they were certainly a political reality in the Aegean. Phoenician city-states enjoyed the greatest amount of independent power in the period between the withdrawal of Egyptian rule from Syria and the western advance of the Assyrians. The Phoenician language belongs to that sub-division of the Semitic language known as Canaanite, which includes Hebrew and the dialect of Mosiph. Although not a particularly literate people themselves, their main interest being trade, the Phoenicians became instrumental in the diffusion of the Semitic consonant-script throughout most parts of their trading empire (inscriptions have been found in Cyprus, North Africa, Malta, Sicily, Sardinia, Marseille, Greece and Spain) and, indirectly at least, in the creation of the Greek alphabet — which was to become the basis of Western civilization.

The development of the Phoenician script (3rd—2nd centuries BC) in all its colonial subdivisions — Cypro-Phoenician (c. 10th-2nd centuries BC) and the Carthaginian or Punic script with its secondary branches (the last discovered Punic inscription dates from the 3rd century AD) — was, like that of the early Hebrew and early Aramaic scripts, purely external. The number of letters (twenty-two) and their phonetic value remained the same, and the direction of writing stayed horizontal, with the script running from right to left in nearly all recorded cases (fig. 53).

53. Phoenician inscription on some commemorating the dedication of gold pillars by Melch-Yashon, king of Kittim and Elathon (Cypria) to the god Reshef-Melch. From Elathon, Cyprus, 391 BC. (British Museum, Department of Western Asiatic Antiquities, 125315)

ARAMEIC

The original home of the Aramaic-speaking people is unknown; they apparently entered Syria and Mesopotamia from north-eastern Arabia in waves of immigration mainly between the 13th and 11th centuries BC. This was a period of great political and social instability, and the newcomers seem to have taken ample advantage of the situation. Soon they established a chain of small, but strategically well-placed, kingdoms along the international trading highways, with Damascus, Aleppo and Carchemish as some of the most important centres. Their political prominence was short-lived, and during the 8th century BC they again lost their independence to the Assyrians. Culturally and economically however they not only survived the decay of their city-states, but by the 7th century BC the Aramaic language, written in the Aramaic script, became the lingua franca of the empire. Under the Persian Achaeamenides, Aramaic was one of the official languages, and the principal speech and script of traders between Egypt and India. Whereas the Phoenician script, despite its wide use among trading communities, had been a national script, the use of the Aramaic script was not politically motivated, and therefore was never

North Semitic scripts

The Semitic scripts fall into two, considerably different, main branches: the North Semitic and the South Semitic cycle of scripts (with the latter being less important). The North Semitic scripts in turn split into various branches; the two most important ones, which became in one way or another responsible for the development of a large number of contemporary forms of writing, were the Phoenician and the Aramaic.

PHOENICIAN

The Phoenicians, whose recorded history begins c. 1600 BC, with the expansion of Egyptian power in western Asia, had at one point settled along the seashore of Syria/Lebanon. From then on essentially a seafaring nation, they were brilliant navigators who ventured far beyond the Pillars of Hercules (Gibraltar), the much feared boundary of the ancient Mediterranean world, reaching at least as far as Cornwall, and the west coast of Africa (and at the beginning of the 7th century BC they probably circumnavigated Africa). With an eye to possible trading monopolies they carefully guarded the secrets of their discoveries and sea-routes, and though much that was previously attributed to Phoenician influence must now be regarded as a legacy of the preceding Cretan trading empire, by the 12th century BC
endowed with, or hampered by, nationalistic feelings: it was freely used by many different nations for purely practical purposes.

The outward appearance of the oldest Aramaic letter-signs differed little at first from those of the Phoenician script, but gradually special characteristics began to emerge: the tops of certain letters such as b, d, and r (originally closed) became open; a tendency to reduce the numbers of separate strokes in certain letters appeared; and finally angles became more rounded, and ligatures were introduced — in other words, the whole script became slightly more cursive (fig. 54). Until the 3rd–2nd century BC the Aramaic script preserved a fairly homogeneous form. After that it split into several branches which developed independently of each other, some of them gaining great prominence in their own right. These were the Hebrew square script, the Pahlavi script, the Syriac script, the Nabataean and the Arabic script, and the Mandaic script. In Iran and in South and Central Asia the Aramaic script gave rise to a great many borrowings, which will be discussed later.

HEBREW

A third offshoot of the North Semitic script was Paleo-Hebrew, or, as it is sometimes referred to, Old Canaanite. This was a strictly national script more or less restricted to the people of Judah. By the 5th–4th century BC it was supplanted by one of the offshoots of the Aramaic script, namely the Square Hebrew. According to both Christian and Jewish tradition, the 5th-century reformer of Judaism, Ezra, was responsible for the adoption of this script for the writing of the Scriptures (119, p. 365), thus giving it the official seal of approval and safeguarding its future prominence. Square Hebrew became the Hebrew script as such and after the 2nd century BC was the one most used by Jewish communities. Its outward appearance changed little, despite the fact that after the Babylonian exile an increasing number of Jews lived outside Palestine — an indication perhaps of connections between scribal schools inside and outside Palestine. Today it is still the vehicle for the religious and secular literature of all Jews, having gained a new status with the foundation of the state of Israel.

Square Hebrew letters are bold and well proportioned, though strictly speaking the invisible frame within which each letter is written (nearly all letters have a top bar or head, many have a base as well) is rectangular rather than square. The letters m, n, p, t, and y form of k have two forms, one when standing initially or medially, and another in a final position. Like all Semitic scripts Square Hebrew is a purely consonantal script — though, as we have already seen, some letters, generally referred to as mater lectionis, could be used for the representation of long vowels. In addition letters were used as numerical signs, the first nine representing units (1–9), the next nine representing the tens (10–90), and the last four the numbers 100, 200, 300 and 400.

When Biblical Hebrew became extinct as a spoken language, familiarity with its pronunciation decreased and the need for some form of vocalic distinction to safeguard the correct reading of the Hebrew Scriptures grew more urgent. According to the Talmud, “the omission or addition of one letter might mean the destruction of the whole world” — a sentiment shared and repeated almost verbatim by the Indian Brahmans in relation to their sacred (orally transmitted) Vedic texts. It is not altogether clear when and how vocalization by means of punctuation marks, consisting of little dots or dashes placed above or below the consonants, was first introduced, but it was probably towards the 5th or 6th century AD, with the older Syriac vowel induction system acting as model. Three main systems of vocalization are known: the Babylonian, the Palestinian and the Tiberian (fig. 55). The use of punctuation marks remained strictly optional, however; they are never used on synagogue scrolls, but appear regularly in the printing of the Bible.
During the long centuries of the Diaspora, local styles developed — despite the continuous effort of scribes to remain faithful to the traditional form of letters, especially when copying the Torah scrolls. The two main types are Ashkenazi, used in north and eastern Germany, and Sephardic, used in Spain and in the Mediterranean world. The Hebrew script also had to adapt itself to the writing of other languages such as Arabic, Persian, Turkish, the language of Jews in China and India and to Judaeo-German and Judaeo-Spanish. In addition to the square script two other styles were used; the rabbinic (fig. 56), used mainly by medieval Jewish scribes, and a cursive script, which became responsible for the creation of many local variations in the Levant, Morocco, Spain and Italy.

SYRIAC

The Syriac script (fig. 57) played an important role in the history, development and dissemination of eastern Christianity. It shows, especially in its earliest forms, a close relationship with another offshoot of Aramaic, namely the cursive form of the Palmyra script — both having a tendency for their letters to be joined together. The order of the
letters is the same as in Hebrew (a definite order of letters being one of the characteristics of all Semitic scripts), though there is some difference in the naming of the letters. As in Arabic, most letters are written differently according to whether they stand alone, at the beginning of a word, at the end of it, or joined on one or both sides to another letter.

Syriac was predominantly the language and script of Christian literature. Indeed all original documents written in Syriac dealt exclusively with Christian subjects. Antioch and Edessa were important centres of early Christianity and remained so until the 7th century AD, when in the course of the Islamic conquest Syriac was replaced by Arabic. At Edessa the Christian faith was preached as early as the 2nd century, and from there it spread to Persia and the East. In the 3rd century the Scriptures were translated from the Greek, which meant that a great number of Greek words had to be transcribed into Syriac. The difficulties of transcribing words from a non-Semitic language, already written in an alphabetic script, into a Semitic consonant script was no doubt a contributory factor in the development of the three vocalization systems, namely:

1. The Nestorian system, the earliest, which consisted of a combination of the consonants ʾa and ʾa and a dot placed above or below it, and of one or two dots placed above or below the consonant to be vocalized.

2. The Jacobite system, created c. 700 AD, which consisted of small Greek letters placed below or above the line.

3. The late Syriac system, consisting of a combination of diacritical vowel marks and small Greek letters.

Over the centuries, variations of the original Syriac scripts, mainly based on the above vocalization systems, came into being. The most important of these, and the only one in existence until c. 500 AD, is the so-called Estrangela (from sāter āngelo - evangelic; ędzi, p. 221). In the middle of the 5th century the Syriac Church was divided by two great heresies hinging on the question of the nature and work of Christ: the Nestorians (East Syrians), who held that in Christ's person a divine and a human nature existed side by side; and the Jacobites (West Syrians), who believed that Christ’s person was undifferentiated, being simultaneously divine and human. As a result the Syriac language split into two dialects, developing two different styles of writing. The Jacobite variety became the one furthest removed from the original Estrangela, and remained in use until the 16th century. The Nestorian hand at first (until c. 900 AD) differed little from Estrangela, but it was to gain far greater importance and influence later. In the 19th century it became the model for the New Syriac script, and was also used for printing by East-Syrian or neo-Aramaic Christian and Jewish communities living in the area around lake Urmia and near Mosul and Tabriz.

As the Nestorian Church grew in importance it became increasingly more involved in missionary activities. Since this proselytizing thrust coincided with the opening of the trade routes into Asia, Nestorian monks carried their teaching, their language and their script into the Kurdistan highlands, Central Asia and China (Marco Polo describes the trade routes from Baghdad to Peking as being lined by Nestorian chapels), to the Turks and Mongol tribes of Central Asia, to Turkistan and to the Sogdians. In the 7th century Nestorian monks reached the south-west of India, now the state of Kerala, and gave a new impetus to the Christian communities founded there some centuries earlier. To reproduce the native Malayalam language, eight more signs, borrowed from the syllabic Malayalam script, had to be added. Today a modified form of the Syriac script is still used for the liturgy of the local Saint Thomas Christians.

**ARABIC**

The Arabic script seems to have originated some time towards the end of the 4th, and during the 5th centuries AD from the script of the Nabataeans, originally Aramaic-speaking tribes living in the north, east and south of Sinai. Only a few examples of pre-Islamic writing have so far been discovered. The Arabs, though a language-conscious and poetically gifted people, had little use for writing. They were predominantly nomads without any strong central organization and, like most people of antiquity, they transmitted their literary compositions by word of mouth, each poet training a group of specially-chosen disciples for this purpose. In most of the cases so far discussed the stimulus for the advancement of writing had been an upsurge in productivity, commerce and administration. In the case of the Arabs the stimulus did not come from material advancement, but flowed directly from the creation of the Islamic faith in the first half of the 7th century. The text of the Koran, revealed to Muhammad by the one and only God, and verbatim written down by the Prophet's successors (Islamic traditions claim that Muhammad, like the majority of his contemporaries, was illiterate), had to be recorded and taught without altering a single syllable. Thus a sudden change of attitude occurred in the second part of the 7th century, and writing assumed greater importance in the life of the people. This meant not only writing, but also calligraphy (see p. 165), since the revelations of God had to be proclaimed not only accurately but also with proper reverence — which meant as beautifully and perfectly as was humanly possible. The prohibition against the representation of all living forms acted as an additional, if negative, incentive to this end by channelling much creative energy into the art of writing. This in due course gave rise to a number of well-defined and exceedingly pleasing styles.

The Arabic script consists of twenty-nine letter signs, made up of the original twenty-two Semitic consonant signs, plus seven more designed to represent the finer shades of pronunciation required by the Arabic language. Grammatically and graphically they are arranged differently from those of other Semitic scripts. Some Arab traditions name al-Khalīl (d. 7867) as the inventor of the vocalization system which gained prominence in the 8th century, though its roots almost certainly go back to an earlier pre-Islamic period (see p. 13). Perhaps again Syriac models. (Besides the vowel marks the Arabic script uses diacritical points to distinguish between otherwise identical letters.) The system of vocalization itself is relatively simple, consisting of vowel marks which are written above or below the consonant preceding the vowel, and a sign indicative of the absence of a vowel. To some extent vocalization was less important than in the case of other Semitic scripts, since Arabic remained a living language. On the other hand the sacred nature of the Koran made it necessary to treat the text with the utmost care, with the result that vocalization is an important feature of Koranic texts.

Already in the early Islamic period two distinct styles of writing existed: one bold and angular, the other more rounded and cursive. The first one, basically a monumental style, formal and geometrical in its features, was termed Kufic (fig. 58) after the Moslemopitan city of Kufah where it is said to have been developed. Kufic was used with great effect on stone and metal for carved and painted inscriptions on the walls of mosques. With the rise of Islam it also became a favoured style for the writing of the Koran. By the 12th century the use of Kufic began to decline. The other style, Nashki (fig. 59), became the model for a number of different styles which developed at the courts of non-Arab rulers; it is also the parent of modern Arabic writing.

Of all the Semitic scripts, Arabic has gained the greatest prominence. Today it is the most widely-used form of writing after the Roman alphabet. Islam had united the Arabs, and by doing so it had unleashed tremendous expansionist energies, fanned by a burning
proselytizing zeal. Hardly more than a century after the death of Muhammad (632 AD) the new faith extended from Spain to India and China, and in consequence the Arabic script had to be adapted to several non-Semitic languages in Europe, Asia and Africa. The use of the Arabic script spread even further than the Arabic language, for since the Koran has to be studied in Arabic, every Muslim, whatever his nationality and daily speech, must, in theory at least, become conversant with the writing and reading of Arabic.

South Semitic scripts

The origin of the South Semitic scripts (which were discovered only during the 19th and 20th centuries in the course of adventurous and at times disastrous expeditions) is to some extent still being debated (ibid., p. 277). Between the 8th century bc and the 6th century ad, southern Arabia was an important centre of civilization, an agriculturally well-tended region, with flourishing city-states, where goods from India and the East were trans-shipped to be carried overland to ports in the eastern Mediterranean.

South Semitic scripts can be divided into two sub-groups: the North Arabian scripts, used, according to inscriptions so far discovered, in north-west Arabia up to Syria, and the South Arabian scripts (fig. 60), which seem to have had their area of dissemination in the south of the Arabian peninsula and on the African side lying opposite.

58 Koran written in Kufic; probably from North Africa; 9th/10th century. (British Library; Oriental Collections; Or. 1397, f. 13v)

59 Koran copied in fine large Indian Naskhi vigat on Thuluth; 1612 ad. (British Library; Oriental Collections; Or. 13203, ff. 96v/96r)
SABAEAN
A large number of inscriptions so far discovered are in the South Arabian Sabaeanscript, an elegant and imposing form of writing, decidedly monumental in character, with itsletters carefully arranged and executed—often, especially after 300 BC, in hollow relief. A distinctive feature of the Sabaeanscript are the so-called "monograms", that is, the combination of several letters into a coherent group.

ETHIOPIAN
Towards the end of the 1st millennium BC and about the beginning of the Christian era, the South Arabian Semites, together with their language and some form of South Arabian script, migrated to Africa where they established a kingdom with Axum as its capital, in the neighbourhood of the old Merotic kingdom (see p. 65). The indigenous language of Ethiopia or Abyssinia, as it is often called, was non-Semitic, belonging to the Cushitic group of languages. The earliest evidence of a decidedly Ethiopian form of writing (on coins and inscriptions) comes from the 4th century AD, the time when the country was first introduced to Christianity by Greek-speaking Syrian missionaries. Inscriptions from this period are still strongly intermixed with South Arabic (script and language) and not yet vocalized. Among the Semitic scripts so far discussed, that of Ethiopia was to develop a number of unique characteristics, which included a visually different appearance, a new arrangement of the letters, another direction of writing (from left to right) and, most important, a systematic and obligatory form of vocalization (cf. 61). Whereas in Hebrew, Arabic and Syriac, systems were devised which indicated vowels by additional points above or below the consonants, in the case of the Ethiopic script the vowels were, and still are, indicated by the addition of small appendages to the basic consonant, either to the right or left at the top or bottom, or by shortening or lengthening one of the main strokes, or by other differentiations. The resulting script, which consists of twenty-seven consonant signs and seven vowel indications, bears great resemblance to the syllabic scripts of India; it has in fact itself become a syllabic script. In addition, in a manner similar to Indian conventions, all consonants are perceived with an inherent vowel, a short a, unless otherwise indicated.

This transformation of a consonant script into a syllabic one has given rise to a good deal of speculation. Causes put forward for it have included the inventiveness of one particular person, a general script reform, and/or the influence of foreign models—Greek, or (more plausible perhaps) Indian.

Semitic scripts in Iran and Central Asia
Semitic traders and Christian missionaries, as well as fugitive communities, took the knowledge of their particular form of writing along the old caravan routes across Central Asia and right into the border areas of China. Written records and accurate information storage had become an important tool of commerce and religious propagation. In consequence various scripts, some more and some less effectively, some long-lived and some quickly forgotten, replaced or improved, developed in Iran and Central Asia. Nearly all of them derived directly or indirectly from Aramaic (see p. 91), the long-established common script and language of traders between Egypt and India, and the script which the newly-founded Christian communities in the Middle East had quickly adapted to their own needs.

After the 2nd century BC the Persians began to reduce the twenty-two Aramaic letter signs to a mere fourteen, intermixing them with obsolete Aramaic words used like ideograms; for example, the Persian word šah–an–šah—"king of kings", an important title of the Sassanian rulers, was represented by the Aramaic mlh n mlh, but read šah–an–šah—an altogether rather unsatisfactory form of writing. More satisfactory was Avestan, the script used for recording the Zoroastrian scriptures, which employed fifty different letter signs and was somewhat better suited to the recording of an Indo-European language. Eventually the Persian religious leader Mani (d. 276 AD) improved the faulty and ambiguous Middle Persian script by introducing the Syriac consonant script, another offshoot of Aramaic, which he adapted successfully to Pahlavi. The cumbersome old ideograms were largely abandoned, and the new writing was used for Sogdian and eventually spread to the Turkish people of Central Asia.
SOGDIAN

The Sogdian script plays an important part in the history and development of Central Asian writing. Sogdian was an Iranian language, with a script, purely consonantal in structure, consisting of seventeen letters plus two more special signs. To begin with, every letter was written separately, but around the 7th century AD a more cursive and flowing hand developed, which linked the individual signs to each other by a continuous base-line (fig. 62). In all there existed three variations of the Sogdian script: (1) for Buddhist works and for everyday use, (2) for Manichaean works, and (3) for Christian texts.

UGHUR

Until the beginning of the 20th century the existence of the Sogdian language and script had been largely unknown. What was known was Uighur, a script which had developed in the 8th century from a later form of Sogdian, and which survived into the second part of the 17th century (fig. 63). Indeed some offshoots of Uighur were still in use between 1940–45 when for political reasons the Russian Cyrillic alphabet, slightly modified, was introduced for writing the Mongolian language as well as all modern Turkish languages in those areas of Central Asia which had become part of the Soviet Union. To begin with, the Uighur script had been used by the Turkish Buddhists of Chinese Turkestan. It was not a particularly good instrument for writing Turkish, especially when the dots which helped to distinguish certain letters were omitted. The direction of the script was at first purely Semitic, from right to left, but later, under Chinese influence, it was written in vertical columns reading from left to right. When Islam reached Turkestan the Uighur script was replaced by Arabic, but was revived under quite remarkable circumstances some time later.

Until the 12th century the Mongols had never used any form of writing. Consisting of small groups of nomadic tribes, basically made up of extended family clans, they came together in times of need in loose and purely temporary alliances, in which amorphous structure they had never felt the need for any codified form of information storage. All this changed dramatically when Chingiz Khan (d. 1227) welded the often feuding groups into a formidable fighting machine and within a relatively short time established an empire, or at least a sphere of influence, which eventually stretched from Hungary to China. An empire of this size and magnitude, consisting of so many different nations, many of them culturally superior to the Mongols, needed organization, some form of administration and, if not a common language, then at least a common script. According to traditional records it was the great Khan himself who in 1296 AD decided that all officers and dignitaries as well as the members of the ruling Mongol families had to learn to read and write, choosing Uighur for this purpose. Thus Uighur became the script of the Mongol chanceller, just as the Uighur
language served as the language of diplomacy in the whole of Central Asia. It was not an ideal solution and soon attempts were made to replace the Uighur language by Mongolian, written in a script better suited to its linguistic peculiarities. In 1272 the so-called Passepa script (fig. 64), an adaptation of the Tibetan seal script, was introduced by order of the Mongol ruler Kublai Khan, only to be replaced in 1310 by the so-called Kalika script, the forerunner of modern Mongolian (fig. 65). Kalika is yet another adaptation of the Uighur script, with the addition of special distinguishing marks and five signs taken from Tibetan.
Indian and Southeast Asian scripts

Indian scripts

A knowledge of writing seems to have been brought to India by Semitic traders, perhaps in the 7th or 6th century BC, or even earlier. To begin with, the new skill did not make much impression on the cultural life of the people. Hinduism, with its emphasis on stratification and exclusiveness in all aspects of life, not only relied but insisted — more strongly than any other ancient civilization — on the oral transmission of its essentially religious literature. It was not until the Buddha and Mahavira (the founder of Jainism) had considerably disrupted the established order by propagating two heterodox movements which rejected caste, ritual and occupational exclusiveness in favour of a more egalitarian society, that a change in attitude made itself felt. Indeed the first literary evidence indicative of a more widespread use of writing, that is, one not exclusively related to trade and commerce, comes from Buddhist sources of the 5th century BC.

The earliest epigraphical records of a decidedly Indian script form are the often cited rock edicts of the Mauryan Emperor Ashoka (272–231 BC). Written in the language of the people, they served a double purpose: to proclaim the secular achievements of the Emperor who, after a series of ferocious wars and conquests, had created a more or less unified India (an achievement not repeated until 1947); and to announce his spiritual victory over such temporary ambitions, brought about by his conversion to Buddhism. The edicts are written in two different but already fully developed scripts: Kharoshthi and Brahmi.

Kharoshthi

Kharoshthi (fig. 66), short-lived and less important than Brahmi, never spread beyond a well-defined geographical area. It appeared in the north-west of India and in Central Asia on coins, wooden tablets, rough pieces of leather, some gems and on a few rock inscriptions between the 3rd century BC and the 3rd century AD. In Central Asia it survived sporadically until the 7th century AD. It was basically a commercial and clerical script, cursive in character, written from right to left, in most cases with obvious speed and not always too much attention to orthographical detail. In origin it seems to have been decidedly Semitic. Aramaic (fig. 54) had for long been the script and speech of international trade. Under Darius I, the Persians conquered the Indus region and used Aramaic, together with Greek, as the language of administration. The diplomatic intercourse between the Persian and Indian chancelleries led to the use of the Aramaic script for Indian languages (north-western Prakrit), and modifications according to the (phonetic) principles of the Brahmi script might have fostered the development of Kharoshthi.

Brahmi

Only a few of Ashoka’s inscriptions are written in Kharoshthi; the rest, displayed throughout his vast empire, are in Brahmi (fig. 67) — a script which was to play an important role in the development of writing in South and Southeast Asia. Directly or
indirectly, no less than about 200 different scripts can claim descent from Brahmi. Nearly all contemporary Indian scripts, with the exception of those imported by Islam, are in one way or another modelled on Brahmi — even those of the South which serve languages belonging to an altogether different family.

As far as the origin of Brahmi is concerned, conflicting theories have been put forward: the Greek alphabet, a mixture of Greek and Aramaic, the cuneiform script, a South Semitic prototype; a Dravidian (South Indian) form of writing, even Tantric symbols, have been suggested. Nowadays some Indian scholars tend to look for connections between Brahmi and the Indus script (see p.86), but such theories are based more on sentiment than scientific proof. The most widely accepted theory is still the one which derives Brahmi from a (North) Semitic source. We have no records of the early stages of Brahmi. To begin with, most writing was without doubt done on perishable materials, since engraving stone needs considerable skill and the availability of polished models, but by the 3rd century B.C. Brahmi had become perfectly adapted to the sounds of the Indian languages. This could hardly have been achieved by merchants, mostly concerned with speedy communication, but only by those well-versed in the science of phonetics. The correct pronunciation of the sacred Vedic hymns has always been an essential part of the ceremonial aspect of Hindu religion, and an exact, orally transmitted, knowledge of phonetics existed long before the Sanskrit grammarians codified the language in the 5th century B.C. and long before it was committed to writing. By the time of Ashoka, Brahmi, though not yet fully perfected, was already a most rational and scientific script, and one which provided Indian languages with an exact reflex of their pronunciation (something, for example, which can no longer be said about the alphabet and the English language).

What then are Indian scripts? They have been variously described as alphabetical, consonantal, or as an imperfect attempt to convert a consonant script into an alphabet. None of these descriptions can really be justified. Indian scripts are from their recorded beginnings clear syllabic. They consist, with the exception of Tamil, of about forty-eight to fifty-four basic signs, which allow for a sophisticated level of manipulation. The particular features that distinguish all Indian languages and also those derived from them are:

1. All consonants are perceived as syllabic, that is, containing an inherent short a, the vowel which occurs most frequently in Indian languages.

2. Vowel signs are written in their full form only if used on their own or in an initial position; in conjunction with a consonant they are abbreviated to auxiliary signs before, after, below or above the consonant sign.

3. Consonants which have no vowel after them are or if possible amalgamated, usually by writing one above the other, by forming ligatures or by having a special sign added to them, such as a stroke above or below the dot above, indicative of the absence of any vowel. (This principle was already fully developed in Brahmi.)

4. The arrangement of letters is strict phonetic: the vowel signs, short and long, are listed first, followed by the diphthongs as understood in India. The consonants are arranged in seven groups indicative of the way in which they are pronounced, beginning with sounds produced at the lowest level of the larynx, and moving forward to those produced by the tongue, the lips etc. in the following order — (i) gutturals: ka, kha, ga, gha, na; (ii) palatal: ca, cha, ja, jha, na; (iii) cerebral: ta, tha, da, dha, sa; (iv) dental: ta, tha, da, dha, na; (v) labial: pa, pha, ba, bha, ma; (vi) semi-vowels: ya, the various ra and la sounds and va; (vii) vowels: a, ə, a and the aspirate ha. In languages which have additional sounds, those are, as a rule, lodged in the system in a position appropriate to their phonetic value.

5. The direction of all Indian scripts runs from left to right, with the exception of some of the earliest Brahmi inscriptions which were written from right to left or even boustrophedon.

Indian culture has always been plural in all its aspects. Even in the 3rd century B.C. the Brahmi script had not been completely homogeneous. After the 3rd and 4th centuries AD an increasingly large number of scripts began to become differentiated, forming localized groups which were not always easily definable and were often overlapping. Most of them are associated with the names of ruling dynasties, simply because whatever evidence exists comes mostly in the form of royal inscriptions on stone or metal. Surviving manuscripts, that is, records written on perishable materials, are (in India itself) rarely older than 500 years, thus post-dating the most important stylistic developments. Usually the climate has been blamed for the absence of material; but India is not the only country with climatic conditions adverse to the preservation of manuscripts. Though the climate did undoubtedly play an important part, equally important was the casual attitude to the written word which characterizes Hinduism. The text itself has always been considered immensely important, but the written record of it was merely one form of storage, and not the most revered one. Written records could be, and were, regularly copied, though often less faithfully than they were memorized, in order to safeguard the survival of the text. It was not until Muslim influence began to be felt after the 12th century, that the "book" in whatever form was eventually treated with the kind of respect originally reserved for the memorized text.

Linguistically and ethnically, the population of India can be divided into two main groups: the Indo-European speaking people of the north — descendants (though much intermixed) of the original Indo-Aryans, a pastoral people who moved into the north-west of India c. 1500 B.C. — and the Dravidians in the south. There are other minor groups, but those do not concern us in this context. In many ways the Dravidians (a term introduced by Robert Caldwell in the last century) are, as far as any definitive classification of their linguistic and ethnic affinities or their original homeland is concerned, as elusive as the Semurians of Mesopotamia (who, incidentally, also used an agglutinative language). But the modern scripts of the south, as well as those of Sri Lanka (which was colonized by both Indo-Aryans and Dravidians as the present population distribution testifies) ultimately go back to the Brahmi of the Ashoka inscriptions. At present India recognizes about fourteen official languages, written in nineteen different scripts (fig. 68).

SNINC marched in the Indian subcontinent. On the one hand, this fact is the result of the high number of languages spoken in India, but also due to the cultural diversity of the region. The use of multiple scripts has helped preserve the linguistic and cultural identity of different communities within the country.

68 Contemporary South Asian scripts.
Language is an important and contentious issue in India; indeed the various states are based, at least in theory, on linguistic areas. The attempt by India's first Prime Minister to make Hindi, written in the Devanagari script, the official language of the whole subcontinent has never become a reality and as time goes by the chances of its doing so are becoming even less.

69. Siddharmas puṇḍarīka rītī. Fragment of a manuscript from Gilgit (Kashmir) written in Central Asian upright Gupta, on birch bark, 7th–8th century AD. (British Library; Oriental Collections; Or. 11878.A)

Most contemporary North Indian scripts can be traced back to the so-called Gupta script (fig. 69) which developed in the 4th century AD. The characteristic long top line of modern Devanagari, the most widespread script in India, seems to have developed from the top wedges caused originally by the stone cutter's tools when carving the Kutila (or Siddhamatikra) script, a later and highly important branch of Gupta.

TAMIL
In South India variants of Brahmi began to evolve from the 2nd century AD onwards. The ancestors of the Telugu-Kannada group become recognizable in certain local forms from around the 10th century. Modern Malayalam owes much to Grantha (see fig. 16) — the script used for the writing of Sanskrit in the Tamil country — and appears in inscriptions of between the 5th and 8th centuries. This leaves Tamil, the script of the most important Dravidian language, which does not fit as neatly as do other Indian scripts into the mould determined by Brahmi. Instead of the thirty-six or more basic syllabic consonants, Tamil has no more than eighteen. The same signs are used for voiced, unvoiced and aspirated forms. In addition Tamil has no sibilants (s, š and sa), no signs for two of the palatals (j and ž) and no aspirate (ha). It also lacks ligatures, which in other modern scripts help to identify consonants used without the inherent short a. In other words, the principle of economy which we have already encountered in the case of the Cypriot and other Mediterranean syllabic scripts (see p. 70) is taken to considerable lengths; and the ancient Tamil grammarians took pains to counterbalance this deficiency by carefully framing rules not only for correct pronunciation, but (especially) for euphony. Unlike other Indian scripts, Tamil is singularly unsuited to the writing of Sanskrit, the classical and liturgical language of Hindu India, and Grantha was used for this purpose.

Epigraphically the Tamil script becomes identifiable from the 8th century onwards — but this unfortunately means little, since writing on perishable materials is nearly all instances pre-dates, often considerably, the writing on stone or metal. From around the same period come records of another variant of the Tamil script, namely Vatteluttu (see fig. 16), a script which seems to have been widely used in the old Pandya kingdom. Various theories have been put forward concerning the origin of Vatteluttu and its connections with

68. Contemporary South Asian scripts.
both the Tamil and the Brahmi scripts. Vattelutu is a distinctly cursive script, slanting slightly to the left, in all appearance more suited to speed (and the stylus or pen, on palm leaf or some other perishable material) than to monumental use. It seems fairly certain that Vettelutu is older than Tamil, but for quite some time the two seem to have existed side by side — rather like Brahmi and Kharoshthi in the 3rd century BC — one perhaps serving commercial and administrative needs, the other reserved for Imperial use. That both Brahmi Grantha and Vettelutu are responsible for the shaping of modern Tamil is borne out by a variety of facts: for example, the retained paucity of signs, four signs obviously taken from Vettelutu for which there were no equivalents in Grantha, and the Brahmi-inspired order of signs. Taking speculation a step further, one could, without too much difficulty, visualize the possibility of Vettelutu going back to some earlier and quite independent connections between southern India and the West, connections largely based on relations with Semitic, perhaps Phoenician traders. That such trading connections existed is borne out by a good deal of historical and literary evidence.

In the 15th century Vettelutu disappeared from the Tamil country. In Kerala, the south-western part of the sub-continent, it stayed in use for another 200 years. Then a modified form of it, called Koleluru, took its place. Among the Nappilas, descendants of early Arab traders, the knowledge of Koleluru lingered on until it was superseded, only very recently, by a modified and exceedingly cumbersome form of the Arabic script.

Indian scripts in the Himalayan countries, Central Asia and the Far East

In the 3rd century BC Buddhism became the state religion of India. From then on, for well over a millennium, it maintained a dominant position on the sub-continent. Like other creeds created by the revolutionary vision of a small group centred around a single individual (for example, Christianity, Islam and Communism), Buddhism depended from the very beginning on its ability to increase its ranks quickly with a growing number of new converts. Propaganda was essential for its growth and survival, for which the multiplication of basic texts by writing (and later by printing) was more effective (and more convenient) than oral transmission. Together with traders and colonists, monks and missionaries have indeed always played an important part in the dissemination of writing.

In India the 1st millennium AD was a period of great cultural expansion into Central and Southeast Asia. The export of manuscripts to Buddhist centres in Chinese Turkestan brought the Gupta script to Central Asia, where it became instrumental in the development of a variety of scripts which served not only Sanskrit but also Iranian and Tocharian dialects; descendants of Gupta writing remained in use in Central Asia until after the 10th century. Buddhism and Buddhist manuscripts took the Sihdamrakita script as far as China, where, under the name of Siddham, it introduced the knowledge of Indian syllabic writing and a phonetic letter arrangement. In the wake of Buddhism this knowledge spread from China to Korea and Japan and became a contributory factor in some major script reforms (see pp. 83–84).

Tibetan civilization as we know it today, and the origin of the Tibetan script, are closely associated with Songtsen-gam-po, who ruled the country between 620 and 649 AD. Songtsen-gam-po succeeded in unifying the various tribes, and by doing so, he created a kingdom which spread its influence to China and India. Apart from his political achievements, he introduced paper and ink from China, writing from India, and is generally credited with laying the cornerstones of Tibetan orthography. This latter was in itself no mean task. Tibetan belongs to a group of languages entirely unlike the Indian ones, and possesses some quite different sounds. The formation of six new signs and various other modifications were necessary to adapt the original script, though still somewhat inadequately, to those needs. According to tradition, the Indian script model was brought back to Tibet in 632 AD by a minister of the court whom the king had sent to India to study Buddhism and the Sanskrit language. But some scholars have suggested that the Indian system of writing may well have been introduced by way of Buddhist monasteries in Chinese Turkestan or Kashmir. Almost from the beginning two distinctly different styles seem to have existed side by side. One was the dhu-can (head possessing) variety, a beautifully accented script, rather top-heavy like Siddhamrakita or modern Devanagari, which was used mainly for handwritten religious texts (fig. 70), for blockprints and eventually also for printing with movable type. The other was a more cursive form called dhu-med (headless) (fig. 71) which served for correspondence and administrative records. Dhu-can produced some highly stylized 'script', from which the Mongols chose the so-called Pasepa script for the writing of their own language (see p. 194). In the course of time variations of the Tibetan scripts developed in the neighbouring Himalayan countries.

Incidentally, if Chinese records from the Shang period are reliable, knotted cords and tallies were used in Tibet before the introduction of Indian script models.