5

THE GEOGRAPHY OF LANGUAGE

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The disciplines of Geography and Linguistics evidently combine in the mapping of the present whereabouts of different languages and dialects. The next step is to consider how these patterns of distribution came to be. In this context, the study of place-names is of first concern. Other circumstances which must be taken into account are: the adaptation of speech to cultural changes; the adjustment of languages to political frontiers; and the genesis of Pidgins and Creoles under special conditions. On a more idealistic plane we must mention the several attempts over the last four centuries to construct a universal language. Finally, it seems appropriate to say something of the origin, evolution and spread of the related art of writing.

LANGUAGE GROUPINGS AND THEIR DISTRIBUTION

There was little interest in the Graeco-Roman world in the speech of 'Barbarians', so called from the perceived sound of their languages; but the understanding and recording of many remote tongues of Europe and Asia owe much to the work of Christian missionaries in translating and preaching the Gospels during the Middle Ages. This activity grew and extended widely during the Age of Discovery, and stimulated the first attempts to classify languages. Joseph Justus Scaliger (1540–1609) categorized the tongues of Europe; during the next two hundred years, partly under the stimulus of the mathematician Leibniz, several ambitious comparative accounts of languages were written, notably by Pallas (*Vocabularia Comparativa,* 1787), Hervas (1735–1809) and Adelung (*Mithridates,* 1806–17); but it was the methodical study of the Indo-European family of languages (by the grammarian Franz Bopp, 1791–1867, following the insights of the missionary Benjamin Schultze (published 1725) and of William Jones, Chief Justice of Bengal (published 1788)) which marked the beginnings of the modern science of comparative linguistics.

Affinities between languages can be recognized first by means of shared words, and second through common features of structure and usage. Of these, the

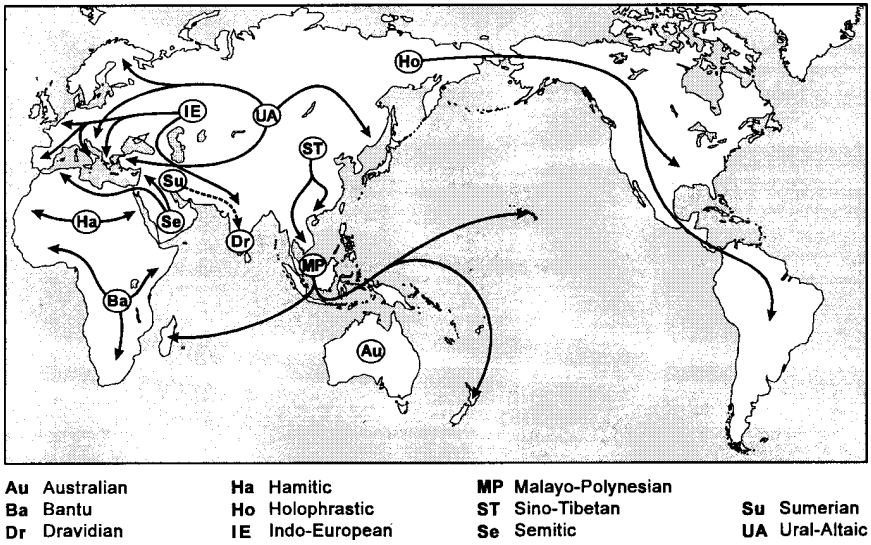

Figure 5.1 The spread of language families.

second criterion is evidently the more reliable, for the vocabulary or wordrepertory of one language may be extended through borrowings from others that are quite unrelated. For example, both Persian and Turkish include many words, particularly in the fields of philosophy and religion, borrowed from Arabic, though all three languages belong to quite distinct families. However, word similarities in some simple and basic fields, such as those of kinship and topography, can provide significant clues to affinities of language.

Thus, the following broad categories can be distinguished (Figure 5.1):

1 *Isolating.* The *Sino-Tibetan* languages of the Far East use a system of simple syllabic sounds, whose range of expression is extended by distinctions of tone. The *Malayo-Polynesian* languages make a separate family which probably falls within the same isolating category. They include an outlier in the island of Madagascar.
2 *Agglutinating.* The Uralic language family (Finno-Ugrian, Estonian, Lappish) and the Altaic (Turkic, including Kirghiz and Manchu), though long separated, are distantly related, and may be classed together as the *Ural-Altaic* group. They are spoken over a wider area than any other of the main language groups of the Old World. Agglutination implies the elaboration of the verbal root through attachment to it of one or more of many regular adjuncts. To blend with the vowel of the root, the adjuncts (affixes) change their own vowels, a habit known as vowel harmony.

The other large group of agglutinating languages is the *Dravidian* of southern India (Tamil, Telugu, Canarese, Malayalam). It has been suggested that the Dravidian and Ural-Altaic groups may have had distant links, but these have not been confirmed.

Sumerian, the earliest language of Mesopotamia, and known only from literary evidence, was also of agglutinating type and may have had a remote connection with Dravidian through the lost language of the Indus civilization. Brahui, a surviving outlier of Dravidian in Baluchistan, may be a relic of such a link.

3 *Root-inflecting.* The Semitic family (Arabic, Hebrew, Ethiopic) and the Hamitic (Cushite, Berber) may be grouped together as *Semito-Hamitic.* They operate through vowel changes within trilateral verbs, on a regular system which lends itself well to rigorous grammatical analysis.

4 *Amalgamating.* This category incorporates the families of the Indian Sanskrit derivatives as well as Iranian, Greek, Romance (Latin derivatives), Teutonic, Slavonic, Celtic, Baltic, Armenian and Albanian, which together make up the *Indo-European* (earlier called Aryan) group. Amalgamation implies the use of complex and variable systems of suffixes and vowel changes to refine meanings.

5 *Classificatory.* The *Bantu* languages of Sub-Saharan Africa fall into this category, characterized by a system of prefixes which indicate the class of ideas to which a subject belongs, and which in a sentence are repeated before all the words connected with the subject.

6 *Holophrastic.* Under this general heading may be subsumed the many native *Amerindian* language families. It implies their common features of the smooth flow of expression and the absence of clear distinction between words.

In addition to these main language groups, there are several of small size ('isolates') which cannot be included therein, and which are probably local survivals of forms which have been largely overrun, replaced, or cut off very early. Such are the Australian Aboriginal dialects, and Georgian and Basque.

THE ORIGINS, SPREAD AND CHANGES OF LANGUAGES

Early ideas about a single origin or ancestry of all human speech now carry little weight, whether based on the story of the diaspora from Babel or the theory of onomatopoeic imitation. However, there has been a revival of interest in the topic, from two directions. The first, connected with the ideas of Noam Chomsky (*Syntactic Connections,* 1957) about an innate human sense of grammar, is of deep concern to linguistic theory, but in this context need not detain us.

The second, however, has more relevance here. It has arisen evidently under the influence of the burgeoning science of genetics, within which attention has been drawn to certain broad resemblances between the

distribution maps of human races and languages. Separation and isolation would account, it is argued, for the parallel development of both genetic and linguistic entities; and just as modern human races may be traced back to a common ancestral group that moved out of Africa some 50,000 years ago (but see Chapter 4), so all languages should be traceable back to a common tongue, of which a partial vocabulary has been proposed—'tik' for 'finger' or number 'one' for example.

It seems however that, if we exclude the early separation of the Australian and Amerindian stocks, the present broad pattern of languages has taken shape within the last 5,000 years at most, and that this pattern has come about largely through migrations, which often had very rapid effects.

Moreover, from archaeology and the study of place-names we have evidence of different language patterns in earlier times. For example, we know that the Americas were colonized through successive movements of peoples across the Bering Straits, beginning about 20,000 years ago. The Amerindian languages comprise several different branches or phyla (Sapir, 1884–1939, reckoned six in North America), which are so distinct that they are usually explained as having been associated with the several separate waves of immigration; but with the exception of the more recent arrivals from Siberia none can be related to any existing Old World linguistic groups.

It would appear therefore to be a formidable if not a vain undertaking to attempt to explain the present language map in terms of the early colonization from Africa of the rest of the world by the species *Homo sapiens,* whose original 'mother-language' evolved slowly in different places into distinct branches. None the less, it is reasonable to suppose that both races and languages can take on an increasingly separate identity under conditions of isolation. Sapir once observed that the longer a language is spoken the greater will be the range of its dialects. Thus there are many more English dialects in England, for example, than in Australia or North America. From this point of view, dialects are nascent languages, just as in biology varieties are incipient species. In an extreme instance, the aboriginal Australian peoples and their associated languages were cut off from South-East Asia by the rising sea-levels of the early Holocene epoch, and went their own ways in solitude.

Under conditions of less extreme isolation, we may remark the broad coincidence between the peoples of Mongoloid stock, who evolved in the cold dry steppe of Central Asia after the last Ice Age, and the isolating languages of East Asia. The clearance and settlement of the river valleys of China were made possible by the discovery of the art of cultivating rice, possibly about 5,000 years ago; thereby the isolating languages spread widely from North China through East and South-East Asia.

Likewise, the diffusion of the Bantu languages through Africa went along with the advance of the economy of shifting cultivation, made possible by the introduction of the yam from Malaysia. This forest crop, evidently brought to Africa by way of Madagascar through the medium of Malay argonauts, was more

productive and reliable than millet (introduced somewhat earlier from Egypt) in a regime of slash-and-burn hoe cultivation. Bantu-speaking peoples were thereby able to spread quickly from the southern Congo throughout Equatorial Africa, supplanting and restricting the early hunters who spoke Khoisan (Bushman/Hottentot) and Pygmy languages. All this has happened within the last 2,000 years.

A similar process has been hypothesized recently to account for the spread of the Indo-European languages. It is suggested that the ancestral form of all these tongues was spoken by the first Neolithic cultivators of Asia Minor some 10,000 years ago, and that it spread with them, and evolved into separate but related languages, as they made their slow way clearing and farming the ground. Westwards round the Mediterranean to Western Europe, and eastwards through Persia to India, argues Colin Renfrew (1987), they colonized, and replaced peoples speaking earlier languages, with the exception of a few chance survivors, Basque, Etruscan and Georgian, and in India the Dravidian-speakers who were pushed into the Southern Deccan.

This picture, however, runs counter to the older and more orthodox view that the Indo-European languages were carried by a dominant few who overran and imposed their own speech upon a wide variety of other peoples. With the passage of time, and through local linguistic evolution and contact, as well as further migrations, the several families and individual languages of the Indo-European stem took shape.

Only thus could be explained the common 'Indo-European' features of languages spoken by such a wide variety of peoples with different habitats and cultures. By isolating the common basic vocabulary of the Indo-European tongues, a reconstruction can be made of the domicile and lifestyle of the hypothetical speakers of the original language. They were evidently patriarchal tribesfolk, steppe-dwellers, living between the Urals and the Caspian, with domesticated animals including horses, and wheeled vehicles. They left conspicuous evidence of their presence in the form of large burial mounds ('kurgans'). Gordon Childe (1892–1957) supposed that they owed their prowess as a conquering aristocracy to their unique skills in horse-riding and wielding the double-headed battleaxe. The initial diffusion of Indo-European speech is generally thought to have occurred some 5,500 years ago, during the third millennium BC, and its subsequent further dispersion into India and the Mediterranean region about a thousand years later.

If the 'homeland' of the Indo-European languages is to be placed in the western part of the Central Asian steppes, that of the Ural-Altaic (Turkic) languages must have been in the same general area, probably somewhat further east. Again the eruption is probably to be attributed to the movement of nomadic tribes. The Lapp and Finnish peoples seem to have followed the 'circum-polar' shoreline, the Hungarians a more southerly route across the steppes, both in Bronze Age times, about 4,000 years ago. The Turkish-speaking tribes, however, newly converted to Islam, moved south and west

through western Persia into Asia Minor only about 1,000 years ago. We naturally know more about this recent event, and it is remarkable that through it the language of the greater part of Anatolia was changed from Greek to Turkish within a generation, partly by displacement of population, partly through intermarriage.

Just as the Hamitic languages of North Africa are centred on the Sahara, so the Semitic belong to Arabia and its cultivated edges in Yemen and the Fertile Crescent. The latest of several eruptions from the desert, through the initial spread of Islam in the seventh and eighth centuries AD, carried the Arabic language into Egypt, North Africa and Spain, Syria and Iraq, though not into Persia or India.

The Indo-European, Turkic and Semitic languages therefore have spread through movement outwards from reservoirs of people of pastoral nomadic economy and culture, on the pattern described by Edmond Demolins in his classic work, *Comment la Route crée le type social* (1901–3). The Malayo-Polynesian languages, by contrast, diffused through movement by sea of colonists using the outrigger canoe, in the early centuries of the present era. The constituent languages of this group are remarkably close in form, from the Eastern Pacific to Madagascar.

PLACE-NAMES AND OTHER EVIDENCE FOR LANGUAGE CHANGES

The evidence of place-names is of course crucial in historical geography. If all other records were to disappear, it would be possible to write a generalized account of the colonization of North America solely from the map of modern place-names. The regions of Spanish, French and British settlement could be defined, and even the general direction of movement of the colonists. With care, traces of German, Scottish and Dutch newcomers could be found, while everywhere would be seen the evidence of a native substratum, in the Amerindian names.

Unfortunately, where there is a dearth of supporting evidence, place-names may prove difficult to interpret. It has been known for almost a century, thanks to the classic work of Paul Kretschmer (1866–1956), that before Greek speech arrived in the Aegean (most would say in the early part of the second millennium BC) there was in that region an earlier language which used place (and other) names ending in -ssos and -nthos: but this *Ursprache* has still not been identified.

The 'hill'-name *tor* is found widely in Derbyshire and Devon, and in the Middle East in the Toros (Taurus) Mountains, the Tur-el-Abdin plateau, Mount Sur (Sinai), the town of Tyre, and in the Greek word *tyrannos* ('king of the hill'). It might be a survivor from a lost language, or have belonged to the speculative group, Nostratic, a supposed common ancestor of the Indo-European and Semitic families. Another word which transcends language barriers is kayak/

caïque, which means a boat across Asia from the Canadian Arctic to the Mediterranean.

The borrowing or adaptation of place-names when two cultures meet is of course only one aspect of a wider process, from which something may be inferred about the nature of the fusion. The first Turkish arrivals in Asia Minor, being nomads, seem to have limited their new coinages to descriptive topographic names (Ak Dagh—White Mountain; Yeshil Irmak—Green River): names for towns borrowed from the Greek were given a Turkish style or meaning—Tefeni for Stephanos, Ayasoluk for O Ayios Theologos. In Spain, Arabic names were often retained with only superficial transliteration—Guadalqivir for Wadi-el-Kabir. In India, British foundations often used the Mogul style—Lyallpur for Ferozepore.

In some cases, the distortion of a place-name to give some memorable shape to a meaningless sound may be all that is involved, as often where an army passes by (Hell Fire for Helfya Pass in the Western Desert). A motel in the American West was oddly named Purgatory Holiday Camp, after the original Spanish name, Purgatorio de las Animas Santas (from the ambush of some early settlers), which was doubtless considered preferable to the cowboy version, Picket-wire.

Though of less cartographic interest, a study of the borrowings and adaptations into the ordinary vocabulary of a developing language can convey much of interest regarding the evolution of a culture or economy. The English language kept the words of the Saxon peasant for his animals (cow, sheep, pig), but accepted those of the Norman aristocracy for the end-products (beef, mutton, pork). From Arabic, English took a vocabulary of trade (cheque, tariff), from Greek of science and philosophy (geography, thesis), from French and Latin of law (loyal/legal, royal/regal, treason/tradition). Hindustani borrowed English words for clothing and military drill, Arabic for business, Persian for etiquette. In the 1920s the young Turkish Republic gladly adopted European words for science and engineering needs, but endeavoured, with only partial success, to jettison loan words from Persian and Arabic in favour of Turkish equivalents.

When the romance languages were taking shape as the Roman Empire broke down, the influential forms were not the literary but the colloquial and slang. ‘Equus’ for horse was virtually forgotten, and ‘caballus’ (‘nag’) was used, leading to ‘cheval’ and its derivatives: likewise ‘viaticum’ for ‘iter’, ‘mansio’ for ‘domus’ and ‘parabolare’ for ‘loqui’ gave ‘voyage’, ‘maison’ and ‘parler’. Near-‘pidgin’ circumlocution evolved into regular adverbial forms (‘tristi mente’ into ‘tristement’) or possessives (‘de illo homine’—for ‘hominis’—into ‘de l’homme’). The gypsy word for a non-gypsy man, ‘gadjo’ (possibly from a Sanskrit form ‘garha’, ‘house-dweller’) has been adopted in North English dialects as a slang word for a stranger and may, via Spanish, be behind the Argentinian ‘gaucho’.

One example from a geographical context may illustrate the subtle and unpredictable changes which such borrowings often undergo. An Early or

Middle English form 'compassus' ('equal-paced') gave rise to 'compass', meaning a pair of dividers. 'Compasso' in Renaissance Italy was a synonym for a Portolano or list of harbours in sequence along a coast. A Compass Chart was a map of the Mediterranean overdrawn—by use of dividers ('compass')—with a mesh of lines of direction emanating from the centre of a circle. The word was adopted into Arabic as simply 'kunbas' (plural 'kanabis') to mean such a chart. By the early sixteenth century, the English word 'compass' also meant a sundial, presumably because the divider-compass was used to lay out the hour-lines on the card. Somewhat later, the word 'compass' was applied to the mariner's magnetic compass, whose card would also be drawn by use of the dividercompass. Through a misunderstanding of the origin of the phrase 'compasschart' for the fourteenth- and fifteenth-century sea-charts of the Mediterranean, the mistaken theory has grown up and been often repeated that these charts were so called because they were surveyed with the aid of the mariner's compass. For technical reasons this could not be so, and, in any event, as explained above, the box with magnetic needle was not at that time called a 'compass' but a 'bussola' or 'magnet'.

It remains to add the caution that bizarre cases can arise by chance convergence, where similar words can evolve even with similar meanings in quite separate languages. Thus the Sheriff of Tombstone derived his title from the English medieval office of shire-reeve, while the Sherif (Ruler) of Mecca was so called from the Arabic root 'sharafa', 'to honour'.

THE ADAPTATION OF LANGUAGE TO CULTURE

Occasionally, a virtually universal process of word invention can be observed—'cuckoo' for example, or 'pupil' ('doll') or the like for the reflective centre of the eye; more often, vocabulary is closely related to culture. It is well known that the Eskimo have a large range of words for different kinds of snow, and the Masai for the many patterns of colouring on their cattle. Such subtleties of expression doubtless develop to meet a need, and may fade when the need is no longer there. How many would now know the difference between a piebald pony and a skewbald?

A change of lifestyle consequent on migration, or the adoption of a new religion, may call for an extension of vocabulary, through borrowing rather than invention. Both of these circumstances influenced the pastoral Turkish tribes that moved into the Middle East from Central Asia in the eleventh century AD. They changed from a tribal nomadic to a village farming economy, and about the same time embraced Islam. Their Turkish language remained structurally intact, but acquired an extended vocabulary from Greek, Arabic and Persian, and even an occasional pre-Greek 'Asianic' word, such as the toponym *ova* ('valley').

Conversion to Islam, which deeply pervades the lifestyle of its devotees and requires readings from the Arabic Koran rather than from translations, accounts

for the strong infusion of Arabic vocabulary in a whole range of languages: Turkish, Persian, Urdu and Malay. The conversion of Northern Europe to Christianity in the early Middle Ages led to a widespread adoption of Latin forms into both Celtic and Teutonic speech. The place-name Eccles, for example, derives from Ecclesia.

In grammar as well as vocabulary there is evidence of the development of constructions suited to local custom. In Hindustani, causal and even doublecausal verb forms can easily be constructed, usually by the addition of a vowel and semi-vowel (karna, 'to make' > karana, 'to *have* made' > karwana, 'to *cause* to *have* made'). The causal form in French or Latin is equally as cumbersome as in English (faire faire, faciendum curare), and the double causal would in each case call for a lengthy circumlocution. The peculiar feature of Hindu society is of course the caste system, wherein the practice of particular crafts and occupations is restricted to appropriate social strata. In these circumstances, causal and double-causal verb forms are evidently very useful, and were for this reason invented and refined in Sanskrit and its derivatives. The Turkish language has similar causal forms (yemek, 'to eat'; yedirmek, 'to feed'); certainly the reservation of crafts for particular minorities ('millets') in the Ottoman Empire would render such verb forms convenient.

Turkish has two versions of the past tense, a distinction which is certainly rare and may be unique. The verb root with the suffix -di/-du signifies that the event has happened to the full knowledge of the speaker; the verb root with -mish/-mush indicates that what has occurred is known to the speaker only through inference, or through information from a third party. Such a distinction would be convenient in the Ottoman bureaucracy, and may well have been invented to meet a need.

Benjamin Lee Whorfe, in his celebrated hypothesis (1956) based on his knowledge of Amerindian languages, viewed the phenomenon in more philosophical fashion. Language, he says, reflects the world-view of the speaker. Thus in Hopi units of time are expressed not in numerals but in ordinals, 'on the third day' rather than 'in three days'. This style, he claims, points to a cyclic as opposed to a linear appreciation of time.

LINGUISTIC AND POLITICAL BOUNDARIES

For various reasons, not least the invention of the printing press and the translating of the Bible into the vernacular, the nations of Europe since the Reformation have become increasingly aware of the qualities of their own languages, which they regard as crucial to their identity. In the re-partition of Europe and the Near East by the Treaties of Versailles and Lausanne after the First World War, language boundaries were used to delimit the new nationstates.

Unfortunately, language boundaries are rarely clearly defined. There are, it is true, instances where a marked geographical feature divides languages. The

terai swamps below the Central Himalayas separate the Gurkhali- and Dogra-speaking hill-folk from the Bihari- and Hindi-speakers of the plains. Between Turkey and Syria the political frontier for most of its distance follows the railway under the escarpment which sharply separates Turkish speech from Arabic.

Such cases are, however, exceptional. Usually language boundaries are wide and transitional, and within them mixed patois tend to be used, as words and expressions are borrowed in both directions. It is said that a good linguist walking across Europe would gain the impression not of regions of distinct speech, but of dialects and languages shading imperceptibly into one another. Hence the difficulty of defining satisfactory political boundaries on linguistic criteria, and the disputes that followed the Versailles settlement over the frontiers in Schleswig-Holstein, Alsace-Lorraine, the Sudetenland, the Adige, Trieste, and elsewhere.

Of course, one harsh way of making such boundaries more satisfactory is through the movement of outlying groups of speakers of a minority language to the country where their own language prevails. After the First World War, over a million Greeks from the newly defined Turkish Republic were exchanged for about half that number of Turks from the Balkans. The same two communities experienced another painful mass-exchange following the 1974 partition of Cyprus.

It has been remarked above that the central part of the southern Turkish frontier marks a neat linguistic divide: but near the Mediterranean in the Hatay (the former Sanjak of Alexandretta), and beyond the Euphrates in the Vilayet of Mosul, the situations are more complex. In both districts the grain of the relief runs north-south, and in the one case Arabic-speakers have moved northwards among Turks, and in the other Turks southwards among Arabs. The situation was complicated in both cases by the presence in large numbers of a third community—Alawites in the Hatay, Kurds in the district of Erbil. The Sanjak became part of Syria until 1939 but since then has been Turkish and renamed the Hatay. The Mosul Vilayet of course has remained part of Iraq.

At Versailles, unfortunately for them, some sizable linguistic groups were not considered large enough for political hegemony, and the resentment of the Kurds and Armenians at being denied statehood still lingers.

It is evident that since the Second World War the sense of linguistic and cultural identity within minorities, and associated demands for more independence, have generally become more vociferous and powerful, not only within Europe but also further afield. In Wales and in the Basque country in particular, demands for a greater degree of autonomy have been associated with a pride in their distinct languages. In India, after the Partition of 1947, when the country was divided into new provinces under a federal constitution, the boundaries were drawn on linguistic criteria.

PIDGINS AND CREOLES, AND OTHER MIXED FORMS

The process opposite from linguistic separation is that of linguistic fusion, where a new patois emerges from the mixing of two or more languages. This phenomenon is different from that referred to above, of the evolution of 'intermediate' dialects in the frontier zones between major language areas. Pidgins (the expression probably derives from the phrase 'business [-talk]') and Creoles are characterized by:

1 The absence of precise territorial definition, and the diffusion primarily by sea through island or coastal regions (Creoles in the West Indies, Pidgins in the East Indies, Swahili in East Africa).
2 The circumstance of the contact, usually from motives of commerce, between an intrusive higher and a more simple native culture.
3 The language of the former is drastically simplified in its grammar and vocabulary and adopts selected words from the latter. Awkward circumlocutions have often to be coined to replace abandoned grammatical forms (the suffix '-Mary', for example, to indicate the feminine).

The Creoles of the West Indies vary according to whether the main parent language is English, Spanish or French, the native element being Carib mixed with imported Bantu.

The several Pidgins of South-East Asia are generally based on a simplified English mixed with Malay and some Chinese forms, while the Swahili of the East African coast is a patois that combines local Bantu with intrusive Arabic.

There used to be a maritime lingua franca in the Mediterranean, which drew on several constituent languages and still survives to some degree in Malta: but it consisted mainly of a rich technical vocabulary to do with ships and navigation, and was too specialized to be classed as a Pidgin. Afrikaans is another mixed form (Dutch-Bantu) which grew up in a colonial time and setting, but would not fit into the strict Pidgin/Creole category, by reason of its more complex and literary structure, its inland spread, and its use in circles wider than the purely commercial.

Urdu (strictly Zaban-i-Urdu or Language of the Camp) is an artificial assemblage compiled for the mercenary armies of Mogul India, mainly from Hindi, but with vocabulary and constructions taken from Persian, Arabic and English. Hindustani, the 'civilian' version of the language (though virtually the same as the military form, Urdu) has become effectively the lingua franca of the northern part of the Indian sub-continent, as has English of the southern (Dravidian-speaking) Deccan.

Another special case is that of Yiddish, a German-Hebrew amalgam which evolved in Eastern Europe, but which now has a wider currency. In this case, as with Afrikaans and Urdu, perhaps the crucial feature which would put them in a

class distinct from the Pidgins is that all three have inspired a significant body of literature.

EXPERIMENTS TOWARDS A UNIVERSAL LANGUAGE

One consequence of the decline of Latin as the vehicle of knowledge after the Reformation was the use of national languages in learning and science, which became fashionable within the academies of Europe during the seventeenth century. At the same time, there was a widespread feeling that a common means of international communication was needed to replace Latin.

Leibniz, in devising his system of mathematical notation, corresponded with Jesuit missionaries from China to find out how symbolic (logographic) writing could be used across language barriers; and he went on to speculate on the possibility of devising a universal language.

The same question concerned Descartes, Grimm and the French Encyclopaedists. George Delgarno of Aberdeen published in 1661 his *Ars signorum,* a lexicon of ideas, as the basis for a common language. Shortly after, in 1668, Bishop Wilkins in his *Essay towards…a Philosophical Language* devised not only a universal language but also a universal script, founded on concepts. A similar but more enduring enterprise in a less ambitious field was Linnaeus's *Systema Naturae*.

In the last century there have been several well-intentioned attempts to formulate an international language, Volapuk, Esperanto and Interlingua being the best known, but in practice C.K.Ogden's Basic English, with its 850 words, has been the most successful.

LANGUAGE AND WRITING

Writing of course is not necessarily directly related to language, and in its basic form of pictography or ideography it is a method of conveying a meaning that is quite independent of speech. The same symbol can be understood by observers who would express its significance in different languages; and this quality explains the survival of pictography for symbols intended to convey simple instructions of guidance in the fields of travel, commerce, technology and cartography. The earliest writings of this kind were devised in Egypt and Mesopotamia for the recording of taxation, trade, food distribution and landholding. In order to express personal- or place-names, for which no pictogram was available, symbols were selected not for their pictographic meaning but for the sound of their names, and were arranged in the appropriate sequence to construct the required proper names. It was quickly found that a limited repertoire of a few dozen sound-signs was adequate for this purpose, and in this way there emerged the syllabaries of the Egyptian hieroglyphic and hieratic and the Mesopotamian cuneiform scripts.

The ideographic scripts of the Far East never reached this degree of

simplification, until the relatively recent invention of the Japanese syllabary. The pictographic writings of the higher civilizations of pre-Columbian America likewise remained at this undeveloped stage.

The most important advance in the history of writing occurred, probably in Sinai or nearby in the late second millennium BC, in a Semitic-speaking community who found that for their purposes it was possible to omit the vowels of the syllabic signs and thus reduce the number required to the two dozen or so of the first alphabet. This invention, which made writing more simple and flexible, swept quickly, generally as a medium of commerce, through the civilized world, in two main forms. The North Semitic letter-shapes were adapted, through the addition of vowel letters, to make the Greek and Latin and derivative European alphabets; and much later, through the spread of Islam, to write Persian, Urdu and Turkish. The South Semitic letters inspired the Indian Brahmi script, and this in turn the several alphabets of South-East Asia and that of the Old Turkish inscriptions of Mongolia.

It is manifest that the present pattern of distribution of languages has taken shape within historic times, very often through the diffusion of emigrant conquerors from areas of pastoral nomadic economy. Though languages are never static, and are subject to constant superficial modifications, basic grammar and vocabulary are remarkably conservative; even the gypsy tongue, which has been influenced by numerous local contacts through more than a thousand years, retains recognizably many of its original Sanskrit roots.

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