LITERACY AND ANCIENT EGYPTIAN SOCIETY*

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From its first occurrence around 3000 B.C., writing was integral to the self-definition of Egyptian culture, especially in terms of display where it was part of a system of pictorial representation. By 2600 continuous texts were produced and any linguistic matter could be written; new genres of text appeared in stages, literary texts in the Middle Kingdom and some additional types in the New Kingdom. Very few people were literate, all of them officials of state; schooling was limited. The main script types, hieroglyphic, hieratic and demotic, have different, complementary functions. The entire system survived into late Roman times alongside the more widespread Greek. Writing can be related to textual elaboration, to the sense of the past, magic and law, and perhaps to social change and stability but not as an overriding explanatory factor. Thus writing cannot explain the failure of radical change in Egypt or its success in Greece. The potential of writing is realised in stages over millennia.

Literacy is an important, if often tacit, criterion according to which fields of study are categorised, and this corresponds to an evident reality. Societies completely pervaded by writing, such as our own, are very different from non-literate societies. In between these extremes comes a range of possibilities, some of which were placed by Parsons (1966: 26–7; 1964: 347), to whose ideas later work has referred, in an evolutionary sequence with literacy as a significant element in classification. Against this background, a study of literacy should seek to cross boundaries between disciplines. General works in the field have not been based on detailed studies within the areas they compare, because such studies are mostly lacking. A number of essays on 'traditional' literacy—mostly in a contemporary context, not in dead societies—were gathered by Goody (1968), who has returned to the subject in *The domestication of the savage mind* (1977; cf. Basso 1980). Here he has useful things to say about modes of analysis, which we take for granted, that are closely related to literacy.

Available discussions are mostly concerned with societies not closely comparable with ancient Egypt, while Egypt is in some ways comparable with non-literate societies. Yet it is necessary here to concentrate on the literacy of my title, for only vague and generalising statements can be made about ancient Egyptian society as such. In comparison with what has been established for various ancient and oriental societies, and still more for early modern England (Schofield 1968; Cressy 1980), no precise results are available from Egypt; both

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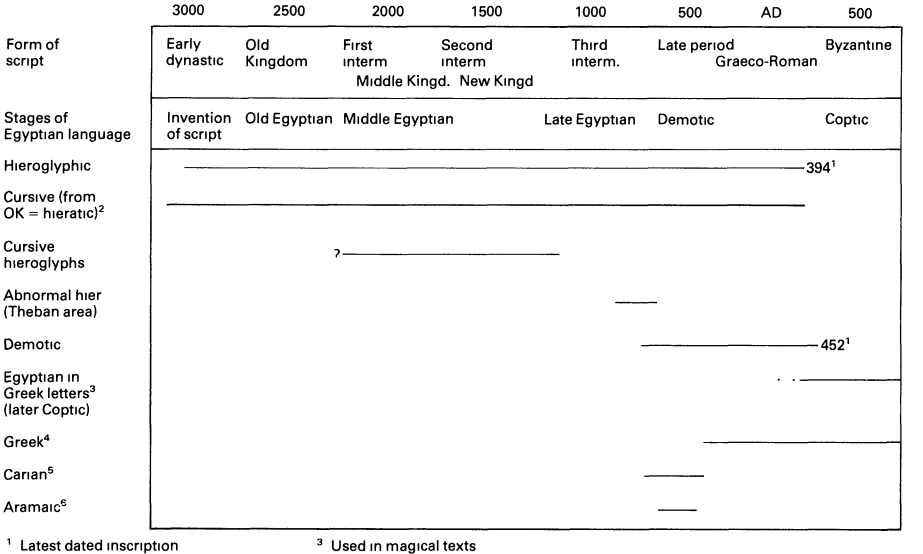
my survey of the facts about literacy and my interpretations are tentative and impressionistic. Basically I return to questions of stability and change and of the position of writing in society that Gough studied in her articles on China (1968*a*) and Kerala (1968*b*) and Murray considered in *Early Greece* (1980: 91–9). The topic is large and diffuse. In Egypt the largest dimension is temporal, from the latest predynastic period around 3000 B.C. to the late Roman period *c.* A.D. 300 (fig. 1; for dates and periods see table 1).[1] It is necessary to refer to evidence from this entire range, but it is also vital to guard against an Olympian view.

This temporal span presents a fundamental problem. If, as is generally assumed, writing is in itself a stimulus to change, how is it institutionalised in a way that is nonetheless conducive to stability? Or is this the wrong question, because it takes too long a view of the subject and does not see it in terms of the actors? Only a few times in Egyptian history will the system have changed markedly in an average lifetime; in between, the uses of writing and its degree of penetration in society remained similar for very long periods. To state the matter thus still takes a broader view than that of the actual users of writing, for whom the addition of a new genre of text to a restricted repertory could be very significant. Because the social background of any such development is very little known, one can often work only from observation of the uses of writing to hypotheses about the range of written genres and then to the social context to which they belonged. Writing provides direct evidence from a very small proportion of the population, to whom discussion must be largely confined; but this does not necessarily prevent our understanding general developments



[1] Latest dated inscription
[2] The earliest cursive forms are distinct from the monumental, but may not constitute a separate script 'hieratic'. Cursive is placed earlier because writing was probably invented for administration
[3] Used in magical texts
[4] Earliest dated inscription 591 B C; official language from 332
[5] Language of mercenaries from Anatolia
[6] Administrative language of the Persian empire

FIGURE 1. Attestation of scripts and languages in ancient Egypt. Only Egyptian and Greek are discussed in the text; the rest are tabulated for completeness.

TABLE 1. Chronology. Dates before 712 are in round figures; all except the last are B.C.

period	*dynasties*	*dates*
predynastic		5000–2950
early dynastic	1–3	2950–2600
Old Kingdom	4–8	2600–2150
1st intermediate	9–11	2150–2040
Middle Kingdom	11–13	2040–1640
2nd intermediate	15–17	1640–1530
New Kingdom	18–20	1550–1070
3rd intermediate	21–25	1070–712
late	25–30	712–332
Graeco-Roman		332–A.D. 395

related to writing, which in all periods except the earliest originate with the literate or those close to them. Those chiefly responsible were probably the core elite, as against the 'sub-elite' of scribes (cf. Baines & Eyre 1983: 65–74).

All this implies that, for most of the time and most of the literate, writing is scarcely perceived as a separate element in the social system. Although it is a latecomer in social evolution, people do not look to a time when it was absent, except perhaps in myth. In almost all periods the literate use writing for traditional purposes, which may be specifically literate, but are mostly better characterised under general headings such as administration or prestige, and those are activities common to literate and non-literate elites. The circumscription of writing is part of society's definition of itself, which its members inherit, so that changes in writing often imply or reflect changes in society. Initially, this definition which includes writing relates to the state which formed before writing appeared. Writing may then change society, but it need not do so in a programme of expansion. More probably it is devised in response to gaps perceived in the non-literate system.

In order to give a context for these observations, I describe the origins of writing in Egypt and the Near East, its institutional position and range of application. I then return to broader issues.

Description

Origins and development. The three transformations associated with the rise of civilisation are the development of settled, agricultural communities – the 'neolithic revolution'; the rise of urban society; and the appearance of complex, centralised states. According to the hypothesis of Schmandt-Besserat (e.g. 1978), the neolithic revolution also produced durable accounting systems which were the precursors of writing. These are attested in the Near East from around the 8th millennium B.C., being documented in a series of stages by clay counters of different shapes, figurines and open (later sealed) containers, sometimes impressed with signs corresponding with their contents. 'Impressed tablets' of clay, the signs on which are the same as the counters used in the previous stage, come shortly before the invention of writing, also on clay tablets, in Mesopotamia or conceivably Elam in the late 4th millennium

(Schmandt-Besserat 1981). No such tidy development can be demonstrated for Egypt, but some objects of the same general type have been found there and in the Sudan (Schmandt-Besserat 1978; omitted from her subsequent presentations). This system of accounting, whose duration was at least as long as that of the writing systems that replaced it, suggests that administration has primacy in the origin of writing, a primacy that most have acknowledged, but which may not fit the introduction of writing everywhere.[2] Just as writing and developments of it may not be necessary features of the types of society in which they occur, so accounting of this sort is not necessary to neolithic society: most neolithic societies appear to have lacked it.

Egyptian writing is first attested in the latest predynastic period, and in the first dynasty became a fairly stable system, difficult now to interpret and different from later forms. Most probably the idea of writing was introduced indirectly by 'stimulus diffusion' from Mesopotamia.[3] The system is fully Egyptian and no more than analogous with the Mesopotamian, but it is significant that it evolved relatively rapidly. In Mesopotamia, the development of complex society and of the state went hand-in-hand with that of writing and lasted many centuries. In Egypt, complex society and the state formed much faster, before the introduction of writing (Schenkel in press).

A script can be adequate for some accounting without writing continuous sentences. Because of such a discrepancy, the early administrative writing of Mesopotamia (Green 1981), Elam, and to a lesser extent Egypt, can be partially understood but cannot now be 'read' linguistically, although those who used the accounts will have read them in a language (Hawkins 1979). The influence of accounting on written language is so great that it ostensibly penetrates even the spoken form, producing constructions that depend on tables rather than conventional grammar. In the Egyptian story of the Two Brothers (*c.* 1200 B.C.) a handsome cowherd, asked by the evil woman who wishes to seduce him how much he is carrying, replies, 'Emmer: 3 sacks; Barley: 2 sacks; Total: 5' (Lichtheim 1976: 204). People may not really come to talk like this, but the influence of tabular presentation on written material involving numbers is profound (Edel 1955–64 §§ 385–409; Helck 1974: 87–91). Here the original restriction of writing to tables, marks of ownership and captions exerted a continuing influence.

Although there may be cases, such as Aegean Linear B, where writing has stayed at the stage of accounting, Egypt was not one of them. Almost from the beginning it served the two purposes of administration and monumental display, but for nearly half a millennium there is no evidence that continuous texts were written. Its non-textual use could not, however, fail to change the existing patterns of activity for which it was devised. In the case of accounting, the result was probably a vast proliferation in the amount done, allowing improved central control of economic activity, as well as a more precisely monitored distribution of royal largesse. Symptomatic of the frequency of writing is the invention within a century or so of the artificial medium of papyrus.[4] Payrus, henceforth the principal writing material and hypotheses about writings on papyrus are my chief subject here. It must be borne in mind that only an infinitesimal proportion of what there was has survived: normal

writing from administrative buildings or settlements is preserved only in rare cases when these were in the desert.

In the case of monumental display, the new medium of communication was an integral part of an ideologically important system I term decorum, which defines and ranks the fitness of pictorial and written material on monuments, their content and their captions (Baines in press: 1.3.3; Excursus). The system is visible on the earliest royal monuments and seems to be inseparable from the first development of writing. On the monuments writing and pictorial representation are not distinct; instead there is a complex of representational conventions including that of writing (cf. Fischer 1977: 3–4). Together these define the Egyptian presentation of the world and have widespread ramifications for the use of writing. Rigid though they are, they were not fixed for all time. Partly because of this flexibility, the system remained in operation as long as monuments continued to be created. The link between iconography and text is visible elsewhere in the later production of 'illustrated books';[5] these are perhaps the most characteristically Egyptian texts.

Later Egyptians, and Egyptologists, define the dynastic period, which began a generation or two after the invention of the system of decorum and perhaps a century after the first writing, as the beginning of history (for which there is no Egyptian word). Written records of the names of regnal years were introduced then. These 'annals' name the years by events that show a conception of the king's historical role comparable to that of later periods, but are expressed in caption-like phrases, not texts. Enumerative, chronological lists of them developed with writing itself and came to have their own ideological purpose, but in origin were probably administrative aids. 'History' is thus set off from 'prehistory' by an ordering process analogous to the elaboration of decorum and related to accounting conventions, rather than by a specific event. 'History' does not imply a discursive, still less an analytical interest in the past, of which all that is accurately retained are these brief year-formulae.

Since decorum and writing define 'history', reflect state formation, and constitute the Egyptian presentation of the ordered world, writing acquired great prestige in relation to the country and its boundaries. No explicit comment on such matters is preserved, yet it is clear that Egypt, the largest centralised state of its time, was set off from its neighbours by its writing. The less powerful, closer neighbours were not literate, and powerful but distant states used a different script. The extent to which the script is identified with Egypt is illustrated by the fact that it was never adapted to writing other languages until a few forms were adopted in the Sudan for the Meroitic alphabet (or syllabary) in the 3rd century B.C. (Shinnie 1967: 132–40); in principle it could write other languages.[6]

In display the system of decorum continues to betray its early origin through the lack of extensive texts. It reinforces the prestige of the sparse written word on the monuments. In later periods spaces for captions were often marked out in religious scenes but the captions were not inscribed. In such cases, especially when iconography was enough to convey the meaning, writing could be dispensed with but was too important to be seen to be omitted (the craftsman might also be illiterate).

The early use of writing and the system of decorum exemplify a principle of scarcity. Writing was a centrally-controlled facility in a state which was focused on its chief representative, the king, and became ever more highly centralised in its first few centuries. There might have been a strong stimulus to diffuse writing widely had it been necessary for technological purposes, but the most sophisticated crafts, as well as complex techniques such as surveying, will themselves have been organised by the state. For 'pure' administration the number of literate people needed would be very small. The administrative significance of this scarcity is paralleled in the use of writing in display, which is the more potent for being restricted. The extreme sparsity of writing and decoration in private tombs of the 4th dynasty, the most centralised period of all, is symptomatic of this manipulation of scarcity: one suspects that an attempt was made to stem the proliferation of a much improved system, because the plainest tombs are later than the first longer inscriptions.

The Graeco-Egyptian historian Manetho (frag. 11, 12a–b) records that under Djoser (3rd dyn.) the culture hero Imhotep 'devoted attention to writing', and this corresponds well with advances visible on the monuments. If these result from a definite reform – probably in monumental and administrative writing – this was a significant precursor of later reforms of writing and language; major changes were seldom gradual.

From the 3rd or 4th dynasty continuous texts were written[7] and the script could in theory be used for almost any purpose for which we use writing, yet was not so used. By the end of the Old Kingdom around 2150 B.C. attested categories of text include copies of legal decrees and proceedings and important private contracts, which could be displayed in order to make their terms public and operative in perpetuity (Goedicke 1967; 1970); letters (Posener-Kriéger 1972); long religious and magical texts (chiefly the pyramid texts: Faulkner 1969); and 'biographical' inscriptions (cf. Spiegel 1935; samples: Lichtheim 1973: 15–27). The existence of technical writings can probably be inferred from other evidence, but it is unlikely that any 'purely' literary texts were written down;[8] their oral prototypes are reflected in biographical inscriptions. No royal narrative inscriptions are known, even though the king's 'historical' role was fully defined. For him the traditional mixture of relief and caption continued to be the norm, while the 'annals' referred to above became more detailed and recorded matters in sentence form; the function of dating had been lost because years were now identified numerically.

In the expansion of texts biographical inscriptions are revealing, as well as perhaps reflecting a changing concept of person. The general context is the search for permanence beyond the initial threshold of death—as Assmann remarks (in press), the most characteristically Egyptian concern of all. The earliest continuous text on the monuments (early 4th dyn.) appears to be largely legal in import (Helck 1972), while contemporary display materials were restricted to title strings and captions. Only gradually did ethical precepts (also related to the avoidance of litigation), general assertions of conformity to social norms, marks of royal favour and the actions leading to royal favour come to be recorded, a progressive development that took over two hundred years (Schott 1977). The writing of continuous texts was probably a response to requirements

of administration, law, and perhaps religion in contexts now lost, but the new possibilities came slowly to be exploited for different purposes. So long as the centralised Old Kingdom state survived, the development of genres seems to have been limited. The succeeding 1st intermediate period shows a great broadening in the content of biographical texts, largely independent of royal sanction. Stone stelae, whose only known use in the Old Kingdom was for royal legal decrees, acquired a variety of functions for others; they may contain biographical texts, suitably captioned commemorative pictures of families, or religious texts.

In the next major period of history, the Middle Kingdom, these changes were consolidated. Two developments are particularly significant. First, kings produced the equivalent of private biographical texts in royal inscriptions recording outstanding events according to set schemata. Second, narrowly literary texts appear,[9] and include 'wisdom' texts (instructions on how to get on in society or to live a virtuous life); narrative stories, often with mythological overtones; hymns; and various texts less easily categorised. Medical, magical, mathematical, astronomical and calendrical texts survive and are also 'literary' material,[10] which therefore constitutes the transmitted body of written high culture as a whole. What is very rare is the systematic treatment of topics; exceptions are a surgical treatise (Westendorf 1966) and the onomastica, lists of categories which loosely order words as compendia of knowledge (Gardiner 1947; cf. Goody 1977: 99–103; also unpublished texts of the Graeco-Roman period).[11] There is nothing 'popular' about any of the literature.

Monuments of kings and private individuals slowly came to bear more and more writing—often in places to which few had access; changes in decorum also slowly extended the pictorial repertory. Monumental inscriptions show a strong kinship with literary texts, indicating a common milieu and time of origin. Although the two groups are mostly separate, some texts appear both on the monuments and on papyrus or ostraca (potsherds and limestone flakes).

The range of literary texts expanded only slightly after the Middle Kingdom, which later had the status of a 'classical' period. The chief development of the New Kingdom was the addition of superficially 'popular' literary types—various genres of story told in simpler style than in Middle Kingdom texts and using folklore-type motifs, and love poems, which depart from the objectivising tendencies of other genres. It is, however, uncertain whether such texts were more widely disseminated than their predecessors. There are two significant features of this slow expansion—our best example of the force of writing as a self-sustaining stimulus to development. First, the Old Kingdom use of writing, with its scarce currency of continuous texts, mostly in practical contexts, was superseded only after an extension of the circles of people who set up inscriptions and an increased use of texts for prestige and display. This need not correlate with an increased *rate* of literacy, but does imply that those who created literature looked to a greater familiarity with texts among the literate. Second, the change followed transitional rather than stable periods. Because writing and its uses were part of the system of decorum or extensions of it, the system as a whole had to change for elements in it to change (for changes in representational decorum see Baines in press: Excursus 2–3). A possible corollary of this process

is that in literary texts the Old Kingdom has some of the status of a 'golden age'; stories are set in it and famous people of the time have instruction texts ascribed to them.

A notable feature of Egyptian texts is that the majority are written in a kind of metre.[12] This formalises the stress patterns of the language into units of two or three stresses, and is in theory easy to learn and apply. Its principles could go back beyond written texts into oral culture, but the system we have is probably a product of dynastic times. The obsession with order it exemplifies is typically dynastic, and its maintenance to the end of Egyptian civilisation is paralleled, for example, in the system of decorum; both are normative for the culture. Metrical forms can be extremely complex and ill-suited to long compositions.[13] This, too, suggests that written form is primary, because oral works tend to use simpler, open-ended patterns. The system of metre must nonetheless have antecedents in spoken form.

One familiar concept which developed still more slowly than continuous writing is that of a text itself. In non-literate cultures traditional formulations will be unstable, but there can be an idea of canonical 'texts'. Both in Egypt and in Mesopotamia the recording of traditional continuous texts in set forms came late. In Mesopotamia 'lexical' lists occur in the second preserved period of writing (Uruk III, *c.* 3000), before continuous texts were written (cf. Green 1981: 359–60); literary texts are not known until about 2500. In Egypt the earliest in this sense are the pyramid texts (from *c.* 2350; Faulkner 1969). These were hidden in the royal burial apartments, and one cannot know how widely such semi-canonical material circulated or when it was fixed. What it does show is that important ritual texts, mainly intended for performance, were among the earliest to be written down, another instance of the principle of scarcity according to which only the most important matters are recorded at first. Religious matter of this sort was almost certainly written as soon as the writing system was sufficiently developed.

So far, the discussion has mostly related to a small minority of texts. Nothing precise can be said about the frequency of genres, and in any case our sample is fatally biased towards the monumental and, among non-monumental sources, towards the literary. Administrative writing, which comprised the vast bulk, is very largely lost. Where it does survive, as at the workmen's village of Deir el-Medina (*c.* 1300–1100; Eyre 1980; Baines & Eyre 1983: 86–91), it dominates the record; the same is true of demotic and of Greek papyri from Egypt.

Thus the spread of uses of writing in Egypt—not its frequency of use nor its diffusion through society—came very slowly to be comparable with that of the modern world. A possible important exception may be personal diary material. The spread is not a significant indicator of distinctions between literate societies. Despite the unity of Egyptian culture over its huge duration, it is necessary to break development into shorter periods, and to look to other factors at least as much as to writing when analysing developments in the use of writing.

Status and dissemination; forms of the script. As an administrative device and an element in monumental art, writing could be practised by technicians in these

crafts, while the elite who benefited from them might not be literate. This was often true in the Middle Ages, but was probably never the case in Egypt. A magnificent 1st dynasty stone vase in the form of two hieroglyphs may write the name of its owner and/or allude to the life-giving properties of a libation poured from it, but either way the user needed to know at least the meaning of these signs (Fischer 1972: 5–15). The titles 'scribe' and 'administrator of scribes' are found in this period applied to people of highest status (Kaplony 1963, 2: 1215 with refs.).[14] In the 3rd dynasty the official Hezyre^{c} was depicted as a scribe in his wonderful mortuary reliefs (Wood 1978 pl. 1–2); elite status was completely identified with literacy (Janssen 1978: 224). According to later evidence kings were literate (Baines & Eyre 1983: 77–81).[15] Writing was presented as the goal of fine speech. In two stories where fine words are pronounced, the sayings are written down, in one on the king's instructions, in the other by the king himself (Lichtheim 1973: 172–3; 140). There are similar implications in the framing stories of several other didactic texts and, more broadly, in the respect owed to famous writers of the past (Lichtheim 1976: 175–8).[16] All this contrasts with Plato's views of the dangers of writing 1500 years later,[17] but in a sense reflects the scarcity of writing in Egypt. Plato was emphasising the hazards of something relatively common.

From very early, therefore, the social system centred on literate officials under the king, himself referred to as an 'office-holder' in later texts and probably so conceptualised much earlier. This bureaucratic idiom continued in less centralised periods. Like other features already discussed, it is part of the self-definition of Egypt. By the Middle Kingdom this definition had expanded from being literate to being also literary.

Despite all this, the work of writing may be a chore. The highest officials had statues as scribes, but in reliefs they were not shown writing except in the symbolic scene of depicting the seasons (James & Apted 1953: 20, pl. 10); almost their only activity, as against 'observing' scenes and receiving reports and goods, is the prestigious symbolic pursuit of fishing and fowling. The work of writing is done by other, subordinate scribes. Literacy is thus necessary for high status, but writing is delegated by those who achieve that status; a polite way of saying 'you' in a letter is 'your scribe' who, this implies, wrote or read out the message (Smither 1942: 16). The retention of scribe statues may reflect the conservatism of sculpture, but they show status and perhaps learning rather than depicting a specific scene; these were not the only statues of their owners, only one of whose attributes was literacy.

Evidence for teaching is at first sparse. By the late 1st intermediate period there were schools, at which basic literacy was acquired, but their existence is uncertain for the Old Kingdom.[18] The more important part of a scribe's training seems to have been vocational, under a superior in an office. Such early specialisation will tend to diminish the common culture even of the literate,[19] except for the core elite; the same basic point is made in the modern world. In such a situation the identity of one's superior is important. The ideal of father and son in Old Kingdom tombs is of a father in the mature prime of life with a young son who is sometimes given a scribal title or scribal gear, and has thus started in a career, probably under his father as his amanuensis.[20] In keeping

with this, a scribe's pupil is often called his 'child' (Brunner 1957: 10–11; for a later community see Baines & Eyre 1983: 86–91).

From the Old Kingdom on, selected children of various backgrounds were brought up with the royal sons (Feucht 1981). Here political factors are far more important than literacy, education involving other activities and the imparting of values. It may sometimes have generated an inner group round a future king; the king also chose prominent officials, in the New Kingdom especially military ones, from among his close companions. Some people educated at court, however, had humbler offices in later life. Sons of foreign vassals were often included, afterwards becoming rulers at home. In later periods reading and writing were learned by copying, and probably reciting,[21] classical literary texts. Afterwards, pupils progressed to writing 'miscellanies'—collections of practical and literary texts in the current written language—probably for individual pupil masters.[22]

A relatively secular picture of schooling emerges, in which the position of the specialist in knowledge—that is, in traditional texts—is uncertain. Such texts were, however, transmitted for millennia. From the late New Kingdom on, the locus of transmission was probably the 'house of life', a scriptorium attached to temples where traditional texts were both copied and studied (Burkard 1980). This institution became more prominent when written and spoken language had diverged a long way, and its position in society will have narrowed access to elite culture further than previously, contributing to later images of Egypt as a land dominated by priests.

This scarce distribution of high culture was reinforced by language and by the script. There are almost no traces of dialect in texts before the Graeco-Roman period, even though Egyptian was not a uniform language, as is clear both from stray allusions and from the multiple dialects of its successor, Coptic.[23] The standardised written form aided communication over the country, but must have been for many at best half-way to a foreign language, especially since phonetically, at least, written and spoken forms were far apart by the Middle Kingdom (fig. 2); such situations are of course common elsewhere. Egyptian is almost unique in its variety of script forms, and different forms are used for different contexts and types of text (fig. 1; table 2). The normal literate person was proficient in only one or two forms and types of text written in them. These complex discriminations, another parallel to the system of decorum, are ideologically important: hieroglyphs, the monumental but otherwise least widely used form of the script, were called 'god's words' (Erman & Grapow 1926–31, 2: 180–181.6, esp. 181.2). On the other hand, such discriminations limit the impact of writing. The example of Japan today, however, shows that a complex script with variants is not in itself a bar to widespread literacy. Most forms of the Egyptian script are not particularly difficult to learn.

A typically Egyptian manipulation of the script, in which the symbolism and potentially different values of the signs are exploited, could be used for more exclusive purposes. So long as all forms of the script remained mutually convertible, these possibilities were realised mainly in cryptography, which occurs in funerary inscriptions from an early date, but is not prominent except on scarabs.[24] Its purpose was mostly to add meaning to short texts or interest to

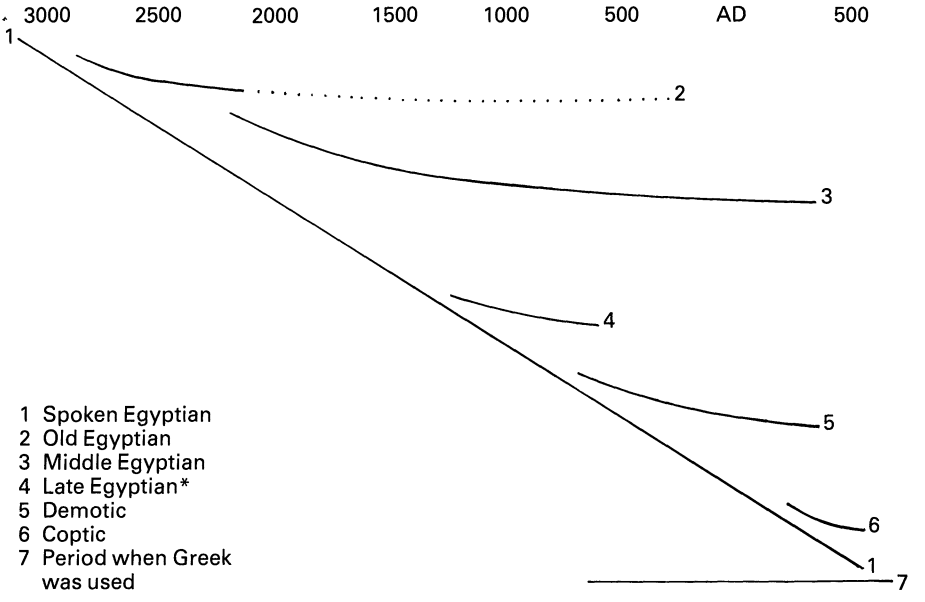


FIGURE 2. Spoken and written Egyptian compared; adapted from Stricker (1944: 47 fig. 3).

stereotyped formulae. With the invention of the demotic cursive script in the late period, everyday writing ceased to be convertible into the monumental form, which required extra study. Hieroglyphs evolved from a few hundred signs to several thousand, including widespread cryptography; signs could also provide a simultaneous commentary on the texts they wrote. This system reached its peak in the Graeco-Roman period, when most of the country's writing was in Greek. The native temples had a privileged position because the foreign rulers, themselves unable to read hieroglyphs, responded to a native pressure group and financed their construction and decoration (cf. Crawford

TABLE 2. Forms of the script and types of material for which they are used; see also table 3.

Hieroglyphic	Monumental texts of all periods, including 'monumental' inscriptions on small objects; religious, legal and historical texts in official and public locations, especially temples; captions to reliefs and paintings
Cursive hieroglyphs	Official religious texts; scribal training
Hieratic	Business and administrative texts *c.* 2700–*c.* 600; literary texts; private religious texts from *c.* 2000; official religious texts from *c.* 1050; some monumental inscriptions *c.* 1050–700
Demotic	Business and administrative texts *c.* 650–A.D. 300; religious and literary texts in the Graeco-Roman period, as well as some monumental inscriptions (the most important trilingual with Greek and hieroglyphic)

1980: 31–6). Few natives could gain access to the temples or read the inscriptions, which were effectively answerable in detail only to the gods—an ideal situation for elaborating priestly knowledge.

Among these variants, training in writing was mainly in the cursive, 'hieratic' script. Probably as early as the Middle Kingdom initial instruction was in the Book of Kemyt (Barta 1978), a short miscellany written in cursive hieroglyphs, the intermediate script used typically for religious texts. Fully cursive forms existed from the first and were further removed from monumental hieroglyphs than cursive hieroglyphs ever were. Hieratic, which was learned after the Book of Kemyt, diverged more and more from hieroglyphs and tended itself to divide into business and literary forms. The average literate person could probably read little more than simple words and a few names in hieroglyphs; from the Old Kingdom onwards, hieroglyphic inscriptions contain mistranscriptions from hieratic drafts (e.g. Sethe 1933: 123 l.2; 133 l.12), perhaps made by stonemasons who could carve hieroglyphs but not read hieratic for its meaning. Many people probably knew hieroglyphs that were important symbols, and the same could be true of a group such as Menkheperre^{c}, the prenomen of Thutmose III (1479–1425), which occurs on thousands of scarabs (Jaeger 1982); however, in general, knowledge of the monumental script will not have been widespread.

In any period the range of use of script types and of stages of the language (fig. 1, table 2) forms a system; this is set out in table 3 for the best-known periods, the late New Kingdom and Graeco-Roman. In the latter the full range was maintained despite the arrival of the simpler Greek. Five hundred years after Greek became the official language, the transfer of language and culture from script to script was beginning, when it was cut short by Christianity and the consequent irrelevance of the old culture.[25]

TABLE 3. Distribution of scripts and text types in the late New Kingdom (*c.* 1200) and the Graeco-Roman period.

	Late New Kingdom (*c.* 1200)		Graeco-Roman[1]	
	script form	language	script form	language
monumental inscriptions	hieroglyphic	Middle Egyptian	hieroglyphic; some demotic	Middle Egyptian; demotic
scribal training	cursive hierog.	Middle Egyptian	demotic[2,3]	demotic
official religious texts	cursive hierog.	Middle Egyptian	hieroglyphic; hieratic; demotic	Middle Egyptian
literary texts; religious and magical texts for daily use	hieratic[4]	Middle and Late Egyptian	demotic	demotic
business and administrative	hieratic[4]	Late Egyptian	demotic	demotic

[1] Native Egyptian literacy only; Greek is the predominant form of writing, but for a small proportion of the population.

[2] There must have been training for writing hieratic and hieroglyphic; these scripts were confined to priestly circles and the uppermost native classes.

[3] Demotic is the name both of a script and of the stage of the language which it normally writes The demotic script can also be used to write Middle Egyptian.

[4] Not necessarily the same forms Business hieratic forms later developed into abnormal hieratic, while traditional hieratic was used for religious texts

These systems are yet another example of the structures into which potentially fluid writing was pressed. Changes in script and written language did not occur gradually on their own, but concomitantly with other major change. Although the norm of writing shifted very slightly all the time, inconsistencies in writing and grammar show that it never kept pace with the spoken language, adaptation to which constituted reform (fig. 2). As with other changes, ease of use and administration were evidently the chief aims of these measures, which were applied to documents before they became current for other purposes, if they ever did.[26] A significant exception here is the relatively slight shift to the 'classical' Middle Egyptian, which continued as the monumental form in most later periods; it was also used for religious and literary texts, new texts being written in it down to the Graeco-Roman period. Thus, although the script could write any sort of text and, I guess, could be written as rapidly as an alphabetic script,[27] its complexity and especially the tying of genre and stage of language to script form restricted its impact. Schooling was limited in extent and duration, and not by itself adequate for reading many types of text or phases of the language.

Numbers of literate; volume of paperwork; reading public. Several lines of reasoning suggest that in most periods not more than one per cent. of the population were literate (Baines & Eyre 1983: 65–72). If the population rose from one million (Old Kingdom) to 4.5 million (Graeco-Roman period, with Greeks the literate majority), the literate will have been 10,000–50,000, but even the lower figure may be too high. The rate of literacy, the volume and range of written material and the loquacity of texts tended to advance, but the increment was not steady. Literacy may have declined between the New Kingdom and the Graeco-Roman period, before rising in different circumstances. The general level of competence is relatively high; only occasionally is writing really deficient, mostly in contexts where the presence of signs is more important than what they say.

Several levels of literacy are possible: reading, of various degrees of competence; reading and the physical ability to write; reading and narrow composing ability, especially in accounting; reading and the full ability to compose texts; and, at the other extreme, the carving of signs with limited reading ability, probably the condition of many relief sculptors. There is little place for literate people who did not use their skills or for barely literate scribes, who could not have performed their administrative functions.[28]

Just as the core elite is identified with literacy, both it and the remainder of the scribal sub-elite are identified with administrative office. There is no evidence of scribes with careers separate from office. The Instruction of Khety, a Middle Kingdom(?) text that glorifies the scribe's career at the expense of manual skills, mentions as his occupation only work in an office at the royal residence (Lichtheim 1973: 184–92). This is at least symbolically valid; such scribes were not amanuenses for hire, as a village scribe might be.[29] When somebody needed an amanuensis, recourse was not always to a professional scribe, and he did not make his basic living in this way. *Ad hoc* use of an acquaintance probably provided the normal access for the non-literate to writing; they would go to somebody trustworthy. For the dynastic period statistics or generalisations

about rates of literacy are devoid of the sense of everyday reality that could come from knowledge of the detail of such practices. Here Deir el-Medina forms an exception (Baines & Eyre 1983: 86–91), while for the Roman period the masterly studies of Youtie (1973: 1981[30]) on provincial literacy and its gradations to illiteracy, as seen primarily in official Greek documents, provide a most valuable analogy.

Central administration is one privileged area of literacy; religion is another. In these spheres we should expect both the greatest proliferation of documentary writing and the greatest interest in texts. The only large early body of documents comes from mortuary temples of 5th dynasty kings (Posener–Kriéger 1976; Verner 1979), and includes examples of minute record keeping that are paralleled in the late Middle Kingdom pyramid town of Senwosret II (Kaplony–Heckel 1971; Griffith 1897–8).[31] Both were religious foundations near the royal residence, were relatively wealthy and tightly run, and had the resources for and interest in elaborate documentation. It is uncertain whether such things were typical for the whole country; the bureaucratic grip was probably strongest near the centre.[32]

Literacy was also necessary for the proper performance of temple ritual, which involved a lector priest, literally 'he who carries the festal (papyrus) roll'. The archetypal magical practitioner is the lector priest. The position of the higher-ranking priests in the élite seems not to have been prominent in early periods—they were not then a professional class—but this changed later, and temples became repositories of written knowledge. For the Middle Kingdom, the high status of chief lector priests in literature may point to priestly involvement, but their prime role is as magicians.[33] Many reputed authors of didactic texts were viziers (highest officials of state); this could be a truer indicator of the focus of written culture, and the chief reading public for high culture was probably in these privileged areas. Finds of texts suggest that the learned had a general education and that interest in traditional texts went beyond the core elite, but probably included only a small proportion of the literate; a number in the hundreds would be enough to keep a tradition alive (the large numbers of garbled school copies are not relevant here). A number of literary texts come from tombs, which implies that their owners kept them for edification or for their role in the next life and attests indirectly to interest in them in this life. Allusions to literature occur in monumental inscriptions, although these were composed by few people. How far they quote and how far they use stock phrases is not clear (Grimal 1980 is over-optimistic), and such material is not good evidence for a widespread ability to bring literary culture into play.

Despite the small body of literate people, there is no evidence that their numbers were deliberately restricted, and in at least one way ideology was expansionist. There was an ideal of efficiency in the form of the best man being selected for a job irrespective of his origins. This runs counter to the notion that son succeeds father (see above), representing the royal or state view as against that of the individual. Some people claimed that they were of little status until the king advanced them.[34] In fact they were probably literate and well placed to start with, but the texts seek to imply that success is based on merit, and belong with a relatively fluid organisation, at least of the elite. The Instruction of Khety may

exaggerate in implying a choice between scribal and craft work, but it points in the same direction. Similarly, New Kingdom 'miscellany' texts contrast the meretricious attractions of the army with the security of a scribal career (e.g. Lichtheim 1976: 171–2). But for the 5th century, Herodotus depicted a very different social order, in which:

> The Egyptians are divided into seven classes. These are the priests; the warriors; the cowherds; the swineherds; the tradesmen; the interpreters; and the boatmen.[35]

However much the foreigner may misunderstand, such a society is not likely to encourage the passage into literacy of the non-literate. In earlier periods both the embedding of conventions of writing into symbolic systems and the centralisation of power will have stabilised literacy; the rather less centralised late period, when writing and administration were focused on temples, may have been positively antagonistic to its spreading.

For the non-literate 99 per cent. a combination of great inequality of wealth and conditions of preservation has robbed us of almost all information about the effects of writing, except that it contributed to their impoverishment through its part in the centralisation of resources. An indication of this is the virtual absence of cemeteries of the poor for the central Old Kingdom, in contrast with extensive finds for the predynastic and very early dynastic periods.[36] Less negatively, one might ask how far writing penetrated beyond the literate in the form of administration, the public proclamation of matters of general concern, and perhaps the interchange of narrative and myth between elite and popular culture. These questions, difficult enough for early modern societies, are virtually impossible to answer. I have suggested that 'folk' elements in written literature should not necessarily be taken at face value.[37] Even so, some exchange between elite and others must be allowed for: before the late period there is little evidence of cultural heterogeneity between classes. In the minority Greek community, Youtie considered that the mutual dependence of literate and non-literate was socially cohesive (1981: 198–9). For the larger body of Egyptians the matter might be very different. Our written sources cannot provide an answer here.

Stability and change: cognitive aspects

Texts and their applications. Developments in written forms may help to define potential changes that could be related to writing. During the 3rd dynasty advances in writing, technology and organisation, including the construction of the first pyramids, came together, and although they are not necessarily causally related probably attest to general social and cognitive development. The succeeding Old Kingdom is the first plateau of literate achievement and the earliest period in which extensive cognitive effects of writing could be expected. These could at best be studied only for the literate; even if there were effects in the wider society, they would be strongest among the literate.

The most significant cognitive achievement in connexion with writing is the invention and elaboration of the script itself. Its devisers and improvers estab-

lished principles of derivation—rebus, phonetic association—separated and ordered semantic classes, distinguished morphology and phonology, set up an 'alphabetical' order of initial consonants and, in extreme cases, employed the highly abstract principle of acrophony. But all of this is deduced from the organisation of writing; it was not formulated in such abstract terms. Efficiency in reading and writing any language is enhanced by familiarity, not by decomposing groups into constituent elements,[38] so that these insights were the more useful for being concealed from others. The practice of learning to read from whole phrases must have helped their concealment, and the perceptions of the inventors were probably confined to themselves and a few others.[39]

Types of text that could have broader cognitive significance include astronomical (Neugebauer & Parker 1960–9), mathematical and medical (Grapow *et al.* 1954–73). These relate to areas of achievement in calendars (Parker 1950), surveying, mapping and land measurement,[40] as well as medical practice, in all of which the Egyptians were advanced. The precise connexion between texts and achievements is not, however, clear. The symbol of perfection in surveying and planning is the Great Pyramid of the 4th dynasty, which belongs near the beginning of the time of written texts; impressively accurate and well aligned structures were also produced in non-literate bronze age western Europe. The Egyptian texts may have come after the practical achievements, codifying them perhaps more than leading to them, and accomplishments such as the calendar (also of ritual significance) may be more striking than the texts (in this case astronomical ones). None of this is central to Egyptian ideology, nor does the mode of expression even of the 'scientific' surgical treatise (Westendorf 1966) seem out of place in Egyptian texts in general. Here 'science' referring to the relatively non-empirical might be more important than that of the empirical. Rather, significant disharmonies that might point to change should be sought in ideologically central contexts. The exact, cognitively demanding tasks reviewed here are easily compartmentalised.

Cognitively interesting exploitation of written form has been seen by Goody (1977: esp. 74–98) in the use of tables and visual presentation, an almost pre-linguistic use of writing (see note 7). The impact of these developments will be restricted by the limited character of what can be said in such forms—a list is best in a context of continuous text. Such a case is, however, provided by the Amduat, the 'Book of the hidden space', which presents the underworld in mixed text and picture, and is explicitly directed towards 'knowledge' (Hornung 1972: 59; for the dating—Middle or New Kingdom—see Wente 1982: 175–6). The text is also known as an 'abstract' (roughly so called in Egyptian: Hornung 1967), and there is a 'catalogue' of the figures in it, presented in pictorial form with captions (Bucher 1932 pl. 14–22). Such secondary elaboration to extract information from a text looks forward to far later developments, but the material is remote indeed from practical realities. The same applies to the glossing and explication of religious texts, which is highly elaborate as early as the Middle Kingdom (Faulkner 1973: 262–9). This last example illustrates the authority of old texts, which are worth copying and commenting even if they are not understood (in this case the text cannot have been very old). Ever more texts could be gathered and reused, and few were discarded, although some

were lost in breaks between periods or stages of the language. In art and in literature 'archaism' can be seen repeatedly in different periods, and in the late period became a comprehensive and eclectic phenomenon. Here writing brings a definite extension of the past, an increase of precision in exploiting it, and an active relationship with it. In a non-written culture most such possibilities are absent, while for the written culture the very common conception of a past 'golden age' may be of the rule of the gods (Luft 1978; Lichtheim 1976: 197–9), of an absolute remote period (attested as early as the 4th dynasty[41]), or be specifically sited. Attitudes of this sort, legitimation mentioning earlier events or texts[42] and cults of deified men or kings enlarge on the definition of 'history' given above. They do not, however, constitute a discursive or analytic history, which implies a different kind of interest in events and processes and is rare in the world as a whole. Here Egypt was in a common intermediate position, aided by literacy but not transformed by it.

More specifically literate developments would be a fully historical view of the past, as arose gradually in Greece, or the appearance of canonical sacred writings. In such cases writing and religious development are closely, but at first not causally, related. A religion with a canon and exegesis, such as Judaism, Christianity or Islam, is a literate phenomenon, especially in its exegesis, which is of a different order from the glossing mentioned above.

Sacred writings are at one extreme of a range of possible modes of transmissions of cultural materials extending to the completely oral and loosely structured. Here sharp distinctions between oral (formulaic) and written (free, non-repetitive) are not visible in ancient Near Eastern material. Formulae, which are the basis of the Parry-Lord hypothesis of oral composition (Haymes 1973; see also Smith 1977; Finnegan 1981), are nearly as characteristic of written texts as of improvised poetry; in both they ease the process of composition and often the comprehension of the message, especially in letters and documents.

Egypt had neither oral epic nor scriptures, but it did come to have important texts transmitted in (in principle) accurate copies. Among these, narrative or didactic literary texts have a well-defined structure and a non-'oral' style, although most religious texts are not narrative. Their composition by accumulation of epithets and phrases which do not form sentences looks closer to oral form—except that there is little repetition (e.g. Assmann 1975). Their metrical form is complex, not simple and open-ended. Even so, copies more often have passages omitted or interpolated than in narrowly literary texts; the less obvious thematic organisation leads to a looser perception of text structure. Almost all could in principle be declaimed in rituals, so that a theoretical distinction in function from 'pure' literature persisted. These are probably the most prestigious texts of all, so that it is significant for the effects of writing that they did not acquire a 'canonical' form, and yet, despite their function, their form is far from an 'oral' one.

Magical texts have a rather different position. Great emphasis was placed on age and on exact copying and performance,[43] and they could be legitimated by introductory matter which emphasised the efficacy of a spell. Writing could also be brought into play in other ways, as when a god issued a written oracle used as an amulet (Edwards 1960), or a statue was covered in inscriptions over which

libations were poured, the resulting 'infusion' becoming a magical remedy (e.g. Lacau 1921–2). In such cases the symbolic power of writing is as a vehicle conveying the import of the spells. Similarly, defacing the monuments of those who fell from favour is a symbolic and perhaps magical practice.[44] The wholesale idealisation of the monumental written and pictorial record—the two being inseparably linked by decorum—is the reverse of the same phenomenon. These areas are vital because symbolically they order and interpret the world. Symbols are therefore manipulated, although the attitude towards them is a general and not a specifically literate one. This point is important because special beliefs about writing and pictorial representation, often posited for Egypt (e.g. Iverson 1975: 6), could affect a general analysis of their position in society. No such special beliefs need be assumed.

Writing is significant in the more open-ended, socially important area of law, which was fundamental in the early extension of literacy and exemplifies the principle of scarcity. Apart from monumental versions of legal documents, Old Kingdom material includes written court proceedings (Sethe 1926), while in later times one finds the use of documents as overriding evidence (Gaballa 1977: 23, 30), the citation of precedent and of statute (e.g. Janssen & Pestman 1968: 156; 146) and a law code (Mattha & Hughes 1975). Elaborate record storage served legal institutions (see text in Lacau 1949). Legal matters could be 'published' in monumental form in a protected but accessible place. These practices mostly respond to needs that can be differently catered for in a non-literate society, but they acquired a notable rigour and generated new modes of intercourse, as in a subject's right to petition the king in writing (Baines & Eyre 1983: 70–1). Within the same officially sanctioned context are also wills (technically deeds of delayed transfer) which define inheritance freely, not always according to set social patterns. Where there is no document, a loose rule of inheritance could lead to endless conflict. Wills of women are known as well as ones that give women the right to decide on an inheritance (Janssen & Pestman 1968: 150–2). There was a high degree of legal autonomy for women in Egypt, hardly a product of literacy, still less a concomitant of it (it was ended by the Ptolemies); but at least among the wealthier, written safeguards buttressed it. Most such women were probably not themselves literate (Baines & Eyre 1983: 81–5; Janssen 1960: 33), but this is not relevant here.

Stability and change. In comparative studies writing is often claimed to be necessary to the cohesion of large societies and to promote their stability (e.g. Bloch 1968; Gough 1968*a*; 1968*b*), to enable them to exist above a certain territorial size (cautious statement of the negative corollary: Beattie 1971: 2–3), and to endure beyond a certain time. While such 'constraints' are 'flexible', and writing may be a contributory factor in these cases, counter-examples can be found for any of them: the long-lived, barely literate society of the Indus valley; Teotihuacán and other Mesoamerican states, which used writing surprisingly little in view of its being invented there by the 6th century B.C. (Bray 1979: 92); the non-literate Inca empire; and various African kingdoms. In any case, the cultural stability of such civilisations compares ill with that of prehistory. Even if cultures are stable, their politics may not be: Egypt and Mesopotamia, with

their similar writing systems and use of them, were also similar in their cultural stability, but politically Egypt was much the more stable. *A priori*, the case for correlating literacy and change looks more plausible, simply because social structures have changed faster since writing appeared than before, but similar counter-examples can be found for most of the causal correlations that have been proposed between writing and change.

The main points to retain here are the potentially self-sustaining character of writing and its possible role in coercion. In the world as a whole writing has seldom come to be less used or to disappear completely. Increase in writing, however, is not automatic; rather, stimuli towards its proliferation come from other developments such as centralisation, increased wealth, attempts to monitor reducing resources. The proliferation of written and artistic high culture among an élite is characteristically self-sustaining, although it operates in a different way and can come to be insulated from outside pressures. In coercion writing can serve a symbolic system, as with the Old Kingdom bureaucratic hierarchy which organised the construction of the pyramids and focused on the king. It can also serve military force directly, but an army does not have to rely on written niceties. In the later periods in Egypt, when literacy was probably less widespread than before, the military became more important.

Apart from these possible 'proclivities' of writing, it may be useful to summarise the material reviewed here, in order to present a model of some generality while attempting to avoid extremes of global interpretation. Writing is a symbolic system that passes through stages; its chief development is not progressive. The development can be characterised by the polarity of instrumentality on the one hand and expression or content on the other: as writing develops, its expressive possibilities increase. (Administrative functions are not specifically mentioned after stage I, but remain vital and continue to grow.) For my stage IV I consider in more detail how far change may be related usefully to writing. Such an outline refers only to the elite and can hardly incorporate the perspective of the actors.

I. Invention and early dynastic period. The principles of instrumentality and scarcity predominate. Writing can assert, but in the absence of written sentences can hardly comment. It is confined to administration and display. The system must be adequate to its needs, for it endures some centuries without great change or loss.

II. 3rd dynasty and Old Kingdom. Writing is reformed so that its potential to record continuous language is realised. Rates of literacy probably rise. The concept of a text appears, but perhaps only for ritual, that is, instrumental matter. The importance of scarcity decreases and expression and comment are possible, being manifest first in biographies, which become the least instrumental writings. Writing is now prominent in law (where the legal document, another type of text, develops) and religion, which are the points of departure for later development. There may also be technical texts. Innovation is almost certainly confined to the core elite.

III. Middle Kingdom. Following stimuli of the decentralised 1st intermediate period, the expressive aspect proliferates in the form of written literary texts. The formation of literature into a canon is the termination of the expressive development, which is complex, centripetal, and in its implications focused on the core elite. Royal inscriptions appear to follow private stimuli, not to lead. The literary canon has an ideological role comparable to that of the system of decorum, but more complex and less instrumental.

IV. New Kingdom (18th dyn. to *c.* 1350). Elite culture looks to a broader base, including

folklore, while a new centripetal ethos tends to supersede one of more subjective personal achievement (Baines 1983). Writing proliferates further in volume and context, and in variety of genres, but without decisive change from III.

V. 3rd intermediate period and later. This continues the later New Kingdom. Writing becomes more diverse in script forms but literacy more restricted, specialised and harder to acquire. Some secular genres in literature and iconography almost vanish. The amount of inscription in public places continues to increase until Roman times.

Common to all phases is the unquestioned maintenance of culture and writing. Changes are within the system and may realise more of its potential, may make it more efficient or restrict it, but the system is treated as given (in myth, language and writing were invented in the beginning by the god Thoth). The only time when this may not be true is the New Kingdom, stage IV. In summary, development in the 18th dynasty is towards greater cultural plurality. Change of this sort could, I suggest, form part of a 'cognitive revolution' such as occurred in archaic Greece, but in Egypt only the first signs are visible. In Greece pluralisation did not replace central symbols, whereas in Egypt it specifically affected those symbols. The cognitive change that is so striking in Greece is one aspect of more widespread social change. As in Egypt, so in Greece the focus of change was on very few people; in both cases a wider society that tolerated at least the initial stages was a necessary precondition. Egyptian change was within a very old written tradition, which it broadened to some extent. In Greece writing had a less fixed place in society and textual forms were in process of development—although contemporaries may not have viewed these matters thus.

The first phase of pluralisation in Egypt is visible as much as anything in shifting cognitive styles, a potentially fruitful mixture of relativisation, scepticism, dogmatism and observation. Relativisation can, for example, be seen when a man says 'I was not taught by an old man; in future years I will be praised for my ability by those who will surpass(?) what I did';[45] another describes how he devised a clock (Helck 1975*b*: 110–12), and a third speaks in highly subjective terms of his physical exaltation in performing a dangerous feat and saving the king (Sethe 1927: 894, 10–15). Egyptians also cease to consider foreigners not to be 'human' like themselves and accept them as beings of the created world (e.g. Assmann 1975: 219), a view enshrined visually in the underworld Book of Gates (Hornung 1972: 234 fig. 32). These attitudes are more 'open' than 'closed', in the terminology of Horton (1967: 155–6, following Popper). In iconography rules of decorum become notably looser, implying more individual access to deities than before and a less centripetal general ideology. In representation there are developments towards unified composition and accommodation to the visual image in pictorial schemata. Finally, the religious reforms of Akhenaten (*c.* 1360) constitute a drastic simplification of the previous interpretation of experience. In his later years Akhenaten replaced the toleration of an indefinite number of deities with the worship of the sun-god alone, knowledge of whom was gained solely through Akhenaten. In his reign representational art also developed faster and more radically than before, and the written language was brought much closer to the spoken. Some features of these changes continued in the following, Ramessid period (19th–20th dyn.). Other comparable elements

occur first then, most notably love poems, the only literary texts to be primarily subjective in focus, and 'harpist's songs', used in conjunction with mortuary ceremonies, which question the value of preparation for death and the certainty of life after death, publicly juxtaposing the affirmation and the doubting of major values. A more important development, however, is the gradual replacement of the king by gods as the focal symbol of society (kings remain formally significant), and in parallel a new restriction of decorum in which secular themes come to be depicted and celebrated much more rarely. The most radical impulses of Akhenaten were diverted or negated in the ensuing reaction.

Comparison with archaic Greece shows clear parallels in the concurrence of new attitudes and artistic development, as in possible stimuli: new influx of wealth; foreign trade and travel; probably social change consequent on the other two. Religious change, however, was very different. What is also missing in Egypt is the abstract form of textual argument that arose in Greece. For Greece plurality may have helped to formulate a mode of discourse that allowed different areas to be discussed in the same terms without necessary recourse to ultimate values. In Egypt no such mid-level metalanguage appeared; the 'revolution' of Akhenaten was couched in traditional terms and centred on traditional concerns.[46]

Radical reform under Akhenaten involved deliberate reversal of existing convention, most noticeable in temple decoration, and iconoclasm. Such shock tactics highlight problems of change and of analysis. The person or group of people who break widespread social forms so drastically may be eccentric or deranged, as Akhenaten could well have been. But the explanation of genius or of madness is at or beyond the limit of what we can do, so that the source of change, even when as clear as Akhenaten, can hardly be analysed; we may say what he built on, but scarcely why he did it. The tiny number who initiated developments would have been from among the literate. One can, however, suggest possible reasons why changes were or were not accepted. Egypt, where change aborted, was monolithic, only partly urban, and had a storage economy. Greece, where it took hold, was scattered, urban, monetised,[47] in comparison a new culture, and the status of writing in it was less well defined. In Egypt an instant transformation was attempted. These contrasts do no more than suggest where one might look for an explanation. From the standpoint of an ancient Egyptian, the failure of change would probably not need explaining; its success in Greece would. Murray, who has considered the matter for Greece (1980: 90–9), decides as I do that literacy is a necessary factor, but one among many, and Greece was a relatively 'open' society before writing spread widely in it.[48]

The hypothesis of plurality and relativisation is compatible with a major role in these changes for writing that can record continuous texts, because of the increased temporal perspective, distance in communication and diversity it allows. Involvement with a changing textual tradition, such as 18th dynasty Egypt possessed, can encourage individual variation and response. The major part of the change brought by plurality is, however, as likely to affect the individual directly, and to be related to a changing conception of person and view of the position of man. These were the developments that remained in

Egypt in later periods, whereas most of the cognitive, or in art the representational, innovations disappeared again.

Literacy is a response more than a stimulus. It may be a necessary precondition for some social and cognitive change, but it does not cause such change. It enhances complex organisation and may be necessary to complex societies above a certain large size, but tends to be introduced after they have come into being. The initial impact of writing is a huge increase in and elaboration of memory. The literate can extend their communication in space and time, and their memory in compass and duration. But although they soon exploit such skill for status, ritual and law, they may not see what they do with it as different in kind from the use of similar skills in oral form—or, for administration, in counters, tokens or knotted ropes. As with any invention, full realisation of its possibilities comes very slowly, if at all. Only in the modern age of institutionalised invention has this altered markedly. Only late in its evolution in a society is writing likely to provide the reinforcement associated with rapid social and cognitive change.

NOTES

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[1] I mostly omit Graeco-Roman material, which is the province of others. Nor do I discuss the principles of the script, which are basically the same in all its forms (Schenkel 1976). This question is tangential to my topic.

[2] Schenkel (in press) has an excellent discussion of theories of script origins. Other theories emphasise 'historical consciousness' and cult. On chronological grounds alone the former should be excluded.

[3] This is a widespread guess. The discovery of late 4th millennium sites in Syria (Tells Habuba Kabira, Qannas and Qraya) renders the idea more plausible, but no Egyptian objects have been found there (Kay Simpson, pers. comm.; Schmandt-Besserat 1981: 323–4).

[4] Papyrus from an official's tomb of the mid 1st dyn.: Emery (1938: 41 no. 432; later said to be two rolls: 1961: 233–5; earlier statement probably correct). The papyrus, which was in a fine inlaid box, was blank. It is more likely to have been meant for the tomb owner than for a scribal employee of his.

[5] Perhaps significantly, most of these refer to the next life, which is not part of the original system of decorum. In chronological order important texts are: the Book of Two Ways (*c.* 2000; Faulkner 1978: 127–89); New Kingdom underworld books (Piankoff 1954; Hornung 1972); the Book of the Dead (Hornung 1979); mythological papyri (3rd interm. period; Piankoff 1957); 'Faiyum papyri' (Graeco-Roman; Tait 1977 no. 35 with refs.).

[6] There are insignificant exceptions from the New Kingdom and an Aramaic text in demotic script. There was also a special, cumbrous way of writing foreign words. This situation is quite different from that of the multilingual cuneiform script. (Our alphabet may be derived ultimately from Egyptian writing, but the route is quite uncertain (most recently Zauzich 1980). The origin of the alphabet is not the same as the adoption of a complex script.)

[7] Possible in principle from the beginning, for many early dynastic personal names form sentences (Kaplony 1963, 1: 377–672), but no text more than a sentence long is preserved. In Mesopotamia the advent of continuous texts was marked by a decline in tabular presentation, the

one compensating for the other (Green 1981). In Egypt the monuments always remained 'tabular', as for a long period were public documents (Helck 1974). This slower victory of language over layout probably related to the prominence of monuments and to decorum.

[8] Helck (1972), Lichtheim (1973: 5–8) and Assmann (in press) argue for a later dating of texts ascribed to Old Kingdom authors.

[9] Some texts are ascribed to the 1st interm. period (e.g. Lichtheim 1973: 97–109; 169–84), but, like Old Kingdom ascriptions, they could be later.

[10] Shown chiefly by the grouping of texts in finds from the Middle Kingdom to the Roman period (e.g. Gardiner 1935; Smith & Tait in press). In so far as finds may attest to 'libraries', they are studied in detail by Burkard (1980).

[11] From the latest periods there are some grammatical texts (Kaplony-Heckel 1974), mnemonic texts which appear to help the memorising of an 'alphabetical' order of consonantal phonemes (Smith & Tait in press no. 27), and a herbal (Tait 1977 no. 20).

[12] Numerous publications by Fecht (e.g. 1982, citing criticisms), whose views have been disputed (also by Burkard, in press, which I have not seen) but I believe to be established beyond reasonable doubt in their essentials.

[13] E.g. Fecht (1965 no. 9). Compare also the story of the Two Brothers with its 'cantos' and 'cantiche' (Assmann 1977: 3–5).

[14] Matters are complicated by a granite statue of a shipwright, also a member of the élite, holding his tools (Spencer 1980 no. 1), which implies that any high craftsmanship was worthy of display. Such iconography is absent in later periods. Early dynastic inscriptions, including that with the name of the famous Imhotep, point in the same direction (cf. Kaplony 1963, 1: 364–76). The prestige of crafts and of personal servants of the king seems to have yielded to that of bureaucrats as the latter proliferated, but proximity to the king continued to rank high.

[15] Gods were preliterate. Thoth, the 'lord of divine words' (hieroglyphs and Seshat are almost the only literate deities. In the story of Horus and Seth, Thoth has a joke at the expense of his illiterate master Re^{c} by writing in a letter that Re^{c} is 'beloved of Thoth' (Lichtheim 1976: 215); only inferiors can be 'beloved' of superiors.

[16] For a cryptic allusion to the superiority of written over oral form see Korostovtsev (1947: 161 line 7).

[17] *Phaedrus* (274C–275B). Note that this is projected onto Egypt. Theuth (the god of writing, Thoth) wishes to spread writing, but Thamous, the king or perhaps king of the gods, thinks it wise to restrict it.

[18] Brunner (1957: 10–13) stated that there were no Old Kingdom schools, but cited good evidence for the 1st intermediate period; the institution could very well go back to the Old Kingdom.

[19] A 19th dyn. text comments that the protagonist had a certain office '[without?] neglecting books in school' (Helck 1975*a*: 88–9 line 4; Kitchen 1980: 90, 9).

[20] Pointed out by Y. M. Harpur, to whom I am most grateful for a mass of documentation; see e.g. Lepsius (n.d. pl. 18).

[21] Cf. Goody & Watt (1968: 42). Striking evidence for the universality of reading aloud in antiquity is St Augustine's statement (*Confessions* 6, III, 3) that St Ambrose read in silence because he was never alone, and perhaps in order to discourage bystanders from butting in. The practice is treated as entirely exceptional. In Egyptian the commonest word for 'to read' means 'to recite' (*šdj*, Erman & Grapow 1926–31, 4: 563–4). An Egyptian king is also said to have 'chanted the writings', presumably while learning them in school, with others (Lichtheim 1973: 100–1).

[22] Lichtheim (1976: 167–78, selection with bibl.). Surprising numbers of these papyri are known, and they may have had a special value for their authors, being buried in their tombs. The most important text, the satirical letter of Hori, is a separate composition known from many copies (Gardiner 1911; no modern edition).

[23] Roccati (1980: 80) proposes that the written language was essentially that of the court; it is uncertain whether this is true in terms of dialect.

[24] A related formal device is the 'crossword' inscription, mostly two hymns written vertically and horizontally with the same signs or sign groups; earliest example c. 1360 B.C. (Epigraphic Survey 1980: 35–6).

[25] Some texts were translated into Greek: Roccati (1980: 82–3; add demotic legal code, Rea 1978:

30–8 no. 3285). The only texts known to be translated the other way are public decrees of the Graeco-Roman period, such as the Rosetta stone (196 B.C.).

[26] Akhenaten (c. 1360) modified the monumental language greatly along with his many other reforms, but probably not in advance of documents of the time.

[27] Reading was probably slower, being limited also by reading aloud. It was desirable to know the likely content of a text before reading it, but this is true of much handwritten material. Classical languages must have been hard to read on account of the general absence of word breaks.

[28] The range of objects with inscriptions increases, especially in the New Kingdom, with unquantifiable implications for writing among craftsmen and reading among patrons. This is paralleled by the diminishing size of signs from the Old Kingdom on. Small scale is economical and rapid, but requires expertise in writer and reader. At the end it is probably indicative of the small numbers who used native Egyptian writing.

[29] The Graeco-Roman period 'village scribe' was placed in office by the government and had government functions (Criscuolo 1978). He too might be illiterate and have to draw on other scribes (Youtie 1973).

[30] Steinmann (1974) analyses valuable material for Christian Egypt, but his estimates of literacy are unsound in method and exaggerate the reality by several orders of magnitude.

[31] Only a minority is published. Jan Assmann remarks that in such institutions things were written that one could not easily have guessed, such as a monthly inventory of the entire moveable property of the temple.

[32] At frontiers government interest is again intense (e.g. Smither 1945).

[33] In P. Westcar an exceptionally wise magician is a 'commoner' (*nḏs*) and the prowess of the chief lector priests is doubted (Lichtheim 1973: 217–18). This surely contrasts deliberately with normal literary stereotypes.

[34] E.g. Dunham (1938: 4); Kitchen (1980: 283,10–284,4; given as an oracular selection). In the Amarna period far more radical claims for the king's role in advancement were made (cf. Assmann 1980: 9–14), but these need not be closely based on fact. An effective route for advance for Egyptians and foreigners was the army; there too only the literate rose enough to be visible to us. One can imagine non-literate soldiers improving themselves more easily than peasants; this may have sharpened scribal polemics against the military.

[35] ii, 164 (less concisely: Diodorus Siculus 1, 73–4, perhaps not of independent value). The Instruction of Khety contains Egyptian folk categories of occupational classes which cannot be matched with those of Herodotus; his could be authentic, but are clearly incomplete.

[36] Compare the remarks of Adams on Egypt and Nubia (1977: 135–41).

[37] 'True' folk materials are extremely rare (for a possible source see Guglielmi 1973). A possible early example is the Old Kingdom herdsman's song, which apparently alludes to a rare myth but is perfectly compatible with other beliefs (Kaplony 1969).

[38] Especially true of demotic, which can only be read in groups, single words often also being unintelligible. It still constituted an advance in communication for those who mastered it.

[39] With time those who learned to read also learned a second, older language, and texts were translated from one stage of the language to another. Such cognitive challenges are available in any multilingual context.

[40] Always cited as a great achievement and said to be required by the effects of the Nile inundation. Perhaps as significantly, the dimensions of Egypt and its provinces were measured by the 12th dyn. (Schlott–Schwab 1981).

[41] Two royal fragments have formulae with 'since the beginning' (reign of Khufu) and 'antiquity' (contemporary?; Goedicke 1971 nos. 6, 60). See also an early 5th dyn. text '[The like had] not been [done] any [ ] since the antiquity of the land' (Sethe 1933: 43, 5).

[42] E.g. Peet (1930: 41, 6, 3–5) Pieper (1929: 8); Epigraphic Survey (1980: 43, 45 n. v).

[43] The search for precision may have stimulated the first writing of Egyptian in Greek letters (2nd cent. A.D.). Christian Coptic is only indirectly related to this.

[44] True also of the mutilating of hieroglyphs showing living beings so that these could not come to life (Lacau 1913). This relates to rites performed on the deceased and dangers of the hereafter, areas not accessible to direct experience.

[45] Helck (1963: 59 n. 1, with ref.); forerunner in the Instruction for Merikare^{c} (Lichtheim 1973: 103), but unique in a private monumental text.

[46] E.g. Hornung (1982: 244–50); not necessarily a change of logic, as Hornung presents it.

[47] Because of the possibilities it creates in social intercourse and because of its being 'good to think with', money is a likely contributor to both social and cognitive change. These aspects are not discussed by Crump (1981).

[48] See also the interesting remarks of Walbank (1981: 176–97) on the lack of fundamental development in the hellenistic world.

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Special abbreviations: ÄgAbh: Ägyptologische Abhandlungen. Wiesbaden: Otto Harrassowitz: BAW: Die Bibliothek der alten Welt, der alte Orient. Zürich & München: Artemis. EES (TE): Egypt Exploration Society, (Texts from Excavations). London. *GM: Göttinger Miszellen: Beiträge zur ägyptologischen Diskussion.* IFAO (BE): Institut français d'archéologie orientale du Caire, (Bibliothèque d'Étude). Le Caire. *JEA: Journal of Egyptian Archaeology. ZÄS: Zeitschrift für ägyptische Sprache und Altertumskunde.*

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