

# Languages 1: the beginnings

## HOW WRITING DEVELOPED

Pictures form the basis of all the earliest known examples of writing. The symbols used are simplified pictures of the objects or people referred to, such as 'sun' or 'king'. But other symbols were also needed to express more abstract ideas such as 'love' or 'happy', and since these could not be drawn directly, early writers borrowed and adapted symbols from those already in use, usually with additional marks to help to distinguish between them. The early deciphered scripts – among them the cuneiform script of Mesopotamia, and early Chinese and Egyptian hieroglyphics – all developed symbols for abstract concepts in this way. The word cuneiform is from the Latin *cuneus*, meaning 'wedge', and cuneiform script is so called because of its wedge-shaped outlines, made by scribing on wet clay with reeds. 'Hieroglyphics' is from Greek words meaning 'sacred writings (or carvings)'.

These pictorial scripts later gave way to writing in which the symbols came to stand for the words themselves, rather than the things the words represented. And the pictorial element disappeared or became marginal. Symbols of this kind are called logograms and include the modern English symbols &, =, + and %, as well as all the numerals.

### Symbols for syllables

Next, symbols were used to stand for the sound of a word or the various syllables in it. Such systems are called syllabaries and came into use alongside or as an alternative to logograms in many cultures. The first syllabaries were developed in the Middle East in about 2000 BC. Chinese characters – descended from a form of picture writing first devised in about 1500 BC – still combine symbols for words and symbols for syllables, and are often called logo-syllabic for this reason. Japanese script, however, which developed from Chinese in about AD 800, is wholly syllabic. The Japanese script, known as *kana*, is still in use.

The last major step in the development of writing was from the syllabary to the alphabet. Syllabaries were an advance over picture writing and logograms in that they broke down a language into simpler units and vastly reduced the number of symbols in use. Alphabets took this process of simplification further – breaking down the language into individual sounds. Alphabets seem to have been invented only in the West, beginning with the early consonantal alphabets of the eastern Mediterranean in about 1700 BC, and followed by Greek – which added separate symbols for vowels as well as consonants.



MESSAGE IN STONE Primitive languages used pictures – sometimes stylised – to convey ideas. This Central American carving, or 'glyph', is the symbol for grass.

## THE FIRST SPEAKERS

Using plaster casts of the remains of ancient man, anthropologists have tried to estimate when man's skull and vocal tract became suitable for speech. Even Neanderthal Man, who lived between about 100,000 and 40,000 years ago, may well not have been able to produce the range of sounds found in known languages. Our own species, *Homo sapiens sapiens*, first appeared about 35,000 years ago; and this has led some anthropologists to conclude that speech developed some time between then and about 20,000 years ago. Unfortunately, these conclusions tell us nothing about the origins of language. Between the dawn of modern man and the earliest reconstructed spoken languages is a gap of at least 20,000 years.

Most European languages, as well as many of those of southwest Asia and India, belong to a single linguistic family: Indo-European. Together they form the largest group of spoken languages – more than 80 in all. No written evidence of the parent language has been found, but scholars have reconstructed parts of it by comparing the languages of the group as a whole and have called the parent tongue Proto-Indo-European. Opinions differ on where Proto-Indo-European was first spoken. Some scholars believe that it was the language of farming peoples in an area of northeastern Europe around 4000 BC. Others assert that it was spoken by nomadic tribes who ranged across south-eastern Europe and southern parts of Russia.

## WHERE WRITING BEGAN

The earliest known examples of writing are forms of picture writing, found on clay tablets in parts of the Middle East and southeastern Europe. The pictures – such as a foot, which represented the idea of walking – were drawn on the clay when it was soft. The tablets were then baked in the sun, and many of them have been found in what are now Iraq and Iran. The tablets – the earliest of which date from around 3500 BC – mostly record land sales, business deals and tax accounts. Symbols from this period have also been found on clay tablets in Romania.

In addition, archaeologists have found even more ancient tokens at sites in the Zagros Mountains of Iran. The tokens are marked with symbols which appear to represent numbers and specific objects such as animals and garments. The tokens date from about 8500 BC – some 5000 years before the accepted date for the invention of writing. But scholars are divided on whether the symbols are a form of artistic decoration, or whether they qualify as the beginnings of a written language.

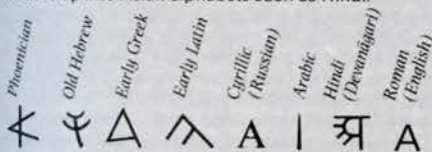
## CHILDREN WHO INVENTED A LANGUAGE

In 1880, thousands of immigrants from Europe and Asia were brought to Hawaii to work in the island's new sugar industry. The result was linguistic chaos, because the immigrants – mostly Chinese, Japanese, Korean, Spanish and Portuguese – could understand neither the largely English-speaking owners of the sugar plantations nor the native Hawaiians.

At first, a crude pidgin English emerged as each group struggled to make sense to the others. But by about 1910 – in other words, within a single generation – a remarkably sophisticated language had developed. Now known as Hawaiian Creole, the language

## NEW LETTERS FOR OLD

All the alphabets in use around the world today can be traced back to a North Semitic alphabet which emerged in about 1700 BC at the eastern end of the Mediterranean. From this alphabet developed Hebrew, Arabic and Phoenician. The Phoenician alphabet was adopted and adapted by the Greeks, who introduced it into Europe in modified form around 1000 BC. The Greeks standardised the direction of the written lines to read from left to right and added some symbols for vowels. The Greek alphabet in turn gave rise to both the Roman alphabet now used for all modern Western European languages (including English) and the Cyrillic alphabet. Cyrillic – devised by two Greek missionaries, St Cyril and St Methodius, in the 9th century AD, and named after St Cyril – is now used in Eastern Europe and the Soviet Union. The North Semitic alphabet also gave rise to the Aramaic alphabet, which spread eastwards to develop into Asian alphabets such as Hindi.



**TAKE A LETTER** The same letter can appear very different in different alphabets. Yet all the forms can be traced back to a common ancestor. The word alphabet itself comes from the first two Greek letters: *c:pha* and *beta*.

included ready-made words from all the original languages in the islands' mix, but its rules of grammar bore very little resemblance to any of them.

Hawaiian Creole's astonishingly rapid evolution was studied in detail by Derek Bickerton, a professor of linguistics at the University of Hawaii. And he came to the conclusion in his book, *Roots of Language*, that Hawaiian Creole had been invented entirely by children at play. Only the children could have done it, Professor Bickerton argues, because there was no time for their parents to have learnt the new language and passed it on. Indeed, he points out, their parents did not understand Hawaiian Creole when it first appeared. They had to learn it from their offspring.

### THE MYSTERY OF THE RUNES

The runic alphabet is one of the oldest in northern Europe, with most early examples dating from around the 3rd century AD. Long associated with magic and witchcraft, runes have been found in about 4000 inscriptions and a few manuscripts, mainly in Britain, Scandinavia and Iceland. Nobody knows for certain where the alphabet came from, but some scholars believe that it was derived from the Etruscan alphabet, used in southern Europe after about 800 BC, and that it was brought north by the Goths during their invasion of the Roman empire.

### WOLF CHILDREN

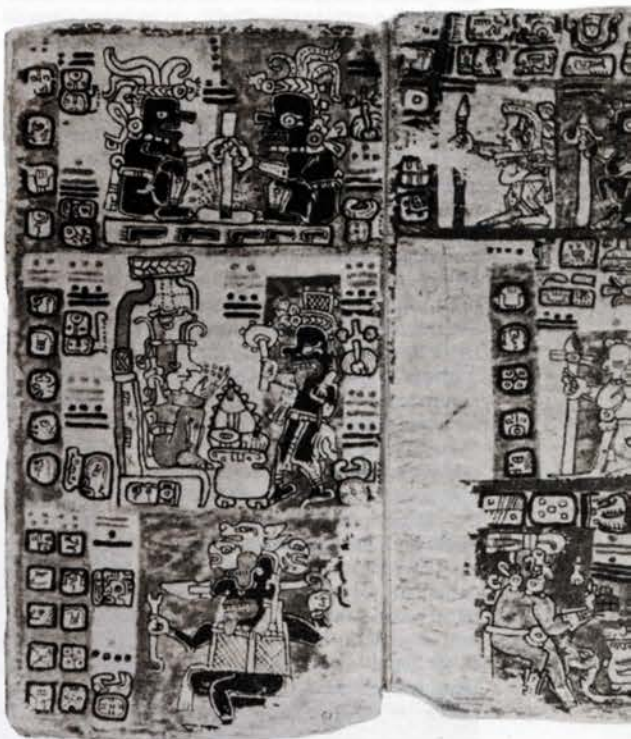
Children left in the wild or otherwise deprived of human contact do not learn how to speak spontaneously, linguistic experts believe. There are now more than 50 recorded cases of 'wolf children' – mostly in India – who have been found living among animals. All were mentally retarded and unable to speak.

A report on a similar case in the United States was published in 1977. It concerned a young girl known as 'Genie', who had been locked up in her home for 14 years – and who had since made some very limited progress in speaking.

### BABIES THAT SUFFERED FOR SCIENCE

More than 2500 years ago, two babies were kept in isolation for at least two years in a cruel experiment aimed at tracking down the world's first language. The experiment was carried out by an Egyptian pharaoh, Psamtik I, who ruled from about 663 to 609 BC. He believed that, without anyone to copy, children would instinctively talk the world's 'original language'. So he put two newborn babies of poor parents into solitary confinement.

A shepherd was given the job of looking after the babies, but Psamtik insisted that nobody should speak in their presence. When, after two years, the shepherd reported that the children had begun to repeat a sound like *bekos* – the Phrygian word for 'bread' – Psamtik concluded that Phrygian was the oldest language. But he overlooked the fact that *bekos* sounds very much like the bleating of sheep – something the children had often heard. So the experiment proved nothing.



**LEFT, RIGHT, RIGHT, LEFT** The first scripts known to have been written in regular lines are two Minoan scripts from Crete dating from about 2000 BC. Known for this reason as *Linear A* and *Linear B*, they are thought to have been written in lines arranged like the furrows in a ploughed field, so that the words ran alternately from left to right and right to left. The Western habit of writing consistently from left to right down the page became established only in about 1000 BC. Elsewhere, other patterns dominated. The Mayas of Central America, for example, wrote numbers in columns read from bottom to top; in the detail pictured above from a Mayan manuscript, the numbers appear as groups of dots and dashes between pictorial symbols. In each group, each dot stands for 1, and each dash for 5. Arabs still write from right to left, and Arabic newspapers have their front page where the back page would be in Europe or North America. In traditional Chinese, words are arranged in columns rather than lines. The columns are read from top to bottom and right to left.

## Languages 2: the way we talk

### BABY'S FIRST WORDS

Babies begin to recognise elements of speech sounds very shortly after birth, and to imitate the patterns of speech well before they begin to form intelligible words. At the age of one month they begin to distinguish between certain features of the spoken language that will later represent vowels and consonants. In English, for example, the presence or absence of the vocal cord vibration which distinguishes *pin* and *bin*, to and *do*, is picked up at this early age.

From around four months, babies can gauge the mood of an adult from his tone of voice. And at six months the sounds they make begin to mimic the rhythm and intonation of adult speech. Soon afterwards it is possible to tell English, French and Chinese children apart simply on the basis of tape recordings of their unintelligible babblings.

### PLAY LANGUAGES

Children all over the world devise their own 'secret' play languages, mostly just for fun. But some scholars argue that these play languages also have a serious role: in introducing changes into the languages of adults. Two British researchers, Iona and Peter Opie, even suggested in a book published in 1959 that some developments in language down the generations were due to innovations first created by children at play. Records of these children's languages go back only to the 19th century, because experts did not begin to study them until then. But play languages are thought to have a far longer history. Three used in Britain are: back slang, pig Latin and eggy-peggy speech.

Back slang takes its name from the way words are said backwards, as in 'Tup taht koob yawa' (for 'Put that book away'). The colloquial British word 'yob', for example, is back slang for 'boy'. A commoner version of back slang takes the final sound and moves it to the front of the word, adding an occasional consonant for ease of pronunciation, as in 'Teput tetha keboo yawa'. In pig Latin, the first consonants are placed at the end of the word and 'ay' or 'e' added, as in 'Utpay atthay ookbay wayay'. Eggy-peggy or 'aygo-paygo' speech is produced by inserting an extra syllable as in 'Pegut thegat begook egaway'.

### RHYMING SLANG

Rhyming slang – the traditional language of Cockney Londoners – can be traced back to the 17th century, though it became widely known only in the 19th century. It probably began as a kind of thieves' jargon in the East End of London, though rhymes of this kind are also known in other parts of Britain and similar features have been found in other languages among groups such as criminals and gypsy clans, where the desire to preserve secrecy is strong.

More than 1000 examples of English rhyming slang have been recorded, though not all are still in use. Among them are *Hampstead Heath* (teeth), *Barnet Fair* (hair), *bottle and glass* (class), *bird-lime* (time in prison), *saucepan lid* (kid, meaning child or to fool), *china plate* (mate), *Scapa Flow* (go), *jam-jar* (car), *tit for tat* (hat), *lean and lurch* (church), *Cain and Abel* (table), *frog and toad* (road), *apples and pears* (stairs), *plates of meat* (feet), *whistle and flute* (suit), *half-inch* (pinch, in the sense of steal), *butcher's hook* (look) and *loaf of bread* (head – whence comes 'use your loaf'). In each case

### WHO SPEAKS WHAT

There are some 4500 million people in the world, speaking between them around 9000 languages and dialects. The 12 most widespread languages are the mother tongues of 2500 million people.

The largest number, 1000 million, speak Chinese, but since this consists of several mutually unintelligible dialects it is perhaps incorrect to think of it as one language. The Mandarin dialect, however, is already spoken by more than 500 million Chinese and will probably become even more widespread now that it is being taught in schools throughout the country.

English is the next most widely spoken language. It is the mother tongue of 350 million people, and is used by another 1150 million people – in all about one-third of the world's population. Below it in the world league table are: Hindi (145 million); Russian (130 million); Spanish (125 million); German (120 million); Japanese (116 million); and Arabic and Bengali, each with 100 million.

### GRIMM'S LAW

Grimm's law is one of several linguistic laws that explain the different forms taken by words in languages with a common origin. It takes its name from the pioneering German scholar Jacob Grimm (1785–1863), who showed, for example, that many *p* sounds in Latin and Greek had become *f* sounds in English and German. Thus the Latin word *pater* had become *father* in English and *Vater* (pronounced 'fah-ter') in German. And the Latin word *pisces* became *fish* in English and *Fisch* in German. Grimm – who with his brother Wilhelm was also the author of *Grimm's Fairy Tales* – charted the transformation of whole groups of vowels and consonants in several Indo-European languages. He was also the first to prove that such changes take a regular form and are not, as had previously been thought, random processes affecting only certain words.

only the first, non-rhyming half of each phrase is usually used – *Barnet*, say, or *bottle* – so that to a stranger the conversation is incomprehensible.

English rhyming slang expressions have also sometimes been exported. Australians still call a bar, or pub, a *rubbedy*, from the expression 'rub-a-dub-dub'.

### HOW MANY WORDS

Precise estimates of the number of words in any language are almost impossible. New words are constantly being added to living languages, and old words are changing their meaning. The Merriam-Webster *Third New International Dictionary* – one of the largest English dictionaries – has half a million entries. But even this massive number is thought by linguistic scholars to represent barely half the total of words in the English language. There are hundreds of local and international dialects in English for which no entries exist, and new words are constantly appearing in such fields as literature and science. Even highly educated people are likely to know less than 10 per cent of the words in the total vocabulary. And they are likely to

make regular use in speech or writing of less than 10 per cent of that fraction—usually fewer than 10,000 words in all.

#### THE IMPOSSIBLE TYPEWRITER

The Japanese, whose genius for machines has put them in the forefront of the industrial world, have not yet mastered the humble typewriter. The reason is that even the everyday language requires more than 2000 characters—far more than would fit on to a conventional keyboard.

Written Japanese is a combination of three writing systems: *kanji*, which are borrowed Chinese ideograms (characters which symbolise the idea of a word rather than its sound); and two systems of *kana*, which are phonograms (characters which represent spoken sounds). Large dictionaries can contain more than 10,000 *kanji* symbols, but after the Second World War the government revised the language, creating a simplified vocabulary of about 1800 *kanji* symbols for everyday use. The two *kana* systems, *hiragana* and *katakana*, date from the 9th century and each contains 112 symbols.

A Western typewriter can cope with an entire language, including numbers and punctuation, with fewer than 50 keys. In comparison, a Japanese typewriter is a cumbersome machine with a limited vocabulary. It consists of a single key and 2000 symbols held in a matrix. The typist moves the matrix each time to get the appropriate *kanji* or *kana* character opposite the key. A second set of 2000 symbols is also


available for more complex subjects. If one of these additional symbols is required, the character is selected and placed in an empty space in the matrix. Because of this slow and expensive procedure, Japanese executives and secretaries still write most of their correspondence by hand.

#### DIVIDED BY A COMMON LANGUAGE

Dialects in China vary so widely that they can be mutually unintelligible—as different from each other as French, Italian and Spanish. But they share the same written language, which is understood by literate Chinese in all parts of the world, whatever dialect they speak. As a result, a Cantonese-speaking businessman in Hong Kong could not discuss a project by phone with a Mandarin-speaking businessman from Beijing (Peking), but he could do so by letter. And Chinese films shown to Chinese audiences often have Chinese sub-titles to help the audience understand what is said. Chinese dialects fall into six main groups: Mandarin (in the north); Wu; Min; Kan; Hsiang; and Cantonese (in the south). The Mandarin dialect of the Beijing area is now taught in schools all over China as the standard language, although it will be some time before everyone speaks it.

#### TAKE A LETTER, JULIUS

The Roman general Julius Caesar knew how to do shorthand. He used a system which was invented by a scholar named Marcus Tullius Tiro in 63 BC. Tiro devised the system to record the speeches of the orator



**TOWER OF CONFUSION** According to the Bible, the world's huge variety of languages began at the Tower of Babel, shown here in a painting by the 16th-century Flemish artist, Pieter Bruegel the Younger. Some 9000 languages and dialects are now in use, and new ones are still being discovered in remote areas. Another 1000 languages, such as ancient Egyptian, are known but no longer used.

## FACTS ABOUT PEOPLE

Cicero. Tiro's system is the first known complete shorthand, and it remained in use for 1000 years.

Several new shorthand systems were devised in the 17th century but modern shorthand is a product of the 19th and early 20th centuries. Pitman's shorthand—still widely used in Britain and Europe—was devised by Sir Isaac Pitman in 1837, and the commonest American system, Gregg's shorthand, was created in 1888 by J. R. Gregg. Both make use of straight lines, curves, dots and dashes, though Pitman's also uses different thicknesses of stroke, to distinguish between phonetically similar letters. The symbol for 'p' for instance—an oblique line—is a lighter version of the symbol for 'b'. Several other systems, among them Speedwriting, which was invented in the 1920s by an American named Emma Dearborn, consist of abbreviations of the Roman alphabet. The Pitman system holds the world records for shorthand of 300 words a minute over five minutes, and 350 words a minute over two minutes. Both records were set by an American, Nathan Behrin, in New York in 1922.

### STRINE

Just as American English has developed its own distinctive accent and vocabulary, so Australian English has diverged from the language spoken in Britain. In particular, Australians have developed a vivid set of verbal images: words and phrases often known collectively as Strine, from a comic version of the Australian pronunciation of the word 'Australian'. Among the phrases are colourful descriptions of people: 'lower than a snake's belly', 'so mean he wouldn't shout in a shark attack', 'as busy as a one-armed bill-poster in a high wind' and 'mad as a cut snake'.

There are now over 5000 words or expressions distinctive to the Australian continent. Some, such as *kangaroo*, *boomerang* and *bush telegraph* are well known outside Australia as well. Others, less well known, include *lolly* for 'sweet' and *station* for 'stock farm'. There is also a lively collection of Australian slang words, such as *sheila* for 'girl', *crook* for 'ill' or 'angry', *drongo* for 'fool', *ocker* for 'an uncultured person' and *wowser* for 'killjoy'.

### UPSIDE-DOWN DOWN UNDER

Boys undergoing initiation rites among the Warlpiri tribe of Australian Aborigines learn to speak a special upside-down language. Called *Tjiliwirri*—meaning 'funny' or 'clown'—it expresses every idea as its opposite. Instead of saying, for example, 'You are tall', a boy speaking *Tjiliwirri* would say 'I am short'. And instead of saying 'Give me water', he would say 'I withhold water from you'.

### DON'T CALL ME MOTHER

Among Australian Aborigines, many tribes have a special language which is reserved for speaking to in-laws. In Djirbal, for example, spoken in parts of north-east Queensland, the basic language is known as Guwal, but when a man wants to talk to his mother-in-law he speaks a special language called Dyalnguy. In Guugu-Yimidhirr, spoken farther north, the men

## WORDS FROM ABROAD

English belongs to the Germanic branch of the Indo-European family of languages. It began about 1500 years ago as Anglo-Saxon, the language of the Angles, Saxons and Jutes, who invaded Britain from the Continent at that time. But dozens of other languages from all over the world have also contributed to its rich vocabulary as a result of invasion, trade and scholarship.

These are some of the languages that English has drawn on, and some of the words they have given it

**Anglo-Saxon** Answer, folk, freedom, go, kill, life, love, night, old, stone, thing, what, when, where, who, year.

**Norse** Anger, awe, clumsy, crooked, enthrall, fog, husband, law, ransack, root, skill, snare, they, wrong.

**Norman French** Abbot, baron, beauty, Bible, court, crown, dress, feast, joy, justice, liberty, market, marriage, navy, parliament, peace, people, pleasure, power, prayer, reign, soldier, treasure, verdict, war.

**Modern French** Ballet, cafe, camouflage, elite, espionage, garage, menu, police, regime, soup, theatre.

**Latin** Accommodate, bacillus, circus, exit, focus, invention, manufacture, penicillin, persecute, refrigerator, status, tradition, vacuum.

**Greek** Agnostic, alphabet, character, clinic, cycle, electron, epidemic, idea, irony, museum, neurology, parallel, polystyrene, rhythm, telegraph, theory.

**Italian** Arcade, concerto, replica, vendetta.

**Dutch** Brandy, decoy, landscape, schooner.

**Caribbean languages** Canoe, hammock, hurricane, maize, mosquito, tobacco.

**Aztec** Chocolate, tomato.

**Chinese** Ketchup, kowtow, tea, typhoon.

**Japanese** Judo, karate, kimono, tsunami, tycoon.

**Malay** Amok, bamboo, caddy (box), sago.

**Turkish** Caviar, coffee, kiosk, tulip, yoghurt.

**Arabic** Alcohol, algebra, amber, assassin, cipher, crimson, cotton, ghouel, mattress, zero, fero.

**Indian languages** Bangle, bazaar, bungalow, chintz, jungle, khaki, pepper, pyjamas, shawl, teak, thug, verandah.

**Persian** Azure, candy, caravan, checkmate, divan, lemon, taffeta.

**African languages** Banana, banjo, chimpanzee, cola, mumbo-jumbo, raffia, tango, tote (to carry), voodoo, yam, zombie.

use a special language for their brothers-in-law and fathers-in-law. Some tribes treat all their in-laws in this way. Aboriginal words for members of the family are also quite different from those used in Western languages. In some tribes, the word for 'father' is also used for the father's brothers and cousins, or a wife may also call her husband's brothers 'husband'.

Crossed wrists  
mean odds on



**TALKING HANDS** British bookmakers use a special sign language called 'tic-tac' to keep in touch with fluctuating betting odds among their rivals around the racecourse.

Patting the  
shoulder means 33:1



Hands on the  
head mean 9:4



**THUS SPAKE THE TRADER**

Pidgin languages are simplified forms of language, invented by people with mutually unintelligible tongues to form a bridge between them. Well over 100 pidgins are in use today—all versions of Portuguese, Spanish, French, Dutch, Italian or English. Spoken mostly in colonies or former colonies, where there might be hundreds of local languages, pidgins began as trading languages. The word pidgin is thought by some scholars to derive from a pidgin rendering of the English word 'business', in which the first syllable has been stretched into two and the final 'ess' sound has been lost. Many pidgins have served traders, sailors and local merchants for more than 500 years. In some countries, such as Papua New Guinea, pidgins have become an official national language—and road signs, newspapers, even Parliamentary debates, all make use of pidgin.

More than 60 varieties of pidgin English still flourish, and some are very widely spoken. Tok Pisin (meaning 'talk pidgin'), the pidgin of Papua New Guinea, is spoken by at least 1 million people. And 2 million people speak Cameroon Pidgin.

**WORDS BELONG HAMLET**

Numerous works of literature have been translated into pidgin languages. Translated into the pidgin English of the Solomon Islanders, Shakespeare's most famous speech appears in these words:

'Which way this time? Me killem die finish body b'long me

Or me no do 'im? Me no savvy.

Might 'e better 'long you-me catchem this fella string for throw 'im this fella arrow.

Altogether b'long number one bad fella, name b'long him fortune? Me no savvy.

Might 'e better 'long you-me. For fightem 'long altogether where him 'e makem you-me sorry too much.

Bimeby him fall down die finish? Me no savvy.'

In English the same lines—from the prince's soliloquy on suicide in *Hamlet* (Act 3, Scene 2)—are:

To be, or not to be: that is the question;

Whether 'tis nobler in the mind to suffer

The slings and arrows of outrageous fortune,

Or to take arms against a sea of troubles,

And by opposing end them?'

**THE SOUNDS OF LANGUAGE**

The number of different sounds varies enormously from language to language. In speech, English generally has about 20 vowel sounds, but some languages have far more, or far fewer. The largest numbers of vowel sounds are in the languages of Southeast Asia. Bru, a Vietnamese language, has 40 vowel sounds; and Sedang, also spoken in Vietnam, has 55. However, many languages, including some from the Caucasus mountains of southern Russia such as Abkhaz and Adygh, have only one type of vowel—usually a kind of open 'a', as in the English word 'are'.

Spoken consonants, too, show a wide range. English accents usually have 24; but many of the languages

spoken in the Caucasus have more than 70, and one—Ubykh—has 80. By contrast, several languages make do with fewer than ten consonants—among them Mohawk, an American Indian language, which has only seven.

**LETTER FROM KAMPUCHEA**

Alphabets—in which each symbol stands for a single sound—are a far more economical method of representing a language than syllabaries or pictographic scripts—in which the symbols stand for complete syllables or words. But even within alphabets, some are shorter than others. The world's longest alphabet is Cambodian; it has 74 letters—nearly three times as many as English. The shortest alphabet is Rotokas, from the Solomon Islands; it has only 11 letters.

**CLICKS OF THE TONGUE**

The disapproving clicking noise which is written as 'tut-tut' in English is used as a consonant in several African languages. Some southern African languages have as many as 15 different click consonants, including the sound made with the sides of the tongue to urge on a horse. Zulu, the most widespread language with clicks, has 3 million speakers, but Bushman, Hottentot and Xhosa all use clicks as well.

Other sounds quite foreign to Indo-European languages also serve as consonants. One of these, resembling the 'glug-glug' sound that children make to imitate a bath emptying, is used in several West African languages.

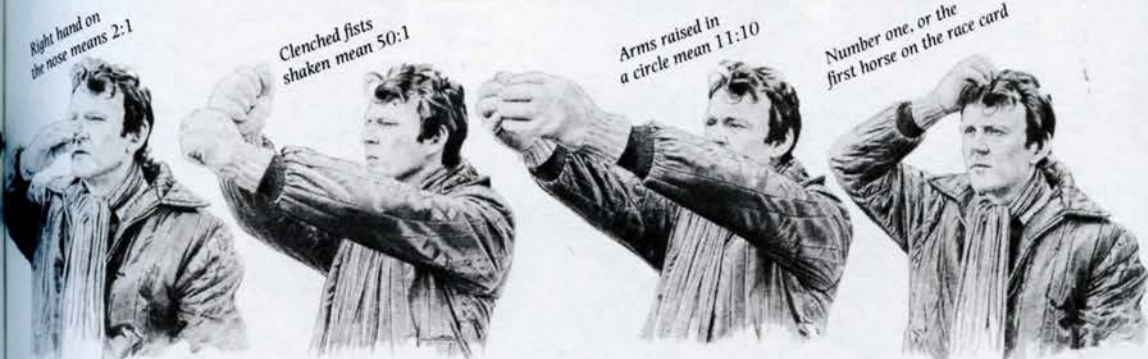
**WHISTLE FOR IT**

The Mazateco Indians of Mexico can hold a complete conversation—just by whistling. Mazateco 'whistled speech', which is used only by the men of the tribe, is based on the tones and rhythms of the spoken language. By varying the speed, pitch and intensity of the whistles, the men can deal with a wide range of subjects. For example, a trader can strike a bargain with a customer, spelling out in whistles exact details of quantity and price, without either side speaking a word. A similar language of whistles, called *silbo*, is used on the Canary Island of La Gomera. The sounds carry so well across the valleys that a speaker can be understood up to 8km (5 miles) away.

**ODD MAN OUT**

Basque is unique among the languages of Europe because it has no known relatives. It is spoken by more than 500,000 people in the French and Spanish Pyrenees, but bears no relationship to any other European language.

Scholars, baffled by Basque's linguistic independence, have developed a number of theories to explain it. Some experts see it as the last example of the language spoken in southwestern Europe before the Roman invasion. Some see a relationship between Basque and an extinct Iberian language found on inscriptions along the Mediterranean coasts. Others link it with the languages of North Africa, or with those of the Caucasus region in southern Russia. No theory, however, has yet won universal support.



Right hand on the nose means 2:1

Clenched fists shaken mean 50:1

Arms raised in a circle mean 11:10

Number one, or the first horse on the race card