; Robinson 1987; Boone and Willey 1988). This diversity would have been a major contributor to the heavy reliance of regional scribes on imagery in conjunction with texts, since knowledge of the orthography’s linguistic and cultural foundations was likely restricted to those with access to the international elite culture and literacy was generally limited to members of the elite. The concurrent use of script and

imagery would have significantly increased the audience capable of ‘reading’ the resulting texts and being influenced by their intended messages. The rich history of texts and imagery in the southeast thus offers an ideal context in which to develop an archaeology of Maya writing.

Copán and Quiriguá: a case-study

Texts at Copán and Quiriguá, near the southeastern edge of the Maya world, provide an ideal case study for exploring the relationship between cultural variability and textual reliance on both script and imagery. The corpus of texts produced in these cities is extensive and well-documented; it is not possible to do their distinctive features full justice in this context (see Newsome 2001;Looper 2003; Copán Mosaics Project 1985–1994 for more extensive descriptions and interpretations). A variety of unusual features distinguish hieroglyphic texts and associated political art at both Copán and Quiriguá. Some of these are entirely stylistic, including the use of very deep relief carving that approaches three-dimensionality and reading orders that depart from normal lowland Maya practice at Copán. Some – such as the division of text into short segments in panels distributed over the bodies of fantastic zoomorphic creatures – may employ imagery to enrich meaning in ways that have not yet been analysed. Others seem to be intended to make the messages conveyed by monuments and their hieroglyphic texts more easily understandable for segments of the population that were not fully literate. Sometimes this involved creative use of imagery in ways that were integral to the script itself; examples include the use of full-figure pictorial glyphs and text arrangements that create imagery. Syntax that was markedly less formal and stylised – and thus more comprehensible to a broader constituency – was also used to increase readability.

The text on Stela 8 (Lounsbury 1990) – a monument celebrating the accession of Yax Pasaj, the sixteenth ruler in the Copán dynasty founded by Yax K’uk’ Mo’ – is unusual in several respects. In the first place, the reading order proceeds across all four columns instead of by pairs of columns as in almost all other inscriptions; the same atypical reading order is found on Stela A. The text opens with a very unusual calendar statement (Fig. 12.2). Instead of a typical Long Count that specifies the date directly or a Calendar Round date whose position within the Long Count was determined by context, the Stela 8 scribe recorded the date indirectly with a highly unusual variant of a Distance Number that specifies the time remaining until the future end of the tenth (current) b’aktun cycle. The two glyphs at the beginning of the text (A1a–A1b) represent the Distance Number (2 k’atuns, 5 tuns, no winal, no k’ins) that connects the date to the end of the tenth b’aktun. The Calendar Round position 7 Ajaw 18 Zip (B1a–B1b) marks the final day of the tenth b’aktun, which is specified by the preceding glyph (A2a). Epigraphic convention makes this complex representation a bit clearer: 10.0.0.0 (the end of the tenth b’aktun cycle) minus 2.5.0.0 (the specified Distance Number) indicates a Long Count position of 9.17.15.0.0. This corresponds to 7 Ajaw in the 260-day Ritual Almanac, 18 Zip in the Solar Year, and to 4 November AD 785 in the Gregorian calendar.

The distance number found in the stela text would normally be rendered as 0 k'ins, 0 winals, 5 tuns, and 2 k'atuns, but here the initial glyphs record '5 tuns, third katun'. This corresponds to a usage that is common in colloquial conversation about numbers in most or all Mayan languages. It specifies 5 tuns in the third katun, or two katuns completed and five in the next. This way of specifying the date – with an oddly rendered Distance Number, unusually placed at the beginning of the text before the date to which it is to be counted, and without affixes specifying whether it is earlier or later than its anchor date – proved to be thoroughly confusing to epigraphers until Lounsbury made sense of it. The logic of specifying the date in relation to a round period ending date in the future might not have been so puzzling in eighth century Copán, however: Altar S also includes a calendar statement defining a date in relation to the end of the tenth baktun, and the text on the 'Reviewing Stand' on the south side of Temple 11 anchors a Calendar Round date to a future k'atun end (Schele *et al.* 1989, 5, fig. 3). These uses of colloquial syntax arguably made the text more transparent to inexpert readers than a standard Long Count date, which such readers might well have found impossibly esoteric.

The same rendering of a distance number, though without the explicit marking of the ordinal number attached to the katun, occurs in a calendar statement in a text at Temple 11 in the city's elevated palace complex (Schele *et al.* 1989, 6). The same text also includes two examples of an unusual way to render numerals (Fig. 12.3, B3, C6). 'Eighteen' and 'nineteen' are almost always written entirely with bars (meaning a value 5) and dots (meaning a value of 1) or with portrait variants that combine the fleshless jaw of the death head portrait for 10 with the facial features of the portraits for 8 and 9. Instead, the Temple 11 scribe combined the easily recognisable skull glyph for 10 with

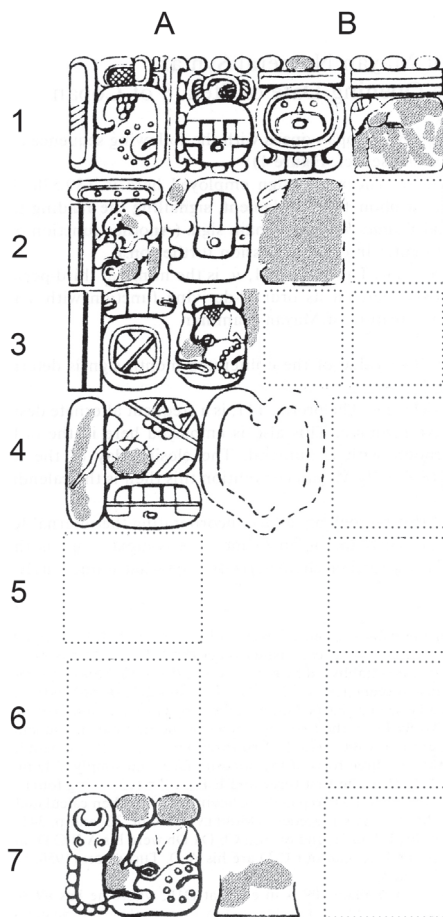


Fig. 12.2. Copán, Stela 8, 'front' side (beginning of the hieroglyphic text). After Maudslay (1889, pl. 109); Morley (1920, 341, pl. 32); Lounsbury (1990, fig. 1).

the bar and dot notation for 8 and 9 (Schele *et al.* 1989, 7–9), thereby enhancing interpretability for non-literate and semi-literate readers without abandoning the elegant portrait number variants used in many elaborated texts.

Copán's texts exhibit a high frequency of unusual numerical calendrical statements (Schele *et al.* 1989). One of the commonest complements of Long Count dates is the 'G glyph', one of a set of nine names that specifies a deity who is apparently associated with the nighttime hours on that day. In general, this is a standard aspect of the calendar used throughout the Maya lowlands: with relatively few exceptions, a given Long Count position was associated with the same G glyph everywhere. Copán's texts specify 'erroneous' G glyphs with striking frequency. Calendar

statements at both Copán and Quiriguá sometimes present the Solar Year (haab') day and the Ritual Almanac (tzolk'in) day in that order – the reverse of the normal order found in the overwhelming majority of Classic period time statements. Truncated Long Count dates and Distance Numbers with descending values that reverse the normal order are also highly unusual. These 'aberrant' practices may reflect cultural variability in a multi-ethnic setting, syntactic practice different from the norm elsewhere in the Maya world, or a different linguistic substrate; they may also be strategies for enhancing text interpretability through mechanisms not yet fully understood. In any case, they are far too common to be easily attributable to scribal error.

Unusual syntactic and grammatical constructions also occur frequently in texts at Copán, especially those composed in the early decades of the dynasty established by Yax K'uk' Mo' (Stuart 2004). They contain unique examples of first and second person constructions that are very hard to interpret as well as several cases of progressive and future verbal constructions that are very unusual in comparison with texts elsewhere. These might be, as Law (2014) suggests, a reflection of 'innovative' approaches to texts on the part of Copán's scribes that were comparable to the flamboyant bent of the city's sculptors. Two texts from the time of the dynastic founder and his successor contain syntactically unusual expressions in which the initial time reference comes between the first and second clauses, violating the standard preference for time phrases to occur

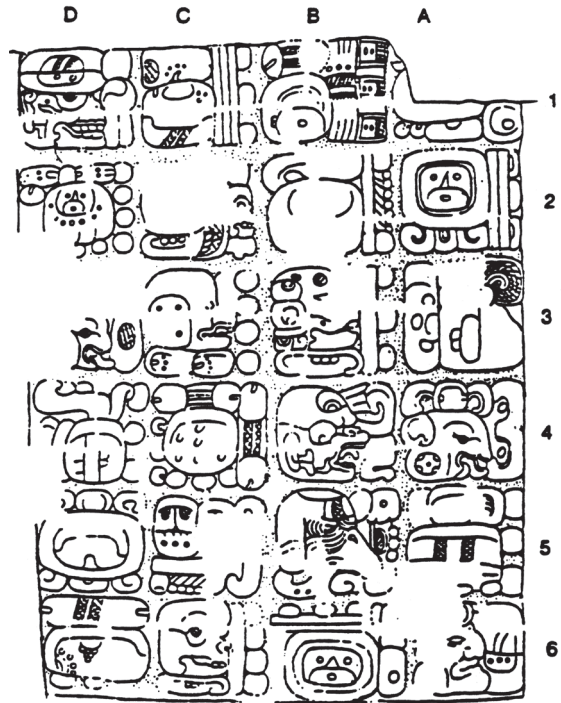


Fig. 12.3. Copán, Temple 11, South door - east panel. After Schele *et al.* 1989, fig. 6.

at the beginning of each clause. Like the unusual time syntax on Stela 8, these patterns might reflect unrecognised colloquial phrasing that would have been familiar and accessible to people who were not fully literate; they might also reflect undocumented syntactic preferences of non-Mayan languages spoken by a segment of the texts' intended audience.

Copán's scribes and sculptors were particularly innovative in deploying script and imagery complementarity to enhance the comprehensibility of texts for audiences with varied commands of the script and perhaps of the 'cultural grammar' of the international Maya elite. In addition to the pictographic dimensions of individual graphemes, they were particularly creative in taking advantage of the spatial positioning of graphemes to convey meaning. For example, one of the ways of writing 'dawn' – PAS – that was particularly popular at Copán but not common elsewhere incorporates an interesting complementarity of text and image (Fig. 12.4). In this configuration, the graphemes for K'IN, 'sun, day', KAB', 'earth', and CHAN, 'sky' are arranged so that the sign for 'sun' appears between the superimposed signs for 'earth' and 'sky' as though it were emerging. This placement of the graphemes is a visual representation of the process involved in dawning, when the sun rises from the place where the earth and the sky meet. The iconographic dimension is more salient in this composition than its linguistic counterpart. The linguistic values normally attached to the graphemes do not relate to words meaning 'dawn' but rather represent aspects of the dawn concept and process; they function as ideograms rather than as logograms. This way of writing 'dawn' would certainly have been far more interpretable by readers not well versed in the script, and probably by those who were not fluent speakers of a Mayan language as well. This version of 'dawn' also occurs in texts at Piedras Negras to the northwest on the Río Usumacinta and Chichén Itzá in northern Yucatan; in the latter case, at least, it could arguably relate to local ethnic and linguistic variability.

Compositions associated with Copán's Temple 11 also reflect the importance of pictographic aspects of graphemes and their spatial arrangements. Texts were carved on both walls of the corridors converging on the central space of the final remodeling of the temple, recording the accession of Yax Pasaj – the sixteenth ruler in the dynastic succession and the one who commissioned the structure – along with its dedication rituals (Schele *et al.* 1989). In each corridor, the head graphemes on both walls face in the same direction: toward the doorway leading to the building's exterior. To achieve this, the scribe had to carve the signs on one wall of each corridor as mirror-images of their normal forms. This affects the appearance of asymmetrical signs, especially those that have the form of profile human heads. In virtually all other contexts, signs

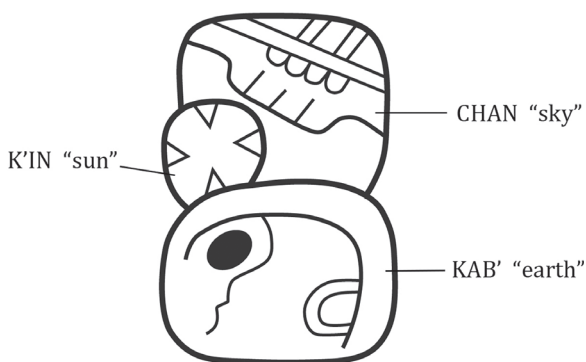


Fig. 12.4. Graphemes denoting PAS, 'dawn'.

that take the form of heads face to the reader's left; in the mirrored texts at Copán head-based graphemes face to the viewer's right (Fig. 12.3, B3, A4, B4, B5, A6, D1, C3, D3, C6). The linguistic component of the text is inextricably intertwined with its pictorial dimensions and participates in the adaptation of the imagery to the building's architectural form. Visually, the texts appear to emanate from within the temple. Those who were privileged to walk the corridors and well-versed in the script might well have extended that interpretation to the account of Yax Pasaj's inauguration and the other meanings conveyed by the texts.

The western façade of the mid-fifth-century building that covered the platform containing the tomb of Yax K'uk' Mo' (Bell *et al.* 2004, 136–143) was decorated with painted stucco reliefs representing a pair of birds with their necks intertwined. One is red and has the head of a macaw (Mo'); the other is green with the topknot of a quetzal (K'uk'). Each bird has the glyph for Yax on its head and a head representing the sun god appears in the beak of each. When considered as a whole, the composition – at once figural and glyphic – represents the name and title K'inich Yax K'uk' Mo', the common designation for Copán's founder. Additionally, each pair of birds stands on a hieroglyphic text: 9 Imix on the south side of the stair and 7 Kan on the north. These glyphs, which may refer to supernatural places, appear beneath the portraits of Yax K'uk' Mo' and Ruler 2 on the capstone of the Motmot tomb at the base of the original building in the sequence that culminated in Structure 10L-26.

A particularly interesting example of the complementarity of image and script at Copán was carved on the interior walls of Structure 10L-26-1 (Stuart 2005), the final construction in a sequence of buildings that was enlarged, remodeled, and refurbished from the time of the dynastic founding until the failure of the Copán state. The glyphs that compose this text are not the normal stylised signs and profile heads but rather full human and zoomorphic figures in which the facial features and costume elements convey the meaning of the sign. Full-figure glyphs are rare in Maya texts but occur with unusual frequency at Copán and Quiriguá, where they can be interpreted as a means of facilitating comprehension among those with a limited understanding of the script and its underlying cultural grammar. The 10L-26-1 text is unique in that it contains two parallel texts composed in paired columns. One consists of 'normal' Maya style full-figure glyphs; the other contains signs with facial features and elements of dress relating to Teotihuacan. The differences between the texts go beyond the stylistic and signify more than a generic reference to past connections with central Mexico. The Teotihuacan elements have a semantic function, asserting equivalences between specific Maya and Teotihuacan supernaturals. The text suggests that facial features usually characterised as identifying a central Mexican being often identified with the Aztec rain god Tlaloc – including goggle eyes, a prominent handle-bar-moustache-like feature on the upper lip, and a V and trapezoid design often interpreted as a central Mexican year sign – are not associated with a single deity such as Chaak, a Maya rain god cognate with Tlaloc. Instead, it indicates that these features are also associated with K'awiil, a deity connected with royalty and legitimate authority, and also potentially with other supernatural beings.

The arrangement of graphemes in relation to elements of imagery and within the conceptual space defined by imagery can also convey important semantic and syntactic information. This is especially clear where the script is arranged to form an image and the two dimensions of the Maya polygraphic system coalesce to create a unified semantics.

The combination of elaborate imagery with unusual and complex script layouts on Copán's stelae provide striking illustrations of the hybrid nature of Maya writing. Stela J, located on the eastern side of the city's main plaza, illustrates this interplay between imagery and script most fully. The monument was dedicated in AD 702 by Waxaklajuun Ub'aah K'awiil (nicknamed '18 Rabbit' by early epigraphers) (Schele and Mathews 1998, 133–174; Martin and Grube 2008, 214–225). Like most of his later monuments, Stela J emphasises his position as the thirteenth in a dynastic succession from Yax K'uk' Mo', the city's fifth century founder figure. Unlike them, however, it does not bear his portrait. Script blocks in the standard paired-column format occupy the narrow sides of the stela without accompanying imagery, but the broad east and west faces are much more unusual (Hudson and Henderson 2015). The long script segment on the eastern face of the monument, oriented away from the plaza and towards the residential zone of Las Sepulturas, has a unique layout: the relief carving represents the constituent graphemes as

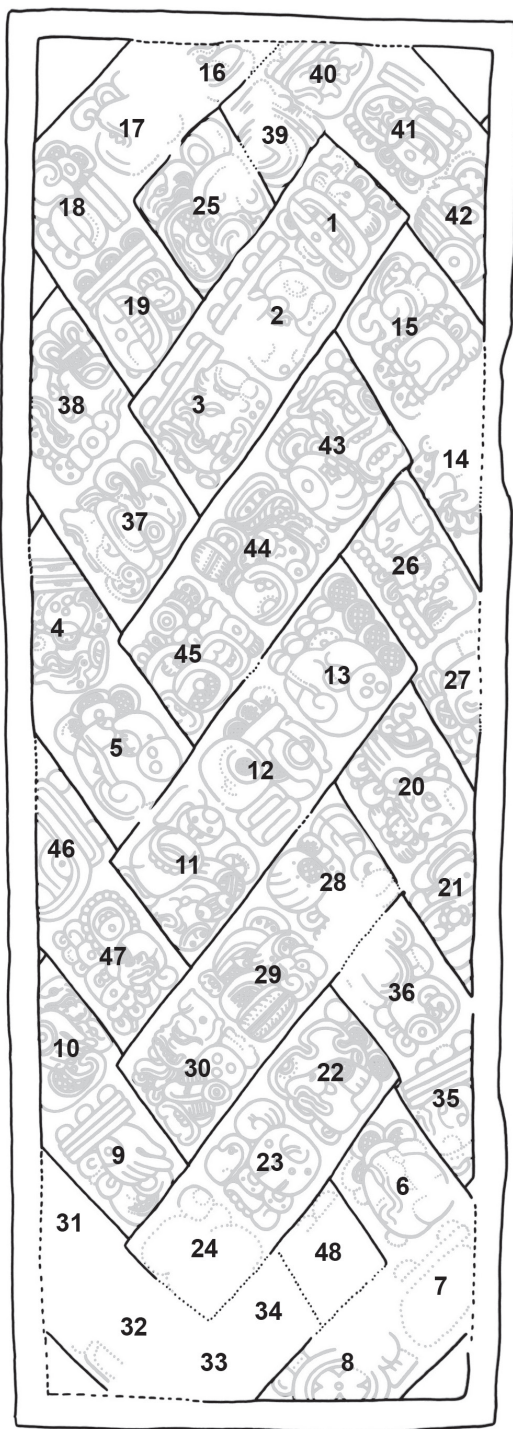


Fig. 12.5. Copán, Stela J, east face.

though they had been drawn on the strips of a mat. The west face of the stela also has a highly unusual composition, with graphemes arranged to frame a stylised face.

The long script string on the eastern side of the stela (Fig. 12.5), which begins near the upper right-hand corner of the stela, has four distinct sections. The first records the date on which the monument was dedicated – 9.13.10.0.0 in the Maya Long Count, equivalent to 24 January 702 AD – and the ritual activity performed by Waxaklajuun Ub'aah K'awiil to celebrate the midpoint of K'atun 13 (*i.e.*, the day that fell exactly midway between 9.13.0.0.0 and 9.14.0.0.0). The text then refers to an important round date – 9.0.0.0.0, the turn of the B'ak'tun on 9 December AD 435 – nearly three centuries in the past and to the taking of office by the dynastic founder Yax K'uk' Mo'. The third section moves forward in time to record the accession on 9.9.14.17.5 (6 February AD 628) of Waxaklajuun Ub'aah K'awiil's predecessor on the throne. The final passage refers to Waxaklajuun Ub'aah K'awiil's own accession on 9.13.3.6.8 (7 July AD 695). The thrust of this script string is to situate Waxaklajuun Ub'aah K'awiil historically in a way that confers political advantage, connecting his accession to that of his immediate predecessor and, even more importantly, placing him in the context of Yax K'uk' Mo's seating in office and to the political activities attending the dynastic founding in the distant past.

The mat imagery formed by the layout of the text on the eastern face was an equally important component of the monument's message. Representations of mats were common in Mesoamerica and conveyed a range of meanings pertinent to constructions of legitimacy and power (Hudson and Henderson 2015). Among the Maya, some versions of this motif appeared as knots signifying ancestors or ancestral connections (see Wagner 2005) while others – including the example on Stela J – referenced mechanisms of legitimation beyond ancestral ties. This more general significance was salient at every scale, from kingship to family head, and would have been known to all inhabitants of the region. In the case of Stela J, the layout of the text does not resemble a knot but rather represents a mat and its more general connotations. The use of this element to structure the face of a royal stela directed toward the end of the formal causeway by which people from elite residential zones – as well as the rest of the eastern valley and more distant areas – would have entered the civic centre would have facilitated reading of the monument even among those who might not have been literate in the script.

The graphemes on the west face are more difficult to interpret. In addition to what seems to be an unusual syntax, the text's layout – with short segments laid out to frame a stylised face (Fig. 12.6) – creates uncertainty about the reading order. The subject matter is distinct from that on the east face and deals almost exclusively with deities and with mythic times and places. In this way it relates Waxaklajuun Ub'aah K'awiil, who presided over K'atun 9.13.0.0.0, to ancestral deities, to the mythic places they inhabited, and to the legitimacy that such associations provide.

The structure and layout of the script strings on the west face may have allowed for alternative reading orders of the constituent segments. One function of the

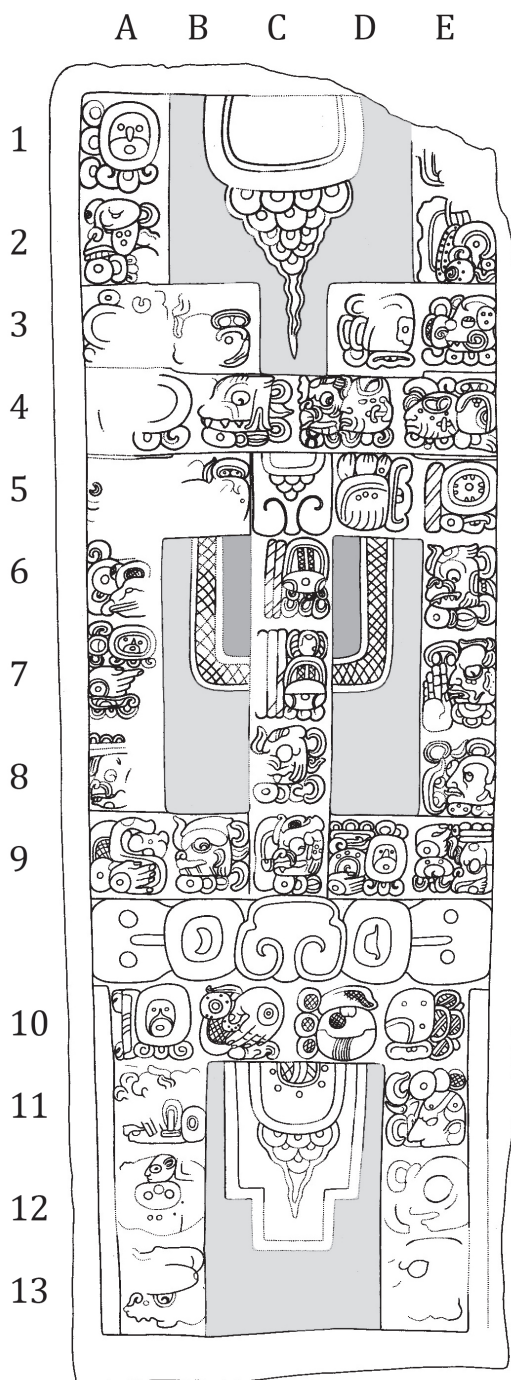


Fig. 12.6. Copán, Stela J, west face.

unusual organisation may have been to free readers from the rigid order prescribed in conventional Maya script strings in ways that enhanced accessibility for non-literate or semi-literate readers, allowed for a more fluid or contextualised semantics, or both. The layout of the script in relation to the imagery on the west face also encodes critical components of the message of Stela J. The positioning of the graphemes creates the image of a face, strikingly similar to a mask composition on the west (rear) face of Stela B, another monument commissioned by Waxaklajuun Ub'aah K'awiil. Maya cosmology – like belief systems elsewhere in Mesoamerica – held that all things were animate, so they could be given faces. Stela J itself was probably conceptualised as a living thing.

The placement of the pupils in the eyes may be a reference to the sun god, who was sometimes depicted as cross-eyed. The T-shaped element in the mouth may indicate a filed tooth of the kind that characterise depictions of many Maya deities. The TUN sign on the wrinkled brow just above the eyes denotes 'stone', suggesting that the face is that of an animate mountain, *witz*. The inverted triangle of scallops in the mouth and in the cleft at the top of the head are likely variants of the TUN sign and reinforce the cave reading. The wavy lines that enclose and descend from the TUN variants resemble depictions of liquids in Maya imagery. Dripping stones, a reference to stalactites, would be entirely appropriate in the context

of a representation of a cave. A dripping tooth would be particularly evocative. In Mesoamerica, caves are widely conceptualised as the dwelling places of the ancestors (Henderson and Hudson 2016), so a cave reference in the imagery would echo the emphasis on ancestors – both human and divine – in the script strings. Caves are also closely associated with springs and are often considered to be sources of rain and water in general. The juxtaposition of *witz*, ‘mountain’ and water symbols also strongly suggests another fundamental Mesoamerican concept: the water-mountain, a pan-Mesoamerican metaphor associated with the city-state, its sovereignty, and the legitimacy of its ruler’s authority.

The imagery of Stela J combines with the script to convey extraordinarily rich and complex meanings. The script has a clear emphasis on the dynastic and genealogical sources of Waxaklajuun Ub’aah K’awiil’s authority: his connection to his predecessor and to Yax K’uk’ Mo’, the dynastic founder. It is also inextricably intertwined with the image of the mat, embodying legitimate authority; with the cave, the place of origin and abode of the ancestors; and with the water-mountain, embodying the sovereignty of the city-state. The mat, a pan-Mesoamerican symbol of power and legitimate authority, faces the causeway that provides access to the city’s civic core from the valley to the east and more distant regions beyond. The basic message – that Copán was a place of power and that Waxaklajuun Ub’aah K’awiil held legitimate authority there – would have been perfectly intelligible to all visitors, whatever their degree of literacy or familiarity with Maya city-state culture. It may be that a substantial fraction of the visitors arriving on the Sepulturas causeway were not culturally or linguistically Maya. The interplay of text and imagery on Stela J made it an embodiment of the sovereignty of the city-state and of the legitimacy of Waxaklajuun Ub’aah K’awiil’s authority and guaranteed that all individuals entering the city – regardless of their cultural and linguistic background – received the intended message.

This kind of concurrent use of multiple registers or channels within a single textual unit creates necessarily a distinctive syntax. Reliance on grapheme strings in script blocks constrains messages in terms of ordinary syntax in a linear way analogous to the structure found in spoken language. The coordinated use of graphemes and imagery permits the construction of very complex messages that can simultaneously take advantage of syntactic understandings and convey meanings in ways that are freed from linear constraints and thus capable of allowing for simultaneous alternatives, none of which must be signaled as primary. Copán’s Stela J reflects this syntactic flexibility very clearly. Specific references in imagery to Copán’s status as a sovereign polity and to the legitimacy of its ruler’s authority communicate a critical dimension of the message: the reader is entering a particular political domain with a legitimate power structure.

This semantics is not expressed in any explicit way in the script strings, which deal with accession of Waxaklajuun Ub’aah K’awiil, his connection to the dynastic founder, and his links with the cults of ancestral deities. Nothing in the hybrid composition prescribes a particular ordering of elements in the imagery in relation to those in the

script strings. Imagery and graphemes placed in the spaces it creates are liberated from the linearity of grapheme strings, providing a syntactic freedom that could be quite useful. This is particularly beneficial for the expression of relationships and semantic associations, which could be indicated more flexibly and without necessarily implying sequence. For example, the legitimate authority referenced by the mat on the east face of Stela J can be read as characterising Waxaklajuun Ub'aah K'awiil, or Yax K'uk' Mo', or the polity they ruled, or all of these. Conveying these alternative readings under ordinary linear constraints of syntax would be significantly more complex and would render key elements of the message more opaque to readers less conversant with the script.

Stela H at Quiriguá is comparable to Copán's Stela J but more poorly understood. Similarly located at one of the principal entry points to the central core of public architecture, one face of this monument bore a hieroglyphic text laid out in a simpler version of the mat design. It was commissioned by K'ak' Tiliw Chan Yopaat, who acceded to the throne under the authority of Waxaklajuun Ub'aah K'awiil; he subsequently rebelled against Copán's hegemony and claimed to have killed his erstwhile sponsor. Like the compositions found on Stela J, the use of script to create the image of a mat referenced concepts of historical and political legitimation and authority. This message would have been clear to all individuals who entered the city's core, regardless of their level of literacy. It would also have been clear to foreign city states, their envoys, and their rulers; it is at least possible that other members of international elite culture were one of the text's intended audiences and that their diverse linguistic and cultural backgrounds contributed to the joint use of script and imagery in the construction of this message.

Discussion

Quiriguá and Copán were situated near the southeastern limits of the distribution of Ch'olan (and Mayan) languages. After the Spanish invasion, speakers of Lenca, an extinct non-Mayan language, certainly occupied the territory south and east of Copan (Lehmann 1920, vol. 2, 636–641, 668–722) and may have made up a significant fraction of the population of the Copán Valley itself. The archaeological record does not suggest large-scale population movements in the region, so the conservative working hypothesis is that the same was true in precolumbian times; this is certainly consistent with the distribution of elements of ceramic decoration in the Classic period. Other non-Mayan languages may well have been spoken in the region as well (see Hudson and Henderson 2018a for an extended discussion of these issues). Yax K'uk' Mo', Copán's dynastic founder, came from the central Petén region, far to the north. Like the new political institutions over which he presided, he was culturally Maya but had distinct Teotihuacan elements, and he spoke one of the languages of the Ch'olan subfamily. Evidence from bone chemistry analyses demonstrates that the woman in the richly stocked tomb chamber in the enlarged platform that

covered Yax K'uk' Mo's burial – likely his wife – was of local origin (Price *et al.* 2010, 24, 29–30). Her ethnicity – whether Maya or not – was undoubtedly different from that of the dynastic founder, and her language probably was as well. It is thus very likely that some members of the royal court were always ethnically and linguistically non-Maya. It is unlikely that most aristocrats in any Maya city-state were fully literate; at Copán and Quiriguá, where some members of the court were also not fully versed in the international elite culture and likely not fluent in the Mayan language of the hieroglyphic script, there would have been added incentive to adapt the script and/or to rely more on complementary imagery.

Some of the unusual features of the texts of Copán and Quiriguá can be found in other Maya city-states. In some cases it is possible to suggest why a similar rationale may account for this: the popularity of the iconographic way of writing 'dawn' at Chichén Itzá might have to do with a high degree of ethnic and linguistic variability in north-central Yucatan in the Terminal Classic (ca AD 800–1050) period. In other cases there is no particular basis for such inferences, but neither is there reason to interpret the occurrence of these features elsewhere as an argument against interpreting the distinctive features of texts in the southeast as a response to linguistic variability.

Conclusions

Hieroglyphic texts at Copán and Quiriguá share a variety of unusual features. Full-figure glyphs and heavy reliance on imagery in overall monument compositions were likely adaptations of the script and of conventions of composition that would have enhanced the intelligibility of texts for audiences not well versed in the nuances of Maya writing. Others are harder to interpret in this way. Unusual phrasings of calendar dates and departures from normal syntax in time statements might reflect unrecognised colloquial phrasing that would have been widely familiar among people who were not fully literate; they might also reflect undocumented syntactic preferences from languages spoken by a segment of the texts' intended audiences. Features like the high frequency of 'erroneous' Lord of the Night statements could reflect cultural differences or scribal errors. All of these possible interpretations imply intended audiences that were culturally and linguistically diverse, and all suggest the importance of considering the social and cultural contexts of writing.

Chapter 13

Writing and elite status in the Bronze Age Aegean

Sarah Finlayson

Introduction

Writing, both ancient and modern, is a social thing; scripts flourish and wither in social contexts, their meanings and performative actions far exceeding their content, as writing shapes and is shaped by the complex structure of society, defining the place of those who can or cannot use it (Houston 2012, xiv; Veldhuis 2012, 4). The corpora of written materials from the Bronze Age Aegean are embarrassingly small by comparison with contemporary Egypt and Mesopotamia. Nevertheless, these rather mundane clay documents are hugely important for our understanding of the social, political and economic landscapes of this period. Our reconstructions of where writing was made and by whom have given rise to the idea that the practice of writing could have been used as one component in the construction of elite identities and status; it features, for example, in discussions of the significance of the geographical distribution of the Cretan Hieroglyphic and Linear A scripts in the First Palace period on Crete (Schoep 2006), and in analyses of the possible motivations for the development of Linear B and how this might have played a part in the reshaping of a palatial elite identity (Bennet 2008). In this paper, I explore how this might have worked in practice – given what we know about who was making and consuming writing during this period and how they could have conceptualised what they were doing – to unpick the processes that might have led to writing practices being imbued with this kind of significance.

The sociopolitical landscape of writing practices in the Bronze Age Aegean

The Bronze Age started around 3100 BC in the Aegean, as the scattered Neolithic subsistence-farming communities gradually expanded into something more complex,

small-scale chiefdoms perhaps (a chart of relative and absolute chronology is given in Table 13.1, with a map of the region and of the key sites in Figures 13.1 and 13.2; our models for understanding sociopolitical and economic developments during the Bronze Age have changed considerably over the last 20 or so years, but Parkinson and Galaty (2007), Pullen (2008), Wilson 2008 and Nakassis *et al.* (2010) all provide excellent reviews of both the evidence, particularly for the crucial Early Bronze Age, and the theoretical models). During this period, there is good evidence for the domestic use of seals and sealings on Crete and the mainland, and at sites like Lerna this took place at quite a large scale, presumably community-wide. A wave of destructions at the end of the Early Bronze Age on mainland Greece and the Cyclades brought this early seal use to a halt, but on Crete it intensified in the Late Prepalatial and into the First Palace period (roughly 1900–1700 BC), when two scripts, Cretan Hieroglyphic and Linear A, were used alongside seals in writing-assisted administration. Following a series of destruction events, Cretan Hieroglyphic seems to have gone out of use at some point during the Second Palace period (ca 1700–1425 BC), and Linear A usage spread widely both within and beyond Crete, in both palatial and non-palatial elite contexts (for simplicity, I am using throughout the terms elite and non-elite, but elite status was never really a stark binary, being rather more of a messy and shifting spectrum,



Fig. 13.1. Map of key sites mentioned in the text.

Table 13.1. Relative and absolute chronology, adapted from Shelmerdine (2008, 4) and following the 'low' chronology

	Date BC	Crete	Mainland	Period
Early Bronze Age	3100	Early Minoan I	Early Helladic I	Prepalatial period
	2700	Early Minoan IIA	Early Helladic IIA	
	2400	Early Minoan IIB	Early Helladic IIB	
	2200	Early Minoan III	Early Helladic III	
Middle Bronze Age	2000	Middle Minoan IA	Middle Helladic I	First Palace period
	1900	Middle Minoan IB	Middle Helladic II	
	1800	Middle Minoan IIA Middle Minoan IIB		
	1700	Middle Minoan III	Middle Helladic III	Second Palace period
Late Bronze Age	1600	Late Minoan IA	Late Helladic I	Third Palace or Mycenaean period
	1500	Late Minoan IB	Late Helladic IIA	
		Late Minoan II	Late Helladic IIB	
	1400	Late Minoan IIIA1	Late Helladic IIIA1	
		Late Minoan IIIA2	Late Helladic IIIA2	
	1300	Late Minoan IIIB	Late Helladic IIIB1	
Late Helladic IIIB2				
1200	Late Minoan IIIC	Late Helladic IIIC	Postpalatial period	

something to be claimed or contested). Life went on with further destruction horizons into the Late Bronze Age, when small states centred on palaces were now found on mainland Greece as well, and a third script, Linear B, was used initially at Knossos on Crete and then soon after at mainland sites. Linear B records an early form of Greek and the script itself was certainly developed out of the Linear A script, with perhaps some parallel influence from Cretan Hieroglyphic on the administrative system and its document shapes (the evidence is slim and the chronology tricky here, but the possibility that Cretan Hieroglyphic was in some sense also a parent of Linear B is reviewed in Hallager (1997–1998, 2011), Tomas (2010; 2017b) and Petrakis (2017) – see further discussion below). There were a final series of destructions around 1100 BC, and the Bronze Age came to a crashing end, taking writing with it and ushering in a period of illiteracy.

For each script, the primary material used was raw unbaked clay, incised or stamped; in the Second Palace period, there is some evidence for the use of parchment with the flat-based nodule sealings showing the imprints of parchment documents on their undersides (Pini 1983, 560–561), and also a small body of non-administrative writing-bearing objects such as stone vessels and jewellery. The clay documents were all preserved entirely by accident when the buildings containing them were

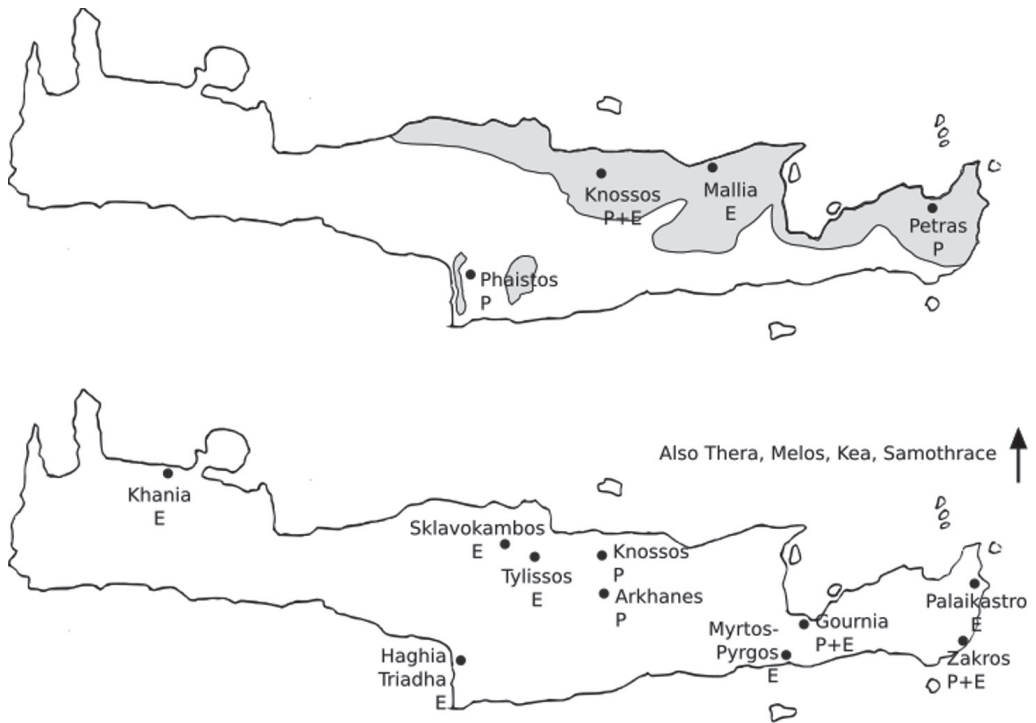


Fig. 13.2. Schematic representations of the distribution of Cretan Hieroglyphic and Linear A documents. The upper map shows the First Palace period, with Cretan Hieroglyphic (and other seal/symbol) usage in the shaded areas, and Linear A at Phaistos. The lower map shows the massive expansion of Linear A usage across Crete and beyond. P = palace, E = elite building. Data drawn from Olivier and Godart (1996); Poursat and Papatsarouha (2000) and Schoep (2002a).

burnt down so – and I cannot stress this point enough – what we have are a series of random snippets of writing practices at particular moments, which must be pieced together in order to reconstruct writing and administrative practices (Bennet 2008, 6). Because Cretan Hieroglyphic and Linear A remain undeciphered, and the numbers of documents so very small, we are heavily reliant instead on contextual and material information for understanding what the documents were doing; the corollary is that, because Linear B is readable, with a significantly larger corpus of documents, there is always the temptation both for teleology and for projecting back clearer aspects of Linear B practice onto the much murkier earlier periods.

Three Aegean case studies

There are three particular points or sets of evidence for which the link between writing and elite status has been made; as will be seen, there are common threads

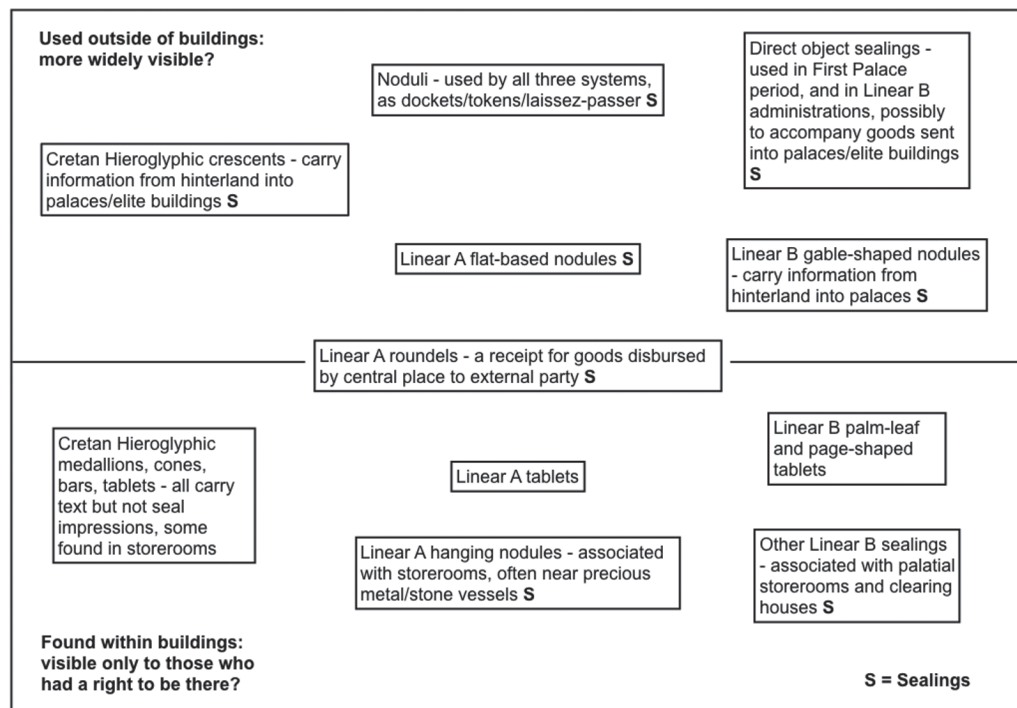


Fig. 13.3. Schematic representation of likely visibility of different kinds of Cretan Hieroglyphic, Linear A and Linear B document types.

running through all three. The first is the use of a particular script as part of the self-identification of a group, as seen during the First and Second Palace periods with Cretan Hieroglyphic and Linear A, and also in the Late Bronze Age with the development of Linear B. The distribution of Cretan Hieroglyphic and proto-Linear A documents across Crete in the First Palace period is very striking (for which, see Fig. 13.3); Cretan Hieroglyphic documents and seals are found at sites across the north and east of the island, clustering particularly around Knossos, Malia and Petras, and in a small set of sites around Phaistos in the south, while nothing has been found in the western half of Crete, and Linear A is attested solely at Phaistos (Schoep 1999, 265; Krzyszkowska 2005, 96). Moving into the Second Palace period, Cretan Hieroglyphic seems to have largely disappeared from administrative use after the end of Middle Minoan III – although the chronology of the Middle Minoan III/Late Minoan I transition, and the dating of the Linear A inscriptions, is not fine enough to pinpoint when exactly (Schoep 2007, 59) – and Linear A usage spread dramatically. Even allowing that the tricky Hieroglyphic Deposit at Knossos might be dated to Middle Minoan III/Late Minoan I (Pini 2002, 6–8, but one must acknowledge that the Deposit was not closed and the sealings it contained may have accumulated over some years (Krzyszkowska 2005,

112–116)), Cretan Hieroglyphic does seem to have been primarily a phenomenon of the First Palace period (Olivier and Godart 1996, 32); the Cretan Hieroglyphic medallion found in a Late Minoan IB layer at Petras could represent some late usage, but the excavators are careful to point out that it is an isolated find and there is no definite proof that it is contemporary with its find-spot (Tsipopoulou and Hallager 1996, 42). All the Linear A documents from Knossos, Malia, Thera and the inscribed *nodulus* from Phaistos date to Middle Minoan III or Late Minoan IA at the latest, and by the Late Minoan IB destructions Linear A documents were distributed widely across central and eastern Crete, at Khania in the west, and at various sites in the Cyclades, and in a range of contexts, including what could be considered non-palatial or private elite dwellings (Schoep 2002a, 18–19).

The relationship between the Cretan Hieroglyphic and Linear scripts is poorly understood – do they represent two different languages or two different administrative systems, and why do they appear together in deposits at Knossos and Malia?¹ The geographic correlation between Cretan Hieroglyphic usage and a range of other practices, such as impressing seals on pottery and loom weights, as well as the distinctive ‘Malia-style’ seals, suggests some sort of region-specific approach, an aesthetic perhaps, to the use of script, seals, and of the manipulation of both text and symbolically-charged imagery, ‘*des codes iconographiques similaires*’ (Poursat and Papatsarouha 2000, 268).

As part of her deconstruction of the ideal of the palace (for which, see also Schoep 2002b; 2002c; 2006; Driessen 2002; Hamilakis 2002; Schoep and Knappett 2004), Schoep has proposed that writing was taking place within a much broader elite, rather than just palatial, context and links the use of writing, alongside architecture, craft production and imported ‘exotica’, to the construction of high culture (for which, see below) which elite groups were creating and manipulating as part of building their self-identity, and in factional competition with each other (2006, 48, 51). Cretan Hieroglyphic use, together with this bundle of other marking and sealing practices, would be the preserve of ethnic, regional or factional group(s) specific to the north and east of Crete. The possible ‘extinction’ of Cretan Hieroglyphic at some point in the Second Palace period, and the massive expansion of Linear A usage, could then represent the social, political, cultural and/or economic domination of the Linear A group.

Petrakis (2017, 88) makes the thought-provoking suggestion that there was at this time a third entity, the ‘North Central Cretan Second Palace period administrative system’, centred on Knossos and containing a fusion of Cretan Hieroglyphic and Linear A practices. He explicitly addresses the chronological difficulties I raised above, and provides a potential explanation both for the co-occurrence of the two scripts at Knossos and Mallia in Middle Minoan III/Late Minoan I and those elements of the late Linear B administrative system which more closely resemble Cretan Hieroglyphic

¹ The likelihood that they recorded two different languages is discussed extensively in Duhoux (1998, 24–26) and Olivier (1989, 49–50; 1996, 108; 1997/1998, 242–243).

(Petraakis 2017, 80–90, 91–92). Far from weakening Schoep's reconstruction, I would suggest this possible third administrative system would in fact fit well and add extra complexity to the picture of a landscape of elite competition in which administrative systems and scripts are another tool in defining a group and its status.

A similar scenario has been proposed for the creation of Linear B from Linear A (or perhaps rather from Petraakis's North Central Cretan system). Bennet, Driessen and Langohr and others have suggested that, instead of Linear B being developed at the behest of mainland Greek invaders who wanted the palatial administrative system to be adapted to their own language (as per Hallager 2010, 155, for example), it was instead part of the deliberate manipulation of material culture by a group centred on Knossos in order to refashion their identity in a way which made references to mainland practices (Driessen 1998–1999, 102; Preston 1999, 140–143; Driessen and Langohr 2007, 181–185, 187; Bennet 2008, 20). Greek would have been chosen by the Knossian palace elite in this case to differentiate themselves from other Cretan elite groups, and also to gain access to the newly emergent hierarchies centred on the mainland (Driessen and Langohr 2007, 187).

The second set of evidence is drawn from the very diverse group of non-administrative objects – inscribed stone vessels, gold and silver pins and a gold ring, metal axes, wall plaster, building blocks, pottery and figurines (Godart and Olivier 1982; Schoep 2002a, 13–16) – from the Second Palace period. The pottery was probably inscribed for utilitarian reasons (the pithos fragment from Thera, for example, seems to be recording a quantity of wine (Karnava 2008, 424)) but the stone vessels, figurines, ring, pins and axes stand out for the materials used in their manufacture – various kinds of stone, precious metals – as well as their hypothesised purpose, as some kind of statement or display object, an offering or grave good. Most significantly, while these objects carry inscriptions, by far the majority of their class do not.

There are examples of non-administrative objects with Cretan Hieroglyphic or Linear B inscriptions; a few pots incised or painted with Cretan Hieroglyphic signs and one intriguing inscribed stone vessel, sadly now lost, and, forming the Linear B corpus, an ivory seal with a carved inscription from the Medeon cemetery, an incised stone weight from Dimini, the three identical signs carved above the lintel of the Kazanaki tholos near Volos and ten incised or painted inscriptions of between one and three signs on sherds of domestic pottery from Dimini, Mycenae, Tiryns, Knossos and Khania (Palaima 1987, 502; Olivier and Godart 1996, 294–318; Olivier 1999, 434; Adrimi Sismani and Godart 2005, 57–62). By comparison with this motley assortment, the Linear A objects are both quantitatively and qualitatively different.

The metal objects were already precious; Ferrara, discussing similar objects from Cyprus, notes that the inscribing process is the last stage in the manufacture of items destined for *elite* purposes rather than ordinary consumption or daily usage (2012, 28). Somehow here, adding text to an object which usually carries none, distinguishing it from the larger group of uninscribed objects and, as Bennet (2018, 65) puts it, 'commenting on' it in some way adds an extra component of value. The ring and

two pins were found in burials; the ring (KN Zf 13) and pin (KN Zf 31) in different compartments of Tomb IX at Mavrospelio (Knossos), associated with different burials, and the Platanos pin (PL Zf 1) from outside the tholoi there (Alexiou and Brice 1972, 115, 1976, 19). The third pin, CR(?) Zf 1, is of uncertain provenance (Olivier *et al.* 1981, 3–5). Their association with the person, worn on the finger, or pinning clothing or hair, perhaps suggest a more personal item and therefore a personal text rather than one intended to be read by many, but whether they were worn in life (and as everyday wear or only on ‘special occasions’) or made for the grave as a precious grave-good is impossible to say.

The stone vessels present a rather different picture. Many, though not all, of the inscribed stone vessels, as well as the various axes, are found in ritual contexts, and are interpreted as offerings or dedications; their inscriptions are mostly formulaic in nature, and different commonly occurring components can be identified; the *A/JA-SA-SA-RA-ME* portion of the ‘Libation Formula’ is the only sign group that recurs on other non-administrative objects, including the clay figurine from Poros, PO Zg 1, with a painted inscription around her skirt, and the silver pin from Platanos, PL Zf 1 (Dimopoulou *et al.* 1993, 509, 513, 515; Schoep 1994, 10). Whatever this sign group means, it was clearly of long and widespread significance and it draws objects like the figurine, found in domestic or non-cult settings, into what we assume to be a ritual context. These objects are generally understood as being used in contexts of elite conspicuous consumption and display, which implies a broader audience who could at least see them, if not read the text, before they were deposited with the jumble of other offerings (Michailidou 2000–2001, 18; Schoep 2002a, 14; and also Karetsou *et al.* 1985, 93, listing terracotta figurines of humans and animals, bronzes, animal bones and broken ceramics alongside the inscribed stone vessels found on Iuktas). Most of them are made of soft stone, such that they could be made by carvers without special skill or tools and the inscriptions are often rather poorly executed, with there being nothing about the material or manufacturing quality of the inscribed vessels themselves to suggest they were the higher-value versions (Bevan 2007, 192; Davis 2014, 97). Instead, the primary logic of the vessels is one of equivalence matching, albeit within what may have been sequential acts of processing or libation that made use of them (Bevan 2007, 192). Contributing a vessel with an inscription could be a way of creating a distinction, perhaps of increasing that vessel’s ritual status or efficacy (Davis 2014, 109), while at the same time at least paying lip service to the ideal of equivalence as emphasised in the matched libationary contributions.

The third point to review in this section is the possibility that being a scribe was in itself a component of elite status and identity. Palaeographic analysis has identified around 50 certain and 27 secondary ‘scribal hands’ at Knossos, and 25 identifiable plus seven secondary at Pylos (Palaima 2003a, 174–175). Olivier estimates there would have been around 100 tablet writers in total at Knossos, and their writing styles, together with tablet contents and find spots, indicate a very high degree of specialisation by topic (1967, 102, 121–134). Writers at Pylos seem not to have been as specialised, and

some of the more visible hands wrote tablets on a range of economic areas, with no clear specialisation by either topic or geographic area (Palaima 2003a, 176).

We do not know what the writers called themselves, in contrast to the care taken to record the names, titles or occupations of others, nor do they sign their documents; not only were they anonymous (or mostly anonymous – see below), there are no representations of writers in broader material culture, rendering them invisible too (Bennett 1960, 26–27). This cultural invisibility, together with their surprisingly low productivity – even allowing for poor preservation, a single writer could probably produce all the surviving tablets in a fortnight (Killen 2001, 7) – makes it unlikely that ‘scribe’ was a standalone profession with a sense of self-identity, training requirements etc., as it was in contemporary Egypt or Mesopotamia (Davies 1990, 99–101; Walker 1990, 43–46). Scribes do not appear in any lists of ration disbursements, ‘wage payments’ or distributions of food during festivals, so they were not considered (or ‘paid’) by the palatial system as being primarily tablet writers; rather, these individuals were probably high status functionaries, creating and using documents as one part of a broader administrative, political or religious role (Olivier 1967, 135–136; Chadwick 1976, 24; Palaima 2011, 121–122).

Some may have been more actively involved in palatial industries than others; Kyriakidis suggests, for example, Pylos Stylus 1203, the only tablet writer closely associated with perfume-manufacture (as opposed to orders for perfume) might be an *a-re-pa-zo-o*, unguent boiler, and Hands 31 and 32 employed in leather-working workshops (Kyriakidis 1996–1997, 212, 224). Bennet, looking in the other direction, as it were, stresses that the tablet writers were recording economic activities at the highest level, including producing ‘final’ documents, and, as such, plausibly members of the elite rather than their servants (2001, 29–30, 35). It might even be possible to put names to two hands; when Hand 2 writes that *pu₂-ke-qi-ri* inspected equipment on PY Ta 711, he could be referring to himself. Likewise, Hand 1 might be identified with *a-ko-so-ta*, who acts on five tablets written by Hand 1 (Eq 213, Un 267, Wa 917, Un 2 and in the Cn records) (Kyriakidis 1996–1997, 220, 224; Bennet 2001, 31). These two options need not be mutually exclusive, of course, and it is possible that some tablet writers were something more like ‘employees’, while others were members of the elite, perhaps with a personal interest in managing economic activities to their own benefit. Whether there was an audience for these documents, a set of readers outside of the scribes/administrators who wrote them, is very difficult to say; we know that some scribes read each others’ work (Hand 1 at Pylos, for example, not only compiled data from other scribes’ tablets but also corrected their mistakes (Palaima 1988b; 2003a)), but one should certainly be open to the possibility that no one outside of this narrow, inwardly-focused group actually looked at the Linear B tablets.

Some aspects of these scenarios are far from universally accepted – the scholarly debate, particularly around the creation of Linear B and the presence or otherwise of mainland Greeks at Knossos, rumbles on and is becoming increasingly entrenched. I do not want to challenge or defend any particular side here, and actually a Mycenaean

invasion prompting the development of Linear B would still fit well within my discussion. Nevertheless, although the evidence is patchy, it does seem reasonable to say that, while their primary use was in administration, Cretan Hieroglyphic, Linear A and Linear B could be indicators of elite status and used to differentiate elite groups from each other or to allow for shades of difference within a group. This has so far been fundamentally about description rather than explanation though, and to try and move beyond this to unpick how these ways of using writing made them effective tools for creating and manipulating status, it is necessary to take a more theoretical and comparative approach. Because the evidence is patchy, incorporating comparative perspectives can be extremely valuable for suggesting ways to enrich and people our somewhat bare reconstructions of writing practices, and also to throw into sharper relief similarities and differences which might be meaningful.

Things and the status they create

It is far from natural or easy for an elite to achieve legitimacy in the eyes of those in opposition or below them; it takes conscious and repeated effort to create this image and then perpetuate it, and requires both a sense of one's own position and/or identity and continuous practical work to maintain inequality, through accumulating wealth, controlling access to resources, including to the gods, and so on (Baines and Yoffee 1998, 213).

How is this managed, though? If we go right back to basics, social relations and meaning-making are built out of material culture; as Tilley (2004, 217) says, 'Persons make things and things make persons'. Social relations are simultaneously relations between material forms, and social identity is experienced and enacted in specific contexts, through concrete material points of reference – in the form of landscapes, places, artefacts, and other people. Material things therefore act, quoting Tilley again (2004, 217), as 'key sensuous metaphors of identity, instruments with which to think through and create connections around which people actively construct their identities and worlds'.

Making or using a thing does not in itself create status, though, and some of the things that people make are more efficacious in constructing particular kinds of social identities than others. This is where ontologies of value come in. The concept of value is a social construct, specific to the particular cultural context in which it occurs, and no single factor, such as labour input for example, is by itself a necessary or sufficient condition for its construction (Papadopoulos and Urton 2012, 12). Because it must be constructed and then maintained, value is always relative and comparative – that is, in essence, what creates hierarchies or gradients of value and status (Bray 2012, 393–395). Papadopoulos and Urton (2012, 21, 25–27) differentiate between place, body, object and number values, although these are thinking tools rather than discreet fixed entities and they overlap and interact with each other; body and object value are particularly entangled with personhood and intimately linked with status display and the use of value-loaded objects or commodities.

To take one example, object value becomes intrinsic or embodied in a thing; value here is created in and around an object from the intersection of, amongst other things, raw and finished materials and their qualities, for example rareness or foreignness, labour investment, the identity of the producers and consumers, the object's divisibility or commodifiability, and its capacity to accumulate history (Papadopoulos and Urton 2012, 34–35). Think of a Moche civilisation (AD 100–800, north coast of Peru) gold pectoral in the shape of an octopus, made of nearly 100 separate gold or silver parts which shimmer and rattle with the motion of the wearer, his head surrounded by the pectoral's tentacles to become that of the octopus. Objects like this were buried as grave goods, and depictions on painted ceramic vessels showing high-status adults wearing the same kind of elaborate ornament indicate they were also worn in life; their value was built out of components considered particularly socially significant, such as their precious materials, for example spondylus shell which had to be imported from hundreds of miles away, all worked with an extraordinary level of technical skills, to create colourful, shiny, shimmering, noise-making full-body ensembles to dazzle and impress the viewer (Donnan 2012, 187, 189–190, 192–194 and fig. 8.7).

This is one example, and societies rarely invest all their value into a single kind of object or practice. Instead, a web of potential values is created, encompassing the object, practices associated with it and the people who have access to it – this is very much the extended artefact, the 'shadowy entity which includes not only the physical thing itself, but also all the conditions, plans and meanings humans surround it with' (Robb 2004, 137) – and in turn interconnected through shared elements such as materials or user-groups with other objects, a significant pot here or an item of jewellery there, until the material world in which people live, work and construct their status is filled with multiple interconnected webs of potential values, each potentially operating in a different sphere (ritual, political, economic and so on).

An absolutely key component of value creation, and one that is, oddly, rarely tackled in our literature, is that this value must be made explicit to an audience (I will discuss who that audience might be in a moment). The value constructed for an object or a practice must be broadcast, for want of a better word; whether through acts of display or restriction, or with some sort of verbal declaration, the 'rules' must be stated in order for this worth to become realised, so that people know that one thing must be treated differently, that it is worth more than other similar objects.

A material imported from afar could easily be viewed as strange or unnecessary unless it is clearly established that the qualities of distance and novelty are, in fact, valuable.

These kind of performative acts have been unpicked for Egypt and Mesopotamia by Baines and Yoffee with their concept of 'high culture', and for the Mesoamerican evidence by Inomata and Coben in their volume of the archaeology of performance; the latter point out that all forms of power relation necessitate constant affirmation and maintenance through acts of performance and witnessing, and the ideologies that underlie social relationships do not appear out of nothing but need to be generated and maintained through practice (Inomata and Coben 2006, 25). High

culture – the ‘production and consumption of aesthetic items under the control, and for the benefit, of the inner elite of a civilisation, including the ruler and the gods’ (Baines and Yoffee 1998, 235) – is particularly valuable here. A communicative complex, high culture enacts, celebrates, and transmits meaning and experience through the elite control, exploitation or appropriation of symbolic resources (Baines and Yoffee 1998, 234, 236). Access to high culture is controlled by wealth but also by social hierarchy, rank, initiation or the holding of specific offices, kinship or other group adherence (Baines and Yoffee 1998, 236).

Visual forms have a particularly powerful role in anchoring cultural forms and central values in symbols that can be readily grasped and recalled (Baines and Yoffee 1998, 239) and Houston and Inomata’s (2009, 152) description of the Classic Maya courts provides a rich example of this, but with the focus here on the appearance of the human actors as much as the things surrounding them; the courts were physical settings enabling and constraining a set of interwoven behaviours, ways of dressing, eating, moving, that marked out elites as different and worthy of their privilege. Interestingly, an integral part of this way of presenting oneself was a prestigious language form specific to nobles, Classic Ch’olti’an, creating an aural/verbal distinction to complement the visual (Houston and Inomata 2009, 152, 156, 169).

Who is the audience, though, for these performances of status construction? Do the elite create spaces and performances that act as focuses for communities, or do they follow an inward-looking strategy of appropriating space and performance for themselves and addressing the rest of society primarily through exclusion? High culture is in principle communicative, but actually tends to subvert communication between elites and others through this interplay of access and restriction to information and objects; paradoxically, high culture addresses itself to very few (and some of those few might be gods or other non-earthly entities) in order to effectively maintain a status quo affecting the considerably larger ranks of the non-elite – think of rich tomb offerings, or restricted rites within a temple, which might have an audience of only the most elite of the elite (Baines and Yoffee 1998, 236). There is considerable power in restricting access to objects, events or knowledge, but for those things which are to all intents and purposes invisible to the population at large, we should perhaps think more about an elite group shoring up their sense of their own superiority in a more inward-looking fashion in order that they can face (or face down) their inferiors, and as Baines and Yoffee (1998, 232) note, throughout the history of the early state, the majority of people hardly had alternatives or points of comparison beyond their own societal environment, which makes it extremely difficult, particularly for the non-elite, to evaluate or challenge the statements they are being presented with.

Writing is very much a component of high culture. In our focus on the minutiae of what is recorded, it is easy to forget that writing systems, at their most fundamental level, are visual manifestations of established social norms and contracts (Reichel 2013, 45); if one conceptualises writing as an embodied and continually responsive skill rather than just a performed technology of representation and transcription

(Anderson 2013, 116), then it can be shaped and reshaped as those social norms evolve. In Mesopotamia, for example, writing was from the start not only used for economic recording but also for compiling the Mesopotamian cultural ‘encyclopaedia’: the description, systematisation and perpetuation of titles of people and things that was a crucial part of the high-cultural complex (Baines and Yoffee 1998, 346).

Writing is particularly interesting for offering several possibilities for value construction – using Papadopoulos and Urton’s categories (given above), writing can float between all of them depending on the form it takes, who uses it and where. Most obviously, writing adds value when it is applied to objects; a text provides plentiful opportunities for self- or group-aggrandisement, from the recording of one’s name and achievements, for example, to the fixing of a certain view of events to one’s own benefit. Because literacy requires learning within communities of practice, there is great potential for restricting access to reading and writing skills as well as to the writing-bearing objects themselves. Literacy levels were extremely low in the Ancient World – from around 1% in Old Kingdom Egypt to 5–10% in the Western Roman Empire – and always firmly associated with the upper echelons of society; even after the invention of the printing press and the spread of Protestantism, while literacy was almost universal for London’s upper classes in the seventeenth century, 70% of non-elite men and 90% of women were illiterate (Moreland 2006, 142). Furthermore, writing is not simply a mental or intellectual act and writing-supports are not simply objects; any engagement with a text requires a range of bodily compartments and actions, and these must be learned or adopted through imitation (Wengrow 2004, 267). In contexts where literacy is highly restricted, the bodily techniques of reading and writing can become elaborate or regulated to mark out those with the necessary knowledge, and in turn something to imitate by those without (Wengrow 2004, 267).

Whether one is literate oneself or delegates the skill to one’s slaves, as it were, depends very much on the place and the period. In Classic Maya society, where the link between cultural, symbolic and political capital was particularly strong, some members of the courtly elite were scribes and artists; in his review of the data from Aguateca, Inomata points to the relatively common practice of artistic production among the elite and the multiple identities of scribes and artists, working across different media but also holding roles as administrators, diplomats and courtiers (Inomata 2001, 329, 331, 333). Significantly, Inomata suggests that these members of the elite were primarily court officials, and their scribal or artistic output was secondary to this. The picture is more complex in the Roman empire, where the bureaucratic machinery of government created an elaborate hierarchy, in which men mostly, but also some women, could hold roles for which their reading and writing skills were combined with legal or administrative knowledge. The appearance of writing equipment on, for example, funerary monuments makes explicit the link between literacy and official status, as well as the pride these individuals felt (Eckardt 2018, 43); literacy clearly opened up considerable possibilities for upward social mobility. At the same time though, oral composition could be prized as an elite occupation, with note-taking and copying carried out by slaves or freedman, possibly within an ideology of writing

as socially inferior because it was associated with the body rather than the free exercise of the voice (Eckardt 2018, 42–43). It is worth asking, particularly for those time periods in which slave-owning was common, whether having a literate slave was not necessarily viewed as so different, or inferior, to being literate oneself – the slave is, in a sense, an extension of oneself, and their skills potentially reflect most positively upon the owner.

The link between writing and administration is another complicating factor. One does not need to follow a particularly hardcore Lévi-Straussian line and posit that the primary function of writing was to facilitate slavery (1955b, 344), or economic oppression more generally, to observe that the use of writing in administration enabled elites to gather and store information about their subjects and support an upwardly mobilising economy which benefitted those at the top at the expense of those further down the chain. Moreland (2006, 140) has written particularly effectively about how people become enmeshed within texts as they participate in bureaucratic activities, even at a very small scale; he gives the example of an Egyptian peasant, stopped in the middle of nowhere and asked to pay customs dues on the six measures of lentils carried by his donkeys, the transaction duly recorded on papyrus and fed into the elaborate, multi-level bureaucratic structure of officials and customs checkpoints and reporting requirements (Moreland 2006, 143). This is a system which makes use of writing but as only one component, and it is worth asking whether the peasant and his donkeys would see the machinery of the state, and its power to impose obligations, rather than the writing as the powerful entity here?

Returning to the Bronze Age Aegean

The number and distribution of written documents, and writing's primary use in administration, suggest that, as with all other early writing systems, Aegean Bronze Age writing is something that belongs firmly to the elite sphere and there is nothing even remotely approaching broader, popular literacy. The model of high culture, incorporating writing and its uses, certainly fits here – but in this section I want to look with a more sceptical eye at the evidence, and ask exactly how writing might have been used to create or maintain elite status.

A starting point might be the potential manipulation of the quality of foreignness, or otherness; the first examples of writing in the Aegean, the Arkhanes Script (found only on seals), appear within the broader context of increased Near Eastern and Egyptian imports or influences, of objects, materials and techniques, in the late Prepalatial period (Yule 1981, 210; Watrous 2001, 210–213). Exactly what might be considered foreign in the ancient world, how and why, is not at all easy to identify and as the papers collected in Maran and Stockhammer (2012) make clear, this is an under-theorised area, subject to a great deal of unchallenged assumption. Nevertheless, the accumulation of imported objects, techniques and so on within a relatively short time-frame does suggest the deliberate absorption and manipulation of material culture from beyond the community. The idea of 'glocalisation' is useful here; writing, a widespread and deeply rooted practice observed outside of Crete,

is imported and reinterpreted to meet local needs, being merged with pre-existing practices, in this case seal-use. The incorporation and transformation of a new thing are social practices, and would present the ideal opportunity for both fixing writing as belonging to the elite realm, and also for creating its biography as an intentionally hybrid entity, which enables its users to 'borrow' some of this otherness to distance themselves from other groups within society (Maran 2011, 283; 2012, 62).

The power of an object's biography is also something to consider for the non-administrative objects with Linear A texts; size, shape, material, colour, its history of ownership, the presence or absence of text, could all be used as hooks for the construction of value within a biography. One should be alert to the possibility that there was a hierarchy of value within materials, for example, or for ordering the relative significance of multiple aspects, but at the same time we should not assume that the presence of writing was necessarily more significant than any other component. The metal objects and stone vessels with Linear A texts have identifiable object values – the former are made of precious materials like gold and silver, for example, or demonstrate skilled craftsmanship, and all have a role in symbolically and socially charged events, such as burials or sanctuary rituals.

It is also possible that the use of continuous running text in their inscriptions was considered significant; this is a key difference between these objects and the administrative texts, with their 'shorthand' inscriptions and utilitarian layouts. I would not wish to overstretch this point, but it might have been considered a mark of high culture to display or present an object with an inscription that could be read (or chanted or sung perhaps, thinking of ritual events) aloud, particularly given that the inscriptions contain what look like names and ritual phrases (Duhoux 1989, 85–86; Schoep 1994, 17). The broader population was highly unlikely to be able to read, and *performed literacy*, as it were, could have been an impressive display of skill and privilege.

Differentiation of an individual within a group and playing with degrees of restriction or exclusion are all potentially applicable here; the ability to see the text and handle the object would operate on a sliding scale from the very personal, intimate level, for example the individual who wears the incised ring, then to a sort of inner core of attendees at a procession, burial or similar, who might be able to observe the text but not necessarily handle the object, and so on outwards up to people on the fringes of the event, who might, for example, spot an inscribed stone vessel amongst the jumble of offerings placed in a crevice at a peak sanctuary. Only 4% of the Iuktas stone vessels have inscriptions (Karetsou *et al.* 1985, 102), so these are very much a rare variant within an already small category of material.

The difference between the 'lived' and the 'inscribed' object is valuable here (albeit terminologically confusing, 'inscribed' being used in anthropological literature to convey carrying a fixed meaning, rather than anything necessarily pertaining to writing); lived objects acquire their meanings in and through specific social contexts and actions, whereas inscribed objects have their meaning incorporated within themselves in the course of their making, in advance of any social action, so their

meaning is materially and socially fixed (Marshall 2008, 63–64). The more explicit the object's meaning is made, the more the object acts to self-consciously create a social relationship or practice (Marshall 2008, 65). If the stone vessels were used and reused (as opposed to being a single-use offering), then the text could tie the object to a particular donor (whether an individual or group) and their ritual practices, a relationship reinforced and re-expressed with each repeated use. The overarching viewers are presumably the gods, as the intended recipient of the offering, and it is very significant if the gods can read – not only does it mark out literacy as a supernatural skill, but it adds an entirely new dimension of value to the use of writing on these objects, implying a particular shared relationship between the gods and the dedicator that the people who cannot make use of writing are simply not party to.

The burial ritual or the sanctuary site provide a clearly identifiable physical context and the audience for the kinds of displays of status-setting discussed in the previous section. It is rather more problematic, though, to identify such contexts for the Cretan Hieroglyphic, Linear A and Linear B administrative documents. There are two sets of evidence which might point to performances of creating and declaring elite group, as opposed to individual, status, within palatial settings. First, in the Temple Repositories at Knossos, Linear A sealings and a tablet were deliberately deposited in one of the stone-lined cists along with other symbolically charged objects. It has been suggested that the collection and deposition of these objects was part of an elaborate ritual, possibly on a large scale if the number of shells correlates with participants, with the Linear A documents perhaps representing one component of the palace's power alongside its ritual domination and subsistence supremacy (Hatzaki 2009, 22, 24, 25–28). Secondly, Bennet and others have proposed that particular Linear B texts could have been 'performed' as part of the events to which they referred; the furniture and ritual equipment inventories on the Pylos Ta set, for example, could have been read aloud as the objects were brought out and arranged for the ceremony of the appointment of the new *da-mo-ko-ro* (Bennet, in an unpublished paper delivered at the Material Worlds of the Aegean Roundtable, Sheffield).

Here writing could be one tangible and performed component of the *setting*, the built environment, objects and people which provide a physical context which in itself shapes social practices through primarily non-verbal communication, such as cues for behaviour (think of the layout and contents of a Christian church, and how they guide a visitor's behaviour) (DeMarrais 2004, 15–18). A conceptual link would be created for viewers between writing practices and the other performed acts within the palace, such as the use of wall paintings to stage symbolically-charged tableaux (Bennet 2007, 12–14). As Robb (2004, 133) points out, abstract axioms are non-material and can only be inferred from material things – economic power or the ability to extract resources has to be made visible, and displaying or enacting the kinds of administrative activity that managed these processes could be one way to materialise them.

In both these examples, the established palatial elite has staged an event of much bigger sociopolitical, economic or ritual relevance to which the use of writing

contributes. If the number of shells does correspond to the number of attendees, an audience of 6000 for the Temple Repository event would suggest something directed at some relatively significant portion of the wider community; Neopalatial Knossos extended over some 100 hectares, with an estimated 22,000–25,000 inhabitants (Whitelaw 2017, 123). Our model for interaction between the Mycenaean palaces and their populations is rather different, being one of carefully managed grades of physical access and experience which create and cement status differences within the community; access to the main Megaron Hall at Pylos, for example, would presumably have been heavily restricted to a small group of privileged invited attendees, who could drink from metal vessels, while rather more attendees in Court 63 and the Southwest Building were one step removed from the action but still got fine-ware drinking cups, and the masses in Court 58 had to content themselves with being on the very edge of the action with their coarse-ware cups (although they had at least made it on to the invitation lists) (Bendall 2004, 123–124).

The deliberate display of writing as part of a larger elite event is exactly the kind of scenario that could underpin acts of status creation and differentiation in the First Palace period using either Cretan Hieroglyphic or Linear A, but we simply do not have sufficient evidence for this kind of usage. In fact, the bulk of the evidence has no obvious symbolic content or context, and I am, I have to say, at something of a loss as to how to bridge the gap between the high-level proposals and what evidence we have for day to day writing practices. As discussed above, it is certainly possible that Cretan Hieroglyphic and Linear A recorded different languages, which would present a very obvious statement of group identity, but again that requires a context in which this statement can be made and have an effect – whether we should contemplate the idea of a high language with attendant language etiquette, following the model of Classic Ch’olti’an, and a significant deliberate division between script and the vernacular, is a tantalising thought but perhaps a step to far.

It is, in a way, easier to suggest that the moments of extreme upheaval – Linear A eclipsing Cretan Hieroglyphic and later the development of Linear B at Knossos – could have been used to present a very obvious sociopolitical change to those who were enmeshed in the administrative systems; in the case of Linear B, apart from the language of written administration now being Greek, there was a shift in economic focus to the large scale production of wool, oil and so on, the document shapes and formats were altered, and new weights and measurements were introduced (Driessen 1998–1999, 101). This may well have unfolded over several years, but nevertheless it makes for a very dramatic statement of the new palatial elite identity broadcast to all who had economic interactions with the palace. There was also the removal, somehow, of the right or the ability to use writing from the broader elite and its restriction to the Knossian palatial elite. This was potentially an outrageously disruptive process, and all but invisible to us. Previously, during the Second Palace period, elite material culture was remarkably homogeneous, and the relatively widespread use of Linear A – more documents are found within what look like elite houses than in the palaces at this point (Schoep 2007, 55) – would support the suggestion that writing was used

in the administration of elite estates, perhaps forming one component of an ideal of elite behaviour. There is even the tantalising suggestion of a network of elite written communication using small parchment documents sealed with gold rings (Krzyszowska 2005, 189–192). Participating in elite networks of material culture practices, particularly if they were ultimately oriented towards Knossos as the cultural capital, what Wiener (1984, and refined in 2016) has called the Versailles effect, would suggest that the primary audience for such activities was other elite groups, and that status was derived from correctly performing or displaying a set of practices rather than through differences.

What exactly was writing's role in all this – how visible would it be? Looking at the distribution of documents, together with what we can understand of how they were used, it seems likely that the documents used most commonly at the interface of an elite group and the outside world, and hence more likely to be visible, are sealings, which on the whole did not require the addition of writing (and see Fig. 13.3). If we posit, as per Bennet's proposal and the Classic Maya model discussed above, that scribes were members of the elite, and that their role and literacy were bound up with their elite status, then this is an extremely small number of people – for Linear B, around 100 at Knossos, 25 at Pylos (figures and references given above) – and very much an elite within the elite.

We come again to this question of whether it is writing in and of itself which is creating the value, or administrative activity more broadly. The space given in elite buildings and palaces to agricultural storage or processing installations and the accumulation of finely crafted objects speak to the importance of the production, mobilisation and consumption of produce, goods and labour. There was presumably a self-reinforcing cycle here, in which the superior status of elite groups was made visible in their privileged access to, and accumulation of resources, and this status was leveraged in the ongoing creation and maintenance of relationships of economic obligation. If members of the Mycenaean elite were themselves scribes, then this would constitute a clear internal statement of the value of administrative activity within the palace hierarchy, but also to anyone in the wider territory who was part of these processes of upward mobilisation and came into contact with roaming palatial administrators, even though they may not have seen them actually write anything. All this administrative activity was underpinned by the Cretan Hieroglyphic, Linear A and Linear B scripts, but as a provocative thought experiment, it is worth asking whether the administrative systems could have functioned without the use of writing? The complexity of the data recorded on Linear B tablets, and the way information is managed through processes of compilation and refinement across different document formats (a particularly thorough example of the flow of data is presented in Palaima 2003a), is certainly very much dependent on the use of writing. I remain to be convinced, however, that the same is automatically true of the Cretan Hieroglyphic and Linear A administrations, and one must be particularly careful not to underestimate the importance of sealings for the management of objects and information during the First and Second Palace periods.

Conclusions

Pulling these threads together, without a doubt persons make things and things make persons, but this in and of itself does not create or maintain status. While the principle that writing could have been used to construct elite status in the Bronze Age Aegean seems valid, it is sobering to reflect on how under-theorised this is, and how shaky much of the evidence can be. It certainly feels like the discipline as a whole is long overdue a conversation about the extent to which it is appropriate, even necessary, to rely on these kinds of high-level narratives to carry us forward over problematic data.

More prosaically, there are three points, probably not unique to this period, which require further unpicking. Firstly, it is not clear whether it is writing as a practice in itself that is powerful here, or its use as a tool of administration, and, in fact, separating out the practice of writing in this way may well be fundamentally artificial (particularly in the case of Linear B); the visible face of administrative status and power might actually be manifested in one of the other components of the system, such as sealings, specific weights and measures or the inevitability of taxes. Secondly, writing does not appear to have been imbued with a power greater than other aspects of elite material culture; fine pottery, metals, wall-painting and practices such as feasting were all used at different times to build up and display the status of elite groups. Weighing up the relative visibility or accessibility of each of these components of elite material culture is unfortunately beyond the scope of this chapter, but it is worth acknowledging that the spatial distribution of writing is more restricted, comparable perhaps only to that of Mycenaean figural wall painting, which is restricted entirely to within palaces. Both these factors should be incorporated into the way we try and understand how writing was conceptualised by its users – it was probably never quite as special and powerful as those of us who study it might like. Thirdly, the presence of an audience is a crucial component for enabling objects or practices to become effective in creating status, but can be very hard to identify in the archaeological record for this period. If the wider population was largely unaware of these statements of elite status (using writing or otherwise), would it really matter? We, of course, see the significance, and it clearly mattered to the participating elite groups too, but it does look very much like these statements were internally directed – the audience was the group itself, or their peers, and this self-definition or identity was quite possibly being constructed against an ‘other’ which was largely unaware of their otherness.

Chapter 14

Why με? Personhood and agency in the earliest Greek inscriptions (800–550 BC)¹

James Whitley

Introduction: the view from Methana

The archaeological museum in Poros is not much visited. In summer, the harbours and jetties of Poros are crowded with yachts on their way from Athens to the islands of the Saronic Gulf and the Southern Argolid – Aegina, Poros, Hydra and Spetses. Few, however, stop to go to the museum. If you do you may very well miss this epigram (Fig. 14.1). Unlike the marble inscribed bases from Attica, where the inscriptions are highlighted in red (such as that of Kroisos² that addresses a passer-by; see Table 14.3) the letters here are very hard to read, and the stone itself (volcanic trachyte) very unsuitable for an inscription.³ It does not aid legibility (or at least our notions of legibility) that the letters are inscribed ‘boustrophedon’, as the ox ploughs. The inscription reads:

Ευμαρες με πατερ Ανδροκλεος ενταδε σαμα
Ποιφεσανς καταθεκε φιλο μναμα ρυειος εμεν

¹ This paper was first read at the 2019 CREWS conference in Cambridge, and a modified version subsequently given in Thessaloniki. I would like to thank all those who offered helpful comments on both occasions, and to Philippa Steele and Philip Boyes (Cambridge) and Sevi Triandaphyllou (Thessaloniki) for making my stay in both places such a pleasant one. Natalia Elvira Astoreca gave some helpful comments on an earlier draft, and I have benefited greatly from comments from the anonymous referee. But particular thanks, as ever, go to Anthony Snodgrass not only for his comments but for his continued encouragement of this line of reasoning. The illustrations have been greatly improved by Kirsty Harding.

² This is the inscription below the Anavyssos kouros; Jeffery (1962, 143–144 no. 57). Though neither εἰμί nor με are used here, the inscription (or rather the inscription-kouros complex) clearly ‘speaks’.

³ Deffner (1909, 354): ‘Ein Quaderstein aus Trachyt’; Premerstein (1909, 356): ‘Es ist eine Quader aus sehr grobkörnigem und löchlerigem vulkanischen Stein (Trachyt), h. 0.45 m, br 0.78 m, d. 0.45 m, auf allen Seiten gleichmässig bearbeitet.’ For the letter forms of the inscription see Jeffery (1990, 181 no. 1).

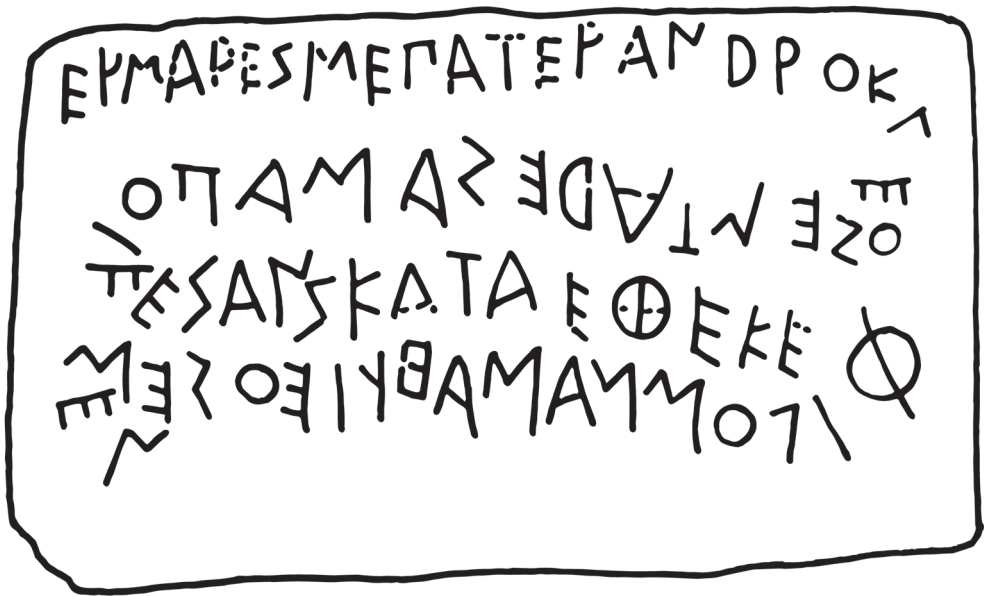


Fig. 14.1. Drawing of inscription on gravestone of Androkles, from Methana (Archaeological Museum Poros). Drawing after Jeffery (1990, pl. 32 1; redrawn by Kirsty Harding).

A rough translation might read:

Eumares, Father of Androkles, made me and set me up here as a sign and
To be a memorial of his dear son.

Now one way – the usual way – of interpreting this is as a gravestone (*Grabinschrift* or *Grabschrift*), an object that commemorates a person – an individual (Androkles) – who has died and has been set up by another person (Eumares) on the Methana peninsula. The purpose of the stone is to perpetuate their memory. Well that is certainly one dimension of its function – or perhaps we should say its agency. For what is – to modern ears and eyes at least – a little odd is that not one but three persons are brought together in this stone and its inscription. First, the father, Eumares who caused this stone to be inscribed; second his son, whom the inscription commemorates; and third the stone itself – the stone that speaks to us. To put it another way, there is a trinity of persons bound together by this inscribed stone.

It is these two features of this inscribed stone – that it acts (and so has agency) and acts as if it were a person (με) – that I wish to explore in this paper. The terms agency and personhood are however clearly *theoretical* terms. This fact may in itself cause difficulties. For there is an established etiquette in Classics (and Classical archaeology) that *theory* (even if known, or even acknowledged) must never be discussed – arguments must be presented as *if* the question were purely empirical.⁴

⁴ Though there are signs this may be changing; see Grethlein (2020).

I feel I must break with this convention, as a few words of explanation are called for. What do the terms ‘agency’ and ‘personhood’ imply?

Agency and personhood: parallel debates in anthropology and classics

First agency, a term that has been widely used in archaeology since the 1990s. My use of this term is, in most important respects, the same as the sense that Alfred Gell used it (Gell 1998a). Of course Gell’s approach has been much discussed since then, notably by Classical scholars and art historians (Osborne and Tanner 2007). We are now some decades away from his ground-breaking book, and many might argue that ‘things have moved on’. Certainly there are alternative perspectives that can be applied to the relationship between humans and things; Bruno Latour’s ‘actor network theory’ (Latour 2005) and Ian Hodder’s ‘human thing entanglement’ (Hodder 2011) fall into this category. There have also been attempts to synthesise these approaches (particularly in order to understand the material basis of cognition), notably by Malafouris, who even discusses Linear B (Malafouris 2013, 68–77). But I am not the only classical scholar (see Grethlein 2020) to have found Gell’s overall approach to be the most *useful* one.⁵

In Gell’s view it is not only animate persons but animate things that can possess the power to *act*, and indeed can be held responsible for their actions. Both animals and things can be treated as agents (as well as unseen forces such as spirits). Even modern humans have a tendency to treat things – things that we in our more rational moments know to be inanimate – *as if* they were persons (that is as animate beings). So things can act, and can act either benevolently or malevolently. If you need an example of how something (which we know to be inanimate) can be treated as if it were animate (that is, as if it possessed a degree of agency), then just think of how you feel (and what you say) when your car, computer or mobile phone suddenly fails you. Have you never cursed it for its malevolence?

If you have, you will understand how humans, animal and things are caught up in webs of agency, such that things can be treated either as extensions of a person (what Gell calls the distributed person; 1998a, 96–154) but also as persons in their own right (as in the example of our gravestone). Agency is thus logically linked to personhood.

Personhood is a more complex issue, if only because there are two quite separate personhood debates. The first (and best known) stems from anthropology and originally arose in the discussion of Melanesian persons. The issue was raised specifically by Marilyn Strathern, who distinguished Euro-American *individuals* from Melanesian *dividuals*.

Far from being regarded as unique entities, Melanesian persons are as *dividually* as they are *individually* conceived. They contain a generalised sociality within. Indeed, persons are frequently constructed as the plural and composite side of the relationships

⁵ I am using ‘useful’ here in the sense used by the Rev. W. Awdry in the *Thomas the Tank Engine* series (‘A very useful engine’). I am not, nor have I ever been, a utilitarian.

that produced them. The singular person can be imagined as a social microcosm'.
(Strathern 1988, 13)

These ideas of personhood were taken up enthusiastically by British prehistorians who thought they could detect *dividuals* in the Neolithic and Early Bronze Age of Britain. The distribution of body parts in Neolithic chambered tombs such as Wayland's Smithy and West Kennet Long Barrow (Piggott 1962) was meat and drink to the view that prehistoric Britain had much in common with 'traditional' societies in the ethnographic present. For example, prehistorians had long known that the body parts in different chambers within West Kennet Long Barrow in Wiltshire were not only divided up by age and sex (such that all adult males were kept together in one chamber, and all adult females in another) but also jumbled up in such a manner as to make it difficult (if not impossible) to distinguish between distinct *dividuals*, that is to determine which bone belonged to which person. This difficulty in identifying individual skeletons seemed to indicate that dead persons were viewed as a collective – socially defined *dividuals* – rather than as bounded, discrete persons. It is for this reason that the main book on 'Personhood' has been written by a British prehistorian, Chris Fowler (2004). Joanna Brück (2004) goes further and maintains that single (individual) grave in Early Bronze Age Britain (such as the classic Beaker grave, with tanged arrowheads, beaker and wrist guards) are not necessarily graves of *dividuals*.

That British prehistorians have been perhaps the most enthusiastic adopters of notions of personhood however creates its own problems. For, perhaps inadvertently, they have deepened what I would call the 'ontological divide' in the human sciences.⁶ This is the divide between those who study 'people like us' (Euro-Americans) and those who study 'people unlike us' (prehistoric and traditional societies). And British prehistorians have – again inadvertently – reinforced the idea that what separates one class of society (the historical, the individualist) from the other (the prehistoric, the ethnographic, the *dividualist*) is literacy in general and alphabetic literacy in particular.

As with agency so with personhood: the question has proven more complex than originally thought. If Melanesian persons are 'partible' *dividuals* then Indian persons seem to be 'permeable' ones (Busby 1997); no anthropologically defined form of personhood (whether *dividual* or individual) seems to fit the Inka case (Wilkinson 2013). Chris Fowler (2016) at least is perfectly alive to these problems and has begun to reappraise the terms 'dividual' and 'individual' as *modes* rather than essences of personhood. And Strathern never quite said (though she has been often taken as saying) that everyone from Papua New Guinea always acts as 'dividuals'. As Li Puma (1998) pointed out, personhood is partly performative: in a Melanesian setting the dimension of personhood that matters is that of the *dividual*; yet young people from

⁶ I am using this term in the French sense, in preference to the rather drab (and misleading) phrase 'Humanities and Social Sciences' common in UK universities.

New Guinea are perfectly able to function as individuals in a Western (Australian) setting. Dividual/individual does not then form an ontological divide between ‘Westerners’ and ‘primitive’ people.

It was not anthropologists however who first talked about notions of what we would now call personhood. Similar debates arose within Classics (Whitley 2018, 183–189). Back in the 1940s and 1950s two scholars, one Anglo-Irish, one German, raised similar concerns about early Greek persons (though neither talked about personhood, or the dividual). E.R. Dodds in his classic *The Greeks and the Irrational* (1951, 1–27) spent a lot of time explaining ‘Agamemnon’s apology’. For Agamemnon, as we all know, does not apologise for his taking Briseis and thus instigating the long sulk of Achilles in any way that we would recognise – that is in any way an individual who was also the locus of agency and responsibility ought to behave. Agamemnon says ἐγὼ δ’ οὐκ αἴτιός εἰμι (Hom. *Il.* 19.86–9) ‘I was not responsible – it was this madness [ate] that Zeus sent down to me that caused me to act in this way’.

That the ‘Homeric’ person was not necessarily conceived as the principal locus of agency and responsibility is also indicated by another *façon de parler* – the tendency of Homeric heroes to talk, not about themselves, but about their parts (heart, liver and so forth, as Odysseus does in Hom. *Od.* 20.18). In a similar vein (and at a similar time), Bruno Snell (1975, 17) noticed that early representations of the human body were not so much representations of a body as a totality but an assemblage of features – and an assemblage of parts moreover where objects we would regard as external to our body (e.g. shields) were as integral to our person as our own limbs, torso and head. Both Dodds and Snell then realised that what we might call personhood in early Greece was quite distinct both from our notions of ‘the individual’.

The implications of Dodds’ and Snell’s work were not taken up by the next generation of scholars. Snell’s suggestions survived, in attenuated form, in the long and inconclusive debate within Classical Archaeology about the significance of the ‘Dipylon Shield’ – the convention by which warriors in the Late Geometric times were depicted as having bodies shaped like ‘Boeotian’ shields.⁷ But the broader implications (for example for our understanding of the ‘I’ or ‘ego’ of Archaic poets such as Archilochus⁸) were lost sight of.

Speaking objects: *oggetti parlanti*

What has all this to do with inscriptions? Inscribed objects that ‘speak’ to us in the first person (using either εἰμί or *με*) such as the Methana inscription (Fig. 14.1) are common in Archaic Greece. So common a phenomenon are they, so familiar are they to scholars, that there is a special term for them – *oggetti parlanti*, speaking objects

⁷ It would be tedious to list all the references in this long debate. The key article is Hurwit (1985). Haug (2012, 19) brings out its relevance to Snell’s thought, and Whitley (2018) places this debate in the overall discussion of personhood.

⁸ But see now Crielaard (2017).

(Burzachechi 1962). Their familiarity has also led to their neglect. For this tendency of early Greek inscriptions to speak to us in the first person is odd if looked at from a comparative perspective. Unlike other peoples (and scripts) discussed in this conference, Greeks of Archaic and Classical times did not think that their script had a divine origin – that it was a gift from the gods; they did not think that the ‘I’ of an inscription was a *divine* voice, since they knew that they had borrowed their letters from a neighbouring people, the Phoenicians (Hdt. 5. 58; see Jeffery 1990, 1–5; Rollston 2010, 20–41).⁹ Nor did this habit arise as a result of diffusion. *Oggetti parlanti* are not, as far as I know, a major feature of early Phoenician/West Semitic inscriptions, though there are a few inscriptions that use this formula in West Semitic or Aramaic. The best-known Semitic ‘alphabetic’ inscription that employs this formula [‘I am Meshah’] is neither West Semitic (*i.e.* Phoenician) nor Aramaic but Moabite (Rollston 2010, 52–54). The early Phoenician inscriptions we do find in the Early Iron Age Aegean – such as the ninth century inscribed bowl from tomb J in the Tekke cemetery near Knossos (Szynger 1979; Rollston 2010, 36–37), and the late eighth century Semitic graffito from Eretria (Kenzelmann Pfyffer *et al.* 2005, 76 no. 66) – do not make use of this formula (see Table 15.4). We cannot then attribute the Greek habit of using εἶμι or με to a straightforward diffusion of practices from the Levant.

From this Levantine perspective it is then striking how common and widespread ‘speaking objects’ are across the Greek-speaking Mediterranean. Examples dating to the late eighth and early seventh century include ‘I am the cup of Qorax’ from Rhodes (Copenhagen 10151; Jeffery 1990, 347 and 356 no. 1) and ‘I am the cup of Tharios’ from the Athenian Agora (Athens Agora P4663; Jeffery 1990, 76 no. 4; Lang 1976, F3). This practice is found not only in the new finds from Eretria and Methoni I will be looking at below but also in perhaps the most celebrated of early Greek alphabetic inscriptions, ‘Nestor’s cup’ from Pithekoussai, whose inscription begins ‘I am the cup of Nestor’. This graffito, inscribed after firing on an East Greek cup found in a cremation grave of a young adult or adolescent male, is central to any discussion of the earliest use of the alphabet.¹⁰ For it is this inscription that underpins Barry Powell’s (1991a) revival of Wade-Gery’s (1952) ‘Homeric’ explanation for the origins of the Greek alphabet, namely that it was specifically adopted to transcribe Homeric, or at least hexametric, verse.

⁹ By late Hellenistic and Roman times this consensus had shifted a little. While both Diodorus (Diod. Sic. 3.67.1) and Pliny the Elder (*HN* 7.56.192) repeat the tale that Cadmus brought ‘Phoenician letters’ to Greece, both also mention (Diod. Sic. 5.57; Plin. *HN* 7.56) other tales which suggest that ‘writing’ (if not the alphabet) may have had a divine origin.

¹⁰ For its archaeological and (possibly) sympotic context, see Buchner and Ridgway (1993, 212–23); Murray (1994). For the *editio princeps*, Russo (1993). For other discussion see Jeffery (1990, 239 no. 1) and Whitley (2017, 76–82). The inscription is on a Late Geometric cup (or kotyle) long thought to be ‘Rhodian’, though recent petrological (Villing and Mommsen 2017) and stylistic (Kerschner 2017) analysis has cast doubt on this attribution. The cup (and similar chevron skyphoi, such as an inscribed example from Eretria (Johnston and Andreiomenou 1989)) may have been made in Kos.



Fig. 14.2. Three sides (2a, 2b and 2c) of Tataie's aryballos from Kyme (Cumae), British Museum BM GR 1885, 0613.1. Photo author (permission from British Museum), reconfigured by Kirsty Harding.

The inscription on 'Nestor's cup' appears to be a joke of some kind, at least if we take this ceramic cup to be an allusion to an epic one.¹¹ Absurd jokes persist on many early *oggetti parlanti*, particularly my favourite, Tataie's lekythos from Cumae/Kyme – 'I am the lekythos of Tataie, whoever steals me will be struck blind' (Fig. 14.2).¹² And speaking objects too persist: 'Nikandre' (Athens NM 1) and 'Euthykartides' (Delos Museum A728) set me up, say two seventh-century dedications found on Delos;¹³ '-archis dedicated us' and 'Geneleos made us', say two of the inscriptions that accompany a well-known group of sculptures from the Heraion of Samos of around 550 BC;¹⁴ 'I am the mark of Phrasikleia and I will be called a maiden forever' says

¹¹ It is not necessary here to follow Powell (1991a, 163–166) in arguing that this inscription is an allusion specifically to the elaborate vessel decorated with gold bosses described in the *Iliad* (*Il.* 11.632–7). There still could be 'humour in the contrast between the clay vessel and the elaborate artefact suited to an epic hero' (West 1994, 11) if the 'tradition about his [Nestor's] wonderful cup belonged ... to the poetry, less sophisticated than the *Iliad*, which celebrated the exploits of his youth' (West 1994, 14; see also Faraone 1996). If so there is no reason to take 'Nestor's cup' as a *terminus ante quem* for the composition of the *Iliad* (as Powell does; see Lowenstam 1997, 48–49).

¹² Tataie's aryballos from Kyme (Cumae), now in the British Museum. BM GR 1885, 0613.1 (Jeffery 1990, 240 no. 3; Powell 1991a, 166–167). For seventh century Kyme, see now D'Acunto (2017, esp 314–317).

¹³ Nikandre: Athens NM 1 (Jeffery 1990, 303 no. 2); and Euthykartides (Delos Museum A728; Jeffery 1990, 304 no. 3)

¹⁴ For the sculptural group, see Freyer-Schauenberg (1974, 106–130) and Clemente (2010; latest reconstruction); for the inscriptions, one reads APXHΣ IMEΑΣ ANEΘEKE THH HPHI, the other IMΑΣ EΠOIEΣE ΓENEΛEOΣ see Freyer-Schauenberg (1974, 122–123) and Jeffery (1990, 341 no. 7).

perhaps the best known *kore* in Archaic Greece¹⁵. And ‘Amasis made me’ say five vases by the Amasis painter (Beazley 1956, 152 no. 25), a formula (such-and-such made me) which has a direct bearing on how we understand the ‘artistic personalities’ and ‘hands’ of Athenian black- and red-figure vases (Whitley 2018).

The last three examples all date to the middle of the sixth century BC. The things that say ‘I’ are then a widespread, persistent and long-lasting feature of the uses of the Greek alphabet throughout the Archaic period. Classical scholars have become accustomed to this formula and so no longer find it odd. Familiarity has taken away their radical *alterité*. For these inscriptions cannot function simply as texts – for, if they are only texts (that is things to be read), who is it who speaks? Who is the ‘I’ or the ‘me’ in these inscriptions if the gravestone of Methana or Phrasikleia is not in some sense a *person*? Such inscriptions then cannot work as abstract *texts*; they can only function when mutually entangled with particular things and particular people – they represent a particular form of human-thing entanglement (*sensu* Hodder 2011) characteristic of much of early Greece (Whitley 2017). The new alphabetic script then made it possible to treat objects as persons – it helped to inscribe agency. With this in mind let us turn to the four major deposits of early inscriptions that have come to light in recent years.

Early sanctuaries and the cups that speak: Methoni, Eretria, Hymettos and Kommos

‘Speaking objects’ are a prominent feature of four major deposits with early inscriptions (Methoni in Pieria in Macedonia, Eretria in Euboea, Mt Hymettos in Attica and Kommos in southern Crete), three of which (Methoni, Eretria and Kommos) have only come to light in recent years. The archaeological character of these deposits is worth emphasising. In all of them inscriptions on drinking vessels are particularly common. Three assemblages are clearly associated with early sanctuaries. At Eretria the sanctuary of Apollo Daphnephoros has good early evidence, not only for the extensive use of drinking vessels, but of the feasts that accompanied animal sacrifice (Verdan 2013). Though there are no faunal reports from the deposits around the Altar of Zeus on Mt Hymettos (Langdon 1976), strong arguments have been put forward for these and other ‘peak sanctuaries’ being the loci of ‘feasting with the gods’ in Early Iron Age Attica (Van den Eijnde 2018, 67–75). The hearth-temple at Kommos in Crete not only has cup deposits associated both with temple A (ca 950–800 BC) and temple B (800–600 BC); it also has copious deposits of animal bones that indicate some kind of feasting took place here (Reese 2000; Shaw and Shaw 2000). These three

¹⁵ The inscription from Merenda has long been known (Jeffery 1962, 138–9 no. 46; 1990, 78 no. 29). It was only with the discovery of the statue in 1972 (Mastrokostas 1972) that this inscription could be related to the funerary, polychrome sculpture of a *kore* we can call Phrasikleia. This allowed the image and text to be related to one another (Svenbro 1993, 8–25). Six other sixth century inscribed bases from Attica (seven out of 68 in Jeffery 1962, nos 6, 21, 32, 40, 54 and 62) also speak to us in the nominative and the first person.

early sanctuary deposits then provide a social and religious context for the use and purpose of some of the earliest Greek alphabetic inscriptions, one that links them to ritualised commensality. They appear in sanctuaries at a time when sanctuaries were primarily loci for ‘feasting with the gods’ rather than ostentatiously ‘giving to the gods’ (Van den Eijnde 2018).

What of the latest of these finds, those from Methoni? These were discovered in the lower deposit of an *apothetis* or dump in a rectangular shaft or *hypogeio* (Tzifopoulos *et al.* 2017, 366; cf. Bessios *et al.* 2012). The archaeological context is therefore clearly a secondary one. Pottery comprises a number of transport amphoras, but the most common shapes amongst the painted pottery are kraters, oinochoai and various kinds of drinking vessels. These include Late Geometric ‘bird bowls’ probably from an East Greek workshop, Euboean (and local imitations of Euboean) Late Geometric high-necked skyphoi, Corinthian (or Corinthian-style) kotylai and some Lesbian plain wares (Tsifopoulos *et al.* 2017, 367 figs 31.6–8). One could call this assemblage ‘symptic’¹⁶, but I would argue that its connections rather lie with other sanctuary deposits that support the Van den Eijnde (2018) thesis. And, at late eighth century Methoni, it is again the cups that speak: ‘I am of Hakesandros’ says the graffito on a late eighth century Euboean skyphos (Bessios *et al.* 2012, 339–343 no. 2) and ‘I am of Philion’ says the one on a small mug from Lesbos (Bessios *et al.* 2012, 337–339 no. 1).¹⁷ The inscriptions from Eretria are generally too short to decipher and show signs of experimentation. But here too one drinking cup speaks ‘I am of –lchadeo[s]’.¹⁸ The eighth to seventh century inscriptions from Mt Hymettos include several examples (at least three) of ‘I am of Zeus’, and one saying ‘someone wrote me’¹⁹. Of the 74 inscriptions from Kommos only a few make any sense. Of those that do however two follow this pattern – ‘I am of Nikagoras’ and ‘I am of –tadas’ (Csapo *et al.* 2000, 114 no. 17 and 117–118 no 27 respectively).

The question then arises – how representative was such a form of words in the inscriptions from these sites? Is ‘I’ or ‘me’ the most common formula? Table 14.1 presents some raw statistics.

At first glance, inscriptions using either ‘ $\epsilon\iota\mu\acute{\iota}$ ’ or ‘ $\mu\epsilon$ ’ are not that common, and do not form a majority of these early graffiti. But if we exclude non-alphabetic signs (which form 40.12% of the inscriptions), and short alphabetic inscriptions (*i.e.* those with single, double

¹⁶ There is now a debate about what counts as ‘symptic’ – whether the practice of couched dining defines the symposion, or whether any set of institutionalised drinking practices employing cups and having the krater at its centre is a symposion (Węcowski 2014).

¹⁷ Other possible $\epsilon\iota\mu\acute{\iota}$ inscriptions on cups from this deposit include ‘I am of Epigenios’ (Bessios *et al.* 2012 343–4 no. 3) and ‘I am of [someone]’ (Bessios *et al.* 2012, 350 no. 7). For discussion see Tsifopoulos *et al.* (2017 371–373) and Janko (2015).

¹⁸ Kenzelmann Pfyffer *et al.* (2005, 59 no. 1). The other ‘ $\epsilon\iota\mu\acute{\iota}$ ’ inscription is on the neck of a Late Geometric jug ‘I am of the lebes’ (Kenzelmann Pfyffer *et al.* 2005, 70 no 44). Eretria is also home to a number of other early inscriptions, including one written on an East Greek vessel very similar to ‘Nestor’s cup’ (Johnston and Andreiomenou 1989).

¹⁹ Langdon 1976: (i) p. 15 **4a** $\epsilon\iota\mu\acute{\iota}$ το Διος το ...; (ii) p. 15 **6** Διος $\epsilon\iota\mu\acute{\iota}$...; (iii) p. 20 **29c** το Διος $\epsilon\iota\mu\acute{\iota}$ ας δε $\mu\epsilon$ $\epsilon\gamma\gamma\alpha\varphi[\sigma\epsilon]\nu$

Table 14.1. Inscriptions with $\epsilon\iota\mu$ or $\mu\epsilon$ from Methoni, Eretria, Mt Hymettos and Kommos: raw counts

Site/sanctuary	$\epsilon\iota\mu$	$\mu\epsilon$	Other intelligible	Double or more letters	Single letters	Signs	Total
Methoni	4	0	1	12	8	166	191
Eretria	2	0	3	14	18	23	60
Mt Hymettos	4	1	51	0	110	4	170
Kommos	2	0	3	9	49	2	65
Totals	12	1	58	35	185	195	486

Information from Bessios *et al.* (2012) (Methoni); Kenzelmann Pfyffer *et al.* (2005); Verdan (2013, vol. 2 31–32) (Eretria); Langdon (1976) (Mt Hymettos); and Csapo *et al.* (2000) (Kommos)

Table 14.2. Inscriptions with $\epsilon\iota\mu$ or $\mu\epsilon$ from Methoni, Eretria, Mt Hymettos and Kommos expressed as percentages

Site/sanctuary	$\epsilon\iota\mu$	Totals	As % of total	Total 'intelligible' inscriptions	Intelligible inscriptions as % of total inscriptions	Eimi as % of all intelligible Inscriptions
Methoni	4	191	2.09	5	2.62	80
Eretria	2	60	3.03	5	8.33	40
Mt Hymettos	4	170	2.35	55	32.35	7.27
Kommos	2	65	2.7	5	7.69	40
Totals	12	486	2.47	70	14.4	17.14

Information from Bessios *et al.* (2012) (Methoni); Kenzelmann Pfyffer *et al.* (2005); Verdan (2013, vol 2, 31–32) (Eretria); Langdon (1976) (Mt Hymettos); and Csapo *et al.* (2000) (Kommos)

or triple letters) of which no sense can be made (45.27% of total) then inscriptions using the ' $\epsilon\iota\mu$ ' formula form 17.14% of all *intelligible* inscriptions.²⁰ This pattern is particularly marked in the earliest of these deposits – at Methoni and Eretria, where they form 80% and 40% of the total number of intelligible inscriptions. Table 14.2 sums up the picture.

The use of the first person is then a very marked feature of the early Greek inscriptions from the two earliest of these deposits – Methoni and Eretria – and is common in the other two. All these deposits are linked to commensality in sanctuaries. More generally these discoveries underscore that the phenomenon of *oggetti parlanti* is present from the very beginning of Greek alphabetic literacy. A very large proportion of early Greek alphabetic inscriptions speak to us in the first person. In many regions of the Greek-speaking Mediterranean this practice persists for a very long time – well into the fifth century. Is this then a peculiarly 'Greek' practice, given the rarity of this formula in early Semitic inscriptions? Well no, for two reasons. One is that the Greek-speaking Cypriots had adopted quite a different script and felt no need to change it until Hellenistic times (Steele 2013). And the second is that there is a very great exception to this particular rule in the Archaic Aegean – Crete.

²⁰ I follow the original publications in determining which inscriptions are intelligible and which not. If these philologists and epigraphers cannot make sense of them then neither can I.

The Cretan exception

In Crete *oggetti parlanti* are hard to find. The earliest alphabetic inscription we have (around 700 BC) is from Phaistos – and though it has two names, and relates very precisely to the object on which it is inscribed (a Geometric pithos), the ‘ $\epsilon\iota\mu\acute{\iota}$ ’ formula is avoided (Levi 1969; Jeffery 1990, 468 no. 8a). With the exception of Kommos, informal graffiti are rare in the seventh century BC, and become rarer still in the sixth (Whitley 1997; 2017, 90–94). Crete is too the island where the earliest Aegean law code has been found, and indeed where most Archaic legal inscriptions known from Archaic Greece have been discovered. The language of the earliest of these law codes – the one from Dreros regulating the term of office of a *kosmos* – eschews the personal. ‘Gods – it seemed good to the polis’ is how the law begins,²¹ and this usage of an impersonal form of words was to remain characteristic of Cretan legal inscriptions down to the time of the Gortyn law code.²² Kommos aside, only in the case of a funerary inscription from Chersonesos and Kydonia and on some rocks in the far northeast of the island (north of Itanos) do we find the object invoked as a person,²³ as we would in Attica, Samos or the Cyclades. These Cretan patterns seem to me to be part of a quite distinct pattern of material entanglements and represent quite different forms of agency. They remain an exception to broader patterns within the Greek speaking Mediterranean.

It is important to underline the significance of the ‘Cretan exception’. First, if we compare Crete and Cyprus (Whitley 2017, 90–94) then there are more inscriptions in the Cypriot script (which, while fully phonetic, has more signs) than in the Cretan version of the Greek script. The complexity of the script then seems to have little bearing on how many people could use it. This Cretan pattern undercuts the notion that the alphabet is mainly a ‘technology’ (Goody and Watt 1963; Havelock 1982), whose cultural effects are predictable: that is the idea that the alphabet, being both simpler than other scripts and straightforwardly phonetic, is easier to grasp than other forms of writing. It is this simplicity, this economy of signs (so this argument runs) that leads inevitably to widespread social literacy and so to the great intellectual achievements of Classical Greece.

Goody’s and Havelock’s arguments mainly concern literacy – the potential for an abstract writing system to be widely disseminated and then used. Simpler scripts make for a more literate culture, and phonetic scripts are superior to those that had used pictures or relied extensively on visual puns. These assumptions underpin most (but not all – see Woodard 1997) scholarship about early Greek writing and wider debates

²¹ Jeffery (1990, 315 no. 1a); Gagarin and Perlman (2016, 200–207 Dr 1); *Editio princeps* Demargne and Van Effenterre (1937).

²² Whitley (1997; 2017, 90–94 (updated statistics); forthcoming). This (to me) strong statistical argument has been resisted by many scholars (e.g. Johnston 2013; 2017).

²³ On the gravestone from Chersonisos and Kydonia see Jeffery (1990, 316 nos 20 and 29). On the Dolphin rock from near Itanos (east Crete) which reads ...]μον ἔγραφε $\mu\epsilon$., see IC III.7.2 p. 158 (Guarducci 1942, p. 158 no. 2). This is now in the Fitzwilliam Museum Cambridge (GR 1.1854, Gift of Captain T.A.B. Spratt). All these three sites are coastal sites, and therefore not typical of Crete as a whole – Kydonia was known to have been re-settled by Samians and Aeginetans at the time of these inscriptions (Hdt. 3.441; 3.59). Though there are fifteen inscriptions with names on much of the ‘daedalic’ armour from Afrati, none uses any formula involving $\epsilon\iota\mu\acute{\iota}$ or $\mu\epsilon$ (see Hoffman 1972, 1–14; Raubitschek 1972).

about ancient literacy (Harris 1989). In this metanarrative, non-alphabetic scripts yield to the alphabet and literacy gradually ousts orality. While I am certainly not against making use of archaeological evidence to discern different forms of literacy in the Greek-speaking Mediterranean I must underline the point that my argument is not primarily concerned with literacy. I agree with Rosalind Thomas (1992) that literacy is linked to orality – the one does not *displace* the other; I argue that these links are best investigated through trying to look at patterns of human-thing entanglements (Hodder 2011), and to do so through the theoretical prisms of agency and personhood. With this in mind let us leave Crete and return to the wider Greek world.

In the Beginning, who is it who speaks?

In most of areas of the Greek speaking Mediterranean *oggetti parlanti* remained common (even on public inscriptions) well into late Archaic times. Sixth-century examples can be found from all over the Greek world (Whitley 2017, 82–90). From Pantikapaion on the coast of the Black Sea a (Lesbian?) oenochoe proclaims ‘I am the prochous of Mynios’ (Μυννιος εμμι προχος; Jeffery 1990, 480 T). Speaking objects do not disappear with the end of the Archaic period. ‘I am the boundary of the Agora’ say the two late Archaic *horos* stones from Athens (Lalonde *et al.* 1991, nos H25 and H26). And the purpose of these inscriptions remains the same – namely to ‘personify’ objects. This then is my chief point: the alphabet was invented to personify *things*, to endow them with agency.

This of course raises another issue. What kind of ‘person’ or ‘agent’ are we talking about here? Well it is unlikely to be a *divine* agent, since the Greeks agreed that they had borrowed their ‘Phoenician letters’ from another Mediterranean people. Writing, unlike fire, is a human invention. Were early Greeks then animists, in an anthropological sense? In a strong sense of the term the answer must be ‘no’ – that is if we are following Philippe Descola’s (2013) classification of human societies – or rather human/natural ontologies – into four types: animist, totemist, analogist and ‘naturalist’ (ourselves). In Descola’s terms the Greeks fall more easily into the ‘analogist’ category. Still early Greeks had a stronger sense of the potential ‘person-ness’ of both things places (naiads) and plants (dryads) than we do, if we follow Grethlein’s (2020) line of reasoning (which I do).

That the alphabet was adopted, in part, to personify things of course goes against some of the major theories that have been put forward concerning the origins of the alphabet. First amongst these is that the economy of signs, and the addition of vowels, allowed writing to transcribe first poetry in particular and speech in general. This is the theory first of Wade Gery (1952) and then of Barry Powell (1991a). Then there is the suggestion (Goody and Watt 1963; Havelock 1982) that, because the consequence of the introduction of such a script was the widening of literacy far beyond a scribal class, that too must have been its cause. Both of these theories are not completely wrong – but both infer causes (and indeed intentions) from consequences.

There is a more fundamental problem with these long-standing explanations; it is that they have emerged from within Classics and not from within archaeology. Classics is a subject whose primary competence lies in the exposition of ancient literature and ancient texts. The primacy of philology has therefore had an effect on what classicists take as being axiomatic, especially when it comes to the origins of those texts and the technology (script) that made them possible.

In the beginning was the word. These, the first lines of the Gospel of John, also encapsulate the logocentric assumptions that have underpinned debates about the origins of the Greek alphabet. These debates have been primarily philological, concerning the ‘fitness for purpose’ of various varieties of Greek script accurately to convey and transcribe the phonetic values of the Greek language. As well as being (inherently) logocentric, they also demonstrate a kind of institutional preference for ‘glottocentric’ (or ‘phonocentric’) explanations. Speech comes first and writing second, and the utility of any particular script can be evaluated in these terms. As Derrida (1976) has demonstrated this assumption goes back to Plato.²⁴ Plato frequently makes the analogy between the ‘elements’ (στοιχεῖα) of sound and the letters of the alphabet, it being assumed that there is a one-to-one correspondence between phonemes and graphemes, sounds and letters. The ‘origins of the alphabet’ – and what this implies about logocentric explanations for symbolic systems in general – is therefore an issue that is as much philosophical as empirical. These ‘Platonic’ assumptions about the origins not only of the alphabet but of writing *as such* crop up in curious places and (mis)-inform many current debates about the state of the contemporary world, not only in contemporary philosophy (e.g. Žižek 2017, 381–3) but even in recent novels (Binet 2017, 141–149).

In this paper I have tried to construct an argument based on different, non-logocentric principles, principles which are more archaeological and anthropological than they are philological and textual. I am not arguing against the notion that the most distinctive feature of the Greek alphabet was its economy of signs, signs that made it possible to transcribe speech. But I am arguing against the notion that these were the sole, or even primary, motivations of the earliest inventors, experimenters and users of this new ‘technology of the intellect’. This point should become clearer if we look first outside the Iron Age, and then outside the Mediterranean world itself.

Script and symbol: the view from the north

There is often an embarrassment of riches in early scripts in the earliest stages of the appearance of literate cultures. Middle Bronze Age (Middle Minoan) Crete now boasts four script or script-like symbolic systems in the earliest, so-called protopalatial phase; Hieroglyphic (in Knossos and Mallia); the so-called ‘Archanes script’ (Decorte

²⁴ Plato *Cratylus* 424–7 & 434–5; *Theaetetus* 202E, 207C–D; *Sophist* 253A; *Politicus* 277E–278D; for discussion see Ryle (1960).



Fig. 14.3. Stone inscribed in both Ogham and Latin script, gravestone of FANONI MAQUTRINI, found at Fardel in Devon (England) British Museum 1861, 0209.1 and datable to the fifth or sixth centuries AD (photo courtesy British Museum). Photo reconfigured by Kirsty Harding.

Dumnonia (Devon) (Fig. 14.3). In the northeast of present-day Scotland (then Pict-land) Ogham and Latin scripts coexisted with at least one other socially significant, icon-based semiotic system – the Pictish Symbols (Forsyth 1997; Noble *et al.* 2018). These Pictish symbols very often have two elements – one more abstract, the other more pictorial (*e.g.* double-disc and Z rod, crescent and V rod, snake and Z-rod). Both these elements have been found combined in grammatically predictable combinations on a variety of inscribed stones and small objects in sixth to ninth century AD Pictland (that is Scotland north of the Firth of Forth and east and north of Argyll).

2018b); Linear A itself (at Phaistos); and the ‘script’ of the Phaistos disc. Of course, neither the ‘Archaic script’ nor that of the Phaistos disc may be scripts in the narrow sense – but they are certainly symbolic systems and existed side-by-side for some time. This raises the possibility that the uses of scripts and other symbolic systems may *complement* one another. That is different scripts (and different symbolic systems) may have had distinct and complementary purposes.

The most fruitful comparison to that of Archaic Greece however comes from somewhere far from the Aegean but much closer to home. In the early medieval period in Britain and Ireland there was a plethora of scripts and script-like symbolic systems (Forsyth this volume). The Anglo-Saxons adopted the Runic script for monumental inscriptions such as the Ruthwell Cross, and the Latin for manuscripts and some smaller objects (such as the Alfred Jewel, now in the Ashmolean Museum). The Latin script was used for ‘sub-Latin’ and perhaps Brythonic in Wales and southwest Scotland, the Ogham for Gaelic and Pictish in Ireland and Scotland respectively. Sometimes Ogham and Latin can be found on the same stone, as in this example from

The early Greek case is similar. For the alphabet did not appear in a symbolic vacuum. For one thing there was already a perfectly good script available for writing down the phonetic values of spoken Greek – the Cypriot syllabary (Steele 2013). Indeed the late Anna Morpugo Davies argued that the Cypriot script is, in purely phonetic terms, the best available script for conveying the sounds of spoken Greek (Morpugo Davies and Olivier 2012). The alphabet appeared (around 800 BC) when the Geometric style of pottery was still dominant throughout the Aegean (Coldstream 1968). This style can be seen as a symbolic system not unlike that of the Pictish symbols. Throughout the Aegean world but especially in Attica – certain motifs appeared in ‘grammatically’ predictable combinations that seem to relate to certain, achieved status grades (Whitley 1991, 116–162 and 191–193; 2015). In Attica the ‘cross-in concentric circle’ motif is first to be found on belly-handled amphoras for women

(Kourou 2002) and funerary kraters for men during the ninth century (EGII), and the motif is retained in the Late Geometric monumental kraters and amphoras of the late eighth century, the so-called Dipylon period (Bohen 2017). The decoration of Geometric pottery has, like the Pictish Symbol stones, its own grammar. That so many early inscriptions were inscribed on pots is not simply therefore a function of ceramics providing a common and convenient surface for inscriptions. A recent article by Binek (2017) draws attention to this interaction between Geometric principles of design and the quasi-Geometric ‘aesthetics’ of the inscription on the Dipylon oinochoe.²⁵ Just as the inscription on Tataie’s aryballos (Fig. 14.2) is *wrapped* around the vessel, hugging the SubGeometric linear decoration, so the writing on the Dipylon oinochoe follows the contours of the shoulder, and so complements the Geometric decoration of the vase (Fig. 14.4). This fact surely has a bearing on how narrative scenes were to develop in later, Archaic Greek art, where image and inscription often go together (Osborne and Pappas 2007).



Fig. 14.4. The Dipylon oinochoe, from the area of the Kerameikos cemetery, Athens. Athens NM 192. Circa 720 BC. Photo Wikimedia commons (adapted by Kirsty Harding).

²⁵ Athens NM 192; Jeffery (1990, 68–9 and 76 no 1). For a different interpretation of the inscription, see Powell (1988; 1991a, 158–162).

Table 14.3. List of Greek inscriptions mentioned in the text (not footnotes) of this article in order of their appearance

Name	Number or museum	Date BC	Transcription of Greek	Jeffery 1990	Other references
Methana	Poros museum	ca 600	Ευφρες με πατερ Ανδροκλεος ενταδε σαμα Ποιφεισας καταθεκε φιλο μναμα φυειος εμεν	181 no. 1	Deffner 1909, 34; Premierstein 1909
Kroisos (Anavyssos kouros)	Athens National Museum 3851	ca 500	Στεθι και οικτιρον Κροισο Παρα σεμα θανοντος ηον Ποτ' ενι προμαχοις ολεσε Θορος Αρες		Jeffery 1962, 143–144 no. 57
Qorax (from Rhodes)	Copenhagen National Museum 10151	ca 700	Qoraxo ημι ρυλιχς	356 no. 1	
Tharios' cup (from Athens Agora)	Athens Agora P4663	ca 650	Θαριο εμι ποτεριον	76 no. 4	Lang 1976, F3
Nestor's cup, Pithekoussai	Museo archeologico di Pitheculsae (Ischia, Lacco Ameno)	ca 720–700	Νεστορος : ει[μ?]: ευποτ[ον] : ποτεριον : ι-ος δ' α<v> τοδε πι[ε]σι : ποτερι[ο] : αυτικα κενον ι-μερ[ος] ιαρ]εσει : καλλιστε[φρα]νο : Αφροδιτες	239 no. 1	Powell 1991a, 163–166; Russo 1993; West 1994
Tataie's aryballos, from Kyme (Cumae)	British Museum GR 1885, 0613.1	ca 680	Ταταιεις εμι λερυθος: ι-ος δ' αν με κλεφσει θυφλος εσται	240 no. 3	Powell 1991a, 166–167; D'Acunto 2017, 314–317
Nikandre from Delos	Athens National Museum 1	ca 650	Νικανδρη μι ανεθεκεν ι-<ε> κηβολοι τοχεαιρηι ρορη Δεινοδικηρο το Νατ-σιο, εσοχος αληρον Δεινομενεος δε κασιγνετη Φι-ρατ-σιο δ' αλοχος v<uv>	303 no. 2	

(Continued)

Table 14.3. (Continued)

Name	Number or museum	Date BC	Transcription of Greek	Jeffery 1990	Other references
Euthykartides from Delos	Delos museum A728	620–600	Ευθοκάρτιδης μ' ανεθεκε: Ἦο Ναι-σιος; ποιεσας	304 no. 3	
Geneleos group from Heraion of Samos	Vathy Museum Samos	ca 560	ΑΡΧΗΣ ΙΜΕΑΣ ΑΝΕΘΕΚΕ ΤΗ ΗΗΡΗΗ, ΙΜΑΣ ΕΠΟΙΕΣΣ ΓΕΝΕΛΕΟΣ	341 no. 6	Freyer-Schauenberg 1974, 106–130; Clemente 2010
Phrasikleia, from Merenda in Attica	Athens National Museum 4889	ca 540	Σεμα φρασικλειας κορε κεκλεσομαι αιει Αντι γαμο παρα θεον τουτο λαχος' ονομα	78 no 29	Jeffery 1962, 138–139 no. 46; Mastrokostas 1972; Svenbro 1993, 8–252
Amasis signature	Paris, Cabinet des Médailles 222 (from Vulci)	ca 550	ΑΜΑΣΙΣ ΜΕΠΟΙΕΣΣΕΝ		Beazley 1956, 152 no. 25
Methoni in Pieria (Macedonia)	Thessaloniki museum?	ca 730–700	1. Φιλιονος εμι 2. ἡακεσανδρο εμι[ι		Besios <i>et al.</i> 2012, 337–343 nos 1 and 2; Janko 2015; Tsifopoulos <i>et al.</i> 2017
Hakesandros & Philion					
Eretria, sanctuary of Apollo	Eretria museum	ca 730–700	- ..]λαδεοεμι		Kenzellmann Pfyffer <i>et al.</i> 2005, 59 no. 1; Verdán 2013
Mt Hymettos, Attica	National Museum Athens & Agora museum	700–600	1. 4a ε[ι]μι το Διος το 2. 6 Διος εμι[ι 3. 29c το Διος εμι[ι ας δε μ' εγραφ[σε]ν	76, 3 a–c	Langdon 1976, 15–20, nos 4a, 6 and 29c
Kommos sanctuary, Southern Crete	Herakleion Museum	700–650	1. No. 17 Νικαγορα ε[ι]μι 2. No. 27 -]ταδα εμι		Csapo <i>et al.</i> 2000, 114 no. 17 & 117–8 no 27
Erpetidamos pithos from Phaistos, Crete	Herakleion Museum	ca 700	Ἐρπετιδαμο Πατιδοπλιας οδε	468 no. 8a	Levi 1969

(Continued)

Table 14.3. List of Greek inscriptions mentioned in the text (not footnotes) of this article in order of their appearance (Continued)

Name	Number or museum	Date BC	Transcription of Greek	Jeffery 1990	Other references
Law from Dreros, Crete	Sylogos of Neapolis, Crete	ca 640	θιός ολοιον. ἄδ' εραδε πολί ἐπεί κα κομήσει, δέκα ρετίον τον ἄ- ρτόν μη κόσμεν. αἱ δὲ κομησίε, ὄπ ε δικασίε, ἀρτόν ὄπ λεν διπλεῖ κάρτόν ἄκρηστον ἦμεν, ἄς δόοι, κότι κομησίε μηδὲν ἦμην. Vacat ὀμόται δὲ κόσμος κοί δάμιοι κοί ἴκατι οἱ τὰς πόλ[ι]ο ς vacat.	315 no. 1a	Demargne and Van Effenterre 1937; Gagarin and Perlman 2016, 200–07 Dr 1
Gravestone from Chersonisos, Crete	Private collection, Koutoulouphari	ca 500	Τιμος ημι Ευαγρος μ'εστασε	316 no. 20	
Gravestone (1 of 3) from Kydonia	Archaeological Museum of Khania	ca 500	Αυτομεδεος εμι	316 no. 29a	
Dolphin rock from just N. of Itanos, E. Crete	Fitzwilliam Museum, Cambridge GR 1.1854	ca 500	ἴμιον ἔγραφε με ...		Guarducci 1942, 158 no. 2 = IC III.7.2
Pantikapaion (Crimea, Ukraine) Prochous of Mynios	Not clear	575–550	Μυνιος εμι προχος	480 T	
Boundary stones from Athens, Agora	Athens Agora	ca 500	λορος εμι τες αγορας		Lalonde <i>et al.</i> 1991, H25 & H26.
Dipylon oinochoe, from Dipylon cemetery Athens	Athens National Museum 192	ca 720–700	ι-ος νυν ορχεστον παντων αταλοτατα παιζει τοτοδεκλῆμιν ...	68–9 & 76 no.1	Powell 1988; 1991a, 158–162; Binek 2017

I generally follow Jeffery in my transcriptions.

Table 14.4. List of Semitic inscriptions mentioned in text

Name	Museum	Date BC	Reference	Language & script
I am Mesha	Unknown	ca 800	Rollston 2010, 52–54	Moabite
Knossos Teke tomb J	Herakleion Museum	ca 850	Szzyrmer 1979; Rollston 2010, 36–37	West Semitic/ Phoenician
Eretria, sanctuary of Apollo	Eretria Museum	ca 720–700	Kenzellmann-Pfyffer <i>et al.</i> 2005, 76 no. 66	West Semitic?

This brings us back to Homer. Powell (1991a) argued that the alphabet was invented to transcribe Homeric verse – a hypothesis that can only really work for the Greek alphabet and for none of the other alphabetic scripts used or adopted by other Mediterranean peoples in the Iron Age (De Hoz 2010). Recent scholarship on the date of the introduction of the alphabet however (*e.g.* Janko 2015) has tended to argue for a much earlier date than would have seemed possible twenty years ago; while much scholarship on the date of the Homeric poems have moved in the opposite direction (*e.g.* Nagy 1997; 2020; Lowenstam 1997; Martin 2020). The alphabet appears to have been adopted around 800 BC,²⁶ while dates for the definitive composition the Homeric poems have steadily moved later than 700 BC. This fact in itself undermines Powell’s argument (which depends on chronological coincidence; see now Gonzalez 2020). But Powell’s thesis does at least have the merit of bringing together two major, key questions in Classical studies (see Elvira Astoreca this volume). Scholarship on the ‘origins of the alphabet’, even at its most radical (*e.g.* Naveh 1982; 1988) has also been resolutely textual, as has most of the debate about ancient literacy (*e.g.* Harris 1989). It has been the main thrust of my argument that alphabetic writing is a material practice bound up with other practices – including the practice of pottery decoration. From the eighth century onwards decoration on Greek painted pottery becomes more ‘Homeric’ in the sense that recognisable figured scenes begin to appear. These scenes appear to represent, or allude to, stories from one of the two great epic cycles of Troy and Herakles (‘myth scenes’). But they do not seem to be ‘Homeric’ in the sense of depending on a near-definitive, established text of either the *Iliad* or the *Odyssey* (Cook 1983; Lowenstam 1997; Snodgrass 1998). That image and inscription went on to develop a symbiotic relationship in narrative scenes on later Greek painted pottery is perhaps something that we need to explore further – and explore moreover with all the theoretical resources in the armoury of archaeology and anthropology. Part of the explanation for this symbiosis between script and icon must require the use of the concepts of agency and personhood.

²⁶ This is partly as a result of new evidence from Gordion that suggests that the Phrygian script (closely related to the Greek alphabet) was already well established by 740 BC (Brixhe 2004; Liebhart and Brixhe 2009). For most scholars who still hold that the Greek alphabet derives directly (and not indirectly) from the Phoenician this must push the date of adoption further back in time, to 800 or even 825 BC (*e.g.* Janko 2015).

Chapter 15

Names and authorship in the beginnings of Greek alphabetic writing¹

Natalia Elvira Astoreca

Introduction

The history of writing in the Aegean is quite a complex one, with many varied writing systems and epigraphic traditions. One of the most complex issues to tackle in this field is how, after a silent period of at least four centuries, Greeks passed from Linear B, a syllabic system used mainly for palatial administrative functions, to the archaic Greek alphabets, mostly employed by private individuals for their own purposes (see Nash, this volume).² The only thing that seems clear is that the model for the latter would be the North-West Semitic script used for the Phoenician and Aramaic languages. However, scholars are still trying to answer questions like when, where, how and even why Greeks adapted this writing system in the way they did. Western academics seem to have a special interest in these questions, as many believe that Greeks created the alphabetic system as we know it when they established the use of letters for the notation of vowels.³

To answer the main questions concerning the origins of Greek alphabetic writing, philologists, archaeologists and cultural historians have studied the earliest

¹ I would like to thank the CREWS project and our ERC funders (Horizon 2020 grant agreement no. 677758) for their support during my PhD research, from which this paper derives. I also appreciate the comments of the reviewer which have helped me to clarify my arguments and the attention of those who heard this paper at the conference covered in this volume.

² Even though no written attestations in the Greek language are found in the archaeological record during this silent period (twelfth–ninth centuries BC), for many scholars this does not mean that Greeks did not know alphabetic writing but that unperishable materials were not used at the time. The date of the introduction of alphabetic writing in Greece is a complex and long held debate with proposals ranging from the fourteenth to the eighth century BC; for the most recent state of the question see (Elvira Astoreca 2020, §1.1.2).

³ For a reasoned criticism of this view see Boyes and Steele (2019b, 2 f.).

inscriptions in search for answers. Although having access to the same material, they do not seem to come to an agreement, perhaps because they disregard the achievements of each other's disciplines.

This is especially obvious when looking at the earliest attested uses of alphabetic writing, an important question to understand the social structures and practices that enabled and promoted the transmission of alphabetic writing throughout the Greek-speaking populations. In the following section, I will discuss the state of the question through the latest proposals of both philologists and archaeologists who looked at this question from their own disciplines.

Nevertheless, my aim is not to answer what was the first or main early use of writing in alphabetic Greek, but to approach the matter from a different multidisciplinary perspective. I will address one of the earliest uses of alphabetic writing in the Greek epigraphical record, the identifying inscriptions, by bringing together epigraphic data, contextual analysis and philological commentaries. This case study will bring observations on specific uses and functions of writing while accounting for a large number of early inscriptions, since, as will be explained below, the identification of individuals is the most popular use of writing seen in the two first centuries of visible alphabetic writing in Greece, the eighth and seventh centuries BC. Moreover, these inscriptions offer interesting insights from the linguistic point of view, especially when looked from the perspective of the literacy act. This may bring a fresh outlook to problems often looked at exclusively from a philological perspective, like the real importance of the systematic use of vocalic notation in the adaptation of Semitic writing for the Greek language. In this way, we will be able to see the interaction of the linguistic elements with the objects and contexts in which they are found and with the individuals who are linked to them.

Contextual studies and the creation of the Greek alphabet

Barry B. Powell's publications on the origins of the Greek alphabet are well known in the field, especially for his philological analysis of early Greek alphabetic inscriptions.⁴ In his book *Homer and the Origin of the Greek Alphabet* (Powell 1991a), he gathered a reasonable number of inscriptions, starting with the Dipylon Oinochoe dated around the middle of the eighth century BC, going up to the end of the Orientalising period around 650 BC. After dividing the evidence into 'long' and 'short' inscriptions, he discards the latter arguing that they are either too fragmentary or bear names and simple formulas, which he interprets as simplified versions of the 'long' inscriptions. These are the ones that carry the bulk of his argument: that these texts written in verse support Wade-Gery's theory that the Greek alphabet was devised to write down epic poetry (Wade-Gery 1952). Consequently, Powell concludes that the original and basic use of the Greek alphabet was the recording of poetry. In his opinion, this would also explain one of the biggest mysteries in the adaptation of the Phoenician

⁴ This can be found in many of Powell's publications, e.g. Powell 1988, 1989, 1991a, 1991b, 2006.

alphabet to Greek: the creation of letters to write down vowels. While Phoenician only wrote down consonants, the earliest inscriptions in alphabetic Greek already show a systematic use of vocalic letters adapted from Semitic consonantal signs.⁵ However, we know nothing of the motivation that led to this significant change in the writing system structure. Powell argues that it was the moraic nature of the Greek verse that impelled the creation of vowels. Ancient Greek poetry is based on the rhythm marked by the length of the syllables, which is often, though not always, marked by the short or long nature of the vocalic element in the syllable (West 1982, 8).

The flaws in Powell's arguments are plentiful, both from archaeological and philological perspectives.⁶ The marking of vowels, and particularly vowel length, in poetry is clearly not the reason why these letters were created. In fact, ancient Greek writing did not mark vowel length. Alpha, iota and upsilon were used for /a:/, /i:/ and /u:/, which never had their own graphemes to differentiate them from /a/, /i/ and /u/. Moreover, eta /ɛ:/ <H> and omega /ɔ:/ <Ω> – in opposition to epsilon /e/ <E> and omicron /o/ <O> – appear only in some of the archaic alphabets for a qualitative rather than a quantitative distinction. Most of the early Greek alphabets, including those represented in the inscriptions analysed by Powell, did not use eta, omega or any distinguishing letter for any long vowel whatsoever. This lack of length notation is demonstrated further in the transcriptions of the texts that appear below, which show multiple times macrons to mark long vowels not characterised as such in the original inscriptions. Therefore, the connection between a supposed poetic use of writing in Greece and the creation of the vocalic signs is not justified.

It is true that, from a philological point of view, most of these 'long' inscriptions share the metre and some epic elements in their texts. But if we look deeper into them, it is possible to see some elements that are also present in the short prose inscriptions left aside by Powell: we see that formulas are repeated and that these formulas are devised to introduce personal names. Perhaps the identification of the individual could be the motivation behind these texts and them being long and poetic or short and prosaic is just a matter of difference in the level of elaboration. Moreover, a characteristic of the archaic Greek epigraphic tradition is that most of the texts are not of a public nature, but completely private, *i.e.* they are not produced and controlled by a public entity, instead they are written and commissioned by individuals to serve their own purposes. Therefore, these are written evidence for us to get to

⁵ The use of *matres lectionis* to notate long vowels in Phoenician was very marginal, only present in the transcription of foreign names (Krahmalkov 2001, 16 f.; Luraghi forthcoming; Willi 2005, 167). Concerning the adaptation of Semitic consonantal signs for the notation of Greek vowels, see Jeffery 1990 for a palaeographic comparison and Woodard 2019 for a linguistic one. In Elvira Astoreca 2020, §4.3.1, I argue that the creation of vocalic notation is not necessarily a Greek invention and that, in fact, other Indo-European and Semitic writing systems around the Mediterranean might have been the precedent for the Greek vowel letters.

⁶ Many scholars continue to react to his publications, *e.g.* Oikonomaki 2012, 94; Panayotou 2000; Ruijgh 1997; Wachter 2006, 39; and this paper as well.

know previously anonymous individuals and their approaches to writing. This suggests that there is much more to these inscriptions than Powell thought.

Other more recent studies look specifically at the socio-cultural contexts in which early alphabetic writing flourished and expanded within Greek-speaking populations. Thus, Papadopoulos looked at the role of pottery workshops and artisans in the early stages of the spread of writing, given the big amount of clay vessels that bear inscriptions, some of them referring to the making of the object (Papadopoulos 2017). Węcowski analysed these objects from a different point of view and was able to reconstruct how the texts, especially ownership statements and erotic inscriptions, would play a part in the games of the symposion and the role of aristocratic dynamics in the spread of visible writing (Węcowski 2017); whereas Bourogiannis argues that it is sanctuaries and the religious and trading activities happening around them that explain better the emergence and transmission of these writing practices (Bourogiannis 2015, 167; see also Willi 2005). I believe that these arguments should not be taken as exclusive, but as complementary, for each of them explains a portion of these inscriptions or even different stages that one of these inscribed objects could have gone through. In fact, as explained in the introduction to this volume, written objects may go through different contexts and functions and the ones mentioned in this section are just examples of some of them.

The identification of individuals on inscribed objects

As already mentioned, an important part of the corpus of early Greek alphabetic inscriptions share a series of formulas meant to introduce a personal name (Table 15.1), hereby called identifying inscriptions. These can go from the simplest name tag to more elaborated poetic texts and may have different intentions, like a statement of ownership or authorship, a religious dedication, the participation in erotic practices and building memorials for other individuals.

Among the possible formulas, the most simple are those of ownership, where we can see names in the genitive case, with or without the verb 'to be', e.g. Φιλίῳνος ἔμι – 'I am of Philion'.⁷ These formulas are seen on clay vessels, most often found in sanctuaries where they indicate who was their offeror. Similarly, votive inscriptions are often found in such a setting, although this kind of formulas can also be found on statues dedicated in those sanctuaries. However, while the latter are clearly made with the intention of being offered, it is not so clear whether the ownership formulas were made *ex profeso*. This idea has been challenged by the appearance of ownership inscriptions in non-religious contexts, like the Athenian Agora (Lang 1976) and lately by the findings in the underground store from Methone, the so-called *Υπογειο* (Besios *et al.* 2012; Tzifopoulos *et al.* 2017). This suggests that at least some of the identifying

⁷ Inscription from Methone in Pieria, dated to the late eighth–early seventh century BC (Besios *et al.* 2012, 337 no. 1). Following the example of Jeffery (1990), I prefer not include accents in the transcriptions due to problematic issues concerning the accentuation of the archaic dialects.

Table 15.1. Identifying formulas seen in eighth- and seventh-century BC Greek inscriptions

Type of formula	Greek text	Translation
Ownership	N(ame) in genitive (expressing possession)	N's
	N in genitive + εἶμι/ἦμι	I am N's (cup)
Authorship & craftsmanship	N μ' ἐποίησε	N made me
	N μ' ἔγραφε	N wrote me/N painted me
Votive	N μ' ἀνέθηκε	N dedicated me
	N με ἔδωκε	N gave me
	N με ἵσατο	N placed me
Erotic	N ἀγαθός	N is gentle
	N καλός/κάλλιστος	N is beautiful/the most beautiful
Memorials & epitaphs	N in genitive + σᾶμα/σημα τόδε	This is N's memorial

inscriptions found in sanctuaries may have had a primary function in a different kind of context and that the identification of an offeror in the sanctuary is most probably their secondary function.

Another important group of identifying inscriptions are those bearing the signatures of artisans who made or painted the object on which these are found. The formula μ' ἐποίησε is seen on both clay and stone artefacts, indicating who made the object. The formula μ' ἔγραφε, however, is more complicated to interpret, since it can be translated as 'wrote me' or 'painted me' (Papadopoulos 2017, 92–96). Whenever this formula appears on a painted vessel, it is clear that this statement refers to the painter. In other cases, this text might refer to the artisan who wrote a specific text, especially when it is made on clay before firing (either as a dipinto or a graffito) or in an inscription on stone. These kinds of signatures show that not only the making of these objects, but also literacy must have been valued abilities and worth to show that one can perform them. Moreover, the marks of the artisans are making the object a unique piece and therefore adding value to the object.⁸

Other identifying formulas include erotic inscriptions that can be either gentle or obscene, related to the well-known erotic activities between males of the elite. These are usually seen on vases, although on Thera one can find them on rocks (Brongersma 1991). Epitaphs and memorials on stone follow a standard formula as well, indicating that the reader is in front of someone's memorial.

These formulas are actually seen all across the Greek-speaking world (Fig. 15.1), which suggests that these are widespread and well-established writing practices among the Greek populations already in the first two centuries of visible writing.

⁸ N. Oikonomaki (2017, 269, 277) assumes that even illiterate people could have appreciated the added value of inscriptions on objects. Cf. Heier in this volume.

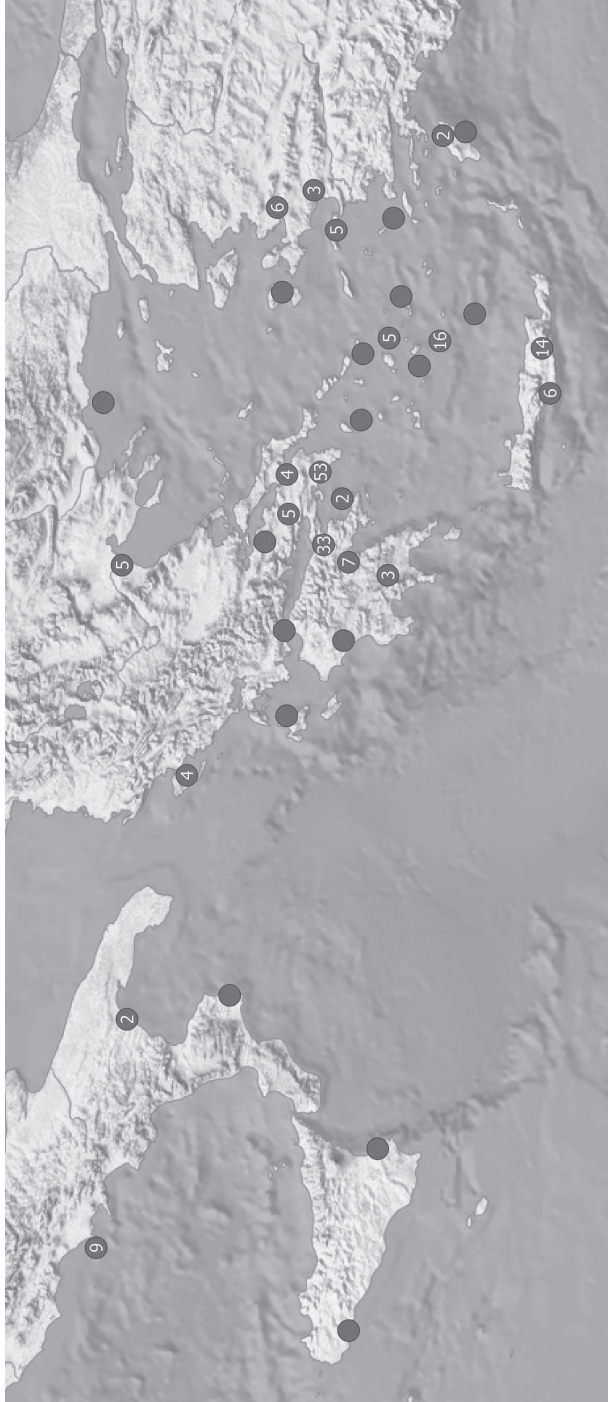


Fig. 15.1. Geographical distribution of identifying inscriptions from the eighth and seventh centuries BC.

Table 15.2. Categorisation of inscriptions from the eighth and seventh centuries BC

Category	Number
Unknown because of fragmentation	268
Identifying inscriptions (with the formulas specified in Table 15.1)	201
Religious: dedications without identification & oracles	116
Letters: abecedaria, single signs, nonsense, etc.	93
Public inscriptions: laws, decrees, boundaries, public dedications	21
Labels of depicted mythical characters	10
Sympotic themes without identification	6
Total	715

Table 15.3. Materials seen for identifying inscriptions from the eighth and seventh centuries BC

Material	Number
Clay	130
Stone	45
Bronze	22
Silver	2
Gold	1
Ivory	1
Total	201

Looking at all Greek inscriptions dated on the eighth and seventh centuries BC, at least one third show those formulas and thus can be categorised as identifying inscriptions (Table 15.2). More than a third cannot be categorised because of the bad conditions of the text and the remaining part are a mix of other kinds of inscriptions.

These numbers show that the identification of the individual is one of the most popular uses in early *visible* alphabetic writing, *i.e.* that seen in the archaeological record. We have evidence suggesting that perishable materials were being used at least from the seventh century BC, if not earlier,⁹ and so we have to bear in mind that the documents discussed here were meant to be written on unperishable materials. We should not dismiss the idea that these materials are attached to the practices and contexts mentioned above precisely because they endure, and their inscribed texts cannot be erased.

From the materials visible in the archaeological record (Table 15.3), a minority are valuable materials, like gold or silver, while the most popular is clay. This category, however, includes objects that range from the most elaborated artistic vases to very modest objects, such as a loom weight or ostraca, already broken pieces of clay used to write. This means that supporting materials and writing were easily accessible to peoples of different social backgrounds (Oikonomaki 2017).

⁹ We know that the laws of Draco and Solon were written on wood (Stroud 1979), that terms for writing tools like the wax tablet (δέλτος) come directly from the Semitic influence (Masson 1967), that parchment was already used by Phoenicians from at least the ninth century BC (Teodorsson 2006, 182) and even Herodotus mentions that Ionians had been using 'skins' as a writing support 'since ancient times' (Hdt. 5.58.3).

Identifying elements

The data shown above suggest that this specific use of writing has spread not only around Greek-speaking populations in the Mediterranean, but also across different social strata, becoming the most popular visible use of writing in early alphabetic Greek. Nevertheless, the identification of the individual involves much more than just mentioning a personal name. In the following paragraphs I describe the different elements seen in these inscriptions that contribute to the personal and cultural identification of a person beyond the incorporation of their name in the text.

From a linguistic point of view, it is worth mentioning that all the formulas place the name of the individual in the linguistic focal point of the sentence, which in ancient Greek is at the beginning. Therefore, the focus of the text is the individual, rather than the object. This suggests that the intention behind the inscription is not so much the tagging of the object as it is the identification of the person mentioned. Take, for example, this inscription on a small lekythos (*IG XIV 865; SEG 47.1475*):

Ταταιῆς ἔμι λῆρυθος. ἢος δ' ἀν με κλεφσει, θυφλος εσται

I am Tataie's lekythos. Whoever steals me will go blind.

It is a simple ownership statement, following the standard ownership formula (see Table 15.1) with a curse attached to it. But in this case – and on those other objects where we just find the ownership statement – the meaningful part is not that the object is a *lekythos* owned by Tataie, but that *Tataie* is in fact the owner of that lekythos. Moreover, *Tataie*'s ownership is reinforced by the curse for the stealer.

Although the emphasis is on the person, this is not to say that the object is not of any value within the writing practice, for it is not only the support of the message, but also the messenger talking directly to the reader in the first person. Furthermore, we could see a symbiotic relationship between object and individual. The object, inscribed or not inscribed, enables the participation of the individual in the social practices mentioned earlier: the symposium, the religious dedications, etc. Their participation is enhanced by the identifying text, both in the level of the object and the individual. In the case of the object, it makes it stand out among other non-inscribed objects that can be found within the same context, and probably increases its value. As for the individuals mentioned, there was surely some sort of prestige attached to the contribution with this kind of special object, that also records their participation in the activity. Not to mention, that this was probably evidence that they had the ability to write, which was clearly well considered, judging from the existence of identifying inscriptions that claim authorship and also the dedication of abecedaries in sanctuaries.¹⁰ Or, in case they did not write the texts themselves, this identification shows at least that they had the means to commission a written object.

Thus, the object is providing the individual with an ideal support for the expression of their identity. We must not forget that we are talking about unperishable materials and that the authors or commissioners of these texts were aware of this feature. The

¹⁰ Multiple examples can be found, e.g. at the sanctuary of Zeus on Mount Hymettos (Langdon 1976).

fact that the text cannot be erased or modified unless the object is destroyed makes it a token of their identity that works across time and space. Even if the person is not present in the social contexts where the object can be found, the record of their previous participation is permanent. In return, what the individual is offering to the object through the text is uniqueness, making the object recognisable as well. Moreover, the way in which the formulas are expressed provides a sense of agency and personifies the object by writing the verb in the first person, thus making it a ‘speaking’ object that addresses the reader and audience directly when they re-enact the text by reading it out loud (see Whitley, this volume).

However, other identifying elements go beyond the inclusion of a personal name in a formula and are embedded in the local writing practices of each Greek speaker. This is specially recognisable during archaic times, as the epigraphic record shows a variety of alphabets closely connected to specific areas (Jeffery 1990; Guarducci 1995). In fact, back then there were almost as many local alphabets as there were cities and their individual graphic characteristics allows for the straightforward recognition of the origin of a text, its writer or its commissioner. In many cases only someone literate in alphabetic writing could identify them, which may reduce the number of people able to distinguish the provenance of an inscription, even though we have written samples of digraphia which suggest that some could actually write in more than one Greek alphabet.¹¹ Nevertheless, some alphabets had visual elements that were of a unique shape and thus recognisable at first sight, *e.g.* Cretan digamma, Corinthian beta, or Sikyonian epsilon. We could then assume that even people with very low levels of literacy could identify some of these concrete typographic characteristics in the texts.

The inscription on Nikandre’s sculpture is a good example of how cultural identity can be expressed through a script that can be recognised by its graphic features:

Νικανδρη μ’ ανεθεκεν η(ε)κηβολδι ιοχαιρηι οδρη Δεινο|δικηο τῷ Ναησιῶ εησοχος
αλ(λ)ηδῶν Δεινομενεος δε κασιγνῆτη | Φραησῶ δ’ αλοχος μ[ην?]} (LSAG² 303.2)

Nikandre dedicated me to the goddess far-shooter of arrows. She is the daughter of Deinodikes the Naxian, distinguished among women, sister of Deinomenes and wife of Phraxos.

The most distinctive element of this inscription is the Naxian xi (Table 15.4), a digraph not shared with any other Greek alphabet, thus clearly identifying Nikandre and her family as Naxians despite their use of Parian marble for a statue displayed in the sanctuary of Delos. Among the words that bear the digraph in this inscription, it is noteworthy the fact that it appears precisely in the demonym ‘Naxian’. As Luraghi has already pointed out, the local Greek alphabets were often employed as markers of a specific cultural or political identity (Luraghi 2010). Therefore, in this case, the digraph

¹¹ This is the case of two abecedaries found on the base of an oenochoe in Cumae (first quarter of the eighth century BC), one Euboean the other Corinthian (LSAG² 130.2).

Table 15.4. Comparison of some characteristic regional graphemes with more widespread graphemes

Characteristic letters	Characteristic grapheme	Common graphemes
Cretan digamma	ϝ Ϟ	Ϝ
Corinthian beta	β̣	β
Sikyonian epsilon	ϵ̣	ε
Naxian xi	ξ̣	Χ Ξ Χξ
Parian omicron	Ϟ	Ο
Parian omega	Ω	Ϟ

for xi being present in the name of their place of origin may have contributed to the attachment of the literate Naxians to this characteristic graphic sign.¹²

It is evident that the sanctuary of Delos would have been a place where the local alphabets contributed to the identification of the offeror. There one can find numerous votives from the nearby islands, mainly Paros and Naxos. With this situation in mind, the special traits of each alphabet would be a way to record and tell apart the dedications made by Parians and those left by Naxians. The latter are easily recognisable by their digraphs, while the Parians had a very unusual way of writing down the mid-back vowels (or o-sounds): the shape of the omega <Ω>, is actually used for the short /o/, while the sign for the omicron elsewhere <Ο> is used for a long open /ɔ:/ (Table 15.4). This can be seen in IG XII 5.252:

<ΑΣΟΝΤΕΣΕ|ΡΑΚΑΙΕCΔΩ|ΦΩΝΤΩΤΗΣΕΟ|ΝΤΑΣΩΙΚΙΑΣΕ|...ΩΙΗΣΕΝ>¹³

Ασων τεσε|ρακαιεβδο|φοντοτης εω|ν τὰς οικιας ε|[χ]σ[ε]ποιησεν

Ason built these houses when he was 74 years old.

This notation is specific to Paros and its colony Thasos, in the northern Aegean, and it is the opposite used in the Ionic script, which would become centuries later the standard alphabet for the Greek language. It also contrasts with the way /o/ and /ɔ:/ are written in every other Greek alphabet, making <Ω> appear more frequently than in any other script and thus making the text recognisable as Parian. Moreover, Naxians did not use <Ω>, so the Parian inscriptions in Delos would have been easily identifiable thanks to this sign.

It is precisely in a setting like the panhellenic sanctuary of Delos where we can see how the visual characteristics of the local alphabets would have played an important

¹² A similar phenomenon is seen in the demonyms that had qoppa. Around the fifth century, when this letter had disappeared in most alphabets and uses of writing around Greece, cities like Corinth and Crotona kept including it in the demonym shown in the legends of their coins (cf. Jeffery 1990, 116 and 249).

¹³ Transcription made after (LSAG² 305.28). Although this example is dated ca 550 BC, the early use of this writing convention is confirmed by a late seventh-century inscription from the Parian colony of Thasos (LSAG² 307.61; SEG 14.565).

role in the cultural expression of the individuals. Through identifiable signs like the Naxian digraph or the Parian <Ω> one could easily see which inscriptions came from which island. Perhaps this was even a way to quantify whether Parian or Naxian citizens brought the most or the best dedications to the sanctuary.

Another element to take into account when thinking about the identification of individuals, or rather their cultural identification, are dialectal features. However, the perception of these elements is not as straightforward and visual as the local alphabets in some cases and it would require a higher level of literacy to recognise them. If we compare Nikandre's votive text with that of Mantiklos, another quite famous inscription from early seventh-century Boeotia, we can see some of these dialectal characteristics.

Μαντικλος μ' ανεθεκε ρεκαβολοι αργυροτοξοι τας {δ}δε|κατας τυ δε Φοιβε διδοι
χαριφετταν αμοιφ[αν] (LSAG² 94.1)

Mantiklos dedicated me to the far-shooter, silver-bowed god, as a tithe. You, Phoibos, give your favour in return.

They start in an almost identical fashion with their names plus the votive formula, but they already differ in the epithet 'far-shooting': in Mantiklos' case ρεκαβολοι is referring to Apollo, while in Nikandre's *h(ε)κηβολοι* refers to his twin the goddess Artemis. While in Nikandre's Cycladic dialect it is spelled out as <HKHCOΛOΙ>, Mantiklos' Boeotian shows <FEKABOLOI> keeping the initial digamma, and a long alpha where Cycladic has eta. Similarly, the word *κασιγνήτη* in the Cycladic inscription, meaning 'sister', is actually *κασιγνήτα* in western dialects. Nikandre's own name is also tied to the characteristics of her dialect, for in other Greek regions this name is attested as Nikandra.¹⁴ In fact, if it were not for the last vowel, these names would not be indistinguishable between them or even from some forms of the male name Nikandros in its genitive and dative forms.¹⁵ Moreover, the words discussed here are in fact samples of a very particular treatment of the vowels in the Cycladic dialect. In the case of *κασιγνήτη* <ΚΑΣΙΓΝΗΤΗ>, we expect two mid-front long vowels, but one is represented with <E> and another with <H>. This has been explained as a peculiarity of this dialect, where the closing of inherited /a:/ does not result in /ε:/, as in other Ionic dialects, but in /æ:/.¹⁶ The latter phoneme is differentiated graphically through the letter eta <H>, while the inherited /ε:/ is graphically indistinguishable from /e/ <E>. This phenomenon evidences that the signs for the long vowels are not meant to distinguish length, but a different phonemic quality. In this case, it is even more remarkable that the sign is indicating a specific dialectal feature of the

¹⁴ Nikandra is attested in later inscriptions from multiple regions across Greece (see *LGN*).

¹⁵ The masculine name Νικάνδρος has 553 entries in *LGN*. In the alphabets discussed above, the genitive and dative forms of this name would be spelled <ΝΙΚΑΝΔΡΟ>, whereas in the Ionic alphabet the dative would be <ΝΙΚΑΝΔΡΩΙ> or <ΝΙΚΑΝΔΡΩ>; cf. Kroll (1977, 109, no. 11, *IG II²* 231). Still, it would be difficult to distinguish feminine and masculine forms if the vowels were not explicit.

¹⁶ About the dialectal features in Nikandre's inscription see Lejeune (1949); Levin (1970); Jeffery (1990, 291); Guarducci (1995, 154–156); the latest study on the Cycladic dialect is Gomis García (2018).

Cycladic islands, so they write <ΚΑΣΙΓΝΕΘ>, where an Athenian or Euboean would write *<ΚΑΣΙΓΝΕΤΕ>, an Eastern Ionian <ΚΑΣΙΓΝΗΘΗ> and a Dorian *<ΚΑΣΙΓΝΕΤΑ>. Similarly, the spelling <ΝΙΚΑΝΔΡΗ> may apply in Cycladic and eastern Ionian alphabets, while *<ΝΙΚΑΝΔΡΕ> would be western Ionian and <ΝΙΚΑΝΔΡΑ> Dorian. Again, the local writing system with its graphic and dialectal particularities expresses the identity of the writer/commissioner, although this time in a way that perhaps only literate people can understand.

The ‘short’ inscriptions, however, are not exempt of dialectal differentiations. Even in the standard ownership formula ‘I am of X’ the verb εἶμί can appear as <ΕΜΙ>, <ΕΙΜΙ> or <ΗΜΙ>, depending on the results of phonetic processes in each of the dialects and the orthography of each alphabet. The same happens in the memorials, where we can find either σᾶμα <ΣΑΜΑ> or σῆμα <ΣΗΜΑ>/<ΣΕΜΑ> depending on the characteristics of the local dialect and alphabet.

The role of vowel signs in the identification of personal names and dialectal features takes us back to the Wade-Gery-Powell theory on the systematic use of vowel signs for the notation of poetry. As made explicit in the transcription of the texts, most Greek alphabets do not show vowel length effectively. In fact, the signs used for long vowels represent not a difference in length, but in the quality of the sound, as argued above. However, as opposed to Semitic languages, in Greek, vowels do bear a lot of linguistic information that is vital not only for the accurate reading of the text, but also for the recognition of proper names and the expression of cultural identity. In the cases mentioned above it would not be possible to recognise the dialectal features or even to distinguish feminine and masculine forms if vowels were not written. These vowels have phonetic, dialectal and morphological information basic to identify the person mentioned, but, most importantly, vowels have semantic information. This means that sometimes two words with distinct meaning are distinguishable with a vowel only. In Greek this happens, for example, in the verbs ἄρχομαι ‘to be ruled’ and ἔρχομαι ‘to come’, and the same applies to personal names. As an example, Nikandre’s husband, Phraxos, could have easily been mistaken for a Phrixos, if it were not for the alpha.¹⁷

There is only one inscription that has ever been interpreted as a Greek personal name written without the vowels: an inscribed cup found at the sanctuary of Apollo Daphnephoros in Eretria which has a clear Semitic style in its shape and the writing on it, which shows a sequence of letters often read as <KPLŠ> (Kenzelmann Pfyffer *et al.* 2005, 76, no. 66). There is no clear interpretation in any Semitic language from this sequence, so a Greek reading <ΚΠΛΣ> has been proposed as a possible solution, with the idea that a Greek person could know how to write in the West Semitic script and decided to record their name in that way. The attested names that could respond to this pattern are Καπέλλας, Κάπιλλος and Κάπυλλος, all of them with double lambda.¹⁸ However, the proposal of the editors was an unattested proper name

¹⁷ Actually, the name Φριξος has more attestations than the *hapax* Φράξος (see *LGN*).

¹⁸ These names were the result of a search in the online database of *LGN* using the pattern ‘k?p?l*s’. Other patterns, like ‘k*p*l*s’ did not give further results that could match the sequence of letters in the inscription.

Κάπηλος, based on the noun meaning ‘retail-dealer’ or ‘tavern-keeper’ (Kenzelmann Pfyffer *et al.* 2005, 77). Although the explanation and the interpretation as a Greek text are far-fetched, let us think for a moment that it could be possible. In that case, what is stopping us from reading instead its female form Καπελίς? Or, if the double consonant was simplified, as is a common practice in archaic Greek writing, any of the other three attested names proposed here could be possible. Unless the reader knows beforehand, there is no reason to discard one over the other. Whether this is an undeciphered Semitic text or a Greek text written in Semitic style, this inscribed object has become an important document in the discussion concerning the transmission of Semitic writing in Greece (Bourogiannis 2019, 159 f.) and the problems that the Greek-speakers had to face when adapting this kind of alphabetic writing for their own language.

The relevance of identifying inscriptions in early Greek alphabetic writing

As shown in this chapter, the complexity in the interpretation of the earliest samples of Greek alphabetic writing is fairly evident. The variety of linguistic, cultural and contextual elements that come together in the epigraphical record of the eighth and seventh centuries BC have contributed to the multiplicity of theories and explanations in modern scholarship. This contribution has analysed a case study that can be found across Greece and its colonies, thus providing a reasonable amount of evidence with a shared characteristic: the identification of an individual as the main function of the text.

This specific use of writing follows strict formulas that cover different sub-functions (votive, ownership, authorship, etc.), all of which seem to have spread throughout the Greek-speaking populations already by the seventh century BC. The consistency seen in this specific writing practice across territories is indeed of relevance, since it suggests that they all share a cultural stratum. However, this contrasts with the high level of ‘personalisation’ of the inscription, which is adapted to reflect the writer’s or commissioner’s social and regional characteristics. These texts seem to have in common the desire to identify individuals as authors, makers, owners, offerors, lovers and deceased loved ones and they do it through the reproduction of shared formulas. Still, the inscriptions are not completely uniform, as they may appear on a variety of materials, socio-cultural contexts and show local features or even customised messages in their texts; there are clearly distinct implications and contextual differences between a marble statue with an inscription written in the Naxian alphabet and dialect that stands in the panhellenic sanctuary of Delos and a pot sherd scribbled in the Euboean alphabet and dialect found in the Methonean *Υπογειο*, even if they both were to say ‘I am of X’. Not to mention the fact that each inscribed object can have multiple contexts during the ‘life’ of the object: the workshop, the store, the household, the symposium, the graveyard or the sanctuary among others. Given that in many cases it is not possible to reconstruct the whole trajectory of an inscribed object, I have preferred to discuss the interaction between text and object and how they both convey the identifying function regardless of the specific setting(s).

These inscriptions come in a variety of materials that range from the most valuable to the most modest, perhaps suggesting that people from different social backgrounds had access to writing, either authored by themselves or commissioned. However, all of these are clearly unperishable materials chosen purposefully so that together with the identifying inscription they work as an individual proof of participation not only in the literacy act, but also in whatever social activity or activities that act is embedded. This proof cannot be modified or erased unless the object is destroyed and so it remains across time and contexts. Moreover, there is an added value given to these objects through this writing practice that makes them unique.

As an individual's identity is not just personal but has social and cultural elements as well, these texts express identities not only with the inclusion of a personal name, but also through regional elements present in the alphabet, orthography and dialect of the inscriptions. These may reinforce a cultural identity when seen in their specific region but are specially interesting when found in a context where multiple Greek-speaking populations interact, like the panhellenic sanctuaries. There, local alphabets and dialects differentiate and mark cultural identities across a myriad of inscriptions.

In this context, the linguistic features found in these texts can be interpreted as more than just a matter of linguistics, since they are clear marks of identity that differentiate individuals. Under this light, the matter of the creation and systematic use of letters for vowels gets a new meaning, since these are both semantic and dialectal features needed for the correct personal and cultural identification of the individual. The discussion of these inscriptions has shown that, if we were to look for a reason why vowel signs are consistently used in alphabetic Greek writing, it is clearly not because of the length of the vowels or the rhythm of the verse, but because of the vital amount of linguistic information that these vowels carry in them. Unlike Semitic languages, Greek without vowels is not readable because of the important role that these play in lexemes and morphemes of the language. Thus, without them, the text cannot be understood without prior knowledge of the message, which is clearly opposite to the purpose of writing as a tool. Although this applies to the whole language in general, this is especially noticeable in the case of personal names in the social and cultural contexts discussed here since the people who come across the identifying inscription may not necessarily know the person mentioned in it.

This does not imply that signs for vowels were created in order to write down personal names, although they probably have a role in the extension of their use (see note 5 above). However, by looking at this issue from the perspective of the identifying inscriptions we may open our eyes to further implications. The extensive use of both letters for the vowels and the local Greek alphabets do not just respond to a linguistic need of carrying a message that can be understood by the reader, but also to the wish of being identified correctly, not just personally but also culturally, and recording one's participation in specific social practices effectively.

Chapter 16

Marking identity through graphemes? A new look at the Sikel arrow-shaped *alpha*¹

Olga Tribulato and Valentina Mignosa

Introduction: scripts, graphemes and identity

Exploring scripts in their social context often involves considering the role that writing – sometimes down to the level of spelling conventions and individual graphemes – plays in the construction of identities. In this paper we look at some of the issues which similar approaches face when they are applied to ancient contexts. In doing so we focus on a case-study which at first sight might seem to pertain exclusively to the epigraphic domain: the peculiar arrow-shaped form that the letter *alpha* takes in the Greek alphabetic variety employed by the Sikel people of ancient Sicily. However, this grapheme has a peculiar place in the history of Classical scholarship. Many studies of Sikel epigraphy subscribe to the view that it was an *identity marker* of the Sikels (see below for full details). Such a culturally loaded interpretation has more recently been expanded to include the idea that the arrow-shaped *alpha* was a symbol of the Sikels' antagonistic opposition to Hellenisation.

In this paper we look at these interpretations in order to address two questions. The first specifically concerns the case-study at hand: is it possible or even desirable to speak of a Sikel *ethnos*, which expressed a clear identity through a mere graphic variant of its script? In order to answer this first question, in the paper we shall proceed along two complementary routes. First, we shall review what historical and

¹ We are very grateful to Pippa Steele and Philip Boyes for having organised such a thought-provoking conference. We would also like to thank the anonymous referees for their very constructive and accurate suggestions. This paper stems from continuous collaboration between the two authors; however, Olga Tribulato is responsible for the introduction, 'The arrow-shaped alpha is not a Sikel invention' and 'Why was the arrow-shaped alpha abandoned? The Hyblaeen area and Castiglione di Ragusa'. Valentina Mignosa is the author of 'Distribution of evidence' and 'Writing without antagonism? The case of Mendolito di Adrano'. The remaining sections are by both authors.

archaeological evidence we have in favour of the existence of a Sikel *ethnos*. Defining clear-cut ‘ethnic’ groups on the basis of material culture is a notorious problem in Italian proto-historic archaeology (Albanese Procelli 2003, 230–232; Pope 2006; Cultraro 2012, 181) and we anticipate here that in the case of the Sikels the useful evidence is so scarce and ambiguous that it seems far-fetched to link the *epigraphic* use of the arrow-shaped *alpha* to the expression of a well-defined Sikel identity. This in turn leads us to bring back the study of this graphic variant to its epigraphic context. Our second interpretative route will map the presence this grapheme in Sicilian epigraphy as a whole, and not just in some selected Sikel sites. This survey of the evidence will allow us to pinpoint the distribution of the arrow-shaped *alpha* in relation to geography, communication routes, and archaeological evidence. With this factual approach, we wish to look at the inscriptions and try, as far as possible, to discuss the context of production of the Sikel inscriptions, which is marked by contact with the Greeks, but at the same time avoiding the slippery interpretative categories of acculturation and ethnic identity.

The second question which we seek to address in this paper is a broader one: whether scholars of the ancient world can really hope to achieve sufficiently clear-cut results regarding the role played by script – and especially graphic peculiarities (spelling, diacritics, peculiar letter-shapes like the arrow-shaped *alpha*, etc.) – in the construction of identities. We look at this question in this Introduction in order to set out some of the caveats that seem more pressing to us.

Modern societies present scholars with a whole range of textual and oral sources rich in contextual information that illuminates the relation between writing, society and identity. Take for instance the important role played by Hebrew characters in the construction of Jewish identity across Europe, Africa and the Middle East (Hary and Wein 2013, 90), or by the Greek alphabet in the self-representation of the Turkish-speaking Orthodox Greeks of central Anatolia (‘Karamanlidica’: Irakleous 2013; Kappler 2016). However, to what extent can the interpretative paradigm provided by these modern case-studies be safely applied to the investigation of writing in ancient societies? A crucial divide lies precisely in the amount of metalinguistic evidence that we have for each context. Consider, for instance, the great difference between Roman Italy, with its wealth of epigraphic, historiographical and literary information on the relation between certain scripts and the expression of identities – as in the case of the Greek community of Latium (Adams 2003, 90–91) or the Celtic and Venetic peoples of the north (Marinetti 2008) – and the much more elusive case of Minoan Crete. Here until about 1600 BC Cretan Hieroglyphic and Linear A co-existed, but hypotheses on their social or political differentiation (*e.g.* Godart 1979; Perna 2016, 104), or on their recording different language varieties (*e.g.* Olivier 2008, 181), are destined to remain speculative: the languages are undeciphered and the total lack of metalinguistic information is an unavoidable limit. The same dearth of relevant contextual evidence affects the study of the ‘Sikel’ arrow-shaped *alpha*. Since there are no sources informing us about how the Sikels perceived their identity (if at all), speculations on the role played by writing and script in this respect are highly hypothetical.

Historical and documentary evidence aside, the case for an identity-loaded interpretation of the arrow-shaped *alpha* is also problematic when we address it from the point of view of sociolinguistic methodology. Many of the current interpretative paradigms concerning the ideological meaning of scripts focus on spelling and orthographic rules (especially in connection with language standardisation and state-led reforms: see e.g. Coulmas 2003, 234–240; Johnson 2005, 119–130; Sebba 2007 *passim*).² The situation of ancient Sicily, of course, is not comparable and our case-study itself is different: the arrow-shaped *alpha* is not a separate *grapheme* that the Sikels employed for a specific phoneme used in their language, but a mere *graphic variant* of a standard grapheme (and one which, as we shall show below, is not lacking in Greek inscriptions either). The use of the arrow-shaped *alpha* thus does not pertain to spelling or orthographic rules, but to epigraphic practice.

In this respect, too, the information that we can use to speculate about the ancients' *perception* of graphic variants is slim. The Greeks have not left much evidence that allows us to say that the *use of certain different signs* was a marker of regional or local identity, let alone of other peoples' identity. Thus when Herodotus (1.139: a discussion of Persian names) mentions that the Dorians wrote final /s/ with the letter *san* (<M>) instead of *sigma* (<Σ>), he simply describes an epigraphic fact and does not offer any hints as to the *ideological meaning* of *san*, which remains of little interest for ancient Greek commentators.³ Similarly, we find no discussion of the use of the 'red' arrow-shaped *chi* that was very prominent in the epigraphy of Euboea and the western colonies.

The situation is no different in ancient Sicily. Greek sources are mostly interested in the origins and, to a lesser extent, geographical location of the non-Hellenic peoples of the island, not in their culture, languages and writing (Albanese Procelli 2003, 18–22; Cusumano 2006, 121–122; Sammartano 2006, 19–20; Péré-Noguès 2011, 156–157; Poccetti 2012, 55–56, 58–65). Paired with a scant epigraphic corpus, and the archaeological difficulties mentioned above, this is a serious drawback for any speculation on the ancient perception of Sikel culture, which often appears more as an ideological construction of Greek historiography than as a historical reality.

In the light of these gaps in the documentation and the methodological caveats put forward in this Introduction, in the next section we shall delve into the arguments adduced in favour of a symbolic interpretation of the arrow-shaped *alpha*. We shall then turn to our proposal for a more factual, less ideologically charged approach to this graphic variant which takes its cue from a careful reconsideration of the

² A good example from the history of Greek culture is the huge controversy which has surrounded the debate over the reform of Greek orthography between the nineteenth and twentieth centuries (Bernal 2007; Banfi 2014, 141–156). Although arguably an important step towards simplification, the 'loss' of the old diacritics (breathings, grave and circumflex accents, etc.), eventually sanctioned in 1982, produced an incredible amount of ideological and emotional reactions, especially outside the academic debate (Moschonas 2009, 298–299).

³ Ath. 11.467 further discusses the use of 'Doric' *san* in musical notation. The *san* was in fact in use also outside strictly Doric areas (e.g. Aetolia and Acharnania), while Sparta and Messenia employed *sigma* from the start: cf. LSAG² 33.

production contexts of the inscriptions in order to correlate, as much as it is possible, the presence of the arrow-shaped *alpha* with the material culture, topography and historical development of the main indigenous sites.

The Sikel script and its arrow-shaped *alpha*: current interpretations

Sikel is one of the fragmentary languages of ancient Italy and remains largely unknown, though it is now mostly agreed that it was an Italic language (Pocchetti 2012, 77–85). Around the mid-sixth century BC the Sikels adopted the Greek alphabet to write simple texts on vases and stone. Since many of them are doubtless in a language other than Greek, it seems safe to adopt the label of ‘Sikel’ for the epigraphic record of the areas which archaeology also identifies as non-Greek, and specifically Sikel.⁴ The script employed in texts in the Sikel language is based on the Greek alphabet, with two major differences: the lack of aspirated signs (which points to the absence of aspirated stops in the language) and the special shape of *alpha*, written with a vertical middle bar instead of the horizontal one. It is often a matter of interpretation whether a given text (especially when it is very short, like ownership inscriptions) really is ‘Sikel’. Usually, scholars identify ambiguous inscriptions of this kind as ‘Sikel’ on the basis of provenance, linguistic traits that are compatible with Sikel, and formal epigraphic features such as the arrow-shaped *alpha*. This sign is attested in two variants: the first with a bar attached to the vertex of the letter (Λ) and the second with a detached bar (Figs 16.1 and 16.2).

Because this sign is found in all the sub-regions of the Sikel area (Fig. 16.3), and is not typical of Greek epigraphy in general, scholars have come to call it ‘*alpha Siculum*’.⁵ This term, which was simply descriptive to begin with, has gradually acquired other meanings, essentially following the authoritative interpretation of Luciano Agostiniani, the main expert in non-Hellenic Sicilian epigraphy, who has repeatedly defined the arrow-shaped *alpha* as:

a graphic marker [...] endowed with a certain social meaning [...] which emerged as a sign of Sikel-internal *solidarity* and *antagonism* [our italics] towards Greek elements (our translation of Agostiniani 2012, 148).

According to this interpretation, the arrow-shaped *alpha* transcends its nature of a formal marker of epigraphic habits connected with Sikel centres and becomes the

⁴ Linguistic criteria to distinguish between Greek and non-Greek language are discussed by Pocchetti (2012, 72–73). For epigraphic criteria, see Agostiniani (1992, 130–131); Agostiniani (2012, 144). Exemplary cases of inscriptions securely identified to be in the Sikel language are, in particular, the graffiti of Montagna di Marzo (see below); the inscriptions from the site of Mendolito di Adrano (see below); the inscription on an *askos* from Kentoripa (PID 2.3 447) and the stele from Sciri Sottano (Agostiniani 1992, 148 no. 7; ISic003362).

⁵ Ribezzo (1913, 374); Zamboni (1978, 963); Manni Piraino (1978, 14); Agostiniani (e.g. 1980–1981, 507–508; 1984–1985, 215; 1991, 28); Camera (2010, 116); Pocchetti (2012, 73); Tribulato (2015, 66). The term is not used in either PID 2.3 or VSS. For the Greek alphabetic models behind the Sikel script of the three sub-regions, see below.

symbolic image of an ethnic group – a case of *iconisation* (though Agostiniani never overtly uses this terminology). It seems to us that there are two problems with this interpretation. The first problem concerns the nature of the graphic symbol itself. Contrary to some established examples of iconic graphic markers – for instance, the Spanish ‘deviant’ <k> instead of standard <c> in anarchist graffiti discussed by Sebba (2007, 82–83) – the Sikel arrow-shaped *alpha* is not a different grapheme, but simply a variant of the same sign. In extreme terms, it may be argued that the alternation between the arrow-shaped and the ‘normal’ *alpha* concerns *handwriting* (i.e. the way individuals write) and not *orthography* (i.e. the way they spell). Moreover, differently from the Spanish <k>, we lack any clear evidence of the symbolic or ‘antagonistic’ character of the arrow-shaped *alpha*, as we shall discuss below.

The second problem, as already mentioned in the Introduction, concerns the perception of the Sikels as an *ethnos*. Before addressing this question, it is necessary to clarify the nature of the archaeological evidence pertaining to the eastern part of the island. In eastern but also in central Sicily – hence in the two areas which Greek literary sources describe as being inhabited, respectively, by *Sikeloï* and *Sikanoi* – there are similarities in funerary practices, housing habits and clothing that, by and large, seem to point to an ethnically similar group. It is not really possible to describe the Sikels as a group with a distinctive material culture, opposed to that of other indigenous peoples of the area. Above all, it would be incorrect to combine evidence from different sets of data to shed light on whether or not an *ethnos* exists. To quote what we believe to be still one of the most insightful works on the issue:

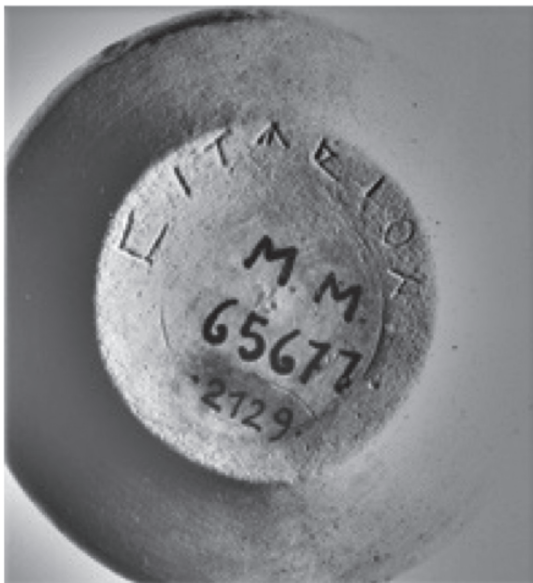


Fig. 16.1. Example of arrow-shaped alpha (type 1). From Agostiniani and Albanese Procelli (2018, fig. 108), all rights reserved. Montagna di Marzo. Tomb East 31, cup no. 70.



Fig. 16.2. Example of arrow-shaped alpha (type 2). From Agostiniani and Albanese Procelli (2018, fig. 112), all rights reserved. Montagna di Marzo. Tomb East 31, no. 77.

It is neither possible nor indispensable [...] to establish an actual correspondence between names inherited from literary sources [...] and archaeological *facies*, which is to say territorial entities defined only on the basis of material culture (our translation of Albanese Procelli 2003, 18).

Sikeloi, as summarised by Nicola Cusumano:

is the name used by the Greeks [our italics] to indicate all the populations of central-eastern Sicily with which they came into contact during colonisation and, subsequently, with their penetration into the hinterland (our translation of Cusumano 2006, 121).

The image of the Sikels as an *ethnos* mainly derives from a misinterpretation of Diodorus' account of the events related to Ducetius, who endeavoured to create, around the middle of the fifth century, a Sikel *synteleia* ('union'). Diodorus represents this confederation as composed of *omoethneis* Sikels (i.e. 'of the same race': Diod. Sic. 11.88.6) and thus in a way that also emphasises the ethnic aspect. However, as De Vido (forthcoming) notes, this emphasis surfaces only in connection with Ducetius' enterprise and has mainly political and territorial relevance. Moreover, as Péré-Noguès writes: 'If Diodore's story conveys the image of a Sikel world gathered around its leader, it tends, however, to erase much more complex social and cultural realities' (our translation of Péré-Noguès 2011, 166).⁶

Both archaeological research and historical sources make it hard, if not impossible, to give a clear definition of the Sikels as a unitary entity. At the same time, recent historical discussions of the most appropriate way of addressing colonial identities have spoken against applying too rigid a model (be it the old notion of 'acculturation' or the more recent theories of 'hybridity' and 'middle ground'). Maurizio Giangliulo, for instance, has made the case for the need to overcome ethnic identity as an unhelpful interpretative category in colonial Sicily where, he argues,

there are no cogent reasons to think that ethnic differentiation was the most salient line of demarcation. Neither artefacts and practices were primarily characterised by their ethnic origin, nor a straightforward correlation between language and ethnic presence can be taken for granted. Therefore, we should be wary of assuming ethnic identity as the, or the most important, analytical focus (Giangliulo 2010, 14).

If, therefore, it is misleading to assume that a Sikel ethnic identity can be found, what is one to make of Agostiniani's sociolinguistic interpretation of the arrow-shaped *alpha* as a marker of Sikel identity? Already hinted at in earlier contributions of his (e.g. Agostiniani 1988–1989, 181; 1991, 28; 1992, 137), and adopted by other scholars as well (e.g. Albanese Procelli 2003, 222; Willi 2008, 44; Poccetti 2012, 73; Tribulato 2015, 65–68), the full-fledged theorisation of this interpretation has appeared in two more recent contributions in which Agostiniani has collaborated with archaeologist Rosa Maria Albanese Procelli to define the archaeological and historical context of the use (and abandonment) of the arrow-shaped *alpha* at the indigenous site of Montagna di Marzo (Agostiniani 2012; Agostiniani and Albanese Procelli 2018). These two articles are exemplary demonstrations of how an

⁶ We will discuss below the issue of Ducetius' enterprise and its role in the debate on Sikel identity.

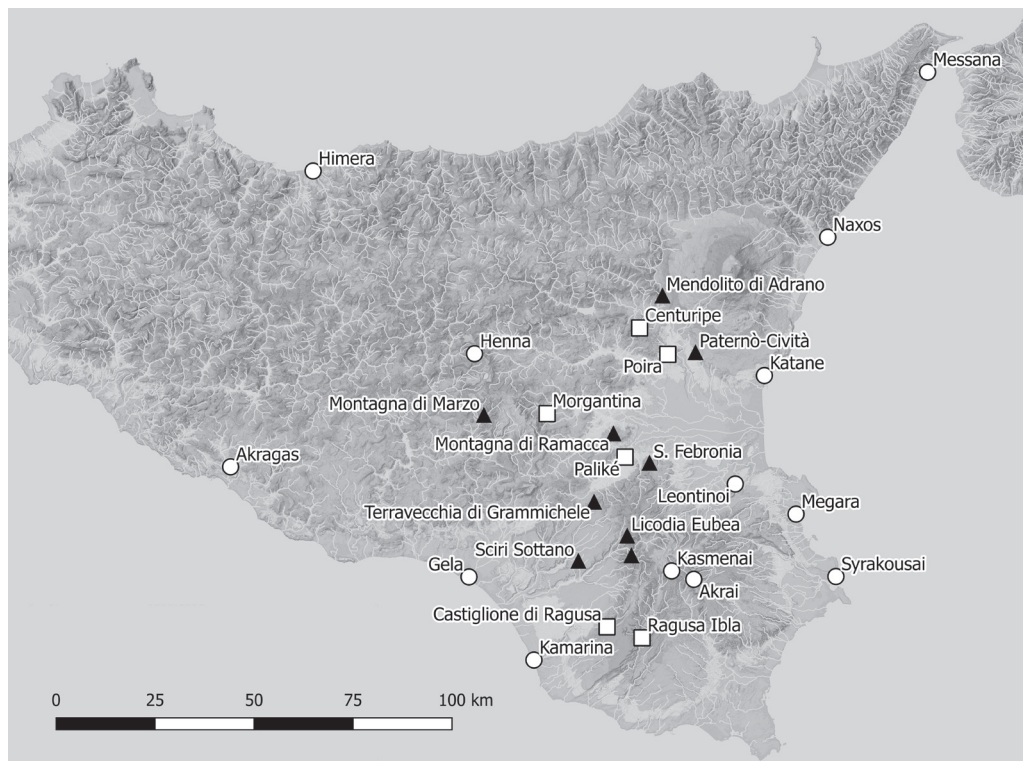


Fig. 16.3. Map of centre-eastern Sicily. V. Mignosa-M. Jonasch based on TanDEM-X © DLR 2019, all rights reserved. ▲: indigenous sites with inscriptions with arrow-shaped alpha; □: indigenous site with inscriptions without arrow-shaped alpha; ○: Greek poleis.

interdisciplinary approach can open new perspectives in the analysis of short and elusive epigraphic texts. Taking up from Agostiniani and Albanese Procelli's example, in this paper we take this interdisciplinary dialogue a step further and propose an approach to the arrow-shaped *alpha* which is not limited to one indigenous site but looks at the whole Sikel area. We will address the following three issues:

1. What is the origin of the arrow-shaped *alpha*? Does it perhaps represent the specialisation of a Greek epigraphic practice?
2. In the light of the available evidence, is it correct to interpret this *alpha* as a marker of *Sikel identity* (and not merely as a graphic variant typical of the Sikel alphabetic variety)? To discuss this point, and keeping with the methodological inspiration behind this volume, in this paper we address the epigraphic habit of three prominent Sikel centres in a multidisciplinary perspective, forsaking the narrow approach of epigraphic *corpora* and placing inscriptions within their full archaeological and historical context. We will pay attention to the contexts of use of Sikel inscriptions, the details of their geographical distribution, and the historical

background, which is often taken for granted and not sufficiently brought into the picture in linguistic and epigraphic discussions of the ‘Sikel’ *alpha*.

3. Is it correct to interpret the lack or abandonment of the arrow-shaped *alpha* in some Sikel centres as evidence that the writers wished to *avoid a sign endowed with a certain ‘social’ meaning*, as claimed in recent scholarship? In the discussion of our case-studies, we shall be exploring an alternative solution: namely, that what we are simply witnessing here is the alternation of two different epigraphic practices, both of which are amply attested in the whole Sikel area. The distribution of the inscriptions with Sikel *alpha* vis-à-vis those *without* it leads us to envisage a switch in the alphabetic model adopted in Sikel epigraphy. Such a switch was not uniformly widespread and is likely to depend on the particular geographical location of each Sikel centre.

To analyse the issues raised here we have chosen three case studies (Montagna di Marzo, Mendolito di Adrano, and Castiglione di Ragusa in the Hyblaeen area) because they are representative of the different ways in which Sikel centres have responded to the contact with Greek culture. They are also some of the richest cases in terms of epigraphic and archaeological evidence.

Distribution of evidence

The inscriptions which we will be addressing here were all unearthed in central-eastern Sicily and are certainly or very likely to be non-Greek. The evidence and counts which we shall be offering are based on our perusal of the material scattered in archaeological, epigraphic and linguistic publications now spanning almost a century. There is still no comprehensive *corpus* of Sikel epigraphy, though Luciano Agostiniani himself has been at work on one since 1981 (Agostiniani 1980–1981, 507; this would be companion piece to his *corpus* of Elymian inscriptions, Agostiniani 1977). He has also hinted that he has seen some unpublished material (Agostiniani 2012, 145) and announces the *corpus* as forthcoming (Agostiniani and Albanese Procelli 2018, 182). Our statistics are therefore likely to be incomplete and hence our conclusions may be countered by the publication of new findings. However, since the eagerly awaited new material is slow to appear, we think it useful to present a re-assessment of what is already available. The inscriptions accessible through excavation reports or scientific publications will soon be accessible online as a database published by V. Mignosa.

Figure 16.3 shows the main sites which have yielded epigraphic evidence identified as Sikel mainly on the basis of linguistic data. The variations in the script used in the epigraphic material of the Sikel area makes it necessary – as pointed out by Agostiniani on several occasions – to distinguish three areas, based on the alphabetic model provided by the nearest Greek centre(s):⁷

⁷ See Poccetti (2012, 72), who agrees with Agostiniani’s subdivision of the linguistic areas (Agostiniani 1992, 130–131). We cannot provide extensive coverage of similarities here, but these have long since been established: see *e.g.* Agostiniani (2012, 145–154). The Elymian area too borrowed its alphabet from the nearest Greek city, Selinous: see Agostiniani (1977; 2006, 684–685; 2012, 140–141); Poccetti (2012, 79–80).

Indigenous settlement	Arrow-shaped alpha	Other types of alpha
Mendolito di Adrano ⁶	Λ (type 1)	-
Kentoripa ¹	-	A A
Poira-Poggio cocola ¹	-	-
Paternò-Civita ⁵	⤴ (type 2)	Λ
Paliké-Rocchicella di Mineo ¹	-	Λ (lost, drawn by Orsi)
Montagna di Ramacca ¹²	Λ (type 1)	-
Coste di S. Febronia ⁴ (one of each, same context)	⤴ (type 2)	A A A
Terravecchia di Grammichele ¹⁷	Λ (type 1)	A A
Licodia Eubea ⁷	Λ ⤴ (both types)	A
Sciri Sottano ¹	Λ ⤴ (both types)	-
Monte Casasia ¹	Λ (type 1)	-
Ragusa Ibla ¹	-	-
Castiglione di Ragusa ³	-	A
Morgantina ⁸	-	A
Montagna di Marzo ⁸⁶	Λ ⤴ (both types)	A A

Fig. 16.4. Synoptic table of types of alphas. Eastern and southern Sicily. Superscripts indicate numbers of inscriptions for each site.

- The Aetna region, which includes Mendolito di Adrano, Kentoripa, Poira, Paternò-Civita, Paliké (Rocchicella di Mineo), Montagna di Ramacca and Coste di S. Febronia. This area borrows its alphabet from Katane and/or Naxos and/or Leontinoi.
- The Hyblaean Mountains region, which includes Terravecchia di Grammichele, Morgantina, Licodia Eubea, Sciri Sottano, Monte Casasia, Castiglione di Ragusa and Ragusa Ibla. This area borrows the alphabet from Syrakousai, her sub-colonies and, more marginally, Gela.
- Central Sicily, including Montagna di Marzo, Terravecchia di Cuti and Sabucina. These sites are clearly influenced by the alphabet of Gela.

It is important to note that, as Figure 16.4 shows, the arrow-shaped *alpha* does not appear systematically in all the non-Hellenic inscriptions. As a matter of fact, ‘normal’ *alphas* also feature in clearly non-Hellenic inscriptions and we also have sites in which both occur. Moreover, as we discuss in the next section, the arrow-shaped *alpha* also sporadically occurs in Greek inscriptions. It follows that it can only be considered a sufficient criterion to identify a text as ‘Sikel’ when other factors (mainly the material culture of the sites) coexist.

In addressing the individual cases of the presence or absence of arrow-shaped *alphas* in Sikel centres we will adopt an interpretative key that places emphasis on the communication routes between the settlements and their connection with the

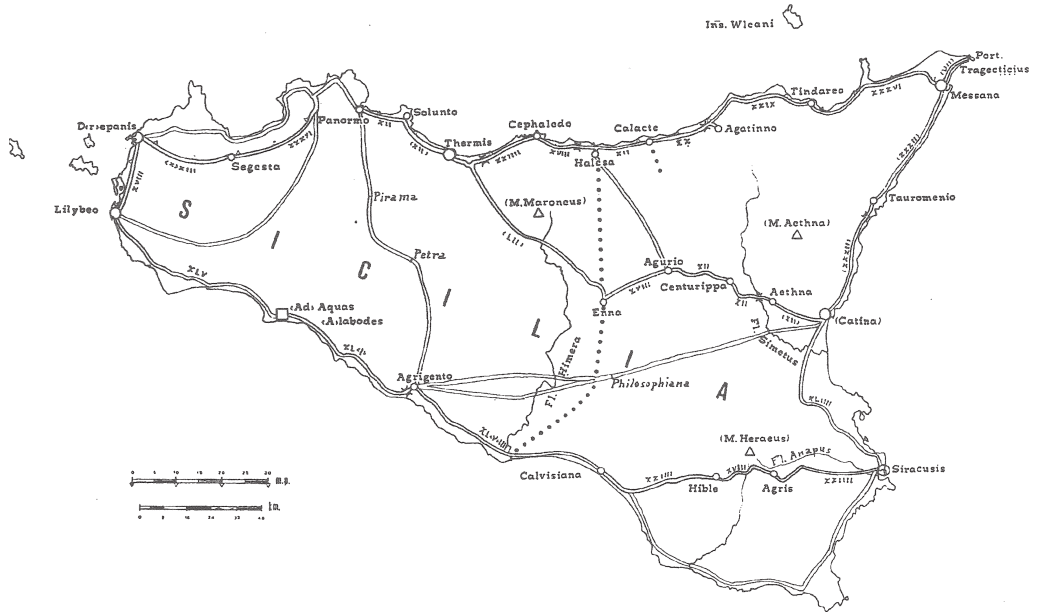


Fig. 16.5. Road network of Roman Sicily. From Uggeri (2004, fig. 1), all rights reserved.

Greek centres. Here we offer an overview which will be taken up in more detail in the sections where we discuss the case-studies.

The exact definition of communication routes in pre-Roman Sicily is a matter of debate (see Burgio 1996), although analysis of the distribution of artefacts and of cultural influences, when combined with the geomorphological and hydrographic features of the territory, helps one define at least the main roads. As Pace observes:

The stable agricultural organisation of the Sicani and Sikel societies before the arrival of the Greeks, and the presence of large population centres lead us to imagine the existence of a network of trails even before the archaic period (our translation of Pace 1958, 459).

There is a general consensus in favour of the hypothesis that modern-day transhumance paths go back to the road network of the period before the Graeco-Roman age (Orsi 1907, 741–748; Albanese Procelli 2003, 78; Uggeri 2004, 7). In the Roman period, especially in east and central Sicily, previous routes were restored and resumed: for instance, the main route which led from Katane to Henna and then on to Himera (see Fig. 16.5) already existed during the Greek period, and was probably used by the Romans to connect east and central Sicily to the north.⁸

Other crucial information for the definition of the communication network of these areas is their morphology, in particular the palaeo-drainage system, which

⁸ Uggeri (2004, 23) argues that the irregular and not straight layout (unlike other roads created anew) of Roman routes in Sicily is the consequence of the use by the Romans of Greek roadways.



Fig. 16.6. Modern hydrographic network of centre-eastern Sicily. Redrawn by P. Boyes after detail from 'Linee guida del piano territoriale paesistico regionale. 2. Carta geomorfologica', Regione Siciliana, Dipartimento BB. CC. AA. ED. E.P. For the entire coloured map see: <http://www.regione.sicilia.it/bbcaa/dirbenicult/bca/ptpr/vettoriali/02Geomorfologia.pdf>.

certainly would have characterised the landscape in a very different manner in antiquity. River valleys, such as *e.g.* those in central Sicily (see Spatafora 2012), were a fundamental resource not only for agriculture, but also because they served as communication routes, especially in mountainous areas (such as that around Mt Aetna). Although it is certain that ancient rivers had a stronger flow rate than in present days, it is possible to use today's hydrographic network to gain an idea of the ancient one (Fig. 16.6).

Starting with the Aetna region, the presence of three wide and viable rivers made the connections between sites easy. These are the Simeto River, which connected the area in the slopes of Mt Aetna with the plain of Katane; the Dittaino and Gornalunga Rivers, connecting the plain of Katane with the hinterland; and the Margi River, which ran close to the southern part of the Plain of Katane. As concerns the roads, it is likely that the Henna-Agyrion-Katane road, which in the Roman age connected Katane to Himera through the hinterland, already existed in the Greek period. However, if we examine the transhumance paths (see Fig. 16.7) in the light of the archaeological evidence of the area we can reconstruct a much wider network of routes, which shows how much the sites, and the areas themselves (the Aetna region and the Plain of Katane), were connected to one another.

The Sikel centres located on the Hyblaean Mountains, all in high-up positions except for Sciri Sottano, and with fertile land in the valleys, constitute a homogeneous area at the crossroads between the Greek and Sikel sites of the Plain of Katane, the Sikel centres in inner Sicily, the southern colonies of Kamarina and Gela, but also Syrakousai and its *emporìa* to the east. This region is characterised by an intricate system of development along smaller and larger rivers and through valleys, mountain ranges and caves (overview in Uggeri and Patitucci 2017, 9–24). The Hyblaean plateau is dominated by Monte Lauro (986 m), which those who travelled from Leontinoi to the southern coast would bypass by going through the Syracusan *emporìa* of Akrai and Kasmenai and then proceeding through valleys formed by sloping mountain ranges. This was the principal communication route of the area, which developed along the Dirillo River and had an important stop in Licodia Eubea. Another route unfolded along the Margi River gorges, where the most important centre is Terravecchia di Grammichele. As we shall discuss below, the relative homogeneity of the Hyblaean area in terms of epigraphy and findings – but also some of its most notable exceptions – can be explained by looking at its ancient hydrography and communication routes.

Sites in central Sicily which have yielded Sikel inscriptions are Montagna di Marzo, Terravecchia di Cuti and Sabucina. The last two sites are located on the road from Katane to Himera (see Fig. 16.6). Montagna di Marzo, even if apparently more isolated, was the nearest Sikel settlement to Gela, and it was located in the northern end of the Olivo River valley (today's Braemi River), in a network of routes which from the east coast led southward (see Fig. 16.6). In the Roman period, the route from Katane to Agrigento had an important stop (*mansio*) in the near-by centre of Philosophiana (identified with contrada Sofiana in modern-day Mazzarino: see Sfacteria 2016, 55–59).

In the light of this communication network, below we shall discuss three case-studies in order to provide a different perspective to analyse the epigraphic evidence of each of the three Sikel sub-areas, contextualising inscriptions in their archaeological and geographical settings. As we shall argue, a wider and more fine-grained overview of the history of the sites leads one to scale down the 'argument' of identity to explain their epigraphic habit and suggests instead a more practical explanation for the spread

of the arrow-shaped *alpha*, one in which movements of people, goods and techniques has a prominent role.

The arrow-shaped *alpha* is not a Sikel invention

In this section we wish to look at the first question which we have posited – namely, to what extent the arrow-shaped *alpha* is distinctly Sikel – by looking more closely at the Greek evidence and its distribution in southeast Sicily. Precisely because of the close dependency of Sikel sub-varieties on their Greek models, it is unlikely that this form of *alpha* was ‘invented’ by the Sikels as a means to distinguish their script. Indeed, similar *alphas* (with a vertical bar or central dot) are employed in inscriptions from various areas of ancient Italy, *e.g.* those from the Rhaetic and South-Picene areas (Marinetti 1985, 56), with the notable exception of Etruscan varieties.⁹

Already some 30 years ago Antonietta Brugnone demonstrated that the arrow-shaped *alpha* is attested in a small corpus of Greek texts from all over Sicily (but especially from the southern and eastern areas) and written both in the ‘red’ and ‘blue’ varieties of the Greek alphabet (Brugnone 1978b; see also Poccetti 2012, 73). As summarised in Table 16.1, these Greek arrow-shaped *alphas* are attested from around 520 BC until at least the middle of the fifth century, mostly in inscriptions on metal, and from seven different *poleis* (Akragas, Gela, Kamarina, Akrai, Selinous, Himera and Katane). The southern area is the most widely represented, with Gela scoring five different texts. It is notable that five of these *poleis* are proven to have transmitted the alphabet to the Sikels.

These Greek texts are therefore contemporary with the Sikel attestations, with the latter showing some possibly earlier specimens in the southern area.¹⁰ Texts on metal are predominant, with only a loom weight from Akrai and an epitaph from Gela being on stone. It is therefore possible that the arrow-shaped *alpha* of Sicilian Greek inscriptions was a special variant associated with metal, perhaps for technical reasons – or that it became distinctive of this typology of texts because of a local epigraphic habit.¹¹ In archaic and Classical Sicily, epigraphy on metal is as common as that on stone, probably because the island does not have marble caves and its limestone has a high porosity. The natural conclusion would be that the Sikels derived the arrow-shaped *alpha*, like the rest of their script, from a Greek model but made it standard in

⁹ Cf. the comparative table in *PID* 2.3 502–503. Earlier scholarship on Sikel epigraphy has invoked a direct influence from Oscan epigraphy, see *e.g.* Manni in *Kokalos* (1978), 43.

¹⁰ These are a funerary inscription from Licodia Eubea (*VSS* 21; cf. the drawing in Agostiniani 1992, 150 no. 12; ISic003363), dated to the first half of the sixth century, and a graffito on an Ionic cup from Monte Casasia, dated to the mid-sixth century by Pelagatti (1973b/2017, 100) and Frasca (1994–1995, 559), but to the end of the century by Agostiniani (1992, 131). The epigraphic interpretation of the inscription, which Cordano (1993, 156) read as ΑΡΕΥΒΑΛΕΑ, is controversial (cf. Agostiniani and Cordano 2002, 80): for a drawing, see Lorefice (2012, 254, fig. 17).

¹¹ Its attestations in continental Greece (Arcadia and Megaris) are also on metal: cf. Brugnone (1978b, 72–73). Brugnone (1978b, 75) goes on to argue that the arrow-shaped *alpha* spread to Sicily and the Adriatic area of northern Italy specifically because of Arcadian influence: this hypothesis is unwarranted.

Table 16.1 Distribution of arrow-shaped alphas in Sicilian Greek texts

Date	Sites					
	Akragas	Gela	Kamarina	Akraí	Selinous	Katane (and Aitna)
525–500 BC	Inscriptions on didrachms (Jenkins 1970, pl. 37; between 520 and 480 BC)					
ca 500 BC		<i>Lamella</i> with names (IGDS I 176; actual find-spot unknown)				
500–475 BC	Opisthographic <i>lamella</i> with names (IGDS I 180 = IGDS II 77, beginning of 5th c.; discussion in Brugnone 1978a; Poccetti 2018, 640–663)	Defixio (IGDS I 134.b, beginning of the 5th c.)		Limestone loom weight (IGDS I 108, where the <i>alphas</i> are drawn with a central stroke; but cf. the drawing in Orsi 1900, 45; beginning of the 5th c.)		Coin legends on tetradrachms (Katane) and <i>litrai</i> (Aitna; cf. Jenkins 1970, 59; ca 460 BC)
475–450 BC	<i>Lamella</i> with names (not later than 470 BC? Cf. Poccetti 2004, 618)			Defixio (Bettarini 2005, no. 22)	Coin legends on two obols (cf. Jenkins 1970, 59; probably later than 472 BC)	
	Legends on Geloan <i>litrai</i> (Jenkins 1970, 59; 233–234; 465–450 BC)			Defixio (Bettarini 2005, no. 23)		
	Funerary inscriptions on a limestone temple-shaped cippus (mid-6th c. according to Gentili 1946; ca 475–450 BC, <i>LSAG</i> : 278 no. 56)					
ca 450						Defixio (IGDS I 121)*

* The precise findspot of the Gela *defixio* is unknown. The text and its meaning in context have attracted a lot of attention; for a full bibliography see SEG LVII 905B.



Fig. 16.7. Network of 'trazzere' (transhumance paths) of modern Sicily (the thickest ones). The thinnest paths are modern trails. Redrawn by P. Boyes after detail from 'Carta della viabilità storica 1885', Regione Siciliana, Dipartimento BB. CC. AA. ED. E.P. For the entire coloured map see: <http://www.regione.sicilia.it/bbcca/DIRBENICULT/bca/ptpr/vettoriali/10Viabilita.pdf>.

their writing practice, or in certain varieties of it. This scenario was already considered by Agostiniani (1980–1981, 519), who however posited a complicated transmission process whereby the slight differences in the execution of the *alpha* (Fig. 16.7) may go back to two Greek variants of the grapheme, employed respectively in texts on metal and on stone.

We wish to advance a simpler hypothesis, which assigns a fundamental role to portable texts, such as *lamellae*. It is usually taken for granted that the transmission

of scripts happens through commercial media, and so vases, with the various types of inscriptions they carry, take centre stage. Indeed, scholars have noted that the Sikels adopted Greek writing together with its most typical textual types and formulae (ownership and/or dedicatory inscriptions on vases of indigenous or Greek origin, funerary inscriptions on stone and public inscriptions on architectural elements). However, the role of magic – a practice strongly associated with metal inscriptions – should not be underestimated. It is far from improbable that various kinds of magic practitioners moved between the Greek and the indigenous worlds. Hints in this direction are the fact that Sicilian *defixiones* abound in non-Greek names (cf. Poccetti 2004, 665; Meiser 2012) and that their main finding-spots on the island, Selinous and Himera, had continuous and complex contacts with the indigenous populations.¹² The *defixiones* from Gela and Akragas too show various degrees of interference from the indigenous world, as noted by Poccetti (2004, 664–665).

All these facts suggest that individuals with an indigenous affiliation were involved in the kind of practices connected to *defixiones* (cf. Poccetti 2004, 664). Speculatively, it may be argued that starting from a specific Greek epigraphic habit the arrow-shaped *alpha* spread to the Sikels via the special medium of *lamellae* of various kinds. While for the Greeks this grapheme was clearly a mere formal variant (with a technical, occasional and/or local character), for most Sikels it became the preferred variant. The prevalence of this variant, however, must not be considered as a deliberate choice on the writers' part, *i.e.* a marker that would differentiate the Sikel inscriptions from the Greek ones, but rather as an epigraphic habit that spreads together with epigraphic practice.

Was the Sikel *alpha* really a marker of identity? The case of Montagna di Marzo

The most important site for Sikel epigraphy is Montagna di Marzo, which has yielded almost half of all the Sikel *alphas* known today. As mentioned above, Montagna di Marzo was strategically located in the middle of a communication network and in an area rich in both Sikel and Greek settlements. The site already thrived in the late Bronze Age and its material culture became progressively characterised by elements which are closer to Greek ones.¹³

The Sikel inscriptions from Montagna di Marzo amount to 86 items (Agostiniani and Albanese Procelli 2018, 183); 83 are graffiti incised on vases found in the necropoleis.¹⁴

¹² On Selinous see Bettarini (2005) and Rocca (2009). Himera has now become the first finding-spot for Sicilian *defixiones*: campaigns in 2008–2011 and 2018 have unearthed some 54 specimens in the west necropolis (Vassallo and Valentino 2010), which are now in the process of being studied (a general overview of the evidence has been published in Vassallo *et al.* 2020). For the relations of these two *poleis* with the indigenous *chora*, see Ampolo (2012) and Vassallo (2010).

¹³ For references on the archaeological history of the site see Agostiniani and Albanese Procelli (2018, 151).

¹⁴ There also are two painted inscriptions on vases and a short graffito incised on a grave: see Agostiniani and Albanese Procelli (2018, 183).

All the texts but one are very short, consisting in individual words (most probably names) or sequences of two or three words (most probably ownership or dedication formulae). The longest inscription, on a local amphora now in the Agrigento Museum, consists of 93 letters: its interpretation remains highly debated.¹⁵ The arrow-shaped *alpha* is only found in non-Greek inscriptions and also features at the beginning of an abecedyary found in this site (Agostiniani 2012, 148 with fig. 8).

Agostiniani's theory that the arrow-shaped *alpha* was a marker of Sikel identity rests exclusively on the evidence from Montagna di Marzo, and especially on the inscriptions from the so-called 'Tomb 31 East', containing burials pertaining to two male individuals, probably of high status (Mussinano 1966; 1970; full catalogue of grave goods in Agostiniani and Albanese Procelli 2018). In the inscriptions on the vases belonging to both dead bodies Agostiniani identifies two hands (*i.e.* two engravers). The first hand uses the arrow-shaped *alpha*, as well as a *rho* with a short left stroke and a much longer right stroke; the second hand uses a 'normal' *alpha* and a *rho* in which the right stroke is clearly shorter (Agostiniani and Albanese Procelli 2015, 38, with figs 21–24; 2018, 190). On two vases (nos. 69 and 70) pertaining to the burial at the back of the tomb, the two hands have written different texts on each vase (Agostiniani and Albanese Procelli 2018, 186–189, with figs 107–108). On one further vase (cup 72), the arrow-shaped *alphas* in the text engraved by the first hand have been 'corrected' into 'normal' *alphas* by the second hand (Agostiniani and Albanese Procelli 2015, 41–42, with fig. 31).

Agostiniani's conclusion with regard to these inscriptions is that the second hand changed the arrow-shaped *alpha* on purpose because it was a 'marked sign, endowed with socio-cultural values' for the Sikels but not for Greek-speakers (Agostiniani 2012, 150; Agostiniani and Albanese Procelli 2018, 191). His interpretation rules out the possibility that the alternation is simply due to carelessness on the writers' part (a point of view with which we agree) and associates the graphic alternation with the funerary practices evidenced by the tomb. Agostiniani also notices a correlation between the type of vessels and the type of texts incised on them (Agostiniani and Albanese Procelli 2018, 194–196). Local or Attic vessels of a simpler kind bear inscriptions consisting of short words (FOAA: 2x, FITAPION: 2x, FI: 1x, ΓΕΑΕ: 1x), whereas the seven high-quality Attic drinking vessels are all incised by the same hand, which does not use the arrow-shaped *alpha*. Two of these texts (one repeated 3 times, the other 2 times) can be interpreted as ownership formulae (tentatively: ΜΑΡΕΣΚΑΚΑΜΙ 'I belong to Mares Kaka', ΑΡΑΚΑΚΑΜΙ 'I belong to Ara Kaka'). Two further graffiti contain ΙΤΑΛΟ and the last one ΡΑΤΟΡΑ: both are interpreted as the genitives of personal names (Ἰταλός and Ρατορας). In the last vase ΡΑΤΟΡΑ, originally written with arrow-shaped *alphas*, was later corrected by the hand which incised a second inscription on the vessel (ΑΡΑΚΑΚΑΜΙ) with 'normal' *alphas*. Thus, according to Agostiniani, while texts pertaining to every-day practices (graffiti indicating the contents of vessels) used

¹⁵ See the contributions collected in Kokalos 1978; and the later discussions by Poccetti (2004), Martzloff (2011), and Agostiniani and Albanese Procelli (2018, 191).

arrow-shaped *alphas*, in those pertaining to higher-status practices (ownership formulae in the context of a funerary symposium), the arrow-shaped *alpha* was felt to be out of place and hence corrected (Agostiniani and Albanese Procelli 2018, 195).

The ingeniousness and appeal of this hypothesis are evident. Yet, we believe that a less ideologically charged interpretation of this epigraphic *corpus* is needed. It seems to us that the distribution of shorter inscriptions with a simple name (ITAAO, PATOPA) and longer inscriptions with ownership formulae (APAKAKAMI, etc.) may more simply speak in favour of the existence of two scripts, both used by speakers of Sikel and both in circulation in Montagna di Marzo around the middle of the fifth century, perhaps a by-product of a 'complex interplay between overlapping and multi-layered identities' (Giangiulio 2010, 16). As Agostiniani and Albanese Procelli note, the vase with PATOPA later completed with APAKAKAMI (cup 72) could contain two different ownership inscriptions. Hence, we suggest, we would simply have two slightly different forms of the same script, the first one perhaps earlier than the second.

It is very important to emphasise that Agostiniani's hypothesis that the arrow-shaped *alpha* has an 'antagonistic' character rests exclusively on *one* correction, occurring on cup 72. In the two cups with ITAAO (nos 69 and 70) the second engraver *does not correct* the arrow-shaped *alphas* and actually uses them *also at the beginning of the second inscription*. Thus, the distribution could be explained by assuming that the two hands at work had two different systems as a reference point. Speculatively, the second scribe – who writes only the texts with the sequences MAPEΣKAKAMI, MAPEΣKAKA and APAKAKAMI and also uses a more open *rho* – may have been trained in a less conservative system, where the arrow-shaped *alpha* was not in use, while the first hand – who writes the texts with FOAA, FITAPION, FI, ITAAO, PATOPA, and a *rho* with a long right stroke – may have been acquainted with a different system. Variation in spelling due to the co-existence of parallel models in a bilingual context is normal in societies where orthography is not likely to have been heavily codified (see Sebba 2007, 163–165 for the connection between spelling and authority).

This interpretation seems to us more economical and also preferable on the historical level since it does not imply the existence of a Sikel 'identity' – an idea which has very little factual evidence to sustain it, as we discussed above (and to which we will return in the Conclusions). It also seems more probable from a linguistic perspective. In Montagna di Marzo, Sikel and Greek co-existed at this stage, as shown by the fact that Greek inscriptions on vases (all with 'normal' *alphas*) have also been found.¹⁶ If marking identity really was a concern of the Sikels, persistence in the use of the native language would be a better candidate for an identity marker than spelling.¹⁷ The fact that within one generation Sikel ceased to be written across the whole island suggests that in the middle of the fifth century the language was

¹⁶ IGDS I 166 (three erotic graffiti, ca 500 BC) and 167 (symptotic inscription, beginning of fifth century); IGDS II 71 (ownership inscription, first half of fifth century).

¹⁷ See the case of Oscan at Bantia, discussed by McDonald and Zair (2017), with useful methodological warnings.

going through its last phase of authentic vitality: the spread of new practices may have affected script first, and later language.

Writing without antagonism. The case of Mendolito di Adrano

The Sikel inscriptions from the Aetna region come from the sites of Mendolito di Adrano, Kentoripa, Poirà-Poggio Cocola, Paternò-Civita, Paliké (Rocchicella di Mineo), as well as the area around Montagna di Ramacca. Commercial exchanges and contacts between Sikels and Greeks started soon, around the seventh century BC but the area remained isolated enough from the main ‘Greek’ routes up until the foundation of Adranon (located on a ridge on the southwestern slopes of Mt Etna) by Dionysius I in 401 BC (Diod. Sic. 14.37.5). Archaeologically, the Aetna area lies in the Sikel heartland: during the short-lived revolt led by Ducetius, in the mid-fifth century, the rebels’ headquarters were Paliké and the near-by sanctuary of the Palikoi.

According to our estimation, the Sikel inscriptions from this region total ca 36. All the sites except two, Kentoripa and Paliké, have produced texts with the arrow-shaped *alpha*. The famous inscription on the Kentoripa *askos* (a small wine-jug), dated to the first half of fifth century BC,¹⁸ features the ‘normal’ *alpha* and other elements which characterise the script of this inscription as unique in the Sikel *corpus* as a whole. As concerns Paliké-Rocchicella di Mineo, the area of the sanctuary has yielded an inscription (now lost, but sketched by Orsi),¹⁹ with an *alpha* with an oblique bar on the right (Λ).

Apart from these two exceptions, the inscriptions and graffiti from all the other sites feature various typologies of *alpha*, among which are the arrow-shaped ones.²⁰ At Paternò-Civita we have tiles with Greek inscriptions (*SEG* 28 769), as well as some five specimens of uncertain linguistic attribution, but with arrow-shaped *alphas* (Pelagatti 1976–1977, 533–536; Agostiniani 1992, 131). At Coste di S. Febronia, on the entrance walls of a rock-cut chamber (second half of the seventh–first half of the sixth century BC)²¹ one finds two longish inscriptions and two *alphas* (higher than the other letters): one ‘normal’ and the other one arrow-shaped.²² Montagna di Ramacca has yielded graffiti on pottery dated to the first half of the sixth century, consisting of

¹⁸ *PID* 2.3 447; *VSS* 25; Pulgram (1978, 72); Morandi (1982, 168); Agostiniani (1992, 147).

¹⁹ Orsi (1900, 59 no. 37); Toscanelli (1914, 595 fig. 185); *VSS* 37 (p. 38, fig. 41); *PID* 2.3 35; Cordano (2003, fig. 12; 2008, 43; 2012, 165 fig. 5); ISic004394. Schmoll (1958) reads the inscription as ΟΣΤΙΥΗΑΓΕ.ΚΕ.Ι.Δ.

²⁰ The only inscription discovered in Poirà we are aware of is on an oinochoe found in a funerary context and inscribed as follows: HIMII (Cultraro 1989–1990).

²¹ See the archaeological context offered by Maniscalco (1993–1994; 1997–1998).

²² The inscriptions (ISic003479 and ISic003480) are edited by Cordano (1997–1998; 1999), who reads: BAHIAE (wall on the right, upper part); BAP.IFA or BAP.KA (wall on the right, lower part); M (wall on the right, lowest part); ΤΟΨΕΙ (wall on the left); Α (wall on the left, but separated from the first inscription); ‘arrow-shaped *alpha*’ (wall on the left, but separated from the first inscription). See also Cordano (2003, 45–46, figs 13–14; 2012, 164–165). It is worth mentioning that the editor provided a drawing only for the longer inscriptions, but not for those featuring the two *alphas*.

monograms and fragments of a longer text with the arrow-shaped *alpha* (Agostiniani 1980–1981, 511).

We shall now analyse the above evidence with an eye to the geographical distribution of these sites and their location on communication routes. Above we highlighted the importance of river valleys in the area. Thucydides' description of the Syracusan ambassadors' journey (during the summer of 413 BC) from Mt Aetna to Syrakousai and the Sikels' manoeuvres to ambush them (Thuc. 7.32.1) suggests that there was a route from the Aetna region to Syrakousai which unfolded along the Simeto River.²³ Other information concerning this area comes from Diodorus, who hints at a route between the Sikel settlement of Aitna/Inessa and the sacred area in the Adranon district (Diod. Sic. 14.37).

If one examines the distribution of the sites vis-à-vis rivers and valleys their mutual connection becomes clear. The Simeto River connects Mendolito di Adrano with the southern valley overlooked by five settlements on high ground which have also yielded Sikel inscriptions: Poirà-Poggio Cocola, Paternò-Civita, Montagna di Ramacca, Paliké-Rocchicella and Coste di S. Febronia. Based on geography, the Aetna region can be further divided into two sub-areas: the first extends on the slopes of Mount Aetna, including Mendolito di Adrano, Poirà-Poggio Cocola, Paternò-Civita and Kentoripa (both set apart by the Simeto River); the second looks out onto the Valley of the Margi River and the plain of Katane and includes Montagna di Ramacca, Paliké, S. Febronia.

The material culture of these sites in the archaic period also offers some very useful insights. Mendolito di Adrano, Civita di Paternò (Lamagna 1994; 1997–1998) and Poirà-Poggio Cocola (Rizza 1959; *BTCGI* 1990 s.v. 'Poirà')²⁴ have structures which can be identified as 'indigenous', while Paliké-Rocchicella di Mineo (*BTCGI* s.v. 'Palice'; Maniscalco and McConnell 1997–1998; 2003; Pope 2006), Montagna di Ramacca (*BTCGI* s.v. 'Ramacca'; Patanè 1995) and Kentoripa (see *BTCGI* s.v. 'Centuripe'; Pelagatti 1982) evidence buildings which have been ascribed to Greek influence (see Albanese Procelli 2003, 160–163). The response of these settlements to technological innovation from the Greek centres – including epigraphic practices – is not pre-determinable on the basis of the geographical location or the proximity to Greek cities, but it rather depends on numerous variables. If we consider literacy as one of the numerous innovations that the Greeks brought into the 'Sikel' area, it is necessary to take into account the whole historical context to understand its adoption and decline. In this respect, the case of Mendolito is particularly instructive.

²³ 'Meanwhile the representatives from Syracuse who, as already related, had gone to the various cities after the capture of Plemmyrium had met with a good response and were now on the point of bringing back with them the troops that they had raised. Nicias, however, was informed of their intentions, and sent to Centoripa and Alicyae and to other Sikels who were his allies and who controlled the route, asking them not to let the reinforcements through, but to join up together and bar their way, since there was no other route that they could even attempt to take, because the Agrigentines would not allow them to go through their territory'. Trans. by R. Warner.

²⁴ Rizza identifies the site with Aitna-Inessa, based on its proximity to Kentoripa, but this assumption remains a hypothesis.

The ‘Mendolito di Adrano’ site, an anonymous native centre, was occupied between the ninth–eighth and the fifth centuries BC.²⁵ The site develops at the foot of the volcanic cone of Mt Aetna on a low-lying basaltic terrace, originating from an ancient lava flow, whose western limit presents steep, albeit not very high, slopes on a more recent lava flow, which separates it from the left bank of the Simeto River. The first striking fact about the site is its size (some eight hectares) which, rather than pointing to a densely urbanised centre, seems to point to a settlement with small groups of houses interspersed with large expanses (perhaps used for agriculture or grazing), located within the walls, and built in the middle of the sixth century BC.

We do not have, at present, definitive archaeological evidence of the presence of craft workshops on the site during the last decades of the seventh and, above all, in the course of the sixth century BC. However, it is significant that much of the indigenously manufactured pottery was produced *in situ* for the community’s own uses. The locally-made pottery (often of the Licodia Eubea *facies*) is accompanied by colonial Ionian cups and some imported Attic and Corinthian ware (*kylikes*, *skyphoi*, *kotylai*, and transport amphoras).²⁶ There is also evidence of indigenously manufactured, albeit Greek-influenced, architectural elements, such as a *gorgoneion*, eight antefixes, polychrome terracotta used for cladding in buildings (not necessarily sacred), a number of basaltic capitals of Ionic imitation, and octagon columns, already known to Orsi (cf. Orsi and Pelagatti 1967–1968, fig. 5; Lamagna 2009, 77–78). This suggests the possible presence of relatively important buildings in the area, as well as the presence on the site of engravers skilled at offering a ‘local’ take on typically Hellenic iconographic motifs. This may be explained on the basis of the communication routes described above. Although the Mendolito site is distant from Greek settlements, the Simeto River provides a crucial connection with the Plain of Katane and the centres gravitating on it: the Greek Katane, Leontinoi and Naxos, and the other Sikeli settlements, which also acquired Greek technological innovations through commercial exchanges.

Mendolito has brought forth only four inscriptions, found on different supports.²⁷ They all feature arrow-shaped *alphas*:

1. A parallelepiped in lava stone (aka *cippo Sanfilippo*, from the name of the owner of the land in which it was found), interpreted as being a boundary stone dating from the sixth century BC. This stone is difficult to read due to its state of conservation

²⁵ The site has been excavated since the seventeenth century, but it was Paolo Orsi who first pointed out its importance to the scholarly community. Systematic excavations were not begun until Pelagatti’s mission in the 1960s (see Pelagatti 1964–1965; Pelagatti 1966; Orsi and Pelagatti 1967–1968; Pelagatti 2009).

²⁶ Pope 2006, 71.

²⁷ The documents were all published by Manganaro (1961), with the exception of the well-known inscription on the urban gate published by Pelagatti (1964–1965), and have recently been re-examined by Agostiniani (2009), whose studies we refer to for more in-depth information. High-resolution photographs of these documents can be found in Mignosa (2017–2018, 232–234, figs 2–7).

- (Manganaro 1961, 110, tab. L–LIII; Orsi and Pelagatti 1967–1968, 144–145, fig. 2; VSS 201–202; Zamboni 1978, 958; Agostiniani 2009, 116; ISic003644).
2. Two tile fragments, found in the village and at first interpreted as two different funerary inscriptions (Manganaro 1961, 110), but later identified as a single votive inscription dedicated by magistrates to deities (*LIA*² 127 = *PID* 2.3 576 e 577; Ribezzo 1923, 224). More recently Cultraro (2004, 224) has interpreted these fragments as an inscription on roofing slabs of housing structures featuring a dedication by the member of the community who financed the building works. The two fragments read as:
 - (a) ΔΟΗΙΤ ΙΜ ΡΥΚΕΣ ΗΑΖΣΥΙΕ that is, according to its accepted interpretation, ‘Ruke Hazsuies gives this’, or ‘gift from Ruke Hazsuie’. This inscription would thus contain a two-member onomastic formula referring to the individual who made or gave something (certainly not the tile but perhaps the building on which it lay or, as G. Colonna points out, something more significant for the community).²⁸
 - (b) ΡΕΣΕΣ ΑΝΙΡΕΣ, understood as another two-member formula. The inscription dates to the fifth century BC (*VSS* 18–19 = *PID* 2.3 576–577).
 3. Tile fragments showing short inscriptions understood to be factory marks, and a fragmentary inscription understood to be the initial part of a name (Manganaro 1961, 110, tab. L, 2–3).
 4. An inscription on a sandstone block found in the right pier (or to the east) of the entrance gate to the settlement (ISic003364). Right-to-left writing, 52-letter long and dating back to the mid-sixth century BC (550 BC). Its reading, accepted by most scholars, is ΙΑΜ ΑΚΑΡΑΜ ΕΠΟΠΑΣΚΑ ΑΓΙΙΕΣ ΓΕΠΕΔ ΤΟΥΤΟ ΦΕΡΕΓΑΙΕΣΗΕΙΚΑΔ[.] ΑΛΛΑ (Prosdocimi 1995, 1421–1422). The meaning of the text is obscure, but some of the terms seem to have parallels in Italic languages.²⁹

While all these inscriptions from Mendolito feature only ‘arrow-shaped *alphas*’, the other sites in the Aetna region do not show uniformity. The arrow-shaped *alpha* occurs in the native sites of Poirà-Poggio Cocola, Paternò-Civita (where the ‘normal’ *alpha* also appears) and Ramacca, but Kentoripa and Paliké-Rocchicella use the ‘normal’ *alpha* instead. We wish to offer a tentative interpretation of this distribution based on historical analysis.

At the beginning of the fifth century the Greeks do not seem to have been a threat to the site of Mendolito, which had thrived throughout the seventh and the sixth century: instead, they provided crucial innovations that the Sikels of Mendolito adapted and reshaped to suit their needs. Inscribing a monumental inscription on a gate is not a common practice in Greek Sicily: it is common, on the other hand, in Italic contexts as evidenced by the later inscription from Serra di Vaglio, found

²⁸ Colonna (1983, 62–63). See also Cordano (2012, 170).

²⁹ For an in-depth analysis see Mignosa (2017–2018).

near the fortification walls of the site (for the inscription see Manni Piraino 1968, 451–457 no. 28).³⁰ Thus, it would seem that in Mendolito the Sikels adopted the Greek alphabet, but proceeded to develop a specific epigraphic habit characterised by the arrow-shaped *alpha*. The sign can be interpreted as a ‘preferred variant’ (given that it is not exclusively used in the other sites of the Aetna region), which became common in the Sikel epigraphic workshops of the area.

The distribution of the *alpha* in the region does not perfectly match the two geographical sub-areas and this probably stems from the fact that all the centres in the Aetna region are connected to one another. Such regional connectivity fostered a high circulation of people, goods and practices. Among these there must have been artisans (stonecutters) who mastered the epigraphic techniques and, thanks to a wide communication network, spread their distinctive epigraphic habit (including the type of *alpha*) around the area. In those centres such as Kentoripa and Paternò-Civita in which the Greek presence was already significant in the second half of the sixth century, stonecutters were more influenced by the ‘original’ Greek alphabet and used it from the beginning. Thus, it may be assumed that Paternò-Civita and Kentoripa have inscriptions with the ‘normal *alpha*’ because of their connection with Katane. This is suggested by the existence of the Henna-Agyrion-Assoros-Kentoripa-Katane route, which may have been created precisely to connect Katane to important commercial areas – or which was the very reason for the establishment of such connections.

Why was the arrow-shaped alpha abandoned? The Hyblaeen area and Castiglione di Ragusa

The Sikel inscriptions from the Hyblaeen area come from the sites of Terravecchia di Grammichele, Morgantina, Licodia Eubea, Monte Casasia, Sciri Sottano, Castiglione di Ragusa and, possibly, Ragusa Ibla. These settlements, some of which go back to prehistoric times, are usually located in a high-up position controlling valleys and water streams (Uggeri and Patitucci 2017, 78 with fig. 122; fig. 7).³¹ Contacts between Greeks and Sikels were intense and multifaceted in this area, where ‘multiple processes of cultural contact and social change were running’ (Giangiulio 2010, 16).

According to our counts, based on the available published material, the Sikel texts from the Hyblaeen area amount to ca 43. Apart from the usual graffiti on Greek vases, some of which will be discussed below, there are also five funerary texts on stone. Two were inscribed on the stone slabs (‘portelli’) closing the rock-cut tombs (‘a grotticella’) which are typical of this area: one is from Ragusa Ibla (ΓΟΣΤΙΦΟ, late sixth century: VSS 29; Agostiniani and Cordano 2002, 79; Cordano 2012, 167 and 180, fig. 7: see below for a discussion; ISic003376), the other comes from Licodia Eubea (PAPOTA, with arrow-shaped *alphas*, first half of the sixth century: Agostiniani 1992, 150 no. 11; Cordano 2012, 167 and 180, fig. 8; ISic003360). Three other texts were inscribed on

³⁰ On the Italic features of the evidence from Mendolito di Adrano see Mignosa (2017–2018, 220–222).

³¹ See Mercuri (2012b, 289–290) for a description of the area and its (commercial) routes.

stone media that have been described as *stelai*. The most famous, a long winding inscription beginning with the indigenous name ΝΕΝΔΑΣ, is from Sciri (first half of the fifth century: Agostiniani 1992, 148 no. 7; Cordano 2012, 181, fig. 9; ISic003362).³² The other two are from Licodia Eubea and both have been dated to around the end of the sixth century: the first has the two-member formula ΑΔΙΟΜΙΣ ΠΑΡΟΙΟ; the other begins with ΤΟΔΕ followed by a text whose interpretation remains controversial (overviews in Agostiniani 1992, 150 nos. 12 and 13; Agostiniani and Cordano 2002, 81; ISic003363 and ISic003361).³³

Arrow-shaped *alphas* feature in inscriptions of all kinds from all these centres except for Castiglione di Ragusa and Morgantina, where the *alpha* always has the 'normal' shape.³⁴ Agostiniani (1992, 131) concludes that the epigraphic habit of the whole area escapes an overarching interpretation. We wish to suggest here a tentative explanation of the distribution based on the topography, history and archaeology of these sites.

The Sikel Hyblaeen area can be divided into two main sub-areas, each with its peculiar character. Terravecchia di Grammichele, Licodia Eubea, Sciri Sottano (in modern-day Mazzarrone) and Monte Casasia constitute a small cluster of nearby centres dominating the valleys of the Dirillo River and its smaller tributaries, along the route that led from Leontinoi to Gela and the sea (overview in Frasca 1994–1995, 563–569; Uggeri and Patitucci 2017, 16–17). Though increasingly influenced by Greek practices, these sites preserved their distinctive Sikel culture throughout the archaic age.

Terravecchia di Grammichele is situated on the slopes of the hills overlooking the valleys of the small Margi River, an area rich in minor indigenous settlements (Branciforti 2000). The necropoleis (Mulino della Badia, Madonna del Piano, Casa Cantoniera) bear witness to the coexistence of different burial practices (Albanese Procelli 2003, 167; Camera 2010). This has been interpreted as a sign that already towards the end of the sixth century the site started undergoing a cultural change, perhaps as a result of the Greek expansion into the interior (Procelli 1989, 685; Camera 2010, 117–118). The epigraphic record also features a Greek text, Δαμαίνετος Μνασία, inscribed on a lead *lamella* from the nearby sacred area of Poggio dell'Aquila (IGDS II 95, beginning of the fifth century). Apart from some isolated marks difficult to interpret, the inscriptions on vases comprise two graffiti with arrow-shaped *alphas*: ΝΕΔΑΙ, inside an Attic cup (ca 525–500 BC; cf. Agostiniani 2002, 83–84 with fig. 4; Camera 2010, 115),³⁵ and ΜΑΙΟ on an indigenous vase from the end of the sixth century (Camera 2010, 115 with fig. 63). A further graffito inscribed under the foot of a black-figured

³² Agostiniani (2012, 148 no. 7) provides a tentative reading of the text.

³³ Agostiniani and Cordano (2002, 81) mention two others unpublished *stelai* from Licodia Eubea as 'of little consequence'.

³⁴ See the two graffiti with ΝΕΝΔΑΣ on two Ionic cups (Pelagatti 1973a, 155–156).

³⁵ Another Attic cup bears the graffito ΟΥΠΕΙ ΠΙΝΙΓΟΙ ΕΜΙ, probably an ownership inscription, with no *alphas*.

kotyle features normal *alphas*: the interpretation of the text, dated to ca 500 BC, is controversial and it was initially thought to be in Greek (Agostiniani 2002, 82–83 with fig. 3). If the chronology of these three texts from Terravecchia di Grammichele can be considered representative, we may be witnessing here the succession of two writing systems, in accordance with the evolution of the cultural *facies* of the site, although the linguistic interpretation of the last text remains ambiguous.

The important settlement of Licodia Eubea, on a hill overlooking the Dirillo River, is an exemplary case of an indigenous site that between the seventh and the mid-fifth century underwent a gradual cultural change, resulting in a unique archaeological *facies* characterised by distinctive pottery (the so-called Licodia Eubea *facies*: overview in Camera 2013). The texts from Licodia Eubea are all Sikel (though some of them are just one-letter graffiti, maybe trademarks) and, as mentioned above, feature only arrow-shaped *alphas*. A similar scenario emerges from Sciri Sottano, slightly to the south of Licodia Eubea, of which only the necropolis is known. The only text, the funerary stele mentioned above, again shows only arrow-shaped *alphas*.

The settlement of Monte Casasia, the highest in the Hyblaeen area (730 m), is immediately opposite Licodia Eubea, on the right side of the Dirillo valley and in a location difficult to access. Surveys in the necropolis have documented the extensive presence of local pottery produced *in situ* as well as of Greek pottery (overview in Lorefice 2012). The earliest phase of the necropolis (mid-seventh to mid-sixth century), which precedes the foundations of both Kamarina and Gela, already witnesses the presence of imported Greek (mostly Corinthian) ware. In this period, Monte Casasia seems to have had dealings with the eastern Greek *poleis* (especially Leontinoi). The changes caused by the foundation of Kamarina in 598 BC are reflected in funerary practices and ceramic types: as mentioned above (see note 9), the only inscription from the site is the obscure graffito ΑΡΕΛΥΒΑΛΕΑ (with at least one secure arrow-shaped *alpha*) on an Ionic ‘B2’ cup, a type which Lorefice (2012, 236–238) connects with the second phase of the necropolis, when rituals appear to have become more clearly Hellenised; the script remains distinctly local.

While the first sub-area of the Hyblaeen region shows the persistence of the indigenous *facies* throughout the sixth century and into the fifth, the profile of the second sub-area, represented by the sites of Ragusa Ibla and Castiglione di Ragusa, is partially different. Their contacts with Kamarina were intense and long-lived, first of all for a topographic reason: Ragusa Ibla and Castiglione controlled the transversal route which, extending through the territory of modern-day Comiso and Chiamonte Gulfi, connected the internal Selinuntine road (see above) and the coastal Helorine road (Uggeri and Patitucci 2017, 78 with fig. 122). The necropoleis of both sites show evidence of ‘aristocratic’ burials which have been associated with the presence of high-status Greeks, probably coming from Kamarina. At Ragusa Ibla, the Pendente necropolis features monumental structures, while the Rito necropolis has yielded sophisticated funerary sculptures associated with exquisite Greek import ware (Di Stefano 2012, 258–259). The only inscription from this site, ΓΟΣΤΙΡΟ (see above),

is not overtly Sikel: if, as has been suggested, it is an anthroponym based on the root *g^hostis, which is not continued in Greek, this form could still be interpreted as an Italic name borrowed by Greek and inflected in the genitive singular (with *omicron* representing /o:/). In conclusion, at present we have no unambiguously Sikel inscriptions from this site.

Castiglione di Ragusa is certainly the more notable of the two Sikel centres. Located on a plateau at 643 m of altitude and overlooking modern-day Comiso, it was already inhabited by the end of the Bronze Age (Pelagatti 2006). Its two necropoleis are characterised by different burial practices that have been interpreted as evidence that two ethnic groups were active at this site (Mercuri 2012b; Uggeri 2015, 226–232). Indigenous people buried their dead in the west necropolis (full study in Mercuri 2012a), which has yielded only simple vascular graffiti, such as those with NENΔΑΣ (see note 34 above). Greek ‘emigres’, perhaps artisans, used the east necropolis, where typically Greek burials such as ‘cappuccina’ tombs and stone sarcophagi mix with indigenous practices.

The east necropolis is absolutely unique in the whole Sikel area because it is the probable finding spot of the so-called ‘Castiglione Warrior’: an early sixth-century bas-relief of a warrior with a shield and spear on a horse, flanked by the heads of a bull and a sphinx (?), which was initially interpreted as the architrave of a building but was later connected to a monumental tomb in the east necropolis (Di Stefano 2012, 260). The apparently ‘indigenous’ craftsmanship of the bas-relief pairs with a Greek inscription (IGDS I 44 = ISic003474) which if read from the bottom up – as would be natural to those passing under the architrave – yields an almost perfect hexameter (Σκύλλ(λ)ος ἐποίησε(ν) Πυρ(ρ)ίνω τῷ Πυτίκ(κ)α ‘Skyllōs made for Pyrrhinos son of Putikkas’). A work of this kind would only be possible within a community where Greeks had a prominent social role. The presence at Castiglione of Greeks of a certain standing is also suggested by another Greek inscription, a funerary epigram for a married couple (with Greek and indigenous names) inscribed on a tomb *portello* (IGDS I 127 = ISic001481, end of the sixth century BC) which, though not unequivocally from Castiglione, has recently been connected to the site.³⁶ In conclusion, Castiglione seems to evidence the full coexistence between Sikels and high-status Greeks which has led Albanese Procelli (2003, 224) to speak of a ‘bilingual’ context. Again, ethnic labels, though handy, are not completely fit to capture the multi-faceted reality of this site:³⁷ what is important, for our present purpose, is that Castiglione displays a level of cultural exchange that is profoundly different from that of the other centre in the Hyblaean area.

The last site of the Hyblaean region is Morgantina, located on the hills rising to the west of the Plain of Katane. Although seemingly isolated from the other Sikel

³⁶ The first editor, Pugliese Carratelli (1942, 321), attributed the stone to the Sikel ‘mountain area around Kamarina’. For the identification with Castiglione, see Cordano (2012, 167) and Di Stefano (2012). For a recent analysis, see Tribulato (2018, 224–229).

³⁷ See also Giangiulio (2010, 18).

and Greek centres, Morgantina is actually located on one of the main routes between Katane and Akragas (see Fig. 16.5 above) and is equidistant from Syrakousai, Katane, Kamarina and Gela. The Sikel centre, preceded by a protohistoric phase (tenth–ninth centuries), was already established in the second quarter of the sixth century and was destroyed in 459, during the campaigns of Ducetius (Diod. Sic. 11.78.5). Imported Greek pottery and building techniques are common (Antonaccio 1997), suggesting – as for Ragusa Ibla and Castiglione – that contacts with the Greeks were precocious and intense. Evidence from the necropolis also suggests that already in the archaic age Morgantina was characterised by a distinctive culture, which mingled elements of different origin but resulted in being original and unique (Lyons 1996; Antonaccio 1997; Giangiulio 2010, 20). This is reflected in the epigraphic record, where clearly Greek texts mingle with more elusive ones. All the eight inscriptions are graffiti and feature only ‘normal’ *alphas* (see Antonaccio and Neils 1995; Antonaccio and Shea 2015). Some inscriptions are clearly connected to sympotic rituals: see ΠΙΒΕ on a *kylix* (Watkins 1995, 39–41; Antonaccio and Neils 1995) and ΛΑΠΕ on a mug (Antonaccio and Shea 1995, 60–61). Other texts have simple personal names, some of them possibly Greek: ΠΥΠΙΙ on a *kylix* (Lyons 1996, 7), ΔΑΜΙΣ on a lamp (Lyons 1996, 145) and ΚΥΠΑΡΑΣ ΕΜΙ a Lakonian krater (for other graffiti see Antonaccio and Shea 2015).

The highly ‘mixed’ context of Morgantina is a good place to stop and take stock. The seeming lack of homogeneity in the Hyblaeen epigraphic record results from the evolution of epigraphic practices under different contact situations. While all the sites in the area at some point came into contact with the Greeks, some (Monte Casasia, Sciri Sottano) remained more isolated, others show signs of higher exchange around the mid-sixth century (Terravecchia di Grammichele, Licodia Eubea), and others still seem to have been inhabited by Greeks early on, and to have experienced a high level of cultural interchange (Castiglione di Ragusa, Morgantina). The distribution of arrow-shaped *alphas* and their evolution into ‘normal’ *alphas* can be conveniently explained in the light of all this. Monte Casasia, Sciri Sottano and Licodia Eubea show no ‘normal’ *alphas* and this may be consistent with the lower presence of Greeks and the consequent permanence of the epigraphic habit established among the stonemasons of these areas. In Terravecchia di Grammichele the only text without arrow-shaped *alphas* is the inscription on the Attic *kotyle* dated to ca 500 BC; in Morgantina and Castiglione – a site that was inhabited by Greeks who were already writing sophisticated inscriptions by the late seventh century – there is *no* arrow-shaped *alpha*; the same could perhaps apply to Ragusa Ibla, though the epigraphic evidence here is too scanty. Mercuri (2012b, 289) argues that Castiglione had a special connection with Gela on top of the more obvious one with the closer Kamarina, as suggested by otherwise rare archaeological material shared by the two centres. It is therefore possible that Castiglione was among the first sites of the Hyblaeen area to adopt the Greek alphabet according to the specific model of Gela, which – as seen above – also occasionally employs the arrow-shaped *alpha*.

Conclusions

The three contexts presented here – Montagna di Marzo, Mendolito di Adrano and the Hyblaean area – in a chronologically coeval period respond differently to the impetus derived from the phenomenon of Greek colonisation. Montagna di Marzo begins to be settled around the sixth century, on the one hand as a ‘reaction’ to the foundation of Gela (ca 689), and on the other hand to Morgantina’s political and cultural evolution, which had already been heavily permeated by Greek elements by the sixth century, and which was only a six-hour walk away. It is reasonable to assume that between the sixth and fifth centuries, Greeks were not only present in the site, but somehow lived harmoniously with the indigenous community. A hint in this direction is provided by the Greek inscriptions, seemingly confined to funerary or, however, private contexts. The evidence from Montagna di Marzo can thus be viewed in the sociolinguistic framework that connects bilingualism and the co-existence of writing systems with the emergence of ‘interlingual phenomena’ (Sebba 2007, 162–163). In this framework, Sikel engravers ended up adopting the script which they learned from the continuous contact with the Greeks and which mimicked the Greek epigraphic habit. However, in an initial phase of contact the situation was more fluid and both scripts, as well as their graphic variants, coexisted.

In the Hyblaean area most centres maintained their writing practices unaltered because they were excluded from the frequent contact with the Greeks that characterised other sites centres and therefore maintained their own epigraphic habit. Castiglione, on the other hand, had been more stably inhabited by Greeks since the beginning of the sixth century. Its special standing in the Sikel community of the area is suggested by the presence of two Greek epigrams (out of the nine in the whole epigrammatic corpus of archaic Sicily: see Tribulato 2018), the monumental burials of the east necropolis and the alliance with Kamarina against Syrakousai in 553/2 BC. It is not by chance that the lack of arrow-shaped *alphas* characterises the Sikel epigraphy of this centre rather than that of other places. This state of affairs should not be taken as proof that the arrow-shaped *alpha* was endowed with an ethnic or social meaning, but simply as evidence that the long process of Sikel alphabetisation occurred in different phases, reflecting different circumstances. Some centres, like Castiglione, seem to have been more advanced in the acquisition of a more distinctly Greek script before they also forsook their language.

By contrast, the centre of Mendolito, situated on a communication route along the Simeto River, has yielded materials from the late Bronze Age (1270–1000 BC), the Final Bronze Age (1000–850) and the Iron Age II (730–650), which confirms the existence of a settlement before the foundation of the nearby Katane and Naxos. The epigraphic practice here is different from the other two Sikel centres which we have studied. It is public and geared towards self-representation; both material culture and epigraphy are markedly ‘local’, which means that the centre adopted innovations from Greek sites but retained its own culture. During the process of alphabetisation the Mendolito engravers

maintained the writing system which they had initially acquired, with its arrow-shaped *alpha*, as long as the centre was populated. This happened not because Mendolito preserved a strong 'Sikel' identity, but because it produced its own inscriptions: an epigraphic production which depended on local workshops and was far from the influence of other scripts/alphabetic varieties. When the gradual encroachment of Greeks in the area took place, by the second half of the fifth century BC, the site was abandoned, perhaps replaced by Adranon.

The epigraphic impetus of Montagna di Marzo, Castiglione di Ragusa and Mendolito di Adrano in the fifth century perfectly matches the information that comes from historiographical sources. This is the period immediately preceding the Sikel rebellion led by Ducetius against Greek expansion in the eastern part of the island.³⁸ Ducetius managed to create a coalition of various Sikel centres, though by no means all of them. He even founded a new centre at Paliké and built a sacred area near the site (Diod. Sic. 11.88.6–11.90.2). His independentist policy however led to an alliance of Syrakousai and Akragas against him, which eventually caused his defeat. It is important to recall these historical events here because scholars have used them to show that a strong 'Sikel identity'³⁹ existed during the fifth century and produced Ducetius's struggle for Sikel freedom. However, Ducetius's attempt to create a union of Sikel communities was short-lived and failed in 450 BC. If his initial success no doubt stemmed from an agreement between the Sikel centres, the short duration of the Sikel union may be explained just as conveniently as a sign of the actual fragmentation of the small Sikel settlements, which were isolated from one another and probably never constituted a cohesive entity (of the same opinion De Vido 1997, 36–37).

In conclusion, the fact that the flourishing of Sikel epigraphy and Ducetius' enterprise are quasi-coeval cannot be used as decisive evidence for the hypothesis that the Sikels thought of themselves as an *ethnos*. Hence, we really have neither historical nor epigraphic evidence to claim that the Sikels may have wished to communicate their *shared* Sikel identity through the use of a graphic marker, the arrow-shaped *alpha*. Instead, as we have argued in this paper, the use and diffusion of this grapheme should be assessed by looking to epigraphic practices and geographical factors rather than to cultural and identity ones.

³⁸ On Ducetius and his enterprise, see Adamesteanu (1963); Galvagno (1991); De Vido (1997); Galvagno (1999); Consolo Langher (1996, 246–251); Consolo Langher (1997, 61–69); Cusumano (2006); Copani (2007); Bellino (2014).

³⁹ On the problem of the interpretation of Diodorus' account on Ducetius (Diod. Sic. Books 11 and 12) through the perspective of identity, see De Vido (forthcoming).

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