

ANDREW ROBINSON

THE STORY OF WRITING

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The Story of Writing

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Andrew Robinson

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I dedicate this book to my mother, who encouraged me to read

Author's note

Brian Lapping, an innovative television producer, enabled me to undertake a period of research into writing systems in 1989–90. I am duly grateful.

No one person could be an expert on all the writing systems discussed in this book. I cannot claim to be an expert in any one of them. I have therefore relied on the work of genuine experts, none of whom will be fully satisfied with my summaries of what are extremely complex and subtle issues. I have tried to take account of their knowledgeable criticisms but hasten to add – more forcefully than usual for an author – that any errors are my sole responsibility.

I offer sincere thanks to John Chadwick (*The Decipherment of Linear B*), Michael Coe (*Breaking the Maya Code*), John DeFrancis (*The Chinese Language and Visible Speech*), Asko Parpola (*Deciphering the Indus Script*) and J. Marshall Unger (*The Fifth Generation Fallacy*) for their detailed comments and their encouragement. I also thank Irving Finkel, and Carol

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INTRODUCTION

Writing is among the greatest inventions in human history, perhaps *the* greatest invention, since it made history possible. Yet it is a skill most writers take for granted. We learn it at school, building on the alphabet, or (if we live in China or Japan) the Chinese characters. As adults we seldom stop to think about the mental-cum-physical process that turns our thoughts into symbols on a piece of paper or on a video screen, or bytes of information in a computer disc. Few of us have any clear recollection of how we learnt to write.

A page of text in a foreign script, totally incomprehensible to us, reminds us forcibly of the nature of our achievement. An extinct script, such as Egyptian hieroglyphs or cuneiform from the ancient Near East, strikes us as little short of miraculous. By what means did these pioneering writers of 4000–5000 years ago learn to write? How did their symbols encode their speech and thought? How do we decipher (or attempt to decipher) the symbols after centuries of silence? Do today's writing systems work in a completely different way from the ancient scripts? What about the Chinese and Japanese scripts – are they like ancient hieroglyphs? Do hieroglyphs have any advantages over alphabets? Finally, what kind of people were the early writers – and what kind of information, ideas and feelings did they make permanent?

This book tries to answer these questions. It encompasses many cultures, many languages and almost all periods of human development; it draws upon ideas and information from a range of disciplines, including anthropology, archaeology, art history, economics, linguistics, mathematics, political and social history, psychology and theology; and it touches on literature, medieval and Renaissance manuscripts, calligraphy, typography and printing. But though its canvas is a broad one – so influential has writing been – it is not a historical portrait. It does not trace the development of writing from earliest times to the present day; nor does it mention every significant script, past and present (there are far too many). It is, rather, an account of the scripts used in the major civilizations of the ancient world, of the major scripts we use today, and of the underlying principles that unite the two. For the ancient scripts turn out not to be dead letters, not just esoteric curiosities. Fundamentally, the way we write at the end of the 2nd millennium AD is not different from the way that the ancient Egyptians wrote. That is the simple, if surprising, idea behind this book.

Without writing there would be no history. In all civilizations, scribes have been the transmitters of culture, the first historians. The Buddhist scribes seen here in a 10th-century AD wall painting from the monastery at Karashahr, China, were as important to Chinese civilization as the monks of medieval Europe or the scribes of ancient Egypt.



Writing as propaganda. On the eve of the battle of Kadesh, c. 1285 bc, the Egyptian pharaoh Ramesses II discusses the plan of attack against the Hittites. According to Ramesses, there was a great Egyptian victory; but according to a Hittite inscription, the Hittites were the victors.

The Function of Writing

Writing and literacy are generally seen as forces for good. It hardly needs saying that a person who can read and write has greater opportunities for fulfilment than one who is illiterate. But there is also a dark side to the spread of writing that is present throughout its history, if somewhat less obvious. Writing has been used to tell lies as well as truth, to bamboozle and exploit as well as to educate, to make minds lazy as well as to stretch them.

Socrates pinpointed our ambivalence towards writing in his story of the Egyptian god Thoth, the inventor of writing, who came to see the king seeking royal blessing on his enlightening invention. The king told Thoth: 'You, who are the father of letters, have been led by your affection to ascribe to them a power the opposite of that which they really possess . . . You have invented an elixir not of memory, but of reminding; and you offer your pupils the appearance of wisdom, not true wisdom, for they will read many things without instruction and will therefore seem to know many things, when they are for the most part ignorant.' In a late 20th-century world drenched with written information and surrounded by information technologies of astonishing speed, convenience and power, these words spoken in antiquity have a distinctly contemporary ring.

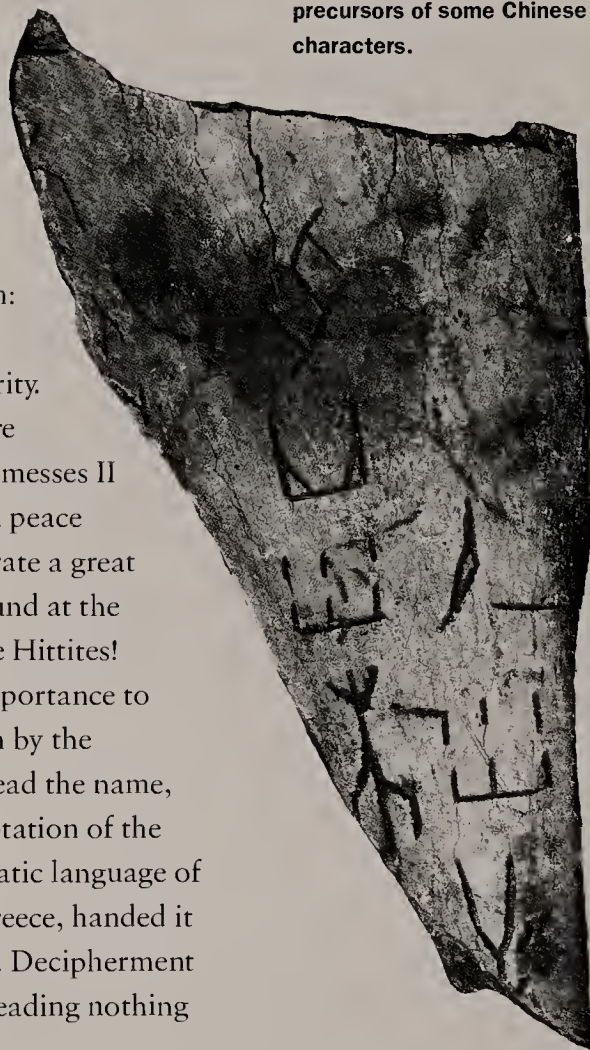
Political leaders have always used writing for propaganda purposes. Nearly 4000 years and a totally different script separate the famous black basalt law code of Hammurabi of Babylon from the slogans and billboards of 1990s Iraq – but the message is similar. Hammurabi called himself 'mighty King, King of

Babylon, King of the whole country of Amurru, King of Sumer and Akkad, King of the Four Quarters of the World'; and he promised that if his laws were obeyed, then all his people would benefit. 'Writing', wrote H. G. Wells in his *Short History of the World*, 'put agreements, laws, commandments on record. It made the growth of states larger than the old city states possible. The command of the priest or king and his seal could go far beyond his sight and voice and could survive his death.'

Yes, regrettably, Babylonian and Assyrian cuneiform, Egyptian hieroglyphs and the Mayan glyphs of Central America, carved on palace and temple walls, were used much as Stalin used posters about Lenin in the Soviet Union: to remind the people who was the boss, how great were his triumphs, how firmly based in the most high was his authority. At Karnak, in Egypt, on the outer wall of a temple, there are carved representations of the battle at Kadesh fought by Ramesses II against the Hittites, around 1285 BC. Hieroglyphs recount a peace treaty between the pharaoh and the Hittite king, and celebrate a great Egyptian victory. But another version of the same treaty found at the Hittite capital Boghazköy turns the battle into a win for the Hittites!

The urge for immortality has always been of the first importance to writers. Most of the thousands of known fragments written by the Etruscans, for instance, are funerary inscriptions. We can read the name, date and place of death because they are written in an adaptation of the Greek alphabet; but that is about all we know of the enigmatic language of this important people, who borrowed the alphabet from Greece, handed it on to the Romans, who in turn gave it to the rest of Europe. Decipherment of the Etruscan language is like trying to learn English by reading nothing but gravestones.

Writing as prognostication.
The earliest Chinese inscriptions are the 'oracle bones', dating from the Shang dynasty, c. 1200 BC. The symbols were the precursors of some Chinese characters.



Left Writing as identification.
The stone seals of the Indus Valley civilization, c. 2000 BC, beautifully carved and undeciphered, probably served as signatures and property markers.



Another purpose for writing was to predict the future. All ancient societies were obsessed with what was to come. Writing allowed them to codify their worries. Among the Maya it took the form of bark-paper books elaborately painted in colour and bound in jaguar skin; the prognostications were based on a written calendrical system so

sophisticated it extended as far back as 5 billion years ago, more than our present scientifically estimated age for the earth. In China, on the other hand, during the Bronze Age Shang dynasty, questions about the future were written on turtle shells and ox bones, so-called 'oracle bones'. The bone was heated with a brand until it cracked, the meaning of the shape of the crack was divined, and the answer to the question was inscribed. Later, what actually transpired might be added to the bone.

But of course most writing was comparatively mundane. It provided, for instance, the equivalent of an ancient identity card or a property marker. The cartouche enclosing the name of Tutankhamun was found on objects throughout his tomb, from the grandest of thrones to the smallest of boxes. Anyone who was anyone among ancient rulers required a personal seal for signing clay tablets and other inscriptions. So did any merchant or other person of substance. (Today in Japan, a seal, rather than a western-style signature, is standard practice for signing business and legal documents.) Such name-tagging has been found as far apart as Mesopotamia, China and Central America. The stone seals from the Indus Valley civilization, which flourished around 2000 BC, are especially interesting: not only are they exquisitely carved – depicting, among other motifs, a mysterious unicorn (see p. 144) – the symbols written on them are undeciphered. Unlike the script of Babylonia, the Indus Valley writing does not appear on walls as public inscriptions. Instead the seals have been found scattered around the houses and streets of the 'capital' city. They were probably worn on a cord or thong and used as a personal 'signature' or to indicate a person's office or the social or professional group to which he or she belonged.

Writing as accountancy. In the late 8th century BC, two Assyrian warriors greet each other after a battle, two scribes record the number slain. The scribe in the foreground writes in Imperial Aramaic, an alphabetic script, using a brush on papyrus. His bearded colleague writes in the traditional cuneiform script on a clay or wax-covered tablet.



Writing used for accountancy was much commoner than that on seals and tags. The earliest writing of all, on Sumerian clay tablets from Mesopotamia, concerns lists of raw materials and products, such as barley and beer, lists of labourers and their tasks, lists of field areas and their owners, the income and outgoings of temples, and so forth – all with calculations concerning production levels, delivery dates, locations and debts. And the same is true, generally speaking, of the earliest deciphered European writing, tablets from pre-Homeric Greece and Crete written in Linear B script. The tablet that clinched the decipherment of Linear B in 1953 was simply an inventory of tripod cauldrons (one of them with its legs burnt off), and of goblets of varying sizes and numbers of handles.

The Origin(s) of Writing

Most scholars now accept that writing began with accountancy, even though accountancy is little in evidence in the surviving writing of ancient Egypt, China and Central America. To quote an expert on early Sumerian tablets, writing developed ‘as a direct consequence of the compelling demands of an expanding economy’. In other words, some time in the late 4th millennium BC, the complexity of trade and administration in the early cities of Mesopotamia reached a point at which it outstripped the power of memory of the governing élite. To record transactions in a dependable, permanent form became essential. Administrators and merchants could then say the Sumerian equivalents of ‘I shall put it in writing’ and ‘Can I have this in writing?’

But this does not explain how writing actually emerged out of no-writing. Divine origin, in favour until the Enlightenment in the 18th century, has given way to the theory of a pictographic origin. The first written symbols are generally thought to have been pictograms, pictorial representations of concrete objects. Some scholars believe that writing was the result of a conscious search by an unknown Sumerian individual in the city of Uruk (biblical Erech), in about 3300 BC. Others believe it was the work of a group, presumably of clever administrators and merchants. Still others think it was not an invention at all, but an accidental discovery. Many regard it as the result of evolution over a long period, rather than a flash of inspiration. One particularly well-aided theory holds that writing grew out of a long-standing counting system of clay ‘tokens’ (such ‘tokens’, exact purpose unknown, have been found in many Middle Eastern archaeological sites):



Writing as an almanac.
This page of the Dresden Codex, c. 15th century AD, contains Maya dates. The Maya used a sophisticated calendrical system.



the substitution of two-dimensional signs for these tokens, with the signs resembling the shapes of the tokens, was a first step towards writing, according to this theory.

In any case, essential to the development of full writing, as opposed to the limited, purely pictographic writing of North American Indians and others, was the discovery of the rebus principle. This was the radical idea that a pictographic symbol could be used for its phonetic value. Thus a drawing of an owl in Egyptian hieroglyphs could represent a consonantal sound with an inherent *m*; and in English a picture of a bee with a picture of a leaf might (if one were so minded) represent the word belief.

Sacred writing. Angels record the good and bad deeds of humanity in an illuminated manuscript by al-Qazwini, 1280. The Arabic script is revered in Islam, since the Koran is regarded as the word of God.

The Development of Writing

Once invented, accidentally discovered or evolved – take your pick – did writing then diffuse throughout the globe from Mesopotamia? The earliest Egyptian writing dates from 3100 BC, that of the Indus Valley from 2500 BC, that of Crete from 1900 BC, that of China from 1200 BC, that of Central America from 600 BC (all dates are approximate). On this basis, it seems reasonable that the idea of writing, but not the particular symbols of a script, did spread gradually from culture to distant culture. It took 600 or 700 years for the idea of printing to reach Europe from China, and even longer for the

idea of paper: why should writing not have reached China from Mesopotamia over an even longer period?

Nevertheless, in the absence of solid evidence for transmission of the idea (even in the case of the much nearer civilizations of Mesopotamia and Egypt), a majority of scholars prefer to think that writing developed independently in the major civilizations of the ancient world. The optimist, or at any rate the anti-imperialist, will prefer to emphasize the intelligence and inventiveness of human societies; the pessimist, who takes a more conservative view of history, will tend to assume that humans prefer to copy what already exists, as faithfully as they can, restricting their innovations to cases of absolute necessity. The latter is the preferred explanation for how the Greeks borrowed the alphabet from the Phoenicians, adding in the process the vowels not expressed in the Phoenician script.

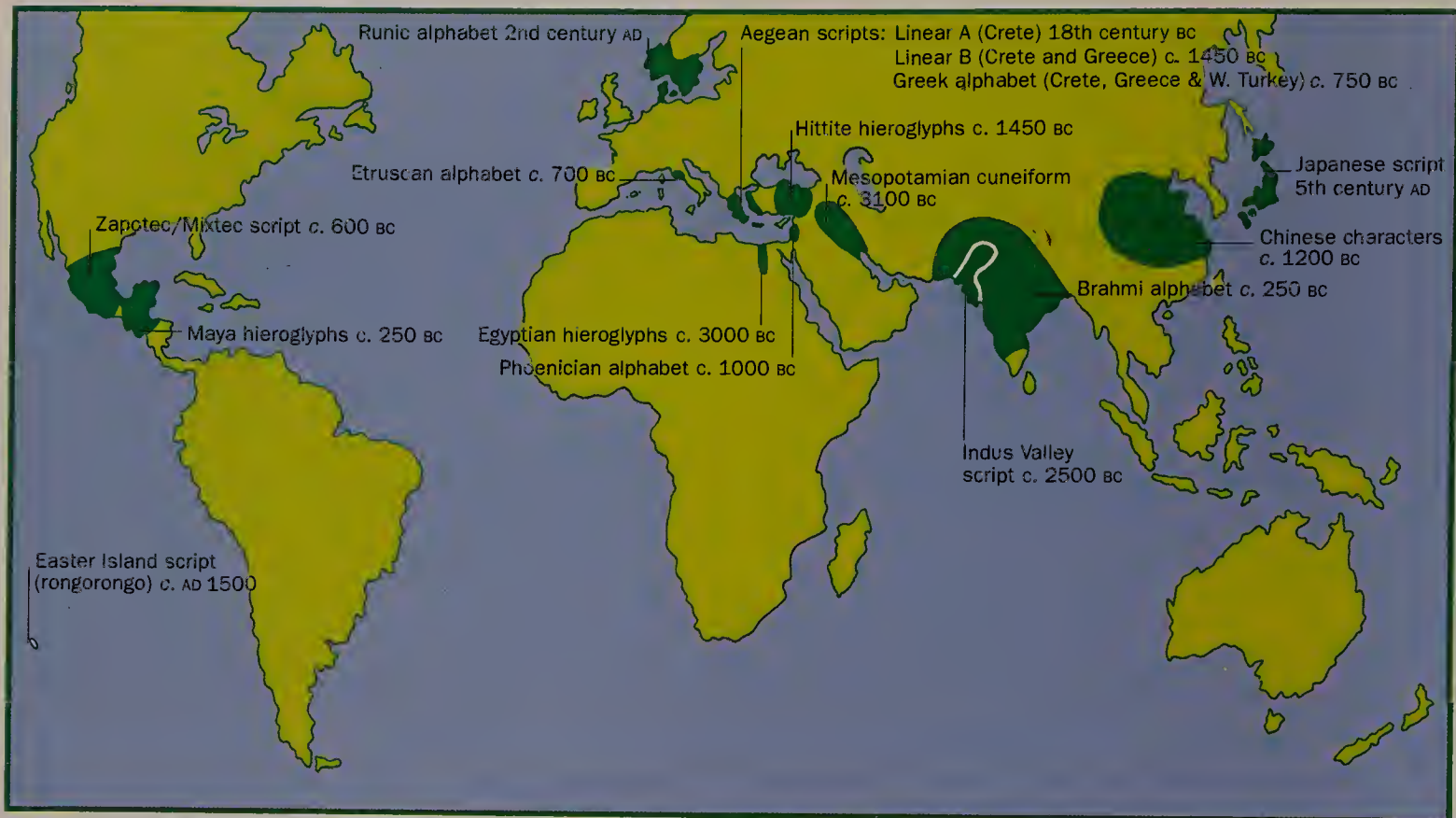
There can be no doubt about certain script borrowings, such as the Romans taking the Etruscan script, the Japanese taking the Chinese characters and, in our own time, the Turks (under Kemal Atatürk) abandoning the Arabic script in favour of the Latin script. Changes are made to a borrowed script because the new language has sounds in it that are not found in the language for which the script was being used (hence the umlaut on the 'u' of Atatürk). This idea is easy enough to grasp when the two languages are similar, but it can be extremely awkward to follow when the two languages differ vastly, as Japanese does from Chinese. In order to cope with the differences, the Japanese script has *two* entirely distinct sets of symbols: Chinese characters (thousands), and Japanese syllabic signs (about 50) that symbolize the basic sounds of Japanese speech. A Japanese sentence therefore mixes Chinese characters and Japanese syllabic signs in what is generally regarded as the most complicated system of writing in the world.

Script, Speech and Language

Europeans and Americans of ordinary literacy must recognize and write around 52 alphabetic signs, and sundry other symbols, such as numerals, punctuation marks and 'whole-word' semantic symbols, for example +, &, £, \$, 2, which are sometimes called logograms. Their Japanese counterparts, by contrast, are supposed to know and be able to write some 2000 symbols, and, if they are highly educated, must recognize 5000 symbols or more. The two situations, in Europe/America and in Japan, appear to be poles apart. But in fact, the positions resemble each other more than appears.

Borrowing a script. Scripts have been borrowed by languages throughout history. In Turkey Kemal Atatürk replaced the Arabic script with the Roman script in 1928. Here he teaches the new script.

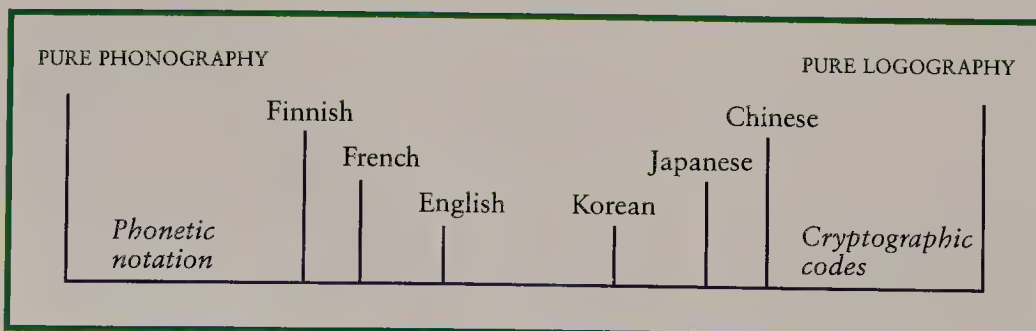




All scripts that are full writing – that is, a ‘system of graphic symbols that can be used to convey any and all thought’ (to quote John DeFrancis, a distinguished American student of Chinese) – operate on one basic principle, contrary to what most people think, some scholars included. Both alphabets and the Chinese and Japanese scripts use symbols to represent sounds (i.e. phonetic signs); and all writing systems use a mixture of phonetic and semantic signs. What differs – apart from the outward forms of the symbols, of course – is the *proportion* of phonetic to semantic signs. The higher the proportion, the easier it is to guess the pronunciation of a word. In English the proportion is high, in Chinese it is low. Thus English spelling represents English speech sound by sound more accurately than Chinese characters represent Mandarin speech; but Finnish spelling represents the Finnish language better than either of them. The Finnish script is highly efficient phonetically, while the Chinese (and Japanese) script is phonetically seriously deficient.

Above **The beginnings of writing.**

Below **Written versus spoken language (from DeFrancis and Unger).** Writing systems are shown on a theoretical continuum of writing between pure phonography and pure logography, with Finnish script as the most phonetically efficient and Chinese script the least.





The difficulty of learning the Chinese and Japanese scripts cannot be denied. In Japan, in the mid-1950s, a peak in teenage suicides seems to have been connected with the expansion of mass education post-war, using the full-blown Japanese script with its several thousand characters. It takes a Chinese or Japanese person several years longer than a western counterpart to achieve fluency in reading.

That said, there are many millions of westerners who have failed to learn to read and write. The level of literacy in Japan is higher than in the West (though probably not as high as is claimed). The intricacy of the Japanese script has not stopped the Japanese from becoming a great economic power; nor has it caused them to abandon their use of Chinese characters in favour of a much smaller set of signs based on their already-existing syllabic signs – a theoretically feasible move.

Cultural Revolution, China, mid-1960s. Mao Zedong maintained that, ideally, he would sweep away the Chinese characters altogether, so that millions of illiterate Chinese could become literate in the Latin script. But conservative opposition was too strong, and during the Cultural Revolution Red Guards destroyed examples of the Latin script.

WRITING: A CHRONICLE

Ice Ages (after 25,000 BC)	Proto-writing, i.e. pictographic communication, in use	1st cent. AD	Dead Sea Scrolls written in Aramaic/Hebrew script
8000 BC onwards	Clay 'tokens' in use as counters, Middle East	75 AD	Last inscription written in cuneiform
3300 BC	Sumerian clay tablets with writing, Uruk, Iraq	2nd cent.	Runic inscriptions begin, northern Europe
3100 BC	Cuneiform inscriptions begin, Mesopotamia	394	Last inscription written in Egyptian hieroglyphs
3100–3000 BC	Hieroglyphic inscriptions begin, Egypt	615–683	Pacal, Classic Maya ruler of Palenque, Mexico
2500 BC	Indus script begins, Pakistan/N.W. India	712	<i>Kojiki</i> , earliest work of Japanese literature (in Chinese characters)
18th cent. BC	Cretan Linear A inscriptions begin	Before 800	Printing invented, China
1792–1750 BC	Hammurabi, king of Babylon, reigns; inscribes law code on stela	9th cent.	Cyrillic alphabet invented, Russia
17th–16th cent. BC	First known alphabet, Palestine	1418–1450	Sejong, king of Korea, reigns; invents Hangul alphabet
1450 BC	Cretan Linear B inscriptions begin	15th cent.	Movable type invented, Europe
14th cent. BC	Alphabetic cuneiform inscriptions, Ugarit, Syria	1560s	Diego de Landa records Mayan 'alphabet', Yucatán
1361–1352 BC	Tutankhamun reigns, Egypt	1799	Rosetta stone discovered, Egypt
c. 1285 BC	Battle of Kadesh celebrated by both Ramesses II and Hittites	1821	Cherokee 'alphabet' invented by Sequoya, USA
1200 BC	Oracle bone inscriptions in Chinese characters begin	1823	Egyptian hieroglyphs deciphered by Champollion
1000 BC	Phoenician alphabetic inscriptions begin, Mediterranean area	1840s onwards	Mesopotamian cuneiform deciphered by Rawlinson, Hincks and others
730 BC	Greek alphabetic inscriptions begin	1867	Typewriter invented
c. 8th cent. BC	Etruscan alphabet appears, northern Italy	1899	Oracle bone inscriptions discovered, China
650 BC	Demotic inscriptions, derived from hieroglyphs, begin, Egypt	1900	Knossos discovered by Evans, who identifies Cretan Linear A and B
600 BC	Glyphic inscriptions begin, Mesoamerica	1905	Proto-Sinaitic inscriptions discovered by Petrie, Serabit el-Khadim, Sinai
521–486 BC	Darius, king of the Persians, reigns; creates Behistun inscription (key to decipherment of cuneiform)	1908	Phaistos Disc discovered, Crete
400 BC	Ionian alphabet becomes standard Greek alphabet	1920s	Indus civilization discovered
c. 270–c. 232 BC	Ashoka creates rock edicts in Brahmi and Kharosthi script, northern India	1940s	Electronic computers invented
221 BC	Qin dynasty reforms Chinese character spelling	1948	Hebrew becomes a national language in Israel
c. 2nd cent. BC	Paper invented, China	1953	Linear B deciphered by Ventris
		1950s onwards	Mayan glyphs deciphered
		1958	Pinyin spelling introduced in China
		1980s	Wordprocessors invented; writing becomes electronic
		23 Dec. 2012	Current Maya Great Cycle of time due to end

Modern ‘Hieroglyphs’

Are the huge claims made for the efficiency of the alphabet then perhaps misguided? Maybe writing and reading would work best if alphabetic scripts contained more logograms standing for whole words, as in Chinese and Japanese writing and (less so) in Egyptian hieroglyphs? Why is it necessarily desirable to have a *sound*-based script? What, after all, has sound got to do with the actual process of writing and reading?

We have only to look around us to see that ‘hieroglyphs’ are striking back – beside highways, at airports, on maps, in weather forecasts, on clothes labels, on computer screens and on electronic goods including the keyboard of one’s word processor. Instead of ‘move cursor to right’, there is a simple ⇨. The hieroglyphs tell us where we must not overtake, where the nearest telephone is, which road is a motorway, whether it is likely to rain tomorrow, how we should (and should not) clean a garment, and how we should rewind a tape. Some people, beginning with the philosopher and mathematician Leibniz in the 17th century, even like to imagine that we can invent an entire written language for universal communication. It would aim to be independent of any of the spoken languages of the world, dependent only upon the concepts essential to high-level philosophical, political and scientific communication. If music and mathematics can achieve it, so the thought goes – why not more generally?

This book shows why that dream, appealing as it is, can never become a reality. Writing and reading are intimately and inextricably bound to speech, whether or not we move our lips. Chinese characters do *not* speak directly to the mind without the intervention of sound, despite centuries of claims to the contrary by the Chinese and by many western scholars. Nor do Egyptian hieroglyphs, notwithstanding the beauty of their symbols and the fact that we can recognize people, animals, objects and the natural world depicted in them.

Aristotle called the basic unit of language – by which he meant both spoken *and* written language – ‘gramma’. Ferdinand de Saussure, the founder of modern linguistics, said of language that it might be compared to a sheet of paper. ‘Thought is one side of the sheet and sound the reverse side. Just as it is impossible to take a pair of scissors and cut one side of the paper without at the same time cutting the other, so it is impossible in a language to isolate sound from thought, or thought from sound.’ We have just begun to understand the mental processes in speaking, we understand still less about those in reading and writing, but we may be sure of this: full writing cannot be divorced from speech; words, and the scripts that employ words, involve both sounds *and* signs.



HOW WRITING



Above **Ceramic vase from Yaloch, Guatemala, depicting a mythological scene.**

Below **Box in the shape of a cartouche from the treasures of Tutankhamun.**

I

Two hundred years ago, no one knew how to read Egyptian hieroglyphs, Mesopotamian cuneiform or Mayan glyphs. Most scholars in fact doubted whether these scripts *could* be read in the same way as alphabetic writing. The assumption was that their exotic symbols represented ideas and thoughts, probably exalted and mystical, not the sounds of a once-living language.

WORKS

Today we can read many of the glyphs on this exquisite ceramic pot, painted with weird and wonderful mythological scenes of the ancient Maya, and each ebony and tinted ivory hieroglyph on this box of Tutankhamun. And we know that, strange as it may seem, both these samples of ancient writing resemble our alphabet in their fundamental principles of operation.

To understand how this can be, we need to grasp how our own scripts represent sound and meaning. We do not generally use symbols that are recognizably pictorial, unlike Egyptian hieroglyphs, the symbols on Sumerian clay tablets, or the ambiguous signs which accompany the cave paintings of Ice Age Europe. What role do pictures play in the evolution of writing? Can the earliest known symbols be regarded as writing? How, precisely, is writing defined?

Chapter 1 Reading the Rosetta Stone

The Rosetta Stone, key to the decipherment of Egyptian hieroglyphs.

