

# GREEK WRITING

*from* KNOSSOS  
*to* HOMER



*A Linguistic Interpretation  
of the Origin of the Greek  
Alphabet and the Continuity  
of Ancient Greek Literacy*

ROGER D. WOODARD

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*For Paul*

בן חכם ישמח אב

*υἱὸς σοφὸς εὐφραίνει πατέρα*

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# P r e f a c e

Of the many splendid achievements of the ancient Greeks, the alphabet was perhaps the most marvelous and certainly the most influential. Like practically all great intellectual and technological achievements, this one was no creation *ex nihilo*. The alphabet stands on the shoulders of the consonantal script of the Phoenicians, as is well known. However, in the following pages I argue that one alphabetic foot also rests on a shoulder of the syllabic script of the Cypriot Greeks. That this is so only comes to light when the question of the origin of the alphabet is examined in a manner which cuts across individual disciplinary boundaries. Because of the cross-disciplinary nature of this investigation, some of the territory traversed will be unfamiliar to one or another group of readers. The phonetic and phonological discussions and the careful examinations of earlier attempts to elucidate certain spelling strategies of the Greek syllabaries will, for example, be new ground for some. These matters are, however, crucial in discovering that there is indeed a continuum of Greek literacy from Mycenaean Knossos to Homer. Perhaps those readers less familiar with linguistics may even wish to begin reading the book with chapter 6 and, after completing chapter 8, go back and read the book from the beginning. Readers may also wish to consult the phonetic glossary and charts which appear following chapter 8.

This is a work which has taken shape over some time. While I would hesitate to provide an exhaustive list of everyone who has offered constructive comments along the way, lest some individuals be unintentionally omitted, there are particular persons and organizations to whom I must express heartfelt appreciation. I am yet again deeply grateful to the Andrew W. Mellon Foundation, which provided partial support for the research underlying this book. I would like to express my appreciation to Marshall Cohen, former dean of the Humanities Division of the College of Letters, Arts and Sciences at the Univer-



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# Abbreviations

- AJA *American Journal of Archaeology*  
 AJP *American Journal of Philology*  
 BASOR *Bulletin of the American Schools of Oriental Research*  
 BCH *Bulletin de correspondance hellénique*  
 BSL *Bulletin de la société de linguistique de Paris*  
 CAH *Cambridge Ancient History*  
 Comp. Dionysius of Halicarnassus, *de Compositione Verborum* (in Usener and Radermacher 1985)  
 CQ *Classical Quarterly*  
 CR *Classical Review*  
 DMic. *Diccionario micénico* (= Aura Jorro 1985–1993)  
 Docs. *Documents in Mycenaean Greek* (= Ventris and Chadwick 1973)  
 DT Dionysius Thrax, *Techne Grammatike* (in Bekker 1814–1821)  
 Ench. Hephaestion, *Enchiridion* (= Consbruch 1971)  
 ICS *Les inscriptions chypriotes syllabiques* (= Masson 1983)  
 IF *Indogermanische Forschungen*  
 IJAL *International Journal of American Linguistics*  
 JAOS *Journal of the American Oriental Society*  
 JHS *Journal of Hellenic Studies*  
 JIES *Journal of Indo-European Studies*  
 JL *Journal of Linguistics*  
 KP *Les inscriptions syllabiques de Kouklia-Paphos* (= Masson and Mitford 1986)  
 KZ *Zeitschrift für vergleichende Sprachforschung*  
 LI *Linguistic Inquiry*  
 M. Sextus Empiricus, *adversus Mathematicos* (= Mutschmann and Mau 1961)

*NK* *The Nymphaeum of Kāfızin* (= Mitford 1980)

*RP* *Revue de philologie*

*SMEA* *Studi micenei ed egeo-anatolici*

*SPA* "Handbook of Phonological Data from a Sample of the World's Languages: A Report of the Stanford Phonology Archive" (= Crothers et al. 1979)

*TAPA* *Transactions of the American Philological Association*

*TPS* *Transactions of the Philological Society*

# Greek Writing from Knossos to Homer



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# Introduction

## 1.0 Overview

This is a book about the origin of the Greek alphabet (at least that is my perception). But I cannot begin this book with the alphabet, for it was not with the advent of that script that the Greeks first began to write. Hundreds of years before the conception of  $\alpha$ ,  $\beta$ ,  $\gamma$ , and so on, Greek scribes had already taken stylus in hand and were engaged in giving orthographic expression to their language. In the following pages I argue that it is only within the broader context of Greek literacy that the origin of the Greek alphabet can be rightly perceived. The Linear B syllabic script, the syllabary of the Cypriot Greeks and the alphabet each stand as points along an unbroken continuum of Greek literacy which stretches from the Mycenaean era to the present.

The continuity of Greek literacy only comes to light upon examining certain aspects of prealphabetic Greek orthography in exacting detail, and I undertake such an examination in the ensuing four chapters. In chapter 2 an overview is presented of the two ancient Greek syllabaries (i.e., scripts in which each character has a value equivalent to a syllable rather than a single consonant or vowel sound).<sup>1</sup> These two scripts are Linear B, the second millennium B.C. writing system of the Mycenaean Greeks, and the slightly later Cypriot Syllabary. Chapters 3 and 4 are devoted to an analysis of the various modern interpretations of the Linear B and syllabic Cypriot spelling strategies which were used for writing sequences of consonants. As each character in the syllabic scripts has a built-in vowel component (since every syllable contains a vowel), special mechanisms had to be devised for spelling phonetic strings of consonants. Though we would most certainly not have anticipated it, we will first encounter here, in these syllabic strategies for spelling consonant clusters, telling evidence that the Greek alphabet was developed by individuals who were

already literate—literate in the tradition of a syllabic writing system. This initial discovery of a bridge between the Greek syllabic and alphabetic traditions is the object of a detailed investigation in chapter 5.

We at last turn our attention fully on the alphabet in chapter 6. Here I explore the Greek adaptation of the characters of the Phoenician consonantal writing system (which is, of course, the source of the Greek alphabetic script), focusing on the Phoenician sibilant letters (*zayin*, *samek*, *šade*, and *shin*) and their Greek counterparts (*zeta*, *xi*, *san*, and *sigma*). Recent investigators have characterized the devolutionary relationship between these particular Semitic and Greek characters as confused and problematic. Closely examining phonetic, typological, and historical-phonological evidence, I argue that the presence of *zeta*, *xi*, and *san* (alongside *sigma*) in the Greek alphabet is reasonably and convincingly motivated only within the framework of a Greek adaptation of the Phoenician script in which the adapters were persons already literate in the syllabic Cypriot orthographic tradition. Moreover, within such a framework the relationship between the Phoenician sibilant characters and their Greek analogues is not confused but straightforward.

Chapter 7 is concerned with Cyprus as the place of origin of the alphabet. Here I identify additional evidence supporting the thesis that the alphabet was the product of Cypriot scribes and explore a scenario of early developments of the alphabet on Cyprus which would account for variations in the local alphabets of Greece. Within recent years the date assigned to the origin of the Greek alphabet has ranged from the eighth to the fifteenth centuries B.C. I argue that the model of a Cypriot origin of the alphabet establishes for this process a *terminus post quem* of the early to mid-ninth century B.C. and that the development of the alphabet at the hands of scribes trained in the syllabic writing system of Cyprus is responsible for the occurrence in the alphabet of certain features which some investigators have interpreted to be evidence for a second-millennium date of origin. Chapter 7 concludes with a survey of the findings of those investigators who have proposed Cyprus as the place at which the Greek alphabet was devised, followed by an examination of other proposed sites for this process.

In chapter 8, I will summarize my findings which point to the Greek adaptation of the Phoenician script at the hands of scribes accustomed to spelling the Greek language with the syllabic script of Cyprus. Recent work on the origin of the Greek alphabet has invoked a causative relationship between the advent of the alphabet and the recording of Homeric verse, an issue I also address in chapter 8. My study concludes with an examination of the nature of the exportation of the alphabet out of Cyprus to points west.

## 1.1 The Greek Syllabaries

Before proceeding to chapter 2 and its survey of the orthographic principles of the Mycenaean and Cypriot syllabic scripts, I offer a few remarks toward placing those scripts within the context of their historical development. Linear B,

the name that the British archaeologist Sir Arthur Evans coined at the turn of the century for the syllabic Mycenaean script, survives primarily on clay tablets recovered from the ruins of the Mycenaean palace at Knossos and at Khania<sup>2</sup> on the island of Crete, as well as from various Mycenaean sites on the Greek mainland, chiefly Pylos, Mycenae, Tiryns, and Thebes (see figure 1.1). The materials from Knossos are most often dated to about 1400 B.C. and those from the mainland sites to about 1200 B.C. The Linear B script almost certainly developed from the as yet undeciphered Minoan script which Evans called Linear A; the advent of the Linear B script is probably to be placed in the fifteenth century B.C.<sup>3</sup> Linear A, in turn, had likely evolved out of the also undeciphered script known as Cretan Hieroglyphic. The former is attested from about 1750 to 1450 B.C., and the latter appears to have spanned the Middle Minoan period (ca. 2000–1600).<sup>4</sup>

The Greek syllabic writing system of Cyprus, the Cypriot Syllabary, first attested in the middle of the eleventh century B.C., appears to be a Greek adaptation of one of the Cypro-Minoan scripts, so called because they are believed to be descended from a Cretan writing system, quite probably Linear A.<sup>5</sup> The Cypro-Minoan scripts have been traditionally identified as Cypro-Minoan 1, 2, and 3; a fourth script, sometimes called Archaic Cypro-Minoan, is attested on

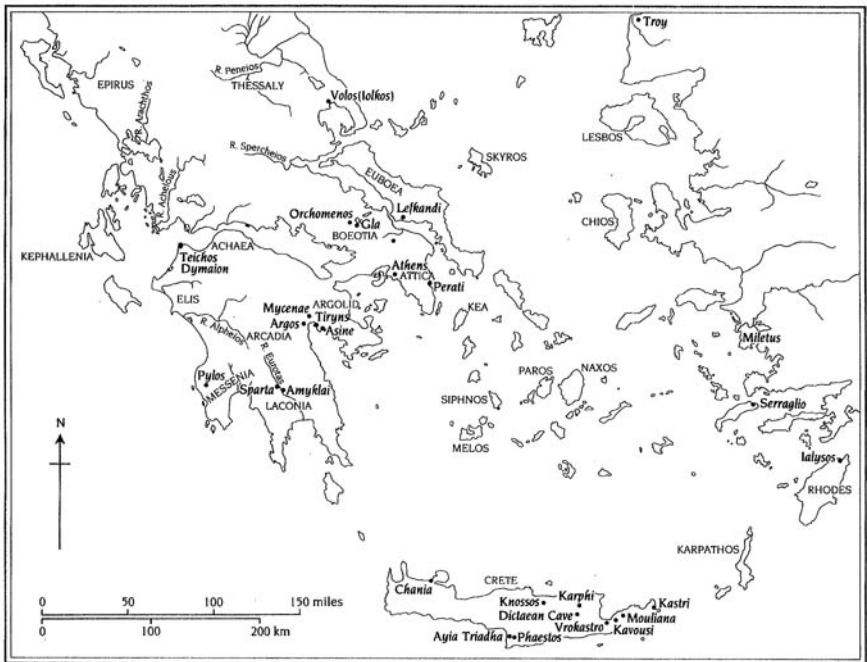


FIGURE 1.1 Map of the Bronze Age Aegean. From Barry Cunliffe, *The Oxford Illustrated Prehistory of Europe* (Oxford University Press, 1994). Reprinted by permission of Oxford University Press.

a single document of ca. 1500 B.C. and is perhaps the immediate predecessor of Cypro-Minoan 1, the probable source of the Greek Cypriot Syllabary. Cypro-Minoan 1 inscriptions are attested approximately from the late sixteenth to the twelfth centuries B.C. Cypro-Minoan 2 and 3 are known from thirteenth-century documents, the latter having been recovered thus far only at the site of the Syrian coastal trading center of Ugarit.<sup>6</sup>

## 1.2 Miscellanea

I have anticipated that this book's audience will include classicists, linguists, and specialists in Near Eastern studies and have undertaken to write in such a way that the work will be accessible to the full array of its readers. The result of so doing may be that at points in the study, one subset or another of the readership may encounter exhaustive discussion of matters which, for that subset, seem patently obvious. I would implore each group of specialists to exercise tolerance and long-suffering in the midst of such trials, so that perhaps in the end some common benefit will be realized.

All Greek and Semitic words cited in the text are phonetically transcribed and glossed. The mode of transcribing Greek vowels which I have adopted is that of W. S. Allen 1974 (see figure 1.2):<sup>7</sup>

- (1)  $\iota$  = high front unrounded /i/ and /i:/
- $\upsilon$  = high front rounded /ü/ and /ü:/
- $\omicron\upsilon$  = high back rounded /u:/
- $\epsilon, \eta, \epsilon\iota$  = mid front unrounded /e/, /e:/, and /e:/, respectively
- $\omicron, \omega$  = mid back rounded /o/ and /o:/, respectively
- $\alpha$  = low central unrounded /a/ and /a:/

The decision was made to transcribe, by convention, all Greek vowels as they would have been pronounced in fifth-century Attic (a procedure which admit-

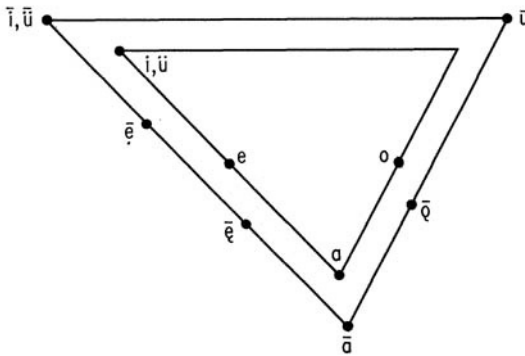


FIGURE 1.2 The vowels of Classical Attic Greek. From W. S. Allen, *Vox Graeca: A Guide to the Pronunciation of Classical Greek*, 2nd ed. (Cambridge University Press, 1974). Reprinted by permission of Cambridge University Press.

tedly has often resulted in anachronistic transcription), except where it was necessary to make dialectal vowel values explicit for the sake of the discussion or argument at hand.

## Notes

1. Of course, there are characters in the Greek syllabaries which represent single vowels, as a vowel alone can constitute a syllable. It is at this one point that the values of characters of syllabic scripts and alphabetic scripts overlap.

2. On the tablets from Khania, see E. Hallager, M. Vlasakis, and B. Hallager, 1990, "The First Linear B Tablet(s) from Khania," *Kadmos* 29:24–34; 1992, "New Linear B Tablets from Khania," *Kadmos* 31:61–87; J.-P. Olivier, 1993, "KN 115 = KH 115. Un même scribe à Knossos et à La Canée au MR IIIB: Du soupçon à la certitude," *BCH* 117:19–33.

3. On the development of the Linear B script from Linear A, see T. Palaima, 1988, "The Development of the Mycenaean Writing System," in *Texts, Tablets and Scribes: Studies in Mycenaean Epigraphy and Economy Offered to Emmett L. Bennett, Jr.*, ed. J.-P. Olivier and T. Palaima (supplement to *Minos*, no. 10), pp. 269–342.

4. For an overview of the Cretan and Cypriot scripts, see R. Woodard, forthcoming, "Linguistic Connections Between Greeks and Non-Greeks," in *Greeks and Barbarians*, ed. J. Coleman and C. Walz. On Linear A see Y. Duhoux, 1989, "Le linéaire A: Problèmes de déchiffrement," in *Problems in Decipherment*, ed. Y. Duhoux, T. Palaima, and J. Bennet (Louvain-La-Neuve: Peeters), pp. 59–120; Y. Duhoux, ed., 1978, *Études minoennes I: Le linéaire A* (Louvain: Éditions Peeters); L. Godart, 1976, "La scrittura lineare A," *La parola del passato* 31:31–47. On Cretan Hieroglyphic see J.-P. Olivier, 1989, "The Possible Methods in Deciphering the Pictographic Cretan Script," in Duhoux et al. 1989:39–58; 1976, "La scrittura geroglifica cretese," *La parola del passato* 31:17–23.

5. See T. Palaima, 1989a, "Ideograms and Supplementals and Regional Interaction among Aegean and Cypriote Scripts," *Minos* 24:29–54; J. Chadwick, 1979, "The Minoan Origin of the Classical Cypriot Script," in *Acts of the International Archaeological Symposium "The Relations Between Cyprus and Crete, ca. 2000–500 B.C."* (Nicosia: Nicolaou and Sons), pp. 139–143.

6. On the Cypro-Minoan scripts, see especially T. Palaima, 1989b, "Cypro-Minoan Scripts: Problems of Historical Context," in Duhoux et al. 1989:121–187 (with extensive bibliography of earlier work); E. Masson, 1974, *Cyprominoica* (Göteborg: Paul Åströms Forlag). Palaima disputes the traditional four-way classification of the Cypro-Minoan scripts.

7. However, I utilize the *colon* to mark long vowels in phonetic transcription, while Allen uses the *macron*.

# The Syllabaries

## 2.0 Structure of the Syllabaries

### 2.0.1 Symbol Types

The two syllabaries in which ancient Greek was written share the trait of consisting almost entirely of two types of symbols: (1) symbols representing simply *vowels*<sup>1</sup> (i.e., V characters); and (2) symbols representing sequences of *consonant + vowel* (i.e., CV characters). In figure 2.1 the symbols of Linear B are presented; as indicated, the only characters having a value other than V or CV are the *dental + glide* characters *twe*, *two*, *dwe*, *dwo*, *nwa* (and perhaps *swa* and *swi*), *tya*, *rya*, *ryo*, and the double stop character *pte*. It is true that the consonantal component of the characters transcribed as *za*, *ze*, and *zo* does correspond etymologically to the alphabetic Greek character *zeta* (ζ) and that *zeta* represents the sound sequence [zd] (i.e., *zeta* is a CC *alphabetic* character); however, the phonetic value of *zV* in the second-millennium script of Mycenaean Greek was almost certainly not the same as that of first-millennium *zeta*. This problem is addressed in chapter 6.

Figure 2.2 illustrates the characters of the Cypriot Syllabary. In addition to V and CV characters, the Cypriot system possesses the CCV symbols *kse* and *ksa*.<sup>2</sup> Unlike the CCV characters of Linear B, these symbols have a *phonetic analogue* in the Greek alphabet: namely, the letter *xi* (ξ), also having the value [ks]. This “coincidence” will prove to be of considerable significance and is discussed at length in chapter 6. Of course, the Greek alphabetic symbol *zeta* (ζ) which was mentioned above could be said to be an *analogue* of the Linear B *zV* symbols, but only to the extent that the consonantal sound spelled with *zV* in the second-millennium script of Linear B evolved into the sound spelled with ζ in the alphabetic script of the first millennium; as indicated above, they

BASIC VALUES					
A		E		I	
DA		DE		DI	
JA		JE		JO	
KA		KE		KI	
MA		ME		MI	
NA		NE		NI	
PA		PE		PI	
QA		QE		QI	
RA		RE		RI	
SA		SE		SI	
TA		TE		TI	
WA		WE		WI	
ZA		ZE		ZO	
O		U		DO	
DU		KU		MU	
NU		PU		RU	
SU		TU			
SPECIAL VALUES					
HA		AI		AU	
NWA		PTE		PHU	
RYO		TYA		TWE	
DWE		RYA		TWO	
DWO		RAI			

FIGURE 2.1 The symbols of the Linear B syllabic script. From Oliver Dickenson, *The Aegean Bronze Age* (Cambridge University Press, 1994). Reprinted by permission of John Chadwick.

are almost certainly not phonetically identical. On this point, note that figure 2.2 includes syllabic Cypriot symbols transcribed as *zo* and *za*. These also correspond etymologically to alphabetic *zeta* and are considered in chapter 6, along with the Mycenaean *zV* symbols.

### 2.0.2 Ill-Suited Systems

A syllabic writing system consisting almost entirely of V and CV symbols would be quite well suited for representing languages such as Japanese and those of the Polynesian branch of the Austronesian linguistic family, that is, languages in which closed syllables and consonant clusters occur infrequently or are absent altogether. Japanese is, in fact, written syllabically (at least in part<sup>3</sup>), and the Kana syllabaries used for this purpose consist almost solely of V and CV characters. The Greek language is quite a different matter, however; the phonotactics of Greek are such that closed syllables and consonant clusters abound. Greek is not a language for which one would expect a syllabary consisting of only V and CV characters to be most naturally devised. It would clearly seem to be the case that the Greeks adopted syllabic scripts which had been originally designed for writing a language, or languages, phonotactically quite unlike Greek.





FIGURE 2.2 The symbols of the Cypriot syllabic script.

### 2.0.3 Linear B

As a consequence of the significant disparity between the syllable structure of Greek and the sign structure of its syllabic scripts, special strategies had to be devised by the scribes for graphically treating sequences of consonants and word-final consonants. In the case of Linear B, these scribal strategies are of two basic types (though there is a third type, discussed later, which is quite

restricted in application). On the one hand, a consonant may simply not be written, as, for example, in the following forms:

- (1) A. *pe-mo* for σπερμo ([spermo], ‘seed’)  
 B. *pa-i-to* for Φαιστος ([p<sup>h</sup>aistos], a place name)

In (1A) there are two consonant clusters, a word-initial [sp-] and a word-internal [-rm-], and in neither case is the first member of the cluster spelled. The same treatment is exhibited in the case of the [-st-] cluster in (1B); that is, only the second member of the cluster is actually written. I refer to this strategy of underrepresentation of clusters as *partial spelling*. Notice that the word-final fricative of (1B) is also not represented orthographically. This is the regular treatment of word-final consonants in Linear B.

On the other hand, in some cases a consonant which precedes another consonant is in fact written, and to do this a CV symbol is used whose vowel component must be understood to have *no phonetic reality*. This spelling strategy is exemplified by forms such as the following:

- (2) A. *te-ko-to-ne* for τεκτονες ([tektones], ‘carpenters’)  
 B. *de-so-mo-i* for δεσμοις ([desmois], ‘with bindings’)

In (2A) the word-internal sequence [-kto-] is spelled *-ko-to-*. In other words, the first consonant is represented by using a CV symbol, and, as there is no vowel pronounced after the stop [k], the vowel component of the symbol *-ko-* must be understood as a merely orthographic, nonphonetic “empty” vowel. Notice that the particular vowel chosen for this purpose is the one which is identical to the vowel that phonetically follows the [-kt-] cluster. The strategy for representing the [-sm-] cluster of (2B) is the same; the first consonant is written *-so-*, using an empty vowel identical to the vowel that is pronounced after the [-sm-] cluster. I refer to this type of spelling as *plenary spelling*.<sup>4</sup>

#### 2.0.4 The Cypriot Syllabary

Both of these Mycenaean strategies for representing consonant clusters were also employed by the scribes of the syllabic Cypriot script. The use of partial spelling, however, is limited to clusters whose first member is a nasal, as seen in the following examples:

- (3) A. *pa-ta* for παντα ([panta], ‘all’)  
 B. *a-to-ro-po* for ανθρωπω ([anthrō:pō:], ‘of man’)

In these and many other forms, a preconsonantal nasal is simply omitted from the spelling. It was pointed out above that an omission strategy is also used for word-final consonants in Linear B. Greek is phonotactically constrained in such a way that a word<sup>5</sup> is only permitted to have as a final consonant either [-r], [-n], or [-s]. A word-final [-r] is regularly spelled in the Cypriot Syllabary. In some instances word-final [-n] and [-s] are spelled as well; in other instances the latter two are omitted.<sup>6</sup> In the event that a word-final consonant is written, it is conventionally represented by using a CV character whose vowel component is *e*, as in the forms presented in (4):

- (4) A. *ka-re* for γαρ ([gar], ‘for’)  
 B. *-pa-i-to-ne* for παιδων ([paidɔ:n], ‘of (the) children’)  
 C. *ka-si-ke-ne-to-se* for κασιγνητος ([kasiɣnɛ:tos], ‘brothers,’ accusative plural)

I term this type of spelling *arbitrary vowel spelling*.

Examples (3B), *a-to-ro-po* for ανθρωπω ([antʰrɔ:pɔ:]), and (4C), *ka-si-ke-ne-to-se* for κασιγνητος ([kasiɣnɛ:tos]), also illustrate the use of the *progressive spelling* strategy in the Cypriot Syllabary: the first member of each of the clusters [-tʰr-] and [-gn-] is spelled with a symbol whose vocalic component is identical to the vowel which follows the cluster. This procedure is identical to Linear B *plenary spelling*.

In addition to partial spelling, arbitrary vowel spelling and progressive spelling, a fourth strategy is widely used for representing consonant clusters in the Cypriot Syllabary, as is illustrated by the following examples:

- (5) A. *mi-si-to-ne* for μισθων ([mistʰɔ:n], ‘of a fee’)  
 B. *a-ra-ku-ro* for αργυρω ([argyɾɔ:], ‘of silver’)

In example (5A), the first member of the word-internal cluster [-stʰ-] is written by utilizing a CV character (-*si-*) whose vocalic component must be read as an empty vowel, just as we have seen in the case of progressive spelling. In this instance, however, the empty vowel is not identical to the vowel which phonetically follows the cluster ([-ɔ:-]), as in progressive spelling; instead, its identity is with the vowel which phonetically precedes the cluster ([-i-]). In the same way, the first member of the [-rg-] cluster of (5B) is spelled -*ra-*, that is, with the symbol whose vowel component matches the vowel occurring before the cluster. I term this spelling strategy *regressive spelling*.

### 2.0.5 Final Clusters in Linear B

Regressive spelling also occurs in Linear B orthographic practice, but in this script, unlike the syllabic Cypriot system, it has a quite limited application. As indicated above, word-final consonants are not written in Linear B. If a word ends in a consonant cluster, however, the consonant preceding the final one may be written, and if it is, this writing is effected by employing the regressive spelling strategy. Specifically, the clusters involved in this kind of representation are those of the type *stop* + *fricative*:

- (6) A. *wa-na-ka*, *ῥαναξ* ([wanaks], ‘king’)  
 B. *a<sub>3</sub>-ti-jo-qo*, *Αιθιοκ<sup>w</sup>ς* ([aitʰiok<sup>w</sup>s], a man’s name)<sup>7</sup>

As (6A) and (6B) illustrate, a word-final [-s] is simply deleted from the orthography (which as we have seen is the regular Linear B treatment of word-final consonants), and a preceding stop is represented using the CV character whose vocalic component is identical to the vowel which phonetically precedes the word-final cluster.

### 2.0.6 Geminate Clusters

An idiosyncrasy of consonant cluster spelling which is shared by Linear B and the Cypriot Syllabary is found in the spelling of geminate clusters:

(7) *Linear B*

A. *e-ne-wo* for *εννεφο* ([ennewo], ‘nine’)

B. *mi-to-we-sa* for *μιλτοφεσσα* ([miltowessa], ‘painted red’)

*Cypriot Syllabary*

C. *wa-na-sa-se* for *φανασσας* ([wanassas], ‘of the lady’)

D. *a-po-lo-ni* for *Απολλωνι* ([apollō:ni], ‘for Apollo’)

As these examples reveal, only one member of such clusters is actually written; that is, a type of partial spelling is employed.

### 2.0.7 Word-Initial Clusters

My remarks up to this point have addressed only word-internal and word-final clusters and single word-final consonants; some attention must now be given to word-initial clusters. In the case of Linear B, word-initial clusters are treated just as word-internal clusters; that is, whatever strategy is used to represent a cluster occurring word-internally is also used to spell that cluster when it occurs at the beginning of a word. This equal treatment of clusters word-internally and word-initially in Linear B marks a fundamental difference between this script and its Cypriot counterpart. In the case of the latter, word-initial clusters are written using progressive spelling, *regardless* of the type of strategy employed in representing the same cluster when it occurs word-internally. Consider the Cypriot treatment of the cluster *[s]* + *stop* when it occurs word-internally (8A) and word-initially (8B):

(8) A. *ka-te-se-ta-se* for *κατεστασε* ([katestase], ‘(s)he placed’)

B. *sa-ta-sa-to-ro* for *Στασανδρω* ([stasandrow], a man’s name, genitive)

As example (8A) illustrates, and as we have seen already (note example (5A)), regressive spelling is used to represent a word-internal cluster of *[s]* + *stop*; however, when this cluster occurs word-initially, as in (8B), it is written with progressive spelling.

### 2.0.8 Summary of Spelling Strategies

Perhaps it would be helpful at this point to summarize the types of strategies utilized by the Mycenaean and Cypriot scribes for spelling consonant clusters and word-final consonants:

(9) A. Partial Spelling

*Linear B:*

- (i) certain word-internal and word-initial clusters
- (ii) word-final consonants
- (iii) geminate clusters

- Cypriot Syllabary*: (i) certain clusters beginning with a nasal  
 (ii) some occurrences of word-final [-n] and [-s]  
 (iii) geminate clusters
- B. Plenary / Progressive Spelling
- Linear B*: (i) certain word-internal and word-initial clusters  
*Cypriot Syllabary*: (i) certain word-internal clusters  
 (ii) word-initial clusters
- C. Regressive Spelling
- Linear B*: (i) stops before word-final [-s]  
*Cypriot Syllabary*: (i) certain word-internal clusters
- D. Arbitrary Vowel Spelling
- Cypriot Syllabary*: (i) word-final [-r]  
 (ii) some occurrences of word-final [-n] and [-s]

For the sake of summation, I include geminate clusters under the heading *partial spelling*, since in the case of geminates, as in other instances of this type of spelling, only one member of a biconsonantal cluster is actually written. However, I do not necessarily claim that it is the *second* member of the geminate cluster which is being written, as is indeed the practice with nongeminate clusters; for at least Linear B geminates such a claim would be moot. Also included beneath this heading are word-final consonants, which, as we have seen, are simply not written in Linear B and, in some instances, in the Cypriot system as well. Perhaps these clusters seem out of place here, but, as I argue later, the nonspelling of word-final consonants actually conforms to partial spelling practice.

### 2.0.9 Other Orthographic Practices

As the preceding discussion and summary are admittedly rather imprecise at points, let us next turn our attention to a more detailed consideration of which strategies are used for which clusters. We will do this by initially examining the treatments of Mycenaean and syllabic Cypriot spelling of consonant clusters which have been offered in the Greek handbooks. Before so doing, however, there are a few other general principles of Linear B and Cypriot orthography which should be mentioned. First of all, as the reader is perhaps already aware from considering the examples above, no orthographic distinction is made in the Cypriot Syllabary between plain voiceless stops, voiceless aspirated stops, and voiced stops. In other words, each of the sounds [p, p<sup>h</sup>, b] is represented by CV symbols conventionally transcribed as *pV*; [t, t<sup>h</sup>, d] by *tV*; and [k, k<sup>h</sup>, g] by *kV*. The same principle is utilized in Linear B spelling, except that the voiced dental stop [d] is distinguished (transcribed *dV*) from the voiceless stops [t, t<sup>h</sup>] (transcribed *tV*). Linear B preserves an additional set of stops, the labiovelars [k<sup>w</sup>, k<sup>wh</sup>, g<sup>w</sup>], and these are each spelled with the symbols transcribed *qV*. The Mycenaean script, though not the Cypriot, also fails to distinguish the two liquids [l] and [r], both of these sounds being represented in the former system by symbols arbitrarily transcribed as *rV*.<sup>8</sup>

## 2.1 Previous Accounts

### 2.1.1 Linear B

The specific applications of the above discussed Linear B strategies for representing consonant clusters are conventionally presented in the various handbooks of Mycenaean Greek<sup>9</sup> as sets of “spelling rules.” For example, in the second edition of Ventris and Chadwick’s *Documents*, Chadwick offers the following consonant spelling rules:

(10) A. *Final* -L, -M, -N, -R, -S

At the end of a syllable these sounds are omitted from the spelling.  
 . . . In *-sm-*, however, the *s* is regularly noted.

B. *Initial S* . . .

Before a consonant initial *s-* is generally omitted . . . but *sm-* is treated as in medial syllables. . . .

C. *Consonant clusters*

Doubled consonants are not distinguished. Where a plosive consonant [i.e., a stop] precedes another consonant, it is written with the vowel of the succeeding syllable. . . . A few irregularities are found with *-kt-*  
 . . .

*x* (ξ) *ps* (ψ) and *q<sup>u</sup>s* [i.e., *k<sup>w</sup>s*] are treated as *k-s-*, *p-s-*, *q-s-*. . . . When final, they shed the *-s* and take the vowel of the preceding syllable . . .  
*m* is preserved in *mn-* . . . *r* in *-rw-* is usually omitted. . . .

The group *-nw-* may be written either *-nu-w-* or with the vowel of the following syllable supplied with *n*. . . . In the group *-sw-*, *s* is normally written . . .<sup>10</sup>

### 2.1.2 The Cypriot Syllabary

The principal work treating the syllabic Cypriot materials is Olivier Masson’s *Les inscriptions chypriotes syllabiques*.<sup>11</sup> Masson’s interpretation of the application of the various basic strategies for the spelling of consonant clusters in this script is thoroughly syllable-based. According to Masson:

(11) Les groupes consonantiques initiaux sont *tautosyllabiques*.<sup>12</sup>

In the case of word-internal clusters, he states:

(12) A. Quand les deux consonnes forment un groupe *tautosyllabique*, le traitement est le même qu’à l’initiale. . . . [L]a première consonne est rendue par le signe comportant la voyelle qui accompagne la seconde.

B. Quand les deux consonnes sont *hétérosyllabique*, la première consonne est rendue par le signe comportant la voyelle qui figure dans la syllabe précédente.<sup>13</sup>

Somewhat more summarily, in his *CAH* article on the Cypriot Syllabary (coauthored with T. B. Mitford), Masson writes:

- (13) In the case of consonantal clusters, several rules are in use, based on the principle that the first consonant is rendered by the sign containing the vowel of the syllable to which this consonant belongs.<sup>14</sup>

This syllable-dependent analysis of consonant cluster spelling in the Cypriot Syllabary, first offered by Richard Meister (1894),<sup>15</sup> is commonly reported. For example, Buck states:

- (14) For groups of consonants, the first is indicated by the sign containing the vowel of the syllable to which this consonant belongs.<sup>16</sup>

But not all investigators have explicitly linked Cypriot spelling of word-internal clusters with tautosyllabicity and heterosyllabicity. Consider Friedrich's treatment:

- (15) Auch anlautende und inlautende Konsonantengruppen werden durch nur graphische Hilfsvokale beseitigt, und zwar erhält beim Anlaut das erste Silbenzeichen den Vokal des zweiten . . . , bei inlautender Gruppe ebenfalls den Vokal des zweiten Konsonanten, falls die Gruppe auch anlautend vorkommen kann . . . , andernfalls den vor der Gruppe stehenden Vokal.<sup>17</sup>

We could rephrase the second half of Friedrich's formulation using the terminology introduced above in this way:

- (16) A word-internal cluster will be represented with progressive spelling if the cluster is also capable of occurring word-initially; otherwise regressive spelling will be used word-internally.

Rather than tying the choice of symbols used to represent the first consonant of a cluster to syllable membership, Friedrich interprets Cypriot spelling of consonant clusters essentially as a matter of analogy, with the mode of cluster representation in word-initial position serving as the analogical model. Friedrich does not indicate his reasons for adopting this analysis, but it is an attractive analysis to the extent that it avoids positing the problematic premise, which is required by a syllable-based analysis such as Masson's, that certain word-internal biconsonantal clusters are tautosyllabic (see (12A); why this premise is problematic is discussed below). Friedrich's analysis is mistaken, however. According to (15/16), word-internal clusters of the type */s/* + *stop* should be written with progressive spelling since such clusters are capable of occurring at the beginning of a word, as is illustrated within the examples of (8), repeated here as (17):

- (17) A. *ka-te-se-ta-se* for *κατεστασε* ([katestase], '(s)he placed')  
B. *sa-ta-sa-to-ro* for *Στασανδρω* ([stasandɾoː], a man's name, genitive)

Contrary to (15/16), when the */s/* + *stop* cluster-type occurs within a word, as in (17A), it is represented by utilizing *regressive* spelling.<sup>18</sup>

Returning to Masson's presentation of the consonant spelling rules of the Cypriot Syllabary, we see that in addition to (11) and (12), he states: