

THE WRITTEN WORD

LITERACY IN TRANSITION

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GERD BAUMANN

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FORMS OF WRITING IN THE ANCIENT MEDITERRANEAN WORLD

ANNA MORPURGO DAVIES

IN the study of writing everything is problematic. I start by rehearsing some of the things which we do not know before I come to my more specific theme. First we do not know how to define writing. The problem is pressing: in 1980 one of the main authorities on ancient writing, I. J. Gelb, found it necessary to reconsider the definition of writing which he had supported since 1952 (Gelb 1963: 12); among his reasons for reconsidering the problem he listed the findings by Marschack (1972) and Schmandt-Besserat's (1977, 1979) about prehistoric systems of reckoning and perhaps writing which may go back as far as the palaeolithic period. It is difficult to predict whether Gelb's new definition: 'writing in its broadest sense is a recording system or device by means of conventional markings or shapes or color of objects, achieved by the motor action of the hand of an individual and received visually by another' (Gelb 1980: 22) will gain general acceptance. In practical terms, the philologist or linguist finds it often difficult to answer the questions posed by archaeologists or anthropologists: are these scratches or signs a form of writing? Any clear-cut criterion for decision hits against marginal cases. We may agree to suspend judgement and to start any inquiry by including only those forms of writing which are traditionally acknowledged as such; Gelb would label them as full writing or phonography and argue that their distinctive features are a close correlation with oral language, and the sequential order. This instantly leads us to problems of classification. Traditionally, 'natural' writing has been classified into pictographic (the signs are pictorial images of objects or events), logographic (the signs correspond to words), syllabic (the signs correspond to syllables), and alphabetic (the signs correspond to phonetic or phonemic segments).¹ Is this correct? The partition is oddly reminiscent of the nineteenth-century classification of languages into isolating, agglutinative, and inflected, a classification which we partly retain but

which the specialist considers with deep misgivings.² The comparison is particularly worrying when we look at the standard way of dealing with the question of origins. The traditional view is that writing starts in a pictographic form; it then develops first into logographic and then into syllabic writing; eventually the alphabet is created. Having thus reached perfection creativity stops; the alphabet, we are told, was created only once; after that it was borrowed. Here too we are forcefully reminded of the nineteenth-century attitude to languages. For a long period it was assumed that there was a 'perfect' language family—needless to say our own—and a number of 'imperfect' families, classified, as we have seen, into two main groups, agglutinative and isolating. The connection between the various types was seen in different manners: one version of the theory assumed regular progress from isolating to agglutinative to inflectional.³ An ill-defined idea of perfection plays a part in both theories, and both in the case of scripts and in the case of languages the classification and the presumed development are somewhat too tidy for comfort.

Another point for dispute concerns the connection between writing and language; traditionally, writing has been interpreted as secondary with reference to spoken language—an imperfect attempt to render speech. If so, communication in writing would in effect be communication in speech made through a replacement medium: in the same way a system of flash lights conventionally started and stopped can render the letters of the alphabet and is in essence writing done through a replacement medium. More recently, writing has been considered as an independent communicative code, a semiotic system with a status parallel to that of other systems (Cardona 1981: 21 ff.). Alternatively—and more helpfully—writing can be seen as a form of linguistic behaviour with similar status to that of speech; language is expressed either through writing or through speech—which may explain why we find written sequences which are never matched by verbal expressions, and vice versa (Vachek 1973: 14 ff.; McIntosh 1956, etc.). This does not exclude, of course, the existence of infinitely important links between speech and writing, but draws attention to the fact that they have to be separately identified and established for each script, each language, each period, and each society. At one extreme we have the so-called dead languages which, in some instances at least, are languages no longer spoken but still written: here writing is obviously indepen-

dent of speech.⁴ At the other extreme we have oral languages, that is languages which are spoken but not written. In the middle there is an infinite gamut of possibilities.

Further worries arise apropos of the impact of writing on society, and, in particular, of the impact of specific forms of writing on society. The distinction between oral and literate or semi-literate societies has been discussed at length in recent years. Should we recognize a great dividing line between oral and literate societies and does literacy impinge, as has been argued, both on cultural patterns and on cognitive processes? The question is far from settled but the 'autonomous' view of literacy which underlies these claims (Goody and Watt 1963; Greenfield 1972, etc.) has recently been attacked from different quarters (for example Basso 1980, Scribner and Cole 1981, Tannen 1982*a*, Romaine 1984: 196 ff., Street 1984 with further literature). Whatever the final conclusion, it is necessary to distinguish between different types and grades of literacy and orality and different uses made of literacy by different societies. In this context the claims originally made for example by Goody and Watt (1963), partly in the steps of Havelock, for a special position of the alphabet as a type of writing which leads to forms of literacy more capable than any other of impressing their seal on the intellectual and social character of the community, acquire greater importance and call for further reappraisal. Goody has withdrawn part of his early statements,⁵ but Havelock has not ceased to emphasize the importance of the alphabet as a major Greek breakthrough; for him real literacy starts in Greece only round the end of the fifth century bc but from that period onwards we witness the start of an intellectual revolution where the new technology leads to the creation of new moral laws and a new scholarly, scientific, and philosophical approach.⁶ Yet the real nature of the point being made is ambiguous. A possible interpretation is that the spreading of literacy brings about a dramatic change in culture, and, according to some, in cognitive powers: on the other hand the spreading of literacy is seen as necessarily associated with the alphabet because all other forms of writing are too unmanageable;⁷ consequently the alphabet counts as the real begetter of the new non-oral culture. A different, more extreme view (which seems to have found some acceptance—conscious or unconscious) is that the very nature of the alphabet favours a specific type of analytic thinking which is indeed the mark of a new culture. In either case

the alphabet is given a special status which marks it off from all other forms of writing. Thus, strangely enough, these modern views of literacy return to—or are based on—the nineteenth-century assumptions about the alphabet as the perfect repository of all wisdom.

So much for some of what is discussed: it is probably true, as has been argued, that both the history and the ethnography of writing must still be written. At present we can only ask general questions and look at details. Anyone interested in the Mediterranean area between the second and the first millennium BC is necessarily concerned with the relationship (differences and similarities) between the various types of writing available in what obviously was a melting pot of both languages and scripts. It is only, I suggest, if we make some headway in the discussion of these more limited problems that we can then consider the wider questions I mentioned above. Part at least of the views proposed is based on historical evidence discussed in turn by for example Havelock and Goody (see also Street 1984: 49 ff.); a return to the historical approach is not untimely.

Any attempt at comparing two or more forms of writing can be done, as it were, from the inside or from the outside: we may be concerned with the code or with the use of the code, the users, and their reactions or attitudes to it. In the first mode we shall compare, for instance, a syllabic writing system with an alphabetic writing system and try to define differences and similarities; it may prove necessary to do this while keeping in mind not only the nature of the writing systems to be analysed but also the nature of the linguistic systems concerned.⁸ In the second mode we shall enquire about the purposes for which each script is used and about the individuals who use it. Here we shall distinguish for example between scripts which are in use merely as reckoning or list-making devices and scripts with a wider range of uses; we shall also want to know for each script how many people were literate in it at any given moment, what grade of literacy they had, and what proportion they were of the community which used the script. Turning to the reactions and attitudes to writing we may ask whether users react for instance to syllabic writing in the same way in which they react to alphabetic writing; it may then be useful to see how in given communities the general attitudes to language compare with the general attitudes to

writing: do people trust more the written word or the spoken word? Do they attribute magical power to spoken formulae or to written words? What is taken to guarantee immortality, the spoken or the written word, and so on? Work which needs to be done for a number of periods and areas but has rarely been done concerns the terminologies of writing and speaking. How far do they overlap at any given period and in any given area? Is the constant confusion between letter and sound, writing and saying, written and spoken word, which characterizes our language, only characteristic of fully literate and alphabetic cultures or is it also shared by other non-alphabetic cultures?

Finally, and at a higher level of generality, we shall want to know what difference it makes to any given society to have for example 1 per cent literate members versus 5 per cent or 10 per cent or 20 per cent or even 60 per cent.⁹ The extent of literacy may be linked with the prestige of literacy. Do people acquire prestige because they can write or do they not? And vice versa do people lose prestige because they cannot write? In our society it is possible to write sentimental novels of the Mills and Boon type where a whole highly dramatic plot is built on the fact that a successful business man is illiterate and does not have the courage to reveal it to the world (Meadmore 1980); in seventh-century BC Assyria it was possible for Ashurbanipal, a great king, to boast (admittedly wrongly) that he was the first king who had ever learned to read and write (Driver 1976: 72 f., 238; Kraus 1973: 19). Obviously, until then at least, one did not lose face by being illiterate.

An analysis of these problems is well beyond the scope of my discussion—and in a number of instances the evidence is not available. In what follows I shall address myself to the more specific question of the difference between alphabetic and pre-alphabetic writing, with special reference to five forms of script all used roughly speaking in the Mediterranean area between the second and first millennia BC.¹⁰ My choice of evidence is determined to a large extent by a firm wish to use firsthand material and to keep linguistic, geographical, chronological, and sociological differences to the minimum.

The oldest script I shall consider is the mixed logographic and syllabic form of cuneiform used in Anatolia (modern Turkey) to write Hittite, an Indo-European language directly or indirectly attested during most of the second millennium BC. Cuneiform writing

was first developed for Sumerian, a Near Eastern language with no known cognates.¹¹ As a result of cultural and to some extent political symbiosis the script was borrowed by the Semitic population of the area and adapted to write their language, Akkadian. In their turn the Hittites first borrowed it from Akkadian through a North Syrian scribal school in the eighteenth or seventeenth century BC. They introduced some simplifications and modifications but the full system consists of almost 300 signs of which more than 100 may indicate different syllables; the others are purely logographic, that is they indicate words. The syllabic signs are of the type *a* (vowel only), *na* (consonant + vowel), *an* (vowel + consonant), and, more rarely, *kan* (consonant + vowel + consonant).¹²

At the same time as the latest phases of Hittite writing we have in Crete, the island in the southern part of the Aegean, in the Peloponnese, and in continental Greece, the so-called Linear B, a script used to write an old form of Greek between c.1400 and 1200 BC. The script is syllabic with some 90 signs, mostly of the type *a* (vowel) or *na* (consonant + vowel); there are some 160 logograms but they play a limited role in our texts. The script is certainly borrowed from an older Cretan script, possibly developed for a local language, and we have the impression, no more than that, that a great deal of adaptation was necessary to make the script viable for Greek.¹³

The third script, the so-called Hieroglyphic Hittite or Luwian (in both cases a misnomer), brings us back to Anatolia; the first monuments (mostly seals, stelae, rock inscriptions) are far from comprehensible and belong to the second part of the second millennium BC. Towards the end of this period and above all in the first three hundred years of the first millennium the script is in more frequent use as the official script of a series of small city states which survived the end of the Hittite Empire in Syria and southern Anatolia. The language of these later texts belongs to the Luwian subgroup of Anatolian and is very similar to Cuneiform Luwian, an Indo-European language closely related to Hittite, written in the Hittite cuneiform script and attested in the second millennium BC. The important point, however, is that the so-called Hieroglyphic script was devised for either Luwian or Hittite. We still do not know what made this invention necessary, since the Cuneiform script, which was used both for Hittite and for Luwian, was in existence at the time—with a far wider diffusion; it is possible that Hieroglyphic

was devised for monumental purposes. The signs are either syllabic or logographic; some 500 have been counted but the syllabic signs in regular and frequent use are no more than 70 and mostly are of the type *a* (vowel) or *na* (consonant + vowel). Of the logographic signs some are very rare.¹⁴

The fourth script is Syllabic Cyprian, used in Cyprus during most of the first millennium BC (until the fourth–third century BC) to write the local Greek dialect. The script itself was adapted from an earlier second-millennium script used in Cyprus, still undeciphered, conventionally called Cypro-Minoan, and distantly related to the ancestors of Linear B. Its later descendant, Syllabic Cyprian, has some 56 signs all of which are syllabic (of the *a*, *na* type). There are no logographic signs (except for the numerals).¹⁵

The fifth script needs no introduction: it is the Greek alphabet for which we have definite evidence in the Greek islands, the Greek colonies, and the Greek mainland from the mid-eighth century BC to present days; it is the ancestor of our own alphabet. Letter shapes, letter values, letter ordering, and letter names are derived from forms of writing used for Semitic languages (probably Phoenician). We are back again to an Indo-European language which borrows a script used for Semitic. The traditional view is that the Greeks borrowed an alphabet where each sign represented a consonant but the vowels were ignored: their great contribution consisted in adapting some of the old signs or devising new signs for the vowels; a less traditional view is that we ought to understand the so-called Semitic alphabets as syllabaries where each sign indicated a consonant followed by a potential vowel and we ought to attribute to the Greeks the discovery of the alphabetic principle according to which different signs are used in correspondence to different segments, be they vowels or consonants.¹⁶

The five scripts and, so to speak, their accompanying circumstances have notable similarities: chronologically and geographically they are not too distant from each other. Moreover, they are all used for Indo-European languages, and they can be grouped in pairs or triplets used for the same language or closely related languages. Yet, the scripts are also very different; we may group them into two or three of the traditional typological classes (logographic-syllabic, syllabic, and alphabetic) but we should remember that the four non-alphabetic scripts show considerable divergencies. Genetically, the differences are still greater. Only one

script, Hieroglyphic Luwian, was originally devised for the language for which we see it used or for a closely related language; the other scripts were variously borrowed or adapted, and sometimes had remote origins both in time and space. The material support of the four scripts differs too (the importance of this should not be underrated): the bulk of the cuneiform Hittite texts is found on highly refined clay tablets (though other materials were used too); Linear B is found on rough clay tablets and pots; Hieroglyphic Luwian on rock and stone monuments but also on seals, lead strips, and possibly on wood; Syllabic Cyprian on stone, metal, and occasionally pots; the Greek alphabet on stone, wood, metal, papyrus, leather, waxed tablets, etc. Historically and sociologically the background is obviously difficult to define; Cuneiform Hittite in its *floruit* period belongs to the archives of an important Empire and is mainly used for religious, administrative, legal, and literary texts. Linear B also belongs to royal archives in various parts of Greece but what we have is of a purely administrative nature. Hieroglyphic Luwian is largely found in monumental texts set up by kings or men in power but is also attested in a few private letters by merchants and in a few economic documents. Syllabic Cyprian was mostly used for public inscriptions, but is also found in private documents (dedications, graffiti, etc.). The Greek alphabet, after its first beginnings, is less limited in usage than any of the other four scripts—not least because we know more about it. It has often been noticed that even in early Greece writing was not an esoteric craft, since some of our earliest texts are casual graffiti (Jeffery 1961: 62; 1982: 831 f.).¹⁷

If we take these five scripts as our testing ground what can we learn about the questions I asked above? Do we want to imagine the development of writing as a continuous striving towards the segmental representation of speech, that is towards the alphabet? Do we believe that as soon as the possibility of alphabetic writing looms on the horizon no one can resist it? If that were so, the fact could be used to support the view that writing in its proper manifestation is entirely dependent on speech. The point must be clarified. On this assumption the ideal form of script is the phonetic alphabet: in theory anything written in a narrow phonetic transcription can be read correctly by anyone who knows the symbols, whatever his linguistic knowledge; speech is not perfectly represented but a

valiant attempt is made at doing so. Should we then understand the various forms of writing as successive attempts at the creation (or discovery) of the phonetic alphabet? Of the ancient scripts which we know the Greek alphabet is perhaps the one which comes closest to the phonetic alphabet, though it falls well short of it; if it is in fact the case that everything yields to the Greek alphabet and that the alphabetic principle automatically takes over as soon as it appears on the scene, this can be used as an argument for a real dependence of writing on speech.

Of these questions some are unanswerable. The first question I propose to consider with the help of the scripts I mentioned concerns the way in which logographic-syllabic scripts innovate before the appearance of the alphabet or in a period when the alphabet is present or approaching. Of our scripts the only one which survived is the alphabet and it is the closest to the ideal phonetic alphabet: an argument in favour of the original hypothesis. On the other hand a close look at the development of the other scripts may lead to different conclusions. Together with the cuneiform script the Hittites acquired one of the most remarkable features of their writing, namely the use of Sumerograms for a large number of words; to these they added Akkadograms in large number. A look at a text will not at first sight show anything odd; regular cuneiform signs appear all through, but reading will reveal a number of words not written in Hittite: some are Sumerian word signs, some Akkadian word-signs. We can look at the starting passage from the Apology of Hattusilis III, a thirteenth-century BC king (Otten 1981: 4 ff.). I print first the transliteration (with the Sumerograms in Roman capitals, the Akkadograms in Italic capitals, and the Hittite forms in italics) and then a literal translation.

- 1 *UM-MA* ^m*Ta-ba-ar-na* ^m*Ha-at-tu-ši-li* LUGAL.GAL LUGAL KUR ^U[(^{RU}*Ha-*)]*at-ti*
- 2 DUMU ^m*Mur-ši-li* LUGAL.GAL LUGAL KUR ^{URU}*Ha-at-ti*
- 3 DUMU.DUMU-ŠŪ ŠA ^m*Šu-up-pt-lu-li-u-ma* LUGAL.GAL LUGAL KUR ^{URU}*Ha-at-ti*
- 4 ŠA.BAL ŠA ^m*Ha-at-tu-si-li* LUGAL ^{URU}*Ku-uš-šar*
- 5 ŠA ^D*IŠTAR pa-ra-a ha-an-da-an-da-tar me-ma-ah-ḫi*
- 6 *na-at* DUMU.NAM.LŪ.ULŪ^{LŪ}-aš *iš-ta-ma-aš-du . . .*

1 'Thus (spoke) the Tabarna Hattusili, Great King, King of the land of Hatti,

- 2 son of Mursili, Great King, King of the land of Hatti,
 3 his grandson of Suppiluliuma, Great King, King of the land of
 Hatti,
 4 descendant of Hattusili, King of Kussar:
 5 "I shall say of the power of (the goddess) Istar,
 6 and let everyone hear of it . . ."

A literal rendering of the text which made use of English for the Hittite words, of Latin (in capitals) for the Sumerograms, and of French (in italics) for the Akkadograms, would read as follows:


- 1 *'De cette façon* the Tabarna Hattusili (spoke), MAGNUS REX,
 REX REGIONIS Hatti,
 2 FILIUS of Mursili, MAGNUS REX, REX REGIONIS Hatti,
 3 NEPOS à lui de Suppiluliuma, MAGNUS REX, REX REGI-
 ONIS Hatti,
 4 PROGNOTUS *de Hattusili*, REX of Kussar:
 5 "*De Istar* I shall say the power,
 6 and let OMNES-s hear of it".


It is certain that the Sumerograms (a modern conventional term) were read aloud as Hittite words; probably the same happened to the Akkadograms.¹⁸ In effect these signs or sequences of signs had the same functions which the Arabic numbers or the odd abbreviations like the ampersand have in our texts. But why did the Hittite scribes make their task so difficult? Is it all to be explained with the origin of the script and the conservative nature of writing systems? The Akkadians acquired from the Sumerians a number of word-signs and the Hittites acquired from the Akkadians both these and Akkadian word-signs; it is only natural inertia which preserved them even when they were oddities no longer understood? This view is demonstrably erroneous. Recent work has shown that in some instances the early Hittite texts regularly use Hittite syllabic spelling where the late texts use Sumerograms or Akkadograms. Thus the word for 'back, behind', Hittite *appan* is written *a-ap-pa-an* in the older texts but EGIR or EGIR-(*pa-*)*an* (the Sumerian EGIR means 'behind') in the later texts (Friedrich and Kammenhuber 1975- : 149); the word for 'not', Hittite *natta*, is written *na-at-ta* in the early texts, but in the late texts the Akkadian *UL* or *Ú.UL* is used (Houwink Ten Cate 1970: 46-9).

¹⁸ Here the language did not change, but the spelling did, and the new

spelling, the result of a deliberate innovation, is *less* close to speech than the old one.¹⁹

Let us now turn to Hieroglyphic Luwian. We ought to remember that the script was developed for the Hittite or Luwian languages, and that it was certainly developed and used by scribes who knew cuneiform. Yet, while Cuneiform has signs for syllables of the type *a*, *na*, *an*, and (more rarely) *kan*, Hieroglyphic Luwian has only signs of the *a* and *na* type, which makes it far more difficult to represent the closed syllables ([consonant +]vowel + consonant) which certainly existed in the language. In Cuneiform a sequence like *annan* would be written (*a*)-*an-na-an*, but in Hieroglyphic it could only be written *a-na-na*; the same spelling would also have to be used if the word ended in *-a* and not in *-n*. Yet to have signs of the *an* type leads to a system with a larger number of signs; the scribes happily gave up the possibility of bringing their script closer to speech in order to keep the number of signs down. Even more striking, however, is the way in which Hieroglyphic Luwian developed. An old view is that in the later texts the script had developed or was developing into a semi-alphabet: signs of the *na* type had effectively come to have an *n* value.²⁰ We now know more and realize that this is wishful thinking; in the late stages the script became more and more syllabic (Morpurgo Davies and Hawkins 1978: 781 f.). Consider for instance the two signs nos. 376 and 377 Laroche which probably originated as pictorial representations (a pointing finger or an arrow) of the demonstrative 'this' (Luwian *za-*). In the second millennium there was only one sign which had the value *za/i* (†). In the first millennium we have two signs: no. 377 *za* (†) and no. 376 *zi* (†). We can probably understand how the two signs were developed: *za* arose from a ligature of the earlier *za/i* sign with no. 450 Laroche *â* (†); the older sign shape is then reserved for *zi*. A similar development is attested for another couple of signs.

In other words, starting with signs of the *za/i* type, the script could have easily turned into an alphabet, but in fact moved towards a regular syllabic system (Morpurgo Davies and Hawkins 1978). This interpretation is confirmed by a further example. The sign for *u* (and possibly *uwa*, no. 105 Laroche) is attested from our earliest texts; it is an ox or cow head () and the Luwian word for ox or cow is *uwi-* or *wawi-*. Hence the origin is clear. The sign for *mi* (no. 391 Laroche) is equally well known; it is formed by four

parallel strokes (|||) and is also used to indicate the number 4: the Luwian word for '4' was *mauwa-* or *miw-*. In the early period the four strokes had the value *ma/i*, while in the later period the sign stands for *mi* only. At an early stage a new sign *mu* (no. 107 Laroche) was created by the simple device of adding four strokes to the cow's head: *m + u = mu* (). Here too it all works as if in the second millennium the four strokes practically had an *m* value and were then joined to *u* according to principles which are almost alphabetic; later on the new *mu* sign was taken as an unanalysable sign. In other words, in the first millennium BC when Semitic consonantal writing (an alphabet according to most scholars) was well known in the region, the script was moving away from the alphabet and was developing into a well-organized syllabary. Is this perverse tendency a peculiarity of Anatolia?

The answer is likely to be negative if we consider what happened in Greek territory. There Linear B, a syllabic script, is used for Greek in the second millennium; as we have seen, a distantly related syllabic script is also used for Greek at Cyprus. But we are now in the first millennium and Syllabic Cyprian is used in preference to, but concurrently with, the Greek alphabet. How does it compare with Linear B? There are some innovations, but none of these is alphabetic in nature; the number of signs is smaller and the syllabary has simply become a better organized syllabary with stricter rules which determine its use. The conclusion at this stage seems trivial but clear: the alphabetic principle has no magic power which influences the destiny of other forms of writing; as Cuneiform Hittite shows, in the development of writing there is no necessary tendency towards an increasingly exact phonetic rendering of speech. Other, and contradictory, types of development seem to occur. Some may well be determined by speed requirements: it is faster to write *Ū.UL* or *UL* than to write *na-at-ta*, nor is there any reason to suppose that this would have caused reading difficulties. We constantly tend to forget that the people who wrote these texts knew, far better than we do, the language they were writing in. There may be a tendency to keep the number of signs down and, at least for the period and the part of the world I am concerned with, there seems to be a general tendency towards a clarification and simplification of the writing system and of the principles on which it operates. Hieroglyphic Luwian becomes fully syllabic; Syllabic Cyprian, if contrasted with Linear B, has abolished all logograms,

and clarified some of the conventions, that is it has become the perfect syllabary. This too is something which would deserve further study: a writing system which is typologically consistent is no easier to use than one that is not, nor I suspect is it less prone to ambiguous writings. If so, what prompts this movement towards typological consistency? Did the pedagogical needs of the writing schools have any part in it?²¹

So much for the thesis that once the shift from pictographic to non-pictographic has been accomplished scripts inevitably tend towards the alphabet. My next objective is to consider whether the development or the interiorization of the alphabet (to use Professor Ong's expression) is in fact responsible, as has sometimes been argued, for a complete change in the modes of thought of the users. I cannot obviously tackle the question in full here. Is it true that Plato could not have discussed moral justice as he did, had he not belonged to a society which was both literate and 'alphabetic'? I prefer to leave aside this problem—to my mind insoluble—and turn to a humbler sort of question. I shall discuss two different types of evidence in turn. I start with something which is for us entirely trivial: though we are fully aware of the possibility of forging documents we still tend to assume that proof of the validity of some statements is best found in the written text. There are moments in one's life when birth certificates must be produced; less solemn occasions when passports must be shown. Both in private and in public life we trust written more than verbal communication (or so we say). On a recent occasion the British Prime Minister is reported to have said in Parliament: 'The NCB has made its position clear in writing. I believe this is the best basis on which to enter into negotiations—to make it clear in writing' (Speech of 24 January 1985 reported in *The Times* of 25 January 1985: 4). We are fully entitled to think that this attitude is the product of literacy. If we now turn to ancient Greece we may draw attention to at least one example of a similar attitude. The historian Thucydides (vii. 8. 2) reports that in 414 BC the Athenian General Nicias, who was worried about the position of his army in Sicily, composed a written message to send to Athens; we are told that he did not send a verbal message since he was afraid that his messengers would not report the full truth either because they were not good at speaking or because they did not have sufficient memory or because they wanted to please the

crowds. Nicias' decision to write was obviously a new step; hence Thucydides' explanation of his motives. According to scholars interested in the techniques of communication in Greece, this passage reveals how deep was the technological transformation which was happening in Athenian society as the result of literacy (Longo 1981: 82). The interpretation is no doubt correct, and reveals that Thucydides at least, and probably Nicias, if the story is true, shared our feelings about the greater reliability of the written text; let us not forget, incidentally, that Nicias was certainly capable of writing and would probably have written the letter himself. Yet the attitude which prompted Nicias' decision is not peculiar to Greek literacy. Let us now look at another letter written almost one thousand years earlier. It is in Hittite, written in cuneiform, and was sent by an Anatolian king to Amenophis III of Egypt in the early fourteenth century BC in connection with the possibility of a royal marriage (VBoT 2; Rost 1956: 328 f.). It reads, 'I do not trust Kalbaya. He said it as a word, but it is not put down on a tablet. If you really wanted my daughter, would I not give her to you? (Of course) I shall give her to you. Send back in a hurry Kalbaya together with my messenger. And write me back this thing/word on a tablet.' The odds are that the king, who dictated this message to his scribe, was illiterate (as was the normal pattern);²² nevertheless he was interested in a written commitment: words are words and he wanted it in writing. From this point of view syllabic literacy by proxy (because this was the position of the Anatolian king) and alphabetic direct literacy (the position of the Greek general and that of Mrs Thatcher, the British Prime Minister) do not differ.

I turn now to my second type of evidence. If we take for granted that there is a connection, of whatever nature, between writing and language we might a priori expect that knowledge of a particular form of writing is likely to influence an individual's perception of linguistic phenomena. This is no doubt true in the modern world. There are linguistic concepts, such as that of word, which most speakers of English assume are entirely clear, and yet cause desperate problems to linguists.²³ The layman does not worry since he 'knows' what a word is: a word is something which, when written, appears between two empty spaces, and he has learned at school how to divide words.²⁴ I want to consider whether at this level we can recognize some fundamental difference between alphabetic and

for instance syllabic writers. The discussion, however, needs some introduction and a digression. It is often said—wrongly—that alphabetic texts provide more information about the language in which they are written than any other form of script. This is, or may be, true, for some phonological aspects of language, but need not be true for other aspects. An example is enough: in common with other Near-Eastern languages Cuneiform Hittite and Hieroglyphic Luwian mark some written words with special symbols (determinatives); these in practice correspond to a semantic and grammatical classification of linguistic units: we have determinatives for god, man, woman, city, country, river, flesh, leather, cloth, vessel, and so on. The Near-Eastern word lists which we have preserved and which are often trilingual (Sumerian, Akkadian, Hittite), are sometimes organized on the basis of the determinative which precedes the word. Determinatives do not always make 'concrete' distinctions. In Hieroglyphic Luwian verbs of movement (including 'go', 'come', 'bring', 'transport', and so on) tend to be marked by one of two possible determinatives, that is by one of two signs (nos. 90 and 93 Laroche) which have the shape of a foot and a reversed foot respectively: the foot is used for verbs of coming or bringing (movement towards the speaker); the reversed foot for verbs of going (movement away from the speaker). In the language the distinction is largely semantic but partly grammatical too. Are these facts not revealing both for the language and for the analysis which its speakers make of it?

Eric Havelock (1982: 8) in his description of what he calls 'the alphabetic mind' argues that 'the alphabet converted the Greek spoken tongue into an artefact, thereby separating it from the speaker and making it into a "language", that is an object available for inspection, reflection, analysis'; he then proceeds to ask: 'Was this merely a matter of creating the notion of grammar?' Whatever the answer to the question, the implication is that, if nothing else, at least the start of grammatical thought must be seen as the result of the diffusion of the alphabet. Is the claim acceptable? Once again, I shall not tackle the main question—what determined the creation of grammar in Greece—partly because this would oblige me to consider at what stage we assume grammatical thought or grammar proper started. I shall simply discuss a detail. In contrast with classical Greek texts, the syllabic texts I have described are highly informative about two notions, which, if we are to judge

from the Greek developments, are essential for grammatical analysis. I refer to the notions of word and syllable.

We have far clearer ideas about what was taken to be a word in Cuneiform Hittite, Hieroglyphic Luwian, Linear B, and Syllabic Cyprian than we do for the much later period in which the Greeks wrote. The reason is that in all these syllabaries word-division is regularly marked—either with empty spaces as in Cuneiform Hittite, or with special signs used as word dividers, as in Hieroglyphic Luwian and in Linear B, or with special writing conventions, as in Syllabic Cyprian. In classical Greek inscriptions the writing is continuous: no word-division, no capitals, no accents, and no real breathings. Since, as Havelock rightly observes, there is no unambiguous Greek word for ‘word’, it follows that we do not know until relatively late whether the Greeks had or did not have a notion of word. For Havelock (1982: 289 f.) this first appears in the fifth century BC: ‘Archaic terminology had described human language synthetically, as song, speech, utterance, saying, talk. (Neither *epos* nor *logos* originally signified the separated word)’; by contrast in Aristophanes (fifth century BC) ‘one detects an increasing tendency to view language as though it were broken up into bits and pieces . . .’. The new terminology is fostered ‘by new habits of seeing language as a physical thing’; in their turn these habits are largely due to the new writing technology. Yet neither Havelock nor others have noticed that some notion of word existed in Greek territory as early as the second millennium BC: Linear B scrupulously divides words. It could be objected that a question of continuity arises. Even if Linear B word-division points to some grammatical notion of word—however subconscious—in the second millennium, why cannot we assume that this was lost and was then ‘rediscovered’ in the fifth century under the impact of the new literacy, as suggested by Havelock? The answer here is not too difficult to find. First, we have word-division, albeit with different means, in Syllabic Cyprian in the first millennium; secondly, and far more important given the isolation of Syllabic Cyprian, word-division of sorts appears in some archaic alphabetic inscriptions (sixth–fifth centuries). There, in contrast with the later inscriptions, one or more dots are occasionally used to separate words. Does anything indicate that the Mycenaean notion of word and the alphabetic Greek notion of word are the same? This too can be supported. Mycenaean word-dividers mostly overlap with modern spacing but do not always do

so. What they mark off is an accentual unit, that is either a single accented element or a sequence of accented and unaccented elements. On this criterion an English phrase like ‘the dog’ would count as a single word and a sequence like ‘the north wind and the sun were disputing’ would consist of four words, corresponding to the four main accents of ‘north’ ‘wind’, ‘sun’, and ‘disputing’. Roughly the same division criteria, based on accent, apply to Syllabic Cyprian and to the archaic alphabetic inscriptions where words are divided. More strikingly there are passages in fourth-century authors such as Plato and Aristotle which can only make sense if Plato and Aristotle operated on the basis of a similar notion of word. Indeed that this was the dominating notion emerges from the grammatical discussions of scholars as late as Apollonius Dyscolus who wrote in the second century AD. Apollonius’ discussion starts by taking for granted the accent-based notion of word, but then expresses doubts about it and wonders whether other approaches are possible. It would be perverse, I submit, to assume that the Mycenaean Greeks round 1300 BC, the first millennium Greeks of Cyprus, the sixth- and fifth-century authors of alphabetic inscriptions which mark word-division, the fourth-century philosophers, and the late grammarians, all independently rediscovered the same criteria for word-division; it would be equally perverse to argue that in spite of all this the notion of word was absent in the early fifth century and was then rediscovered by the ‘alphabetic mind’ of some fifth- and fourth-century authors.²⁵

Similar observations may be made apropos of other notions that Havelock does not consider, those of syllable and syllabic division; here too we find a complete continuity between Mycenaean times and the much later Greek period when syllabic division was discussed (Morpurgo Davies 1986*b*). The continuity is all the more noticeable in that it goes against all the evidence we have about syllabic division in speech. Because of some facts of Greek metre, we assume that an intervocalic sequence such as *-kt-* was always split between two syllables: hence a word like *Hektōr* was formed of two syllables, *Hek-* and *-tōr*.²⁶ What we now find is that in Mycenaean writing a noun like *Hektōr* is treated as formed by two syllables which are *He-* and *-ktōr*, not the expected *Hek-* and *-tōr*.²⁷ The same applies to Syllabic Cyprian. We do not find references to syllables in the linguistic sense until the fifth century BC and the Greek alphabetic texts are normally silent about syllabic division.²⁸

Yet starting with the third and possibly late fourth centuries BC it became fashionable to split words at the end of the line according to some criteria of syllabic division. In Attica at least the alphabetic texts where this is done also divide *He-ktōr* against our expectations (Threatte 1980: 64 ff.). Later on, in the first centuries of our era, the grammarians seriously discussed the problems which arose from syllabic division. In the second century AD Herodianus produced a full set of rules and concluded once again that the correct division was *He-ktōr*. Differently from his ancient predecessors, he also explained the rationale for his decisions. Syllabic division should be made according to the principles which govern the possible combinations of sounds at the beginning of a word. Greek words can begin with *kt-* but cannot end with *-k*; hence *Hek-* does not form a syllable and only one division is possible: *He-ktōr* (Hermann 1923: 126–30). Here too, we find a surprising form of continuity, as revealed by writing, in what I should like to call metalinguistic reactions, from the period of the syllabic scripts down to the period of full alphabetic literacy. Can this be by chance? We know how the late grammarians explained their decisions; did they simply produce a rationalization of the principles which they had somehow inherited? What prompted the earlier decision of the first syllabic writers of Greek?

This may seem a trivial collection of details—and one which is not relevant to the main purpose of this chapter. Yet even these details lead to more general conclusions than at first appears. The last facts I have mentioned reveal a continuity of linguistic, or perhaps folk-linguistic, reactions, which lasted in Greece for more than one millennium and survived through a violent disruption such as that which signed the end of the Mycenaean civilization and a cultural renewal such as that marked by the introduction of the alphabet and the new literacy. If it is true that the ‘alphabetic mind’ is fundamentally different from the pre-alphabetic mind it is striking that it is just this type of linguistic-grammatical attitudes which survives. Havelock argues that the alphabetic revolution was shattering and not merely for grammar. I want to argue that the size of the gap between the ‘alphabetic mind’ and the ‘syllabic mind’ has been overrated, largely through the fault of omission. Undoubtedly in the ancient world there are considerable differences between illiterate and literate societies and between pre-alphabetic and alphabetic

societies but we cannot a priori assume that these are connected with the writing technology used or with its absence, nor can we a priori define the cultural features which in any given society are likely to be affected by a change in writing technology.²⁹ I have made a case for the survival of some fundamental linguistic or folk-linguistic notions in Greece through a period of loss and acquisition of literacy. It would also be possible to argue that the Near-Eastern pre-alphabetic civilizations were not as deprived of scientific and scholarly results, that is of those results which tend most obviously to be associated with literacy, as is sometimes assumed. There is a Sumerian proverb which reads: ‘The scribal art is the mother of orators and the father of scholars’ (Lambert 1960: 259)—it was written long before the alphabet was invented. The Sumerian concept of scholarship may well have been very different from our own, but serious scholarship—cuneiform scholarship—existed in the Near East earlier than in Greece, and is not the product of an alphabetic culture.³⁰

NOTES

1. Strictly speaking pictographic writing does not belong in this list since its link with language is or may be of a different order from that of the other types.
2. A comparison between the two classifications is drawn by Cardona (1981: 21 ff. and 34 f.) who should also be consulted for background information to the problems mentioned above and below.
3. This was the view held e.g. by Max Müller in the second half of last century (cf. in general Morpurgo Davies 1975).
4. Romaine (1982: 15) points out that when modern linguists speak of the death of a language they normally refer to the loss of its spoken form—which contrasts or ought to contrast with the view supported above.
5. Cf. Goody 1968: 20 ff. (see also Goody 1977): ‘in Greece it was not only the alphabet which was being introduced but writing of any kind (at least, for the first time for some 500 years)’; in other words, what matters is the introduction of literacy rather than that of a specific writing system. Part of the papers collected in Goody 1968 (e.g. Gough 1968) also point out that relatively widespread literacy is possible even with non-alphabetic scripts.
6. See Havelock 1963, 1971, 1976, 1978, and the collection of articles in Havelock 1982; a recent summary of Havelock’s views can be found in Havelock 1982: 3–38.
7. That the alphabet is a more efficient writing system than any other is

- normally accepted: cf. e.g. Scribner and Cole 1981: 239, but see also *ibid.* 240 for further references and observations about the efficiency and success of some syllabic scripts and of the syllabic system in general.
8. In recent years linguists, sociologists, anthropologists, and educationists have done a certain amount of work about the differences between spoken and written language in the use of specific linguistic communities or even of specific individuals (cf. e.g. Greenfield 1972, O'Donnell 1974, Poole and Field 1976, and the articles collected in Tannen 1982*b*). In comparing different scripts it would obviously be useful to know whether there is a correlation between the specific features of a script and the way in which the written and spoken norms differ in the society which uses the script in question. We ought to be able to ask questions such as: are texts in for example syllabic scripts more likely than alphabetic texts to show linguistic features which are not found in the spoken language? Unfortunately this approach is unsuitable for ancient cultures which are only known through written records—even if interesting inferences can sometimes be made in this field too (in ancient Greek it is possible to identify some features which are likely to have belonged to written language only; some inferences are possible for classical Chinese (Li and Thompson 1982), etc.).
 9. Street (1984: 2) refers to the somewhat ill-defined claim that a society needs a 40 per cent literacy rate for economic 'take off'; other classifications of society development, such as that by Parsons 1966, in terms of different rates of literacy (in an 'advanced intermediate society' literacy is characteristic of all upper-class adult males), are also open to the objection that the 'quality' and uses of literacy are as important as its spread.
 10. For some general data and references about these and other contemporary scripts see Hawkins 1979, as well as the standard histories of writing quoted e.g. in Gelb 1963 and Cardona 1981.
 11. Gelb 1960 has suggested that the script may have been originally devised for a non-Sumerian population.
 12. General introduction, Friedrich 1960*b*; list of signs, Friedrich 1960*a*; brief account of the development of the script and its problems. Laroche 1978.
 13. General introductions, Ventris and Chadwick 1973, Hooker 1980; detailed information about the script and further references, Duhoux 1985.
 14. There is nothing 'hieroglyphic' about the script; the adjective refers to the appearance of the signs, which often are easily identifiable representations of objects, animals etc. General introductions, Laroche 1975, Meriggi 1966-75; historical data, Hawkins 1982; list of signs, Laroche 1960; new transliterations, Hawkins, Morpurgo Davies,

- Neumann 1973, Hawkins 1975; development of the script, Morpurgo Davies and Hawkins 1978.
15. Introduction, texts, signs etc., Masson 1983 (cf. p. 408, no. 18g for a reference to the earliest text now available which dates from the eleventh century BC). Cf. also Mitford and Masson 1982.
 16. For early Greek writing see Jeffery 1961 and 1982; for the derivation of the alphabet from a Semitic script cf. Driver 1976: pt. iii; Isserlin 1982. The view that the so-called Semitic alphabets are in fact syllabaries was proposed by Gelb (1963: 146 ff.) and is still disputed.
 17. At least for the four non-alphabetic scripts the types of texts we have and the material on which they are written may be determined by chance only; writing on perishable material was easily lost, it is conceivable that specific genres were confined to specific types of material support, and the evidence is not sufficient, as in the case of the alphabet, to provide adequate references to what was lost. Lack of evidence also prevents us from answering a basic question: how many people were literate in the scripts listed? Some serious work has been done for Greece, and above all for Attica: cf. most recently Harvey 1966, Woodbury 1976 with the conclusion that the majority of adult Attic citizens in the fifth century BC had basic literacy; the position was different in Sparta (Cartledge 1978; Boring 1979); for most other regions and periods we do not know, though there is more information about Hellenized Egypt. Knowledge of writing in second millennium Anatolia was probably limited to scribes and we do not know what their number was; Laroche (1971: 193) refers to more than 91 different scribes whose name is known, but this means but little. The evidence is even more limited for Hieroglyphic Luwian and Cyprian, though it is worth pointing out that we have Cyprian graffiti in Egypt which look like the work of individuals (mercenaries, etc.) who were not professional scribes. For Linear B we know that at the same period there may have been some one hundred scribes at Knossos and some fifty scribes at Pylos (Olivier 1967, 1984), but we do not know what the size of the population was. It is useful to compare the data for other contemporary cultures; in his interesting studies of Egyptian literacy J. Baines (1983; Baines and Eyre 1983) suggests that in most periods only 1 per cent of the Egyptian population was literate.
 18. Sumerograms are often accompanied by phonetic complements, i.e. by Hittite terminations: DUMU-*aš* 'son' has the Hittite nominative ending -*aš*; Akkadograms can also have Hittite phonetic complements but this is rare.
 19. In modern English writing the alphabetic principle (one letter, one segment) obviously does not apply, but in a number of instances at least it could be argued that this is due to the conservative nature of

- spelling which does not reflect language change. That is why I have concentrated on innovations rather than on old features.
20. Cf. the brief resumé of Bossert's views in Laroche 1960: 259.
 21. A factor that we cannot test with this set of data concerns once again the extent of literacy; it would be possible to argue that when writing is limited to a small group of scribes it develops differently from when it is more widely used.
 22. The same tablet contains a few sentences addressed by the writer directly to his fellow scribe: 'You, scribe, write clearly to me, and add your name (to the text). And as for the tablets which they will bring to me write them in Hittite.' Presumably neither the Anatolian nor the Egyptian king were likely to read the text by themselves.
 23. Cf. the simple, but clear, discussion by Frank Palmer (1971: 41-51) which ends negatively: 'In conclusion, sadly, we have to say that the word is not a clearly definable linguistic unit.'
 24. Pre-school children do not find it easy to segment speech into words, or into what we call words (Romaine 1984: 206 f.).
 25. For the basic data, which cannot be given here, and for a more detailed discussion cf. Morpurgo Davies 1985 and above all 1986a.
 26. For the main facts of Greek syllabification cf. Hermann 1923 and Allen 1973: 203-23. This is not the place to discuss Pulgram's views, which I find impossible to accept. Pulgram (e.g. 1981, with earlier references) knows that a Greek word like *Hektōr* is scanned as two long syllables but nevertheless assumes that the correct syllabic division is *He-ktōr* and the first vowel is lengthened because of metrical convention. Cf. in general Morpurgo Davies 1986b.
 27. In Linear B we have words like *te-ko-to-ne*, *e-ko-to*, *e-ko-to-ri-jo*, i.e. *tektōnes*, *Hektōr*, *Hektorio*- where the signs chosen to render the *-kt-* cluster (*te-ko-to-*, *e-ko-to-* rather than **te-to-*, **e-to-*) point to a division of the *He-ktōr* (not *Hek-tōr*) type. Similarly in Syllabic Cyprian we have forms like *ti-mo-wa-na-ko-to-se*: *Timowana-ktos* (rather than **ti-mo-wa-na-ke-to-se*: *Timowanak-tos*).
 28. The word *syllabē* 'syllable' in its technical meaning first appears in the fifth century BC (possibly in Aeschylus *Septem*, 468 and certainly in Euripides fr. 578 Nauck); words and concept are well attested in the fourth century (Plato and Aristotle). Grammatical discussion of syllabic division is attested much later; the most complete account we have is by Herodianus in the second century AD (Hermann 1923: 123-32).
 29. Cf. for similar observations apropos of Egypt Baines (1983).
 30. Speaking not of scholarship but of poetry Havelock (1982: 166 ff.) compares the translations of two passages which contain descriptions of natural events in the *Epic of Gilgamesh* and in the *Iliad*, notices that the Greek passage is less tautological and less ritualized in style than the Akkadian passage, and suggests that the difference is due to the

writing form in which the two compositions were recorded: 'the deficiencies of cuneiform as an instrument of acoustic-visual recognition have discouraged the composer from packing into his verse the full variety of expression which such a description calls for; the alphabet on the other hand applied to a transcription of the same experience places no obstacles in the way of its complete phonetic translation' (1982: 172). The hypothesis is obviously untestable; I can simply observe that my experience of syllabic scripts does not make me feel that it would be impossible to write Homeric poetry in a syllabary, and that, as Havelock himself points out, the contrast between *Gilgamesh* and the *Iliad* is also capable of a different explanation.

REFERENCES

- Allen, W. S. 1973: *Accent and Rhythm*. Cambridge: Cambridge University Press.
- Baines, J. 1983: 'Literacy and Ancient Egyptian Society', in *Man* (NS), 18: 572-99.
- and C. J. Eyre 1983: 'Four Notes on Literacy', in *Göttinger Miszellen*, 61: 65-96.
- Basso, K. H. 1980: Review of Goody 1977, in *Language in Society*, 9: 72-80.
- Boring, T. A. 1979: *Literacy in Ancient Sparta* (Mnemosyne: Supplement 54). Leiden: Brill.
- Cardona, G. R. 1981: *Antropologia della Scrittura*. Turin: Loescher.
- Cartledge, P. A. 1978: 'Literacy in the Spartan Oligarchy', in *Journal of Hellenic Studies*, 98: 25-37.
- Driver, G. R. 1976: *Semitic Writing. From Pictograph to Alphabet*, rev. edn. ed. S. A. Hopkins. London: Oxford University Press for the British Academy.
- Duhoux, Y. 1985: 'Mycénien et écriture grecque', in A. Morpurgo Davies and Y. Duhoux (eds.), *Linear B: A 1984 Survey*, pp. 7-74. Louvain: Cabay.
- Friedrich, J. 1960a: *Hethitisches Keilschrift-Lesebuch*, vol. 2. Heidelberg: Winter.
- 1960b: *Hethitisches Elementarbuch*, vol. 1. Heidelberg: Winter.
- and A. Kammenhuber 1975- : *Hethitisches Wörterbuch*, 2nd edn. (in progress). Heidelberg: Winter.
- Gelb, I. J. 1960: 'Sumerians and Akkadians in their Ethno-linguistic Relationship', in *Genava*, 8: 258-71.
- 1963: *A Study of Writing*, rev. edn. Chicago: Chicago University Press. (1st edn. 1952.)

- 1980: 'Principles of Writing Systems within the Frame of Visual Communication', in P. A. Kolers, M. E. Wrolstad, H. Bouma (eds.), *Processing of Visible Language 2*, pp. 7-24. New York: Plenum Press.
- Goody, J. (ed.) 1968: *Literacy in traditional Societies*. Cambridge: Cambridge University Press.
- 1977: *The Domestication of the Savage Mind*. Cambridge: Cambridge University Press.
- and I. Watt 1963: 'The Consequences of Literacy', in *Comparative Studies in Society and History*, 5: 304-45, repr. in Goody (ed.) 1968: 27-68.
- Gough, K. 1968: 'Implications of Literacy in Traditional China and India', in Goody (ed.) 1968: 70-84.
- Greenfield, P. M. 1972: 'Oral or Written Language: the consequences for cognitive development in Africa, the United States and England', in *Language and Speech*, 15: 169-78.
- Harvey, F. D. 1966: 'Literacy in the Athenian Democracy', in *Revue des études grecques*, 79: 585-635.
- Havelock, E. A. 1963: *Preface to Plato*. Oxford: Basil Blackwell.
- 1971: *Prologue to Greek Literacy*. Cincinnati: Cincinnati University Press.
- 1976: *Origins of Western Literacy*. Toronto: Ontario Institute for the Study of Education.
- 1978: *The Greek Concept of Justice from Its Shadow in Homer to Its Substance in Plato*. Cambridge, Mass.: Harvard University Press.
- 1982: *The Literate Revolution in Greece and its Cultural Consequences*. Princeton, NJ: Princeton University Press.
- Hawkins, J. D. 1975: 'The Negatives in Hieroglyphic Luwian', in *Anatolian Studies*, 25: 119-56.
- 1979: 'The Origin and Dissemination of Writing in Western Asia', in P. R. S. Moorey (ed.), *The Origins of Civilization. Wolfson College Lectures 1978*. Oxford: Clarendon Press.
- 1982: 'The Neo-Hittite States in Syria and Anatolia', in J. Boardman, I. E. S. Edwards, N. G. L. Hammond, E. Sollberger (eds.), *The Cambridge Ancient History*, 2nd edn., iii (1): 372-441. Cambridge: Cambridge University Press.
- , A. Morpurgo Davies, G. Neumann 1973: 'Hittite Hieroglyphs and Luwian: New evidence for the connection', in *Nachrichten der Akademie der Wiss. in Göttingen. Phil.-hist. Klasse*, Nr. 6.
- Hermann, E. 1923: *Silbenbildung im Griechischen und in den andern indogermanischen Sprachen*. Göttingen: Vandenhoeck & Ruprecht.
- Hooker, J. T. 1980: *Linear B. An Introduction*. Bristol: Bristol Classical Press.
- Houwink Ten Kate, Ph. H. J. 1970: *The Records of the Early Hittite*

- Empire*. Istanbul: Nederlands historisch-archaeologisch Instituut in het Nabije Oosten.
- Isserlin, B. S. J. 1982: 'The Earliest Alphabetic Writing', in J. Boardman, I. E. S. Edwards, N. G. L. Hammond, E. Sollberger (eds.), *The Cambridge Ancient History*, 2nd edn., iii (1): 794-818. Cambridge: Cambridge University Press.
- Jeffery, L. H. 1961: *The Local Scripts of Archaic Greece*. Oxford: Clarendon Press.
- 1982: 'Greek Alphabetic Writing', in J. Boardman, I. E. S. Edwards, N. G. L. Hammond, E. Sollberger (eds.), *The Cambridge Ancient History*, 2nd edn., iii (1): 819-33. Cambridge: Cambridge University Press.
- Kraus, F. R. 1973: *Vom mesopotamischen Menschen der altbabylonischen Zeit und seiner Welt*. Amsterdam: North Holland.
- Lambert, W. 1960: *Babylonian Wisdom Literature*. Oxford: Oxford University Press.
- Laroche, E. 1960: *Les Hiéroglyphes hittites*. Paris: Centre nationale de la recherche scientifique.
- 1971: *Catalogue des textes hittites*. Paris: Klincksieck.
- 1975: 'Hiéroglyphen, hethitische', in *Reallexicon der Assyriologie*, iv: 394-9. Berlin: de Gruyter.
- 1978: 'Problèmes de l'écriture cunéiforme hittite', in *Annali della Scuola Normale di Pisa. Classe di Lettere*, iii. 8: 739-53.
- Li, C. N. and S. A. Thompson 1982: 'The Gulf between Spoken and Written Language: a Case Study in Chinese', in Tanner 1982b: 77-88.
- Longo, O. 1981: *Tecniche della comunicazione nella Grecia antica*. Naples: Liguori.
- Marschack, A. 1972: *The Roots of Civilization: The Cognitive Beginnings of Man's First Art, Symbol and Notation*. New York: McGraw-Hill.
- Masson, O. 1983: *Les Inscriptions chypriotes syllabiques*, enlarged 2nd edn. Paris: Boccard.
- McIntosh, A. 1956: 'The Analysis of Written Middle English', in *Transactions of the Philological Society*: 26-55.
- Meadmore, S. 1980: *Behind the Mask*. London: Hale (Italian trans.: *A come Amore*. Milan, 1981).
- Meriggi, P. 1966-75: *Manuale di eteo geroglifico*, 4 vols. Rome: Edizioni dell'Ateneo.
- Mitford, T. B. and O. Masson 1982: 'The Cypriot Syllabary', in J. Boardman and N. G. L. Hammond (eds.), *The Cambridge Ancient History*, 2nd edn., ii (3): 71-82. Cambridge: Cambridge University Press.
- Morpurgo Davies, A. 1975: 'Language Classification in the Nineteenth Century', in T. Sebeok (ed.), *Current Trends in Linguistics*, 13: 607-716. The Hague: Mouton.

- 1985: 'Mycenaean and Greek Language', in A. Morpurgo Davies and Y. Duhoux (eds.), *Linear B: A 1984 Survey*, pp. 75–125. Louvain: Cabay.
- 1986a: 'Folk-linguistics and the Greek word', to appear in *Festschrift* H. M. Hoenigswald.
- 1986b: 'Mycenaean and Greek Syllabification', to appear in *Tractata Mycenaea*. Proceedings of the 8th Int. Colloquium on Mycenaean Studies. Skopje.
- and J. D. Hawkins, 1978: 'Il sistema grafico del luvio geroglifico', in *Annali della Scuola Normale di Pisa. Classe di Lettere*, iii. 8: 755–82.
- O'Donnell, R. C. 1974: 'Syntactic differences between speech and writing', in *American Speech*, 49: 102–10.
- Olivier, J.-P. 1967: *Les Scribes de Cnossos*. Rome: Edizioni dell' Ateneo.
- 1984: 'Administrations at Knossos and Pylos: What differences?', in *Pylos comes alive. Industry and Administration in a Mycenaean Palace*, pp. 11–18. New York: Fordham University.
- Ong, W. J. 1982: *Orality and Literacy. The Technologizing of the Word*. London and New York: Methuen.
- Otten, H. 1981: *Die Apologie Hattusilis III*. Wiesbaden: Harrassowitz.
- Palmer, F. 1971: *Grammar*. Harmondsworth: Penguin Books.
- Parsons, T. 1966: *Societies. Evolutionary and comparative perspectives*. Englewood Cliffs: Prentice Hall.
- Poole, M. E. and J. W. Field 1976: 'A Comparison of Oral and Written Code Elaboration', in *Language and Speech*, 19: 305–12.
- Pulgram, E. 1981: 'Attic Shortening or Metrical Lengthening?' in *Glotta*, 59: 75–93.
- Romaine, S. 1982: *Socio-historical Linguistics*. Cambridge: Cambridge University Press.
- 1984: *The Language of Children and Adolescents*. Oxford: Blackwell.
- Rost, L. 1956: 'Die ausserhalb von Boğazköy gefundenen hethitischen Briefe', in *Mitteilungen des Instituts für Orientforschung*, 4: 328–50.
- Schmandt-Besserat, D. 1977: 'An Archaic Recording System and the Origin of Writing', in *Syro-Mesopotamian Studies*, 1: 1–32.
- 1979: 'An Archaic Recording System in the Uruk-Jemdet Nasr Period', in *American Journal of Archaeology*, 83: 19–48.
- Scribner, S. and M. Cole 1981: *The Psychology of Literacy*. Cambridge, Mass.: Harvard University Press.
- Street, B. V. 1984: *Literacy in theory and practice*. Cambridge: Cambridge University Press.
- Tannen, D. 1982a: 'Oral and Literate Strategies in Spoken and Written Narratives', in *Language*, 58: 1–21.
- (ed.) 1982b: *Spoken and Written Language: Exploring Orality and Literacy*. Norwood: Atlex Publishing Corporation.
- Threatte, L. 1980: *The Grammar of Attic Inscriptions*, i. Berlin: de Gruyter.

- Vachek, J. 1973: *Written Language. General Problems and Problems of English*. The Hague: Mouton.
- Ventris, M. and J. Chadwick 1973: *Documents in Mycenaean Greek*, 2nd edn. Cambridge: Cambridge University Press.
- Woodbury, L. 1976: 'Aristophanes' *Frogs* and Athenian Literacy Ran. 52–3, 1114', in *Transactions of the American Philological Association*, 106: 349–57.