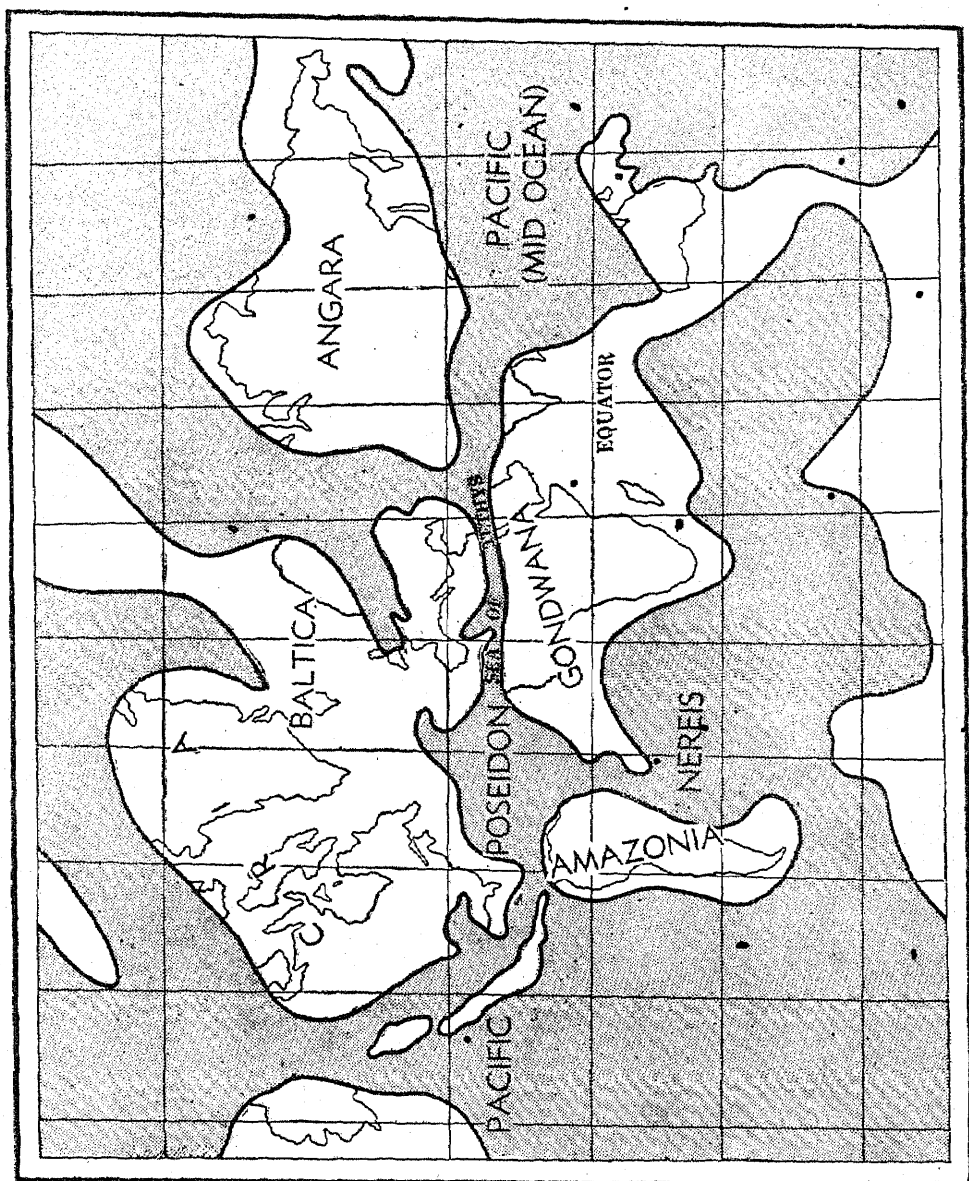


## PRE-HISTORIC SOUTH INDIA



From: THEORY OF CONTINENTAL DRIFT

# PRE-HISTORIC SOUTH INDIA

[*Sir William Meyer Lectures, 1950-51*]

BY

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## PREFACE

• Six lectures were delivered by me in January 1951 on Pre-Historic South India under the Sir William Meyer Foundation for the year 1950-51. These lectures are published with a resume at the end under the head 'Conclusion'. The books of scholars who have worked on the subject, mentioned in the bibliography at the end of every lecture, have been quite helpful to me in the preparation of these lectures.

I am deeply indebted to the Vice-Chancellor and the Syndicate of the University of Madras for inviting me to deliver these lectures and arranging for their early publication.

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# LECTURE I

## GEOGRAPHY AND HISTORY

### Section I

#### *The evidence of Geology*

#### ARCHAEAN ROCKS

In the study of the pre-history of any country the importance of geological factors in their influence upon history cannot in any way be minimised. This is true of the pre-history of South India. Writers on history generally begin with the influence of geography and little or no attention is paid to geology. It therefore becomes necessary for us to take note of this at the outset in these lectures mainly devoted to pre-historic South India. We shall deal with Geology in this section and with geography in the next.

We can recognise in the rocks of South India those belonging to the Archaean era, consisting of a series of granites and gneisses massed in a jumble. The Archaean rocks, all the world over, have attained a complexity of character which is a puzzle even to this day. These rocks in whatever way they might have been formed originally were subject to mechanical deformations. They form the foundation rocks of all the sedimentary systems. About two-thirds of the surface of South India constitute the Archaean rocks. They are mostly found in Orissa, Mysore and Madras where they are largely exposed at the surface. They bear close resemblance to the system of rocks known as Dharwarian in Indian geology. The Mysore geologists believe that the

Era	Period	Age	South Indian Equivalents
Tertiary or Cainozoic	{ Pleistocene Pliocene Miocene Oligocene Eocene	70 million yrs.	Laterite
			Cuddalore Sandstones
			Deccan Traps
			Deccan Traps
			Upper Gondwana
Secondary or Mesozoic	{ Cretaceous Jurassic Triassic		Marine beds of the East Coast
Primary or Palaeozoic	{ Permian Carboniferous Devonian Silurian Ordovician Cambrian	350 million yrs.	Lower Gondwana
		380 million yrs.	
		700 million yrs.	
	Archaean	1500 million yrs.	Vindhyan, Cuddapah, Dharwar, Aravallis, Kurnool Series

Dharwar period was characterised by a tremendous outpouring of basic lava followed by acidic lava. When once they were cooled and contracted they gave rise to a number of fissures. The volcanic flows with their associated dykes perhaps left sediments, now recognisable.

### THE DHARWAR SYSTEM

The Dharwar system is best in evidence in the Dharwar district of Bombay and in parts of the Mysore State, Central Provinces and Chota Nagpur. This system is important from an economic standpoint, for here we find the chief ore deposits of gold, manganese, iron, copper and lead. The Kolar gold fields alone produce more than 350,000 ounces of gold per annum. The Orissa reserves contain 3000 million tons of iron while the deposits of manganese, copper and chromium are extensive. To the same system belong valuable minerals such as mica, graphite, ilmenite etc., and precious stones like sapphire, ruby, beryl etc. The system is also rich in famous marbles like the makrana used largely in architecture.

Another group of rocks found abundantly is a form of granite usually called Charnockite. The Charnockites are found largely in South India and comprise rocks ranging in composition from acid to ultra basic. They are found distributed in the mountains of South India including the Nilgiris, Palnis, Shevroys, Anamalais, Cardamom hills and parts of the Eastern Ghats from Nellore to Mahanadi. The same system of rocks extends to the south-western part of Ceylon.

### THE CUDDAPAH SYSTEM

Towards the end of the Archaean era the whole of South India had become one solid land mass, subject only to sub-aereal denudation. Thousands of years passed. Part

of the land was again submerged beneath the seas to receive the succeeding series of sediments of the Cuddapah system. The deposition went on undisturbed for a long time giving rise to an accumulation of sediments of great thickness, of about 20,000 feet. The Cuddapah sea which retreated from its basin, exposed the rocks to atmospheric denudation for a fairly long time. The partly eroded land was again submerged to receive another series of sediments, the remnants of which are now found as sandstones in Kurnool. The famous Golconda diamonds were mined from these beds. Again, diamonds are found as pebbles in the Banganapalle group just outside the Cuddapah basin. The Narji limestones of the Guntur and Kurnool districts and the Cuddapah slabs are extensively used.

At about the same period, the northern portion of the Peninsula was submerged to give rise to the deposits of sandstones in the Vindhyan region. They are by far the most common rocks. Their composition remains unchanged over long distances. They are characterised by shades of colour, sometimes red or yellow and sometimes gray or mottled. They are useful for buildings and other architectural works.

Towards the close of the period of the Gondwana there was another earth movement in the history of South India but the peninsula remained a solid block little affected by this movement. Subsequent to the formation of the Kurnool series there is a wide blank which perhaps extended over millions of years in the geological history of South India. At the end of this period the Purāṇa sea<sup>1</sup> got linked up with the

1. In 1904 in an article in the Imperial Gazetteer of India, Sir T. H. Holland proposed a new classification of the Indian strata in which the Cuddapah and Vindhyan systems were grouped together under the name of Purana group. The term Purana is used in geological literature.

sea of Tethys<sup>2</sup> which overspread North India, Tibet and China. South India formed a great part of the continental area known as the Gondwana land,<sup>3</sup> which extended through Madagascar and South Africa to South America on the one side and through Malaya Archipelago to Australia on the other. The lowermost beds of the Gondwana system are fixed by indirect evidence as upper carboniferous or permo-carboniferous in age.

Rocks similar to the Gondwana system occur in Australia, South Africa, South America and Antarctica. It is believed that land connections existed between these regions across the Indian ocean, which linked South America through India and the Malaya Archipelago to Australia. Zoology furnishes further proof that the fauna of India have marked affinities with those of Central Africa and Madagascar. Geology accepts the Indo-African land connection as a settled fact though there is a difference of opinion about the mode of continuity and of its geography. According to one school of thought the whole of the region that is now the Indian ocean and the area to the north of it was at the close of the Palaeozoic in Permo-carboniferous times occupied by two separate masses of land, the great continent of 'Angara' with its Gigantopteris type of flora and secondly the continent of Gondwana characterised by Glossopteris flora, extending from Australia through peninsular India to South Africa on to South America.

2. Tethys is the great mid-ocean which extended perhaps from China to Spain and in which sediments were deposited continuously from Upper Carboniferous or Permian to Eocene age. This ocean comprised not only the present Mediterranean area but also North and South beyond its present shores. The deposits could be recognised in the Alps, Carpathians and Caucasus mountains and in Asia Minor, Iran, Baluchistan, Afghanistan and Tibet. The sea of Tethys separated Angara land in the North (North Eastern Siberia and Central Asia) from Gondwana land (the lands of Brazil, South Africa, Madagascar, Deccan and south western Australia which then were united into a single block) in the South.

3. The system is so called from the ancient Gond kingdom to the south of the Narmada where the formation was first known.

Between these two continents ran a comparatively narrow sea which perhaps united the Atlantic and the Pacific oceans. This seems to have persisted till the commencement of the Cainozoic era, when large segments of it are supposed to have subsided to form the Bay of Bengal, Arabian Sea etc., thus isolating the peninsula of India.

### THE LEMURIAN CONTINENT

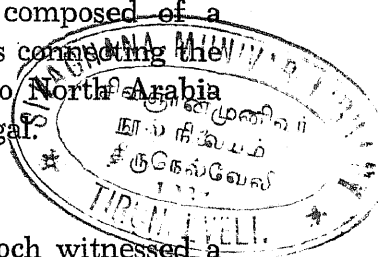
The end of the Cretaceous period and the commencement of the Eocene period saw the disruption of this ancient continental land mass of Gondwana land. Large territories of land either went under the sea or the continent got fissured and drifted apart leaving Australia, South India and South Africa separate. It is believed that India and Africa were still connected by an isthmus to which the name Lemuria has been given. That this was once the case is still shown by supporters of the theory by a line pointing out the position of Madagascar, Mauritius, Maldives and the Laccadive Archipelago. Similarly on the east, a large area of land traversed by a mountainous belt to which the name Madras Mountain belt has been given is supposed to have extended eastward as far as the Andaman islands and occupied the area that is now the Bay of Bengal. In the main Gondwana period (Jurassic) this eastward extension of the Indian peninsula still traversed by the Madras mountain belt is supposed to have undergone subsidence and sunk beneath the sea. About this time also the central part of the continent of Angara is supposed to have subsided thus drowning a greater part of the land. The similarity of stratigraphy persists in Gondwana land through the greater part of the Gondwana era. The Gondwana land now lies scattered over the whole of the southern hemisphere. The connection of India with Madagascar and eastern and southern Africa is not readily obvious, probably because some strips of the crust have been lost during the long

time that elapsed since the drifting began. Madagascar appears to have lain contiguous to Tanganyika and Kenya with which it has structural and stratigraphical similarities. The separation of Madagascar from Africa was probably effected in Jurassic times as also the separation of Australia. Geologically speaking Madagascar, Ceylon and South India afford resemblances. The presence of a series of rocks of a similar nature in these areas supports the suggestion that these areas once formed part of one land mass.

The drift of India north-eastward probably took place in early tertiary times. During the upper Gondwana times (the Jurassic period) the southern sea encroached slightly on the Coramandel coast. The remnants of this are even now found as isolated small patches between Vizagapatam and Tanjore along a narrow strip between the gneissic country and the coast line with their principal exposures near Rajahmundry, Ongole, Sriperumbudur, Satyavedu and Tiruchirappalli. It seems certain that at the close of the Mesozoic era, the Indian ocean was composed of a northern and southern part while the Tethys connecting the Atlantic with the Indian Ocean extended to North Arabia terminating in what is now the Bay of Bengal.

### DECCAN TRAPS

The commencement of the Tertiary epoch witnessed a stupendous outburst of volcanic energy. Gondwana land began to crumble in pieces. This obliterated all the previously existing topographical conditions of the country. The whole area was converted into an immense volcanic plateau. These formations are known by the name Deccan traps. They are particularly found in the area between Bombay and Nagpur over a distance of 500 miles and up to the foot of the Aravallis. The traps are found as far as Belgaum in the south, Rajahmundry in the south-east and





Cutch in the north-west. Their original extent must have been much greater than their present distribution, for denudation has been at work for ages. Pockets of traps are found occurring here and there, separated from the main area by wide distances." Time has rendered this lava plateau into magnificent table topped hills separated by vertical walls. Throughout the area the beds lie nearly flat interspersed by plains and terraced hills. These isolated mountain blocks have often served as strongholds in warfare. The maximum thickness of the Deccan trap is approximately 1500 feet along the coast of Bombay but varies considerably at different places, for instance at Belgaum it is only 200 feet. The vegetation is peculiar and, except for cultivated tracts, the country presents a uniform straw-coloured surface during the cold season and is desolate during the hot season. In spite of its durability the rock is not a favourite building material probably because of its prevailing dark colour. It is largely used however as road metal and also as aggregate in cement structures.

The Deccan traps are a great store-house of quartz, carnelian, onyx and other varieties of chalcedony which are used as semi-precious stones. Sometimes they are made into beads, ringstones, trinkets and ornamental objects. The soil produced by the decomposition of the basalts is a rich agricultural soil. The black cotton soil is said to be due to the sub-aereal weathering of the basalts *in situ*. The precise age of the Deccan traps is a disputed question. The age may be said to range from upper Cretaceous to late Oligocene. In Eocene and Miocene times the sea of Tethys was obliterated by the uplift of the Himalayan ranges. In the south the tertiary seas have left their mark in a few insignificant occurrences like the lime stone beds in Quilon and the Ratnagiri rocks in the Kanara coast and a loose deposit of sandstone in the east coast extending from Vizagapatam to Cuddalore. These are called the Cuddalore sand-

stones and are believed to be of the Miocene or early Pliocene age.

### THE ICE AGE

The close of the tertiary epoch all the world over is marked by a distinct fall of temperature culminating in what is known as the Ice Age or the Glacial age. Whether India, south of the Himalayas was affected by the effects of glaciation is still an open question. The evidence put forth by W. T. Blanford is enough to point out that South India experienced a succession of cold pluvial epochs. Blanford writes : " On several isolated hill ranges such as the Nilgiris, Anamalai, Shevroys and other isolated plateaus in South India, and on the mountains of Ceylon, there is found a temperate fauna and flora which does not exist in the low plains of South India, but which is closely allied to the temperate flora and fauna of the Himalayas. The most remarkable of these is the occurrence on the Nilgiri and Anamalai ranges and on some hills further south of a species of wild goat, *capra-hyrcori* belonging to a sub-genus (*hermitragus*) of which the only known species, *capra-jeemlaica*, inhabits the temperate regions of the Himalayas . . . . " " That a great portion of the temperate flora and fauna of the South Indian hills, has inhabited the country from a much more distant epoch than the glacial period may be considered as almost certain, there being so many peculiar forms. It is possible that the species, common to Ceylon, the Nilgiris and the Anamalai may have migrated at a time when the country was damper without the temperature being lower but it is difficult to understand how the plains of India could have enjoyed a damper climate without either depressions, which must have caused a large portion of the country to be covered by sea, a diminished temperature, which would check evaporation or a change in the prevailing winds ".

## THE LATERITE<sup>4</sup>

The other extensive rock formation which arrests our attention is laterite. Laterite is a kind of vesicular clayey rock being a mixture of the hydrated oxides of alumina and iron with a large percentage of other oxides like manganese and titanium. Laterite is a form of regolith peculiar to India and a few other tropical countries. It has become an important subject of study mainly because it is widely distributed throughout the peninsula and because of the economic considerations that have lately gathered round it. Laterite is soft when newly quarried but becomes hard when exposed to the air, and therefore it is used chiefly as a cheap building material. The low level laterite is abundant on the coastal sides of the peninsula, either east or west. On the east coast it may be said to occur almost everywhere. The climatic and physical features of India are responsible to a great extent for the formation of laterite. In the low lying laterite areas are found largely the earliest remains of the pre-historic man in the shape of stone implements. The age of this low level laterite has been determined in some cases to be post-tertiary (Pleistocene).

## PLEISTOCENE AND RECENT

Among the pleistocene and recent deposits of India the deposits in the valleys of the Narmada and the Tapti may be distinctly mentioned. These rivers begin in deep rock basins and their valley deposits are characterised by the presence of fossils belonging to extinct species of animals. Besides the fossils these ancient river sediments throw light on the existence of the earliest man, as evidenced by stone knives, hatchets, arrows and other implements. These are preserved for us showing thereby that he manufactured

4. The term laterite has come originally from the Latin word *later* meaning a brick.

these out of some hard stone like the Cuddapah quartzite. In addition to these river deposits, there are the teris of the Tinnevely and Travancore coasts and the aeolian deposits of the Godavari, Krishna and Cauvery banks. To these may be added the stalagmitic cave deposits of the Kurnool district. The teris or sand dunes are a common feature along the Indian coast especially on the Malabar coast, leading to the formation of a good number of lagoons and backwaters. We meet with sand dunes even in the interior of the peninsula as in the broad valleys of the Krishna and the Godavari. Evidently a large volume of sand is blown through the valleys during the hot season. This may be true of the Tinnevely coast.

Among the residual soils of India we have to notice one more interesting variety. This is called the black soil or Regur occurring to a great extent in the cotton districts of the peninsula. It is sticky when wet and is able to retain moisture over a long period. Among its accessory constituents are calcium and magnesium, iron and some percentage of organic matter. The presence of these is perhaps responsible for its black colour. Its fertility is immense. Sometimes, it has helped agriculture without either manuring or being left fallow. The Telugu word for black cotton soil is *Regada*. In dry weather it is seamed with broad cracks often half a foot wide and many feet deep. Very large areas are cultivated consequent on its remarkable fertility. There is a large area of Regur soil in Cuddapah, Kurnool and Bellary districts, the origin of which can be explained, only by the rôle of climate in the formation of soils. It occurs generally in regions of high temperature with a low rainfall.

#### THE HUMAN EPOCH

As in other parts of the world the Pleistocene age in India, especially in South India, is marked by the presence

of the earliest man and hence the age is known as the human epoch. The existence of man is revealed to us by the number of relics which have been wonderfully preserved among the gravels of such rivers as the Narmada and the Godavari and also in superficial alluvia both in South and North India. Among these archaic relics are found many stone implements which have been used by the pre-historic man in his daily life. They range from crude stone chippings and coarse flakes to skilfully fashioned knives and needles made of stone, or bone. These artefacts both in their manufacture and in manipulation evince an increasing degree of skill pointing to the progress of humanity from a primitive stage of existence. If we can examine the testimony afforded by these tools and implements we are able to distinguish three stages of the human epoch as can be deciphered from the Pleistocene records, viz., the crude stone age, the polished age of stone implements and the metal age. The discoveries in South India especially of metal tools have indisputably shown that the iron age succeeded immediately after the new stone age. Then copper appeared on the scene. That the primitive Indian used copper implements is evident from a material which he might have obtained from some deposits of native copper in Southern India as testified to us by Bruce Foote in his *Pre-historic and Proto-historic Relics of Southern India*. It is a fact of the utmost importance to note that in other places like the region of the Indus valley in North India it is the bronze age that succeeded the new stone age. Afterwards iron and iron implements appeared. Anyhow this is a matter for the archaeologists to determine.

### CONCLUSION

To sum up, the peninsula has been a land area since the Cambrian period. The rivers have generally flat and shallow valleys with low gradients. 'Block-movements' have occurred at different epochs of its history especially

during the Gondwana period. One notable peculiarity in the drainage system of the peninsula is the easterly trend of its main channels. The Western Ghats form the watershed. The hydrography of the peninsula is peculiar in the distribution and extent of alluvial margin on the two coasts, in addition to the deltaic deposits at the mouths of the Mahanadi, the Godavari, the Krishna etc. The West coast has no much deltaic deposits at the mouths of the streams even of the Narmada and the Tapi. Marine, and estuarine deposits of post-tertiary age are seen mostly towards the southern extremity of the peninsula. In reading stratigraphical geology the student should take into account a number of problems like crust formation, volcanicity, the variations, migrations and extinctions of life forms in the course of ages and a host of minor particulars which are inscribed in the pages of the rock register.

## Section II

### *Historical Geography of South India*

The historical geography of South India is still in the making. The profound influence which the geographical features of a country exercise on its history can hardly be exaggerated though it has not been sufficiently realised. The geography of a country plays a prominent part in the progress of its history and the evolution of its social and economic organisation. In fact, the development of man and his culture are determined by two principal factors, environment and heredity. With this background we may examine the geography of South India and its influence on the history of the country.

South India is in shape an inverted triangle with its apex in the south at Cape Comorin  $8^{\circ}$  north of the equator. The two sides of this peninsula are bounded by the Arabian

sea on the west, and the Bay of Bengal on the east. The base of the triangle, i.e. the northern boundary of the peninsula consists of the Vindhya mountains. Between latitudes 21 north and 24 north we find a group of mountains running in a line across the sub-continent of India. This is what is called the Vindhya-Satpura line. Along with the Vindhyas and the Satpuras mention may also be made of the Ajantas and the Aravallis. The Aravalli hills must have been important in the Palaeozoic times. There is a belief that the peninsula extended from this chain to the present east coast. It is also believed that even after the Palaeozoic era, India and Africa were connected together and the ocean currents swept from the Persian gulf to the Aravallis.

South of the Ajantas lies the country of Orissā. The land south of this triple wall of the Vindhyas, Satpuras and Ajantas is called the Deccan. Apparently, this is the anglicised form of the Sanskrit term *Dakṣiṇa* or *Dakṣiṇāpatha*. South of the Satpura and other hills was once a belt of impenetrable jungle known as *Dandakāraṇya*, where lived in early times, sages and saints, some leading the third āśrama, *Vānaprastha* and others the fourth āśrama of *Sannyāsa*. In the extreme south there are the Tamil land, the Andhra territory and the Malayalam region. North of the Malayalam region and extending into the modern Bombay province is the Kannada country proper. Beyond that is the Maharashtra country.

It can be said that there are three great oceans in the world, the Pacific, the Atlantic and the Indian oceans. Of these the Indian ocean alone is named after a country, viz. India, and India, therefore, was very important even in the early days. The commerce and the trade routes between the continent of Europe and the countries of the Far East have been passing through the Indian ocean since very remote times. Even now the commercial and strategic value

of the Indian ocean can hardly be overestimated. The importance of the Indian ocean is on account of the land masses which lie on its border. Among such land masses India has been dominating on account of its wealth from very early times. No wonder, every foreigner from the East or the West has been attracted towards this land. Likewise there were frequent return movements from India itself, whether it be to Europe, the Near-East or the Malaya Archipelago and other countries in the East. The Indian ocean, the Arabian sea and the Bay of Bengal respectively to the south, west and east of the peninsula of South India instead of completely isolating the region from the outside world have enabled it to maintain cultural and commercial contacts with the neighbouring countries as far as the Mediterranean sea in the west and China and the Pacific islands in the east.

Proceeding to examine the geographical features of the Indian peninsula, we find that it is largely a plateau which reaches its highest elevation in the Mysore country where it rises to about 3000 feet and slopes gently towards the east. The topography of the region with the beautiful landscape which it now affords us is the result of the changes which the country has undergone through a cycle of geological transformation. Like every land of great antiquity, South India has a subdued relief and we cannot show any direct relationship between the external configuration of the area and the internal geological structure. Generally speaking, South India is a region of open valleys and easy slopes in which the rivers flow with slow gradients. The rivers traverse a comparatively flat country and have built up shallow and broad valleys. In South India it is only in the Western Ghats that one finds streams and valleys which are sometimes deep and steep. The streams themselves seem to cut back the heads of the valleys showing thereby that the region has undergone in recent times an



uplift and that the drainage has not adjusted itself to the altered conditions.

If we examine the mountain ranges of the peninsula the old Sahyadri hills now called Western Ghats run almost parallel to the west coast from Cape Comorin to the Tapti valley. There are ghats or passes here and there through which access from and to the coast has been possible. Throughout its length it is broken completely in three places, viz., the Bhore ghat, Thalghat and the Palghat gaps. Of these the Bhore ghat was considered once the key to the Deccan. The Thalghat to the north-east of Bombay does not interest us much.

On analysis the Western Ghats can be divided into two parts viz., the southern half and the northern half. Roughly the northern half comprises the territory between the present Belgaum and the Tapti. This is predominantly covered up with the Deccan traps, which on weathering have given it a characteristic landing stair aspect. Denudation has shaped the trap formation into natural citadels and fortresses which dominate the crest of the hills and they served as military positions of vantage in the heyday of Mahratta supremacy. The Deccan traps in general rise up to 2000 feet. The southern half roughly comprises Mysore, Malabar, Cochin and Travancore and is essentially composed of metamorphic rocks which have an undulating outline. Only in the south we find peaks rising up to 8,000 feet. The Western Ghats run quite close to the sea and form the water-shed of the peninsula. The peninsula which has been a stable land-mass was subjected to sub-aereal denudation, almost from the earliest geological times.

In the east of the peninsula we have the Eastern Ghats more simple in character. The rivers which drain the interior of the peninsula interrupt the rocky coast line by a series of deltas. Between the deltas are tracts of low lands

as we have on the west, and behind them is an abrupt rise of the ground level with an average elevation of about 2,000 feet. They are also broken and discontinuous forming a series of detached hills from Balasore in Orissa to the Nilgiris. They do not have the special features of a mountain chain and the component parts belong to no single geological formation. Perhaps they are only the denuded and depressed relics of a mountain series which might have been contemporary with the Aravallis. Between the Krishna and the Pennar in the Cuddapah district there is a range of hills, being a section of the Eastern Ghats, called the Nallamalais (Black hills). Geologically the rocks are akin to the Cuddapah system consisting of quartzites and some sandstone. The Nallamalais are replete with plateaus. One famous plateau is that of Srisailem which appears to have been once a residential centre. We have yet the remains of towns and forts in the place. It is now the abode of the Chenchus, a forest tribe. Thick forests abound all over the range. But the scarcity of rainfall is felt much. Timber grows and its hardness is unsurpassed. Firewood, and bamboos are a speciality in the region.

Mention must also be made of the Shevroy hills which are indeed a detached range in the Salem district. They cover an area of 150 square miles. At their southern extremity is the town of Yercaud, considered to be a good sanatorium. Geologists find in this range archæan plutonic rocks. Though there are three routes to the hill, the most popular is the ghat on the side of Salem town. There is no abundance of forests though on the high levels one can notice some teak, blackwood and sandalwood. But the soil and climate are agreeable to the growth of coffee, orange, lemon and potato. The native population in these parts are the Malagalis, literally hillmen, but these appear to be of the Vellala community among the Tamils, who have made this their home only a few centuries ago.

The Ānamalais, literally the Elephant hills form a section of the Western Ghats in the south of the Coimbatore district. Like the rest of the hills in the surrounding parts they consist of gneiss. The higher range of the hills contains a number of plateaus, sometimes the peaks running to 8,000 feet. They go as far as the Travancore hills. The lower ranges of the Ānamalais are in recent times used for the growing of tea and rubber. Here we find thick forests mostly containing timber and teak. The Forest college Museum at Coimbatore contains a variety of woods, fibres and other articles found in the Ānamalais. There are plenty of wild animals and elephants found in great numbers. The Ānamalais are inhabited by several jungle tribes of which the Kadars, Muduvans, Pulaiyans and Malasars are the chief. Some of their customs are similar to those of the people of the Malaya Archipelago and the Kongu country.

The Nilgiri Plateau:—The meeting place of the Western Ghats and the Eastern Ghats is represented by a group of hills to which is given the name Nilgiri plateau. The Nilgiri hills consist of charnockites and they have nothing like the steep edges or knife-like ridges which are familiar to the Himalayan range. The characteristic feature of this plateau is that it is an elevated one not quite different from the surrounding low lands. Here and there in the plateau are deep-cut valleys though not to a considerable extent. This is a testimony to the comparative recentness of the hills. The Nilgiris have abundant rainfall and equally abundant vegetation. Ootacamund is the queen among the hill stations in India. In summer it was the abode of the Governor and also the Government departments. It is interspersed by streams of clear-water running in shallow channels and contains forest tracts separated by spaces of marsh land and bog. The forest territory goes by the name of Sholas to-day. It is interesting to find that these hills form the orthographical apex of the Deccan highlands which

occupy a considerable portion of the centre of the peninsula. On the west and the east they are surrounded by the low lands. On the south the Western Ghats continue to run through the Ānamalais to a considerable portion of the southernmost point of the peninsula.

Detached masses of hills like the Palnis and the Salem hills branch off to the north-eastern sides almost close to Madras but they wonderfully preserve the structural outlines of the southern parts of South India. It is interesting to note here the intimate relation between the Nilgiri—Palni group of hills and the physiography of Ceylon. From this D. N. Wadia infers<sup>1</sup> that in some respects at least the structure of Ceylon furnishes the necessary key to the tectonics of South India. The group of Nilgiri-Palni hills and the Cardamom hills lying in the south-eastern direction have on their western and south-eastern sides gigantic precipices. Though they had been subject to the weathering of ages, still they represent the most striking features of the South Indian landscapes. The Nilgiris contain cliffs 6,000 feet high rising above the peneplain of Coimbatore. The extraordinary abrupt inequality of the ground like the Pykara precipice of 3,500 feet in a very ancient archæan terrain can only be ascribed to the recent mechanical dislocation and block uplift. The waterfalls of this region, now happily harnessed for electricity and power development show that the topography has not reached maturity and that disruptions in the river courses have happened in more recent times. Likewise the fault scarp nature of the precipices in the south-east phase of the Palni hills is no less apparent to any observer looking down from Kodai-kanal on the plains of Madura nearly 3,000 feet below. It is believed that these upheavals took place in the tertiary age.

1. Presidential address: *The making of India*, 29th Session of the Indian Science Congress, 1942.

The Nilgiri and Palni escarpments are from their very nature different from the table-topped square cut hills of the Deccan traps. Perhaps this is due to the difference in the nature of the materials composing them. The plateau does not bear any stamp of erosion but seems to consist of upraised hills with an orographic axis, formed later. The faults which are abundant in the mountains of South India are by no means peculiar. The fault-bounded depressions filled with sediments of the Gondawana age are found along the Godavari, the Mahanadi and other rivers where coal is locked up. Similarly, the straight-line of the Malabar coast is a long prominent line of fracture. Generally speaking the drainage of the region is eastward. All the rivers flow from west to east though the case of the Narmada and Tapti is different.

The separation of Ceylon from South India was probably a phenomenon of a somewhat later date. The island of Ceylon is geologically speaking a part of peninsular India. In most respects they resemble each other. The continental shelf is broad at Cape Comorin and includes Ceylon with an indentation pointing towards the gulf of Mannar. The island is itself built up of archæan rocks except for a narrow coastal strip. The disposition of the rocks suggests a southerly continuation of the Eastern ghats. If we closely examine the south face of the island, the inference is irresistible that it resembles in most respects the rocks of Travancore. Possibly the separation from the peninsula took place during the middle period of tertiary epoch.

The block mountain and fault-basin structure have enabled the economic exploitation of minerals in South India. Already mention has been made of coal. Another commercial product is mica and in addition are the wide stretches of richly aluminous laterite. The peculiarity in structure is again responsible for the waterfalls of the region whose economic importance can hardly be exaggerated. To

the same structural peculiarity may be ascribed the frequent find of iron and manganese ores almost at the surface. Probably the occurrence of the age of iron immediately after the stone age in the peninsula is due to this.<sup>2</sup>

This configuration of the different chains of hills, big and small, running in the most fantastic confusion has resulted in the division of the country into a number of geographical units, independent of one another, and each having certain special characteristics of its own. A sense of separateness and isolation was developed in each of the geographical units which led to the existence of numerous tribal groups in the country, each having its own culture in pre-historic times, and the formation of a number of independent kingdoms often fighting against one another. Thus the cultural zones in South India in pre-historic times had their basis on the environment, such as the hilly region, forest country, pasture and agricultural land, sea-side area etc., and in each such unit developed a particular kind of culture.

A study of the history of South India in more recent historical times shows the emergence of kingdoms and chieftaincies in the different geographical units. Thus in South India there grew up the three well known kingdoms in the Tamil country, namely those of the Cheras, Cholas and the Pāṇḍyas as also the eighteen semi-independent chieftaincies like those of the Tiraiyans of Kāñcī, Malayamans of Koval, the Adigamans of Tagadur, the Marans of Mohur, the Āys of Aykudi in the region of the Podiyil hills, to mention some. Even now in the popular summer resort, the Kodaikanal hills, there was a chieftain who was the lord of the adjoining hills. In the northern limits of the Tamilagam even in the middle ages there were certain local chieftaincies like those of the Alupas, Nolambas, Bāṇas, Vaidumbas, Telugu Codas, Sambuvarāyas, etc.

2. Vide *Supra*.

The existence of the geographical barriers stood in the way of the political unification of South India, except for short periods under the able rulers of one or other of the major kingdoms that flourished in the region.

### RIVERS AND RIVER VALLEYS

If we closely examine the river systems of South India, a few types may be observed. First, rivers like the Mahanadi, Godavari, Krishna, Kaveri, etc., flow in the south-eastward direction and fall into the Bay of Bengal. Secondly, mention has already been made of the Narmada and the Tapti flowing westwards to the Arabian Sea. Thirdly, there are again innumerable small rivers flowing over to the Arabian Sea and fourthly, there are some rivers like the Son which drain north-eastward to the Gangetic Basin. But the bulk of the drainage of South India is to the Bay of Bengal effected through the large river basins. The river valleys here are all in the adult stage, broad and shallow with low gradients ; the bigger rivers have developed deltas. Consequently, there is not much momentum except in times of flood ; normally speaking they are only agents of deposition. In the upper reaches of some of the rivers of the Western Ghats we find cascades and waterfalls. Mention may be made of the Sivasamudram falls of the Kaveri and the Pykara falls in the Nilgiris.

One of the important rivers of South India is the Godavari. It takes its source in the Nasik hills of Bombay and cuts through the Hyderabad state and a good portion of the Madras Presidency. It is in length about 900 miles. In its upper reaches it is shallow and its tributaries are the Wardha, the Penganga and the Weinganga. Gold-washing was once an important industry afforded by the river. Nearby another river called Indravati flows through wild forests, the home of the Gond tribes similar to the Bhils of the Narmada region. The Godavari waters have been harnessed for irrigation. Another river of importance

is the Krishna which takes its source near Mahabalesvar. Its great tributaries are the Bhima in the north and Tungabhadra in the south. It breaks the Eastern Ghats and becomes useful for irrigation. An anicut has been constructed at Bezvada (now Vijayavada).

The Kāveri:—This is known as Dakshinaganga rises in the hills of Coorg and flows in a south-easterly direction. Its upper course is tortuous. The bed of the river is rocky and the banks are steep and covered with rank vegetation. It is the one river which has been harnessed for purposes of irrigation since remote times. We hear in the beginnings of the Christian era of one Karikāla Chola building embankments to the Kaveri so as to utilise its waters for various irrigational schemes. The grand anicut consisting of a solid mass of stones over 1,000 feet in length, 40-60 feet in breadth, and 15 to 18 feet in height, stretching across the whole width of the Kaveri was probably reconstructed in the early centuries of the Christian era. In recent times an anicut more than 2,250 feet in length has been constructed across the Coleroon branch of the river. As many as 12 dams have been erected in the Mysore state to intercept its flow, and a little more than a decade ago, the largest dam in South India has been constructed across the river at Mettur near Salem for the dual purposes of irrigation and power generation. In its course, the Kāveri cuts through sacred spots, Srirangapatam and Sivasamudram in the state of Mysore and Srirangam near Trichinopoly.

To these may be added four minor rivers which are historically important and which contribute to the alluvial wealth of the maritime districts of Madras. These are the North and South Pennars, the Palar and the Vaigai. The chief physical characteristic of the east coast is its deltaic wealth and agricultural abundance. There are two Pennars, one the northern Pennar known in Sanskrit as Uttara Pinakini, and the other Dakshina Pinakini or southern



Pennar. The latter is also known as Pennaiyar. The northern Pennar rises on Chennarayanpetta to the north-west of Nandidoorg in the Kolar district of Mysore, traverses Anantapur and passes through Cuddapah and falls into the sea south of Nellore. The river flows through the Nellore district and is valuable for irrigation purposes. At Nellore a dam was constructed in 1855. If the proposed Tungabhadra project comes into existence much of the surplus water of this river may flow into the Pennar so as to form a nucleus for a large reservoir there. The southern Pennar takes its source again in Chennarayanpetta but runs through the east of the Bangalore district forming the great Jangamakote and Hoskote tanks. It then passes through the Salem district and falls into the sea to the north of Cuddalore. At present its waters are not utilised much for irrigation though some irrigation work is rendered possible almost near the end of its course. There is a dam near Tirukoyilur in South Arcot but some more dams higher up the river have been suggested. It is traditionally believed that for the first five days in the Tamil month of *Tai* the Ganges flows into it through some underground channels.

The Palar:—This is known as Kshīranadi or Milk river. Its origin is from the Nandidoorg in the Kolar district of Mysore. It runs through the North Arcot district and falls into the Bay of Bengal near Sadras in the Chingleput district. The Betamangala under Ramasagara supplies water for the Kolar gold fields. Its chief tributaries are the Ponne and the Cheyyar. The towns of Vaniyambadi, Vellore, Arcot, Chingleput are situated on its banks. Its waters are utilised in the Chingleput district for irrigating a considerable area.

The Vaigai:—This is the principal river in the Madura district. It takes its source in two streams draining the two valleys Cumbum and Varushanad. Much of the drainage is received from Palni hills. It flows through Madura town but its waters are not much utilised for irrigation. In

most of the months the waters in the river are uncertain. Waters have been dammed up and tunnelled through the Ghats and distributed by the Vaigai river.

#### THE PERIYAR PROJECT

Though it cannot be said that the irrigation of this project has been fully utilised, still, its productive value has been on the increase. It is noted for a large storage work and therefore the question of increasing the storage capacity has to be fully explored. There is a great possibility of extending this project perhaps by erecting more shutters. Much of the water that passes to waste can be better utilised. The cost may be considerable but the actual utility of the work justifies the huge outlay.

#### THE TUNGABHADRA PROJECT

This seems to involve a lot of initial outlay and expenditure. According to the report of the Indian Irrigation Commission 1901-1903 "if a canal could be taken through the Bellary district across the water-sheds into the districts of Anantapur, Cuddapah and Nellore, supplementing the discharge of the Pennar; there are many tracts in which the water would be eagerly utilised". It is therefore the expert opinion that whether rice cultivation could be raised or not, the water scarcity might be minimised, and at least it will be a great bulwark against famine, in years of drought. Further any storage of water according to the Tungabhadra project would serve parts of Mysore and parts of Hyderabad and the advantages of the scheme would benefit a large number of people inhabiting the regions which are fed by the Tungabhadra.

There are other small rivers which are worth mention. The Tambraparni, for example, is a river in the Tinnevely district. It rises in the Western Ghats and is responsible for the falls at Papanasam. From Papanasam it runs eastward

and finally it flows into the gulf of Mannar. It is a monsoon-fed river and there are as many as eight dams, seven of them having been built by the 15th century. The last was begun in 1867. Its waters have been mostly used for irrigation. The mouth of the river is marked by Korkai, once a seaport of much repute and the quondam capital of the Pāṇdyas. Very near to it is Kayal, where the famous Marco Polo landed, but this got silted up in course of time and was abandoned. When the Portuguese came, Tuticorin became the important port on this coast. But for thousands of years the mouth of Tambraparni was the place for pearl and chank fisheries. This is testified to us even by the epic Rāmāyaṇa. There are other minor rivers like the Hemavati and Arkavali both in Mysore ; but these form tributaries of the river Kaveri.

The political influence that has been exerted by rivers and riverine valleys in the history of the world has been tremendous ; and in fact on the banks of the great rivers like the Nile in Egypt, the Indus in the Punjab, the Ganges in the present United Provinces, the Godavari and the Krishna in the Deccan and the Kaveri in Southern India mighty civilizations have been born. Agriculture which is one of the chief elements of any civilization could not be carried on, on an extensive scale without the help of an unfailing supply of water from rivers or storage works. There is a theory that agriculture was originally born on the Nile valley, though we cannot agree with this. Speaking of the history and culture of South India her rivers have affected the different regions in various ways. It is a fact of history that several of the kingdoms of the South as many of those of the rest of the country have started on one or other of the riverine basins and expanded on all sides. For example, the Chola empire expanded from Uraiyr and Tanjore on the banks of the river Kāveri and the Pāṇḍyan kingdom from Madhurai on the banks of the river Vaigai.

It was so, probably because the founders were anxious to have good water supply for their capitals, as also excellent means of water communication. Some of the rivers have served as the dividing line between one kingdom and another. The civilization of the riverine regions has been always in the vanguard because of the fertility of the area and the comparative prosperity of the people. For instance, the ancient Chola country has always been referred to as the 'Cholavalanāḍu' meaning the ever fertile land of the Cholas on account of the never-failing nature of the river Kaveri which from immemorial times has been irrigating large stretches of land in the dominion.<sup>3</sup>

### COAST LINE

Speaking on the west coast, it is so straight that it is probably due to subsidence or elevation along a line close to the present course of the coast. The seaward face of the Western Ghats and the luxuriant vegetation close by, the narrow space of low land from 20 to 50 miles wide much broken by spurs in the province of Konkan — all these point out some series of earth movements.

The physical characteristics of all that strip of territory which includes the maritime districts of Madras vary but little between the Mahanadi basin and Cape Comorin. At intervals one notices broken edges on this coast line with large lagoons, or lakes like those of the backwaters of Malabar. Whenever the delta of a great river occurs, there reaches out seaward a wide expanse of banks and shallows which render a close approach to the coast impossible. If no silt formation exists, then there is a fair close anchorage as at Madras and Vizagapatam ports. But on the whole the East coast is conspicuously poor in natural harbours.

3. It may however be mentioned that a similar system of river irrigation prevailed from the early centuries of the Christian era in South Travancore (Nanjinad), suggesting the Tamil element of culture in that area; for irrigation is unknown to the rest of the region.

Comparatively speaking the coast line of South India is uniform and regular with a few creeks or inlets. For the greater part of its length a sandy strip is washed by a shallow sea. It is only on the Malabar coast that few lakes and backwaters are seen. They constitute an important topographic feature of the Malabar coast. The coast offers facilities for inland water communication. Subject to the influences of the south-west monsoon the silts brought by the monsoon floods enable the growth of large forests and even plantations on the sea shore. The West coast is more actively eroded though the erosion sometimes is retarded by the sandy nature of the shores and also by the many lagoons. From the low-shelving plains, the sea bed goes on deepening both towards the Bay of Bengal and the Arabian sea. On both the coasts there has been raised a beach at altitudes varying from 100 to 150 feet which go to prove that the coasts were recently elevated. Marine shells which are found in plenty at several places confirm this hypothesis. The plains which border on the sea throughout the west of the peninsula from Kathiawar to Cape Comorin speak volumes for their fertility. Here the Arabs, the Portuguese, and the Dutch had their ports and factories. One notices the active commerce which was carried on from and to the palm-groves of Malabar. In Malabar especially the scenery along the coasts is impressive. Many of the port towns on this coast are shallow and boats reaching them have to lie far out, two miles at Tellicherry and three miles at Mangalore and Calicut. Pepper and cocoanut products constitute the bulk of the trade of these parts.

Between the Eastern Ghats and the coast we see a low territory in width about 100 miles which is considered to be the richest portion of the Madras Presidency. The low level and smooth contours of the country suggest that it was once under the waters and had surely emerged from them. Perhaps the old shore line lay along the Eastern ghats.

The heavy rainfall caused by the south-west monsoon in the area of the Western Ghats is conspicuous by its absence in the plains of eastern Madras. But the retreating monsoon gives an average rainfall of 40 to 50". This together with developed systems of irrigation assures the productivity and the fertility of the soil. Hence we find in the plains of Madras an abundant rice cultivation, a high density of population and consequently magnificent temples with a beautiful architecture, and many active centres of indigenous culture and industry. In this respect, to the student of economic geography of South India the deltas of the Godavari, Krishna and Kaveri are of absorbing interest.

Natural harbours are few and far between on the entire coast. There are no big islands. On the other hand we find the entire coast to be storm-swept. This makes it difficult to construct and maintain harbours of any magnitude. Besides Bombay, we can speak of Cochin alone as a natural harbour. Even in the worst monsoon season it is not much affected. But other harbours on the west coast feel the effects of the south-west monsoon which interrupts the movement of shipping. Once Cape Comorin is rounded, though the actual coast even on this section is bad, the harbours continue to function throughout the year. In the development of the east coast political factors came into play and the dry climate helped the Europeans in these endeavours. But Calicut on the west coast has played a notable part in the history of the peninsula. For what we know, Calicut has been an active mart from very early times of the Roman empire down to the modern days of European dominance. Chinese junks plied a roaring trade with Calicut even in the early centuries of the Christian era. The west coast is of easy access from Negapatam. Madras at the centre by its situation, carried its trade northward by the Pennar valley into the Krishna basin and from there to Goa: and it went

southward by the Palar valley into the Kaveri basin and from there to Calicut.

On the Northern Circars the delta plays a vital rôle and sometimes boats lie far away ; for example, five miles from Masulipatam and seven miles from Cocanada. Hence Vizagapatam has been chosen for developing a port and may grow to considerable dimension in the future because of Dolphin nose and the uninterrupted route to the rich manganese tracts of Central Provinces. Nevertheless maritime development in both the coasts has been handicapped for ages. But with the growth of European influence or rather with the growth of sea-power, Calicut, Pondicherry and the like assumed special importance. The Coramandel coast became more and more important in point of navigation.

Recent evidence of the change of shore line is found on a large part of the coast. On the Tinnevely coast in the Balimukham bay, a submerged forest has been noticed while the peat beds of Pondicherry are enough evidence to show their submergence in pleistocene and recent times. That the sea has advanced on land at Sadras is proof positive from the remains of a temple, which is still seen out in the sea. It is said that the remains of a Pagoda could be seen at low water level in the sea off Tranquebar during the last century. There are several other traditions which seem to suggest that the island of Ramesvaram was until recently a part of the mainland. The town of San Thome (now part of the city of Madras) is said to have been some distance inland formerly but is now skirted by the waves. The sea is also vigorously invading the northern part of the city of Madras, extensive protection works being necessary to check the incursion. This is attributable to the construction of Madras harbour, the pier of which causes the coastal current to whirl towards the land, to the north of the harbour at Royapuram. But equally well the pier is responsible for giving Madras the grandest sea beach in the world.

Evidence is available of the land encroaching upon the sea and several places on the coast, a few centuries ago, are now seen some miles inland. For example Kalingapattanam at the mouth of the Godavari, Kaveripattanam in the Cauvery delta and Korkai on the Tinnevely coast were all flourishing seaports 1,000 to 2,000 years ago but they are now miles inland, mainly due to the outward march of the river deltas.

If we still further examine the position we must accept it as a fact that our ancients even before the commencement of the Christian era were brave mariners and ship-building, as practised by them, was almost an art. From the little evidence we have, it is possible to imagine that these ancient explorers though mainly fisher-folk and accustomed to only short voyages, were able in course of time to develop a sort of ship on long voyages which proved seaworthy. These boats were floated on the wide seas in search of new land. For we have unquestionable evidence that our ancients with a dauntless spirit were able to brave the raging waves and venture far beyond the seas, occupy several islands which form to-day the Malayan Archipelago. To mention only a few Sumatra, Java, Siam and Borneo were the few islands where our culture and civilization penetrated peacefully and influenced a good deal the habits and customs of the natives in these islands, who, realising the usefulness of such customs and manners, began to adopt them readily.

These bold navigators of ours who were adventurous enough to sail in their out-riggers were animated perhaps by curiosity to find new lands, perhaps new homes to settle if the environment would satisfy them. Finding that they were welcomed by the people there, they settled ; and the natives of the islands who saw the manifest superiority of their culture, adopted it in their ways of living and this state of affairs continued for aught we know for 15 to 20 cen-



turies. Perhaps such migrations and contacts might have been very much earlier than we could imagine. If we examine the culture that obtained in the distant islands in the Pacific we find unmistakable evidence of the influence from Indonesia. For instance, we may quote the Polynesian triangle which is the triangle of many islands having the Hawaiian group in the north, Easter island in the east and New Zealand at the south-west. Within this triangle are several hundreds of Polynesian islands. The problem is what was the ancient homeland of the Polynesians and from what place did they come ? Though there are no records of their past there is much traditional evidence which can be more or less treated as history. The theory is now established that these Polynesians came largely from Indonesia and possibly through the sea route called Micronesia. .

The myths and legends of these Polynesians are so similar to those of the Indonesians and those of the Indonesians bear full similarities especially cultural similarities with India and South India in particular. It is now accepted generally that the Polynesians started first from their Indonesian home and the Indonesians themselves were indebted to India for their culture and civilization, including ship-building with several types of canoes and boats. It is surmised, perhaps rightly, that the forebears of the Indonesians had something like exploring ships and being themselves daring explorers they began to inhabit the farflung mid-Pacific islands probably all the way through to the coast of Peru. If we stretch our imagination a little and go into details about the antique manners and customs of the Peruvians and the Mayas and even Astecs, and about their ways of living and all their religious practices including ceremonies and ceremonials, it is possible to conjecture that the Hindu culture has spread to ancient America to grow there independently. Mackenzie the author of the *Myths of pre-Columbian America* quotes Bancroft, the author of the

*Native Races of the Pacific States of North America* and remarks "There is not the slightest ground for suspecting that the Mexicans or Peruvians were acquainted with any portion of Hindu Mythology". It is difficult to accept this thesis as against the host of evidence which urges that those who discovered America in very early times were the people of India and this is evidenced by the presence of the Indian elephant, Gaṇeśa, Indian temples, Nāgas, cotton, food-plants, etc.

### CLIMATE AND AGRICULTURE

Generally speaking peninsular India has got an equable climate. In the hot season which comprises the months from March to October there is high temperature in the land. In the central areas, this high temperature is found with extreme dryness. On the Malabar coast the south-west monsoon usually sets in by the month of May. The sea on this coast rises heavily and this indicates that the south-west monsoon has begun. Having commenced on the west coast in May it soon sweeps all through the peninsula. On the Coramandel coast its effect is felt little, as it blows almost parallel to the coast. By August the monsoon is almost over. Its velocity in depth and volume is much greater than the north-east monsoon. The west coast naturally gets heavy rains, its fall being 100 inches and above. The central districts vary in their rainfall from 38 inches in North Arcot to 23 inches and less in Bellary. Not only is the rainfall less abundant but also capricious. Sometimes it is excessive and sometimes it is premature. Accordingly, agricultural produce differs from district to district and from season to season.

The retreating monsoon commences in the latter part of October usually on the Coramandel coast. At the time of its beginning there is a heavy storm. Though the winds continue to blow in January also neither the west coast nor the interior is generally affected. Usually, February is the

month when this monsoon abates. Early in March the south-east wind of the Coramandel Coast establishes itself. To some extent the rainfall varies from place to place, more due to local conditions and circumstances.

The copiousness of rainfall depends on a high humid atmosphere and the volume of the vapour-loaded air. The Western Ghats may be said to be therefore the foothold of abundant rainfall. The line of hills which runs across the vapour-bearing air rises abruptly from the Konkan. It is only from the west coast the Deccan and Mysore plateau are fed with rainfall. Notwithstanding the variations in the quantity of the rain that falls, the cultivation has spread to an enormous area and with the spread of cultivation there is a considerable improvement in live-stock though it is still of poor quality and even ill-fed. Intimately connected with agriculture and agricultural produce are the implements necessary for the same. Examining these we find they are few and simple. There is the light plough in the Tamil districts while there are cumbersome ploughs (now happily replaced by iron ploughs) in the Telugu districts which break the heavy black soils. Simple water-lifts either worked by cattle or human power are seen everywhere.

The distribution of population in any agricultural country is often the result of climatic conditions. A careful study of the density of population in different parts of south India shows that regions that are subject to extremes of cold and heat are not so thickly populated as regions which are not so cold or hot. A tropical climate though advantageous to plant life is not generally favourable to human life. Large parts of South India are hot for nine months and hotter for three months. Yet men have lived here for ages together. The enervating nature of the region does not admit of hard and sustained work for man all through the year. The average rainfall during a year varies from about 140 inches

in the west coast to 40 to 50 inches in the east coast, (falling occasionally in ill-timed abundance). It has tremendous influence on agriculture. It is largely responsible for the existence of numerous rivers and storage lakes, big and small. The availability of large stretches of fertile land irrigated by the rivers without much effort has made it possible for the prosperity of the agricultural industry in South India from time immemorial. More than 70% of the population is dependent on agriculture in the country. And of the agricultural lands nearly 80% is used for the raising of such food crops as rice, cereals, pulses, etc., besides garden produce. It is possible to classify the soil itself into three kinds, wet lands irrigated by rivers and tanks, dry lands dependent on the monsoons, and those lands irrigated from wells through appliances. The particular crop raised depends upon the nature of the soil and facilities for irrigation. While rice is cultivated in wet lands which command an abundant supply of water, crops like cotton are produced on the black soil where the rainfall is much less and where there are no facilities for irrigation.

#### LATEST DEVELOPMENTS

Agriculture is a very important industry for India. There are numerous problems connected with it and the efforts of research stations in the country to solve them successfully are commendable. The crop pests are a great menace for the industry. For example the Army worms are dangerous and destructive and dry down paddy seedlings before these are a month old. There are the caterpillars which destroy the seedlings. Some measures like the employment of Benzene, Hexachloride and D.D.T. have been adopted with partial success in the prevention of these pests. The rat damage has been combated by poison baiting. The Kapok or silk cotton tree, known to most of the agriculturists in South India, whose lint is used for stuffing

beds and pillows is grown along the fences in garden land areas and on high-lying places. The Koilpatti Research station has reported a new variety said to be of Russian origin.

Sunhemp is used as a mixture with groundnut or cereals in rain-fed lands. This Sunhemp mixture has many advantages in its favour. It goes deep into the soil without appropriating the food of the groundnuts or other crops and adds nitrogen to the soil thus increasing its fertility. Besides, the crop yields seeds that could be used for raising the green manure crop in wet lands or used as cattle food. Fibre too could be had from it which is useful for making ropes of several kinds. The method of cultivation of Cambodia cotton in vogue in parts of Chittoor, Chingleput and South Arcot districts seems to be promising for the extension of irrigated long staple Cambodia cotton without encroaching on the area for food crops. The rotation system is another feature in agricultural industry. In some parts like the Nilgiri district there is no systematic plan or procedure in adopting this method of rotation farming. At the Agricultural Research station, Nanjinad, a two-year rotation plan is being followed. First the potato crop is raised and then the green manure crop of lupin is grown. The second year crop of cereal like *sami* or *ragi* is followed by potato in the third year.

### CLIMATE AND LIFE

Like any other geographical factor, the climate of a country exercises considerable influence on the life of man. It needs no saying that the difference in the culture levels among people living in various countries is largely due to the influence of climate on them. It has been well said that "climate modifies many physiological processes in individuals and peoples, affects their immunity from certain diseases and their susceptibility to others, influences their tem-

peraments, their energy, their capacity for sustained or for merely intermittent effort, and therefore helps to determine their efficiency as economic and political agents." It is again climate that decides the character of man's food, his clothing, dwelling and ultimately his civilization.

Further the climate has also had much to do with the mental development and outlook of the people. The enervating climate of South India generally combined with the easy availability of the articles of food and clothing, facilitated intellectual and philosophical activity in the country. In historical times there is testimony to aver that the intelligentia of the population who commanded great leisure devoted their time and were therefore able to contribute substantially to philosophical and religious speculation in the land.

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## LECTURE II

# PALAEOLITHIC AGE

## *Archaeology*

### INTRODUCTORY

When and how man appeared on earth is a moot problem that still awaits conclusive solution. Geologists are of opinion that there was no life in the Azoic epoch. According to experts in Geology it was in the Palaeozoic age that life emerged first in the form of invertebrates, then as fish and amphibia and then as reptiles and birds. Different types of mammals appeared in the Mesozoic and Cainozoic eras. It is believed that from these mammals, perhaps, apes or creatures similar to them that man was evolved. The Dharwar rocks belonged to the latter part of the Azoic age. This was followed according to geological history by the Purāṇa epoch, which, however, has nothing to do with our Purana literature. This epoch is characterised by the Cuddapah and Vindhya systems of rocks. They are not igneous but sedimentary. This was followed by the Silurian and Devonian rocks wherein were found shell-fish, crabs, and finally fishes. Originally they were all water animals, but by and by, the evolution of land animals came into being. Simultaneously water-plants began to thrive on dry land. Swampy forests with primeval woods were a contribution of the carboniferous times of the Palaeozoic age. The Mesozoic epoch succeeded the Palaeozoic age and here are distinguished Triassic, Jurassic, and Cretaceous periods. In this age again the so-called Gondwana land was formed. At the commencement of the Cainozoic age evolved the mammals. In its turn this epoch, viz., Cainozoic is divided into Eocene,





the Oligocene, the Miocene and the Pliocene periods. These periods may be of great interest to geologists but what concerns a student of history is the emergence of the Himalayan system and its counter-part in the Deccan and farther south. This was the period of the mammals and man evolved out of these mammals.

In this connection a study of our ancient Vedic literature especially the Ṛg-Veda Samhitā and the traditional account preserved in some of our Purāṇa literature may be to the point. The curiosity of the scientist is whetted when the Ṛg-Veda speaks of a state of non-existence and of the origin of vegetation. According to the Taittirīya Samhitā, originally the earth was a mass of fire which was replaced by water. It was Indra who made the earth *terra firma* and also the mountains. Aeons passed by when the Anḍaja (amphibians) began to lay their eggs in and under water. Long after, Jarāyuja, a variety of mammals, appeared on the scene. It was in the glacial age, to speak in the language of geologists, that we first meet with cave men and sub-men. In its historical setting our ancients have given some thought to these questions, and in our opinion the conception of Daśāvatāra, so elaborately adumbrated in our Purāṇas, was nothing but an outline of the life history of man. The first among the incarnations is said to be the fish. The succeeding incarnations in the traditional order are first the Kūrma (Tortoise) suggesting the amphibian and then the Varāha (the boar) two stages in the evolution of mammals, quite in conformity with the evidence of geology. The idea of the Boar incarnation is that the earth had crumbled owing to Nature's havoc like earthquakes and volcanoes. The legend says that to raise the earth's crust the Lord took the Boar incarnation to restore it to the original level. The next two incarnations are those of Narasimha (Half-man and Half-Lion) and Vāmana, a dwarf. The half-man, half-lion stage is to be taken as the precursor of mankind

while the dwarf manifestation can be identified with the sub-man. The next manifestation of Paraśurāma (Paraśu or axe being the symbol) shows the beginnings of a simple civilisation when man was still leading the nomadic life of a hunter. From the man of the woods the stalwart man as the true man came into existence and this was the *avatār* of Rāmachandra. We are not concerned here with the succeeding *avatārs* of Kriṣṇa, Buddha or Kalki. But what interests us is that every *avatār* from the beginning represents a distinct stage in the story of the evolution of life. This resulted in the growth of a tradition and what was a floating tradition gathered momentum in the course of aeons and was put down in the Purāṇa literature.

The most outstanding question centres round the original birth-place of the earliest man. The Monogenists claim that the original man belonged to a single locality. Whether it was in Syria, Western or Central Asia, Africa, India, or Farther Asia is a bone of contention among scholars. Sir Arthur Keith shows a human development from the reduced jaw of the australopithecus. For several years the ape man theory has been holding the field and Java was considered the birth-place of man. It was Keith who postulated a pliocene precursor of man who spread from the Indo-African continent but it has been suggested perhaps rightly that South India, the heart of ancient Gondwana was the original place of man and it was from there that he went into other parts of the world. The original man came into existence according to this theory from the plateau immediately lying to the south of the Daṇḍakāraṇya. It was the original abode of man which was then a land of small hills and accessible to river valleys.<sup>1</sup> It is not patriotism that drives us to this conclusion; for in the opinion of Sir Harry

1. Sir G. E. Smith in Human History also suggests that the original home of mankind is in the Sivalike hills of India.

Johnstone, India was most probably the land of the original man. We hold that it was the southern part of the Indian continent.

Before we take into consideration the palaeolithic age and examine its general characteristics as noticed in South India, a word may be said of the eolithic age in human history. The Eolithic age preceded the Palaeolithic. French scholars are inclined to give the name pre-Chellean to this epoch. Though the diffusion of Eolithic culture was widespread, still it is difficult to say from an examination of the artefacts so far discovered whether India had the eolithic age at all. Bruce Foote is of opinion that there was no eolithic age in India. But recent researches have shown the existence of eolithic specimens. A set of flints found in a ravine in the slope of Iravati in Burma is similar to the Narmada specimen. Another specimen that clinches the issue is the find of a boucher of Vindhyan sandstone at Bhutra in the Narasingpur district in the Narmada valley. It definitely shows that man existed in an age which was coeval with the presence of a vertebrate fauna, long extinct, and possibly it can be attributed to pre-glacial epoch. Another discovery called the Pre-Chellean, Godavari chip or flake near Paithan in Hyderabad contains the remains or bones of animals said to belong to the age of the Bhutra find. Examining these finds at close quarters, scholars are agreed that the earliest culture comprised areas now known as Burma, Deccan, Ceylon, the Andamans and Java.

#### THE PALAEOLITHIC AGE

Whatever the original home of man, the fact was that Homo Sapiens or Homo Recens spread himself over the different parts of the globe. The movement of Homo Sapiens was facilitated by the changes in climate, in animal and plant life, in the various regions with the result that different types of man were evolved. From the beginning

man was differentiated into two types, Dolichocephalic (Long-headed) and Brachycephalic (Broad-headed). The modern theory is that the Dolichocephalic stock went from its original home to Europe and was the originator of the Proto-nordic and Proto-Mediterranean races. It also spread itself to the other parts of the world including India and Indonesia. The Brachycephalic later known as the Alpine race are said to have spread themselves along the plateau of Southern Europe and Western Asia as far as Bengal and even Mysore. Though these are believed to be the general movements of the Palaeolithic age yet they could not be accepted *in toto*, as much of it is guess work. Imagination must play its part, but mere reflection without reasoning is not of much value. The palaeolithic age is largely the period when man lived in rock caves. It is alleged that there are no caves and rocks in India containing palaeolithic remains as in Europe. As against that it may be argued that there has been no systematic exploration, and caves and rocks which have been found by the archaeologists are merely accidental finds. It cannot be completely denied that there have been no palaeolithic caves and caverns in India, or for the matter of that in South India. The lithic monuments which have been discovered and examined by the Archaeologists in South India have been noticed in the pages of the Madras Annual Reports for Epigraphy. The districts of Madura and Tinnevely, not to speak of Trichinopoly and Pudukkottah, contain a number of caves but they have been dated as almost modern, say at the beginning of the 6th century B.C. from the contents and inscriptions contained therein. But before fixing the dates of these caves and caverns, a systematic geological survey must be undertaken and their ages determined. The sooner it is done the better. Climatic and other reasons would contribute to the gradual wear and tear of the relics, if there were any. Our study of the epics, especially the Rāmāyaṇa, has demonstrated beyond doubt the existence of such caves inhabited then

by the now extinct races of Yakshas, Kinnaras and Apsaras and also by the sages throughout the length and breadth of India.

There is very little to cavil at in this. We have the evidence of at least the Billisangam hill caves in the Kurnool district of South India which testify to us that they are palaeolithic in character. No trace of pottery has been found which itself justifies our conclusion that these caves were primitive ones belonging to palaeolithic times. If one examines the remains in these caves one has to put them to the Magdalenian or even pre-Magdalenian epoch. No doubt some of the fauna of the caves are now extinct. This is not surprising when we know that several tribes in more recent times have become extinct in our country. The Yakshas of whom much is mentioned in Sanskrit literature, and even in the Śāṅgam literature of the Tamils, are now an extinct tribe of the land. Mammals like the hyaena must have gone out from India during this period. Altogether 2,000 bones have been found and they belong primarily to the primate *Semnopithecus*. Several kinds of rhinoceros, ox and antelope and even animals of the cat family are found. It is interesting, however, to note that the Kurnool cave deposits show some species which though extinct in this country are mostly found in Africa. This may be cited as a piece of evidence for the migration from India, once upon a time to the African continent. But apart from this question we can notice the most remarkable feature in the list of Kurnool palaeoliths. Though this example of hill caves in the Kurnool district is solitary, still we believe that systematic explorations of the hill caves in South India will reveal that the cave age in India could be definitely dated to an age contemporaneous with European hill caves. In concluding thus we have to take into account circumstances and conditions due to climate or otherwise. But this solitary example in the Kurnool caves cannot be solitary. A

number of other caves existed as well, and they can be said to belong to the palaeolithic age, with some definiteness.

Apart from the rocks and caves the laterite formations of the coast and the older alluvia of rivers or lakes contain relics which undoubtedly belong to the old stone age. Even human artefacts have been found in two places, one near Madras and the other in the alluvium of a small river in the Guntur district. Therefore it is all the more necessary that more intensive examination of the coasts of South India is undertaken. This would probably bring to light some more relics of the old stone age of which only a few remain. A kind of rock called quartzite is found largely in South India and an examination of the Palaeolithic finds distinctly shows that the palaeolithic man in South India went in search of this material here and there, for the majority of the finds available to us are made of the peculiar rock called quartzite. This quartzite is not found so abundantly in the north or even in the west coast. It is more common to the east portion of South India.

From what little evidence we are able to gather the weapons used by the Palaeolithic man were not enough to clear the forests which were thick and extensive. We may therefore conclude that the Palaeolithic man in South India would have avoided forest tracts and contented himself with plains and plateaus for his activities. Speaking of the extreme southern part of India, the Travancore side and even if we penetrate into Ceylon, we do not meet with any remnants of the old stone age tools. Two reasons must account for this. First because there were impenetrable forests in these areas which primitive man was not able to clear and make fit for habitation, secondly because the rock material which he used viz., quartzite was not available in these regions. Even the Tinnevely district is devoid of any palaeolithic implements due largely to the absence of quartzite in that area. Madura which is rich in lithic monuments

contains remnants of palaeolithic tools whose specimens were noticed by Bruce Foote when exploring sites in Madura. Another site of importance, where palaeolithic implements were found was in Vallam, near Tanjore. Here were found two palaeoliths of chert. They are very primitive in feature and workmanship. Some 45 miles to the east of Trichinopoly two oval implements being the handiwork of the palaeolithic man were found.

Passing on to Mysore and thereabouts we find several palaeolithic monuments, weapons in several taluqs of Mysore. They were made of the material known as quartzite. Proceeding we find numerous localities in the district of Bellary rich in palaeolithic finds. They are not made of quartzite proper but a variety of it, plenty of which is locally available, approximating to the Dharwar system of rock formation. Many implements of this Bellary rock are found along the foot of the Copper hill and the inference is irresistible that it was once a seat of the palaeolithic man. The district of Cuddapah has yielded as many as 220 specimens which are said to belong to the Mousterian stage of palaeolithic culture. Cuddapah can be said to be the home of quartzite and this naturally attracted the palaeolithic man to it. Side by side with rough tools there are also some with sharp edges, and they show that chipping, cutting trees and piercing animals were perhaps common.

If we pass on to the alluvial parts of Madras like North Arcot, Chingleput, Nellore, we find many remnants of the palaeolithic man. In fact palaeolithic life was at best in these parts. The chipped stones found at Pallavaram bear definite marks of the artistic expression of the primitive man. In the words of Bruce Foote "they point out a deliberate choice of colours and a distinct progress in craftsmanship. They show how humanity was flourishing in those portions of South India under conditions highly favourable to primitive life. The proximity of rivers to the rocks highly

suitable for the old weapons and implements no doubt was helping man much to be the dreaded hunter of animal life". There are again palaeolithic relics in the gravels of the Godavari. Perhaps the residence of the old stone age man has been covered by alluvia. But some of the implements found here are not of true quartzite but a variety of quartz but anyhow it shows the activity of palaeolithic man. Though we are not much concerned with the Deccan, yet there are several centres which yield evidences of palaeolithic age. Yeddnapalli in Hyderabad or in the districts of Dharwar, in Bijapur and Belgaum in the Bombay Presidency, we find several palaeolithic remains. Palaeoliths as well as mammalian remains are found even in the gravels of the Narmada valley. Some specimens are also discovered in Orissa. From the similarity of the materials found it is possible to suggest that some amount of intercourse may have existed between the palaeolithic peoples of the different parts of the country.

### PALAEOLITHIC TOOLS

Confining himself to South India, Bruce Foote recognises ten distinct forms of tools. These were :

(1) Axes. There were different types of axes. The prominent among them are pointed-oval, oval, square-edged and oblique-edged.

(2) Spears. Here again there were several types and two of them are prominent. One is a narrow spear and the other is a broad-based one.

(3) Tools and implements for digging and other purposes. Invariably these were pointed with pebble butts.

(4) Circular implements. They must have been used mostly in hurling stones for these implements contained sharp edges all round. In form, they resembled the wheel.



(5) There were choppers which were again pointed-oval and contained sharp edges on the side only.

(6) Knives. These were long narrow flakes with parallel sharp sides.

(7) There were scrapers which were put to different uses.

(8) There were abundant cones.

(9) There were hammer stones.

(10) Strike lights were also among the finds.

These different weapons and tools which can be catalogued at least ten in number were used by the primitive man for different purposes of grinding, moving, polishing etc. They point to the dexterity of the palaeolithic man and how he handled various types of tools, some with sharp edges and others with cutting edges. There were also others with blunt edges, thus demonstrating an earlier rough workmanship ignorant of later improved methods. It is certain that these tools had no handles. The weapons with butt ends were perhaps for digging up roots or were used in combats. Though the palaeolithic men were savages, still they knew how to handle a weapon like the axe or the chopper. Perhaps the bamboo which was in plenty might have provided a suitable handle. In places where bamboo was scarce other kinds of wood similar to it would have provided them with excellent shafts.

It must not be surmised for a moment that the Palaeolithic Indian was satisfied with the stone implements whatever precautions he took and however baffling was wood. These stone implements would not have been enough to bring down the ferocity of beast or man. So wooden implements must have supplemented the stone tools. He found those forests thick with durable woods out of which he fashioned spears and other weapons of offence and defence. Branches of trees formed effective clubs in over-coming an

enemy. We could not say whether these primitive men used fire. But there is evidence of traces of the use of fire in the Kurnool caves. They could have observed the fire produced by the friction of trees and this would have taught them that by the friction of combustible wood they could produce fire. The presence of the cinder in the caves shows that the early man must have been familiar with the use of fire. That is perhaps why in Vedic sacrifices or Yajna, fire is sacred and it is only sacred if it is produced from two pieces of wood. Even to-day those who perform Vedic sacrifices would use fire produced from the wood. This points to the most primitive custom of obtaining fire viz., by friction from combustible wood. This must have been known to the palaeolithic man as he took to flesh eating besides fruits and nuts. From this we may postulate a theory of wood age perhaps before the stone age, or side by side with the old stone age when wood and wooden implements like the club were largely in use. Wood being a perishable material and subject to the ravages of time, the relics of the wood age have been irretrievably lost.

#### SOME RECENT PALAEOLITHIC SITES

Since the time of Bruce Foote much work has not been turned out in Indian pre-history, especially South Indian pre-history. Some time back Mr. L. A. Cammiade, a civilian officer of the Madras Presidency, collected some pre-historic remains which were examined by Mr. Burkitt of the Cambridge University in 1930. As a result of his classification of the different tools, he held that as many as four cultures were concerned with the palaeolithic implements and these were (1) Hand axes of different types ; (2) Flake industries ; (3) Slender blades with blunted backs and (4) Mostly microlithic industries. Some time after scholars including F. J. Richards explored the region round Manjakkaranai, a village some twenty miles down the Kortalar river. The possibility of this site belonging to the palaeolithic

this era was further examined by the Superintendent for Archaeology, Southern circle. The region between the Alicoor and Sattiavedu hills and the Bay of Bengal was taken for examination. The plateau of laterite intervening is cut through by two rivers, the Narnavaram and the Kortalayar. The Alicoor hills contain jurassic conglomerates and to its east there is the plateau of laterite. At several places along the valley of the Kortalayar are terraces which are remarkably high. They are also noticed in the Alicoor valley. In these terraces are discovered some stone implements left apparently by the palaeolithic man. Still beyond between Vengal and Vadamadurai there is the laterite that has been possibly denuded. The Sriperumbudur shale also belongs to the jurassic age and is exposed along the valley and also round the red hills. The white grit at Erumaivettipalayam and at Manjankaranai below the laterite has been found to be the same as the boulder conglomerate as seen in Vadamadurai.

Examining closely the valley of the Kortalayar we find as many as four terraces which can be termed pleistocene. It is said that a certain amount of pluviation was responsible for the presence of the white grit and later on the laterite foundation. All these contain lithic monuments which can be legitimately said to belong to the lower palaeolithic age. The examination of the terraces suggests the existence of man before the laterite was formed. Likewise the depth of the boulder conglomerate at Vadamadurai perhaps suggests the beginnings of the Abbevillian industry near Madras. And the site of Vadamadurai itself, is a fair indication of the existence of man in pre-laterite times. The various stages of the hand-axe culture in Africa and in South India deserve comparison and in several respects there is a wonderful similarity which may suggest successive waves of migration and immigration. The finds in the Kortalayar throw welcome light on the earliest cultural evolution in South India.

In this connection a word may be said about the terrace at Attirampakkam in the Kortalayar valley. There one notices the stratigraphic evolution of the Acheulean culture from the laterite in the exposed portions. Many tools are also found. Most of them are contemporary with the laterite gravels. The hand-axes found here remind us of the late acheul types of Eur-Africa. There are abundant cleavers and that too in different forms.

The localities round Madras are typical of the Abbevillian-Acheulean stages and industries developed in this region have been given the term Madras industry and this can be traced from the lower Palaeolithic culture complex of South India. On the west coast is seen lateritisation in the Mid-pleistocene gravels, pointing out to the prevalence of the Madras industry. It is reasonable to suppose that this condition must have appeared during the palaeolithic period. This is distinctly noticeable over the Warkkalai formation of the West Coast from Ratnagiri to Malabar. Notwithstanding this, it is strange that the Malabar coast has not so far yielded palaeolithic implements. As has been well said the presence of quaternary terraces in South Canara makes it all important for the study of the stone age.

Thus the recent discoveries made by the Geologist and Archaeologist in the different parts of South India have clearly exhibited that the so-called Madras industry flourished even in early palaeolithic times and the West Coast was not an exception. Hitherto the West Coast was regarded as unimportant from the palaeolithic standpoint but recent finds of the existence of the laterites on this coast reveal that the palaeolithic man must have been also active in this region of the country. These recent explorations were more casual and even the casual attempts have brought to light very important tools at once valuable to the archaeologist, let alone the geologist. In the light of the foregoing facts it is considered plausible that a systematic exploration

in the different districts and different parts of the peninsula may throw more welcome light and add considerably to our knowledge of the activities of the palaeolithic man in our peninsula.

### LIFE IN THE PALAEOLITHIC TIMES

If the palaeolithic man was anything, he was a nomad and an aimless wanderer from one region to another, little thinking of home or shelter and even food. In the lower palaeolithic epoch no houses or habitations have been discovered. The inference is irresistible that the ancient man did not build houses but sought shelter from sun and rain only under the protection of rocks. These rocks afforded not only accommodation for living but also for storing provisions. His wants were simple, few and far between. He lived chiefly on fruits and nuts, plucked from the neighbouring tree and perhaps roots on which he could lay his hands easily. There was no cultivation of lands as such and there was no raising of crops and there was no particular attachment to this or that locality. It was only towards the end of the palaeolithic age that man felt inclined to give up nomadic life and settle in houses which were perhaps erected sheds with the leaves and trees to cover them.

But the great danger he had to meet was from wild animals of which there were plenty in the numerous forests beyond. Though the palaeolithic man avoided the forest regions, still he felt he could not avoid ferocious animals making inroads into his territory. That is why the palaeolithic man found it necessary to live in groups and in small communities so that they might put impediments to the onslaught of these animals. It is therefore that the lower palaeolithic man cultivated what we may now call the herd instinct, but the localization of these tribes was felt a crying necessity. But it depended to a great extent on the rocks which could give

them suitable material for making tools and implements. That is why we find palaeolithic settlements in the Cuddapah district and also in the districts of Chingleput, North Arcot and Nellore. South of the Palar valley quartzite is conspicuous by its absence and hence we do not find much palaeolithic material in the regions south of the Palar. When age advanced and when men felt the necessity to live in settlements totemistic and magic practices began to influence them. Even to-day man in the jungle is more akin to a nomadic man and the old world customs and beliefs about the origin of man and creation of the world are still noticeable in him.

The palaeolithic man must eke out his livelihood in his own way. We have already mentioned that he did not know how to till the soil or raise his food. To satisfy his hunger he ate fruits and nuts but it was not enough food for him. To satisfy his taste for variety of food he took to hunting. This means that the early man was by profession a hunter. He hunted the animals of the forests and consumed whatever flesh or meat with which those animals killed in the hunt provided him. His implements were not so highly developed as to find rich animal food. This is evidenced by the fact that among the tools of offence and defence are found several choppers with sharp edges. These choppers among other tools found in the palaeolithic sites must have been largely used for providing the meal which was afforded by the hunt. But nevertheless, his age-long experience and thorough skill in hunting taught him a good lesson, viz., how to develop hunting. So he used the bow and the arrow with which he was conversant, to kill from time to time jungle beasts and make a meal out of them. Even now, long after the discovery of iron, he used his arrow tipped with steel to kill wild game. Whatever this may be the palaeolithic man began his life as a food gatherer and slowly developed traditions of a skilled hunter.

Towards the end of the palaeolithic period we find him a hunter par excellence. This was an age when the palaeolithic man did not know the use of pottery which was yet to come.

#### DISPOSAL OF THE DEAD

It is interesting to know how the ancient man who had absolutely no knowledge of pottery disposed of the dead. While on this question it may be of interest to notice that there are two words of significance to the antiquarian in the early Vedic literature. These are the *paroptas* and the *uddhitas*. The *paroptas* is perhaps a reference to dead people who have been abandoned in far off places. This means that the dead bodies were left in places where the death took place. These bodies perished in course of time. This practice was probably adhered to in the plains and plateaus where death took place. But the expression *uddhita* signifies to the dead in elevated region. Common-sense dictates that this would have happened in case the mountain or the cave was the place of occurrence of the death. Otherwise there is no intelligible meaning for the term *uddhita*. Man lived in the mountains and caves as well as in plains. Custom was that whenever death occurred here or there, the body was cast away and became exposed to both carnivorous birds and beasts.

India is a land of wonders and strict conservative habits linger with us even though thousands of centuries have passed on. A relic of the old method of disposing the dead is even to-day found among the Parsi community who do not burn or bury the dead but throw away the body to be feasted on by wild animals and birds.

What would be more interesting to find is the nature of the dress in which the palaeolithic man attired himself and showed himself off. The palaeolithic man was almost naked. Though we look upon nudity even now with some

reverence and awe among the ascetics of our day and though the custom has dictated that there is no pollution for the dress of men and women if it is touched by an infant boy or girl, these are after all relics of the practices of a dim past when man was almost without any dress. This does not mean that even the man of the forest, the most uncivilized man had no sense of shame and went about here and there, stark naked. When the palaeolithic man emerged from his primitive habit and grew wiser and when the powers of intelligence were developed in him, even though hunter he was, he felt like covering his person with some material which was readily accessible to him. Common-sense would dictate that when this stage was reached the palaeolithic person used leaves and barks and probably hides of animals which he hunted, to cover his nudity. Among the implements discovered in the palaeolithic sites are found stone scrapers. These scrapers were primarily used for cleaning the flesh of animals hunted. What was left over was the hide which was completely dried and used as a cover for the body. In this way also the scrapers must have been quite handy for the palaeolithic man.

It is not surprising that this custom has not died out. On the other hand we look upon the hides of certain animals as sacred. To sit on them, to be clothed with them, and put them to other uses has been the custom not only among the sages and seers but even among the laymen. For instance, the hide of a tiger or the skin of an antelope is still regarded holy and put to holy purposes. Another method by which the earliest man covered his nakedness was with the bark of trees. We call this tree flay *marauri*. It is said in our epic Rāmāyaṇa that when Rāma went to the forest to lead a forest life he was dressed in the tree flay. This would point out that the uncivilized man, the man of the forest, was largely using leaves and barks as his dress in the jungles. Considering the



beliefs and practices of the present day and the legends which are many, both in the Purāṇas and epics, reason voices forth eloquently that the primitive man, especially the palaeolithic man dressed himself in barks of trees and hides of animals. This simple dress was enough for him because the climatic conditions of South India are such that man could maintain his existence even with the minimum amount of clothing.

### PALAEOLITHIC ARTS

From very primitive times man's interest in art has been profound and curious. In the palaeolithic times in Europe man had his artistic feelings to which he gave vent in caves and grottoes which are not easily accessible to us. Persistent efforts of the archaeologist have laid bare innumerable paintings drawn by the primitive man in palaeolithic times. But the question is whether the Indian palaeoliths were imbued by such a spirit and whether they resorted to the art of drawing and painting. Bruce Foote who has examined the Kurnool caves closely would not credit the palaeolithic Indian with a knowledge of picture drawing. But we must take into account the conditions and circumstances under which Bruce Foote worked upon his subject. The researches which were continued have revealed the existence of caves and caverns with remarkable paintings in the Central Provinces. In some of the caverns at Singhanpur near Raigarh, were drawings which could be attributed to palaeolithic times and a close examination of the figures showed that the pictures were drawn with bamboo brushes, bamboo being the material not inaccessible to the palaeolithic man. For South India was now thick with bamboo bushes everywhere. Ravages of time have made the figures faded and indistinguishable but the pictures available have been classified and studied.

There were four kinds of scenes depicted in these paintings. There was first the hunting scene. And

as man was primarily a hunter, there is no surprise in seeing a number of hunting scenes. Secondly, there is a group of figures which are not however intelligible at the present moment and which must have been significant to the artist who drew them. Thirdly, we notice drawings of animals domesticated or not. One special feature about these drawings of animals is the ease with which the artist has presented the figures to us, the drawings being full of spirit and fire. Lastly, we have different kinds of picture-writing which was in vogue at that time. The picture-writing is said to represent many topics of interest and include within its purview a scene of the setting sun or the rising one. The human figures which have been noticed are all in a natural pose depicting a dancing scene. From this some scholars believe that the scene represents some ceremonial relating to religion. The scene depicts men, some cross-legged and some lifting their hands upwards. Though the paintings discovered in these caves do not have high technique, still they resemble those in Egyptian pottery. As the latter is a thing of distant future we see that there was frequent intercourse not only among the palaeolithic people but also among the neolithic people who succeeded them. In some drawings the method of brush work adopted stands comparison with similiar paintings in Spain. It has been observed from these paintings that when "the Vindhya were thoroughly explored they would prove to be a classic ground of primitive, if not pre-historic art".

Several places have yielded a number of varieties of clay with different colours. For example we have the red clay with different shades, green, dark and light. These varieties of clay and ochres must have given incentive to the primitive man to take to painting. Though we have not many examples of pictures painted, still there is enough evidence to indicate that the palaeolithic man in South India was a bit of an artist and he indulged in art expressions. The paintings further

evince that dance was the most primitive form and the modes of dance were not a recent development. However crude the fashion then was, the fact remains that at least by the end of the palaeolithic age when man settled in groups, dance was resorted to not only for amusement but also as a form of primitive ritual for some god or goddess, as a necessary adjunct for their propitiation. In short, fine arts developed from so early as the palaeolithic epoch.

### RELIGION

How far religion appealed to the palaeolithic man we cannot definitely say. The absence of graves and graveyards may lead us to believe that the early man had no faith in the existence of soul after his death. But he seems to have believed in Nature and its doings. He well knew that there was an inner spirit which was the cause of his movements and nativities. This system of things continued almost to the end of the palaeolithic period when man desired to live in small settlements. He built up something like a family kinship and came to yearn for something which would be sacred. There was no plethora of gods and goddesses but the conception of Mother Earth would have profoundly influenced him. All protection which human beings want comes only through the mother. This perhaps gradually led the way in later palaeolithic times to the development of a mother cult and the worship of a mother goddess. The worship amounted to praying to the deity to free them from diseases and to be safe from wild animals. In this way the cult of the Mother Goddess has grown till to-day to unimaginable dimensions.

In confirmation of this we may cite the evidence of the *Lalitha Sahasranāmam* which contains 1008 names in honour of the Devi. The *Sahasranāma* is considered among the Hindus as a sacred text-book and these 1008 names are recited in the holy traditional way and it is believed that this

continued recitation on the part of the devotee will bring him health and wealth and ward off all calamities. Among these names there are two significant expressions which can be cited in this connection. They are *Dharāyai Namah* and *Dharā Sutāyai Namah*. If we stretch our imagination a little these two terms unmistakably point out that Mother Earth was in very primitive times considered as Devi herself. Though later tradition has hedged her with divinity of being the consort of Lord Viṣṇu, still if we trace the cult of Devi to primitive times, there is no doubt that the worship of Devi to which the Hindus are to-day wedded so strongly had its origins, probably in palaeolithic times when man knew only of one God, and that was the Mother Goddess. The occurrence of these two terms in the *Lalitha Sahasranāma* in vogue to-day shows definitely that there was a continuity of worship almost from palaeolithic times down to this day. After all the primitive Mother Goddess is the Devi of to-day.

Living in the old stone age and familiar with stone tools and implements the early man was perhaps struck with the idea that stone, the material of his existence, was a symbolic representation of the inner spirit which we call in modern parlance Mother Goddess. From the prominence given to the cult of the Mother we have also to infer that Mother right had perhaps the beginnings in this family organisation. It was believed, and rightly too, that the progress of the world depended upon the mother and hence prominence should be given to her in the family circle. Perhaps this idea was uppermost in the minds of the authors of the Vedic hymns when they taught *Mātrudevo Bhava*, *Pitrudevo Bhava*. This was again true of the philosophic idea with which we are quite familiar that without Śakti the Śakta is nothing. It is the presence of Śakta with Śakti that is absolutely necessary for the propagation of the species in the world. We make mention

of these things simply to show the priority of the female in a primitive family group. This must to a large extent have been responsible for the system of matriarchy which is even now present in some parts of the world. But the dominant conception of the early world when the palaeolithic people lived was that the mother must be given an important place in the social economy as they understood it. While the cult of the mother goddess became popular, these primitive men propitiated their goddess by sacrificing mostly animals and sometimes human beings. These human sacrifices were prevalent until very lately among the Gond tribes in the Central Provinces.

In addition to human sacrifices they indulged in animal sacrifices, chiefly buffalo sacrifices. Even now, forest tribes who reside all the time in forests are sacrificing the buffalo to propitiate the gods. In the palaeolithic age when man lived on flesh, which he got by hunting a number of animals, he offered their meat to their chosen goddess. A remnant of this custom is seen in the pages of the R̥g. Veda. We can trace it in the fact that one of the names given to the mother goddess and worshipped as such even now is Mahishāsūramardani. This twin epithet is perhaps derived from the primitive custom of killing the buffalo in sacrifice to goddess. It is crystal clear that the foundations of the cult of the mother goddess were laid in the palaeolithic age and the cult still lingers with us as a vital part of our religion.

#### MESOLITHIC CULTURE

While it can be readily conceded that there was no intermediate position between the Palaeolithic and the Neolithic ages, still Bruce Foote who had studied the problem with minute care and attention, adumbrated a theory that a certain hiatus existed between the two periods, Palaeolithic and Neolithic. The explorations which have been carried out since, have pointed unmistakably that this

hiatus did not exist and the course of evolution was normal from the Palaeolithic to the Neolithic. Recently, however, this question has been studied by expert geologists in respect of the field evidence. Dr. M. H. Krishna affirmed that a real Mesolithic culture existed at the site in Brahmagiri in the Chitaldurg district of Mysore. In the Narmada region, De Terra would record microlithic industry representing a proto-neolithic phase. In Kurnool and Bombay, the efforts of Burkitt and Todd proved that there was no hiatus from the Palaeolithic to the Neolithic. Bruce Foote himself discovered some microliths embedded in the red fossil dunes known as Teris in the tip of the peninsula. All these pieces of evidence point out that microlithic industries were spread over the whole of the peninsula, not to speak of all North India.

In their typology these industries bear marks of similarity with the Western Caspian (Mesolithic culture). Investigations made in the Microlithic levels of Guzerat on human skeletal remains show even a kinship with North East Africans and also perhaps to the Proto-Egyptians. The question now is whether there was a new lithic era called Microlithic as distinguished from the Palaeolithic. There is a difference among scholars, one school classifying the Microlithic age with the Neolithic on the strength of the discovery of pottery which occur in both, and the other school distinguishing Microlithic distinctly from the palaeolithic and classifying it as the Proto-Neolithic. Scholars seem to be in general agreement with the latter classification.

Recent studies in different parts of the peninsula have proved that in its various parts the Microlithic industry flourished prolifically. This has been observed in Kurnool and the lower Godavari division. Coming nearer home to the Tinnevely district at Sawyerpuram, where Bruce Foote had already done commendable work and had unearthed

several articles of value, are found some Mesolithic artefacts which demonstrate fully that in the upper palaeolithic age one can roughly distinguish a sort of Mesolithic era, as tools and implements gathered therein justify. There are a number of waste flakes of different sizes, some very big and some diminutive in form. There are also some fresh-looking cores all weathered and painted. There are also other tools which on close examination may be classed as belonging to the Mesolithic culture. Though they do not provide absolute evidence yet, the Tinnevely finds go a long way to prove that once Mesolithic culture thrived in that part of the region.

Climatic changes and the changes in environment might have driven the pre-historic man inhabiting the Tinnevely and Ramnad coast, which perhaps had more lagoons in their neighbourhood at that time, to desert those places even before the Neolithic epoch set in. We have to say this because no Neolithic tool, typical of Neolithic culture has been discovered at Sawyerpuram and this emboldens us to positively make the assertion that Mesolithic men who inhabited this region of Tinnevely must have left that place some time before the Neolithic epoch crept in. If anything could be conclusively said from the foregoing study, it is that the existence of Mesolithic artefacts and microlithic industries was a fact of utmost importance in the peninsula. The evidence as a whole, stratigraphical and surface, would point out, notwithstanding the prevalence of such industries of the Mesolithic period between the Palaeolithic and the Neolithic that the Palaeolithic culture continued to survive even in Neolithic times. Though there might have been an intervening epoch after the Palaeolithic age and before the beginnings of the Neolithic age, still it was not so marked in its features as to deserve a special study apart from the Palaeolithic and the Neolithic cultures.

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### LECTURE III

## NEOLITHIC AGE

### *Archaeology (contd.)*

There are indeed some who would hold the view that the Neolithic age in India was not a continuation of the Palaeolithic age nor was evolved out of it but was separated from it by a long interval. They honestly believe that a wide gulf existed between the close of the Palaeolithic age and the beginning of the Neolithic epoch. It is true that the old stone age was too long and its period can be computed only in thousands of years. But on this account we cannot conclude that the Old Stone Age did not merge into the New Stone Age. Whatever might have been the conditions in Europe and whatever had been the intrusions and variations of the glacial age there, it is a fact of the utmost importance that in South India the Palaeolithic age was followed almost close on its heels by the Neolithic epoch. There is no evidence here of any geological transformation affecting the life and culture of the neolithic people. There have been again no marked invasions of peoples from foreign continents. In India, especially South India, the transformation to the new epoch was gradual, peaceful, continuous and conclusive. Reason postulates two things, viz., Evolution or Revolution. There are no evidences to indicate the revolutionary character of the transition to the Neolithic epoch from the Palaeolithic one. On the other hand there is reliable evidence to show that slow evolution took place which resulted in the new Neolithic life.

We shall proceed first to examine the finds of Neolithic tools which are more abundant and which are far more numerous than the implements which belonged to the

Palaeolithic epoch. With an eye to analysis and minuteness, characteristic of Bruce Foote, he has discovered as many as seventy-eight distinct types of artefacts from the Neolithic sites. Of these types as many as forty-one are said to belong to the polished variety and the remaining thirty-seven may be deemed as unpolished ones. Before we examine these numerous implements which were a distinct contribution of the Neolithic man, we can mention the polish which is a common feature with the class of Neolithic peoples. We saw that in the palaeolithic age the finds of the polished variety were few and far between, thus testifying to the fact that the palaeolithic man was satisfied with crude appliances. No doubt among the finds which belong to the New Stone Age figure the unpolished tools and implements; but side by side with the unpolished class we notice the polish which suggests the gradual evolution of the Neolithic man's intelligence. Among the host of artefacts which belong to the polished variety mention may be made of adzes, anvils, axe-hammers, celts, chisels, corn-crushers, hammers, hammer-stones, mealing-stones, troughs, mortars, net-sinkers, pestles, polishing grooves, slabs for grinding slick-stones, and whet-stones. It may be noted in this connection that the Neolithic people selected a particular kind of rock which was easily accessible to them for making their stone implements with.

The men of the Palaeolithic age largely depended upon the use of quartzite but the Neolithians preferred the black-coloured trap, largely prevalent among the gneiss and granite formations, which are largely found in the Dharwar, Cuddapah and Kurnool systems. It may be noted that the trap rock is more tough and more hard than its sister rock quartzite, but still it was a good material to make the polished variety of implements. That is why we see large Neolithic settlements not only in our state but in every Indian State. But the absence of Neolithic establishments south of the Kaveri can be explained by the fact that the trap

which was a suitable material to them was largely absent in that part of the country. It must be noticed, however, that trap rock was not the only material used by the Neolithians though it was largely handled by them. Weapons like celts, adzes, chisels etc., were manufactured from the trap rock, and the polish of the tools needed their abundant use.

Among the artefacts of the polished variety are found as many as twelve types of celts in different shapes, six varieties of chisels some being square and others triangular, three kinds of hammers, two types of adzes, two kinds of mealing stones, two kinds of trough, etc. There is no evidence that the Neolithic workers worried themselves about their material which consisted of rock and that too trap rock. They do not seem to have had huge pieces which were freshly broken, but they were content with whatever fragments they were able to get and with them they made implements which were deemed necessary for them. In short, they do not seem to have laboured much, for their labour was simple. Mention may be made of a celt factory discovered on the Kapgallu or Peacock's Hill near Bellary. Examining this, Bruce Foote found here the existence of a great dyke of dioritic traps which traverses the hill axially in the north-west by western direction. "This dyke furnished the stone workers with an inexhaustible supply of excellent material of two sorts, the coarse blank diorite and the fine grained pale greeny-grey of drab-trap which occurs in tentacular masses, often of large size included in the diorite dyke." It needs no saying that the celt-makers were attached to this colony.

Not only weapons of offence and defence were done in a polished style but also other articles some consisting of luxury things and some associated with religious beliefs belonged to the polished class of their manufactures. For example, we see the existence of beads, buttons, discus, toy-

marbles, pendants, vessels and also the phallus besides a number of human and animal figures. Mere enumeration of these various articles will show to any impartial reader that civilization of the Neolithic men was far more advanced than that of their brethren in the Palaeolithic age, and some of them if not all go to prove that the germs of modern culture could be easily recognised among them. We may cite beads and buttons, pendants and toy-marbles. It is also interesting to mention here the find of the phallus largely associated with the Hindu religion even to-day. More of this is in the section under religion. The numerous figures and figurines found among the Neolithic finds indicate the enormous interest which the man of antiquity took in what we now call portrait sculpture. Among these were animal figures which we meet with in the Neolithic sites, which indicate an advance on the Palaeolithic art.

Besides tools and implements of the polished variety, many unpolished articles have been found in many sites of South India. Mention may be made of anvils, bone-splitters, engraving tools, arrowheads, cores, flakes, knives, lancets, pelting stones, mallets, scrapers, sling stones and numerous other varieties of useful articles. Some of these articles are of different shapes and of different kinds. For instance, we meet with no less than six varieties of cores and flakes. There are also several varieties of scrapers, some small, and some others curved. What is more important is the arrow-head of which three types can be distinguished. In spite of the fact that the palaeolithic and neolithic South Indian largely used arrows for earning their food and defending themselves against wild marauders, arrow-heads of the stone variety are scarce, and Bruce Foote surmises that thorn-headed arrows were used on an extensive scale. The bow is not in evidence, perhaps it was the weapon of the North Indian now called the Aryans. After the contact with the Aryans these jungle tribes provided their arrow-heads with

horn or bone. Evidently this is a thing of the future and the bow was not an instrument with the Neolithician. Stone arrow-heads, therefore, were largely used by the people of this age and a few examples of this type of implement have been discovered at Sawyerpuram in Tinnevely, Ramdrug in Bellary and Rawalkonda in Hyderabad. It is a remarkable circumstance to relate that the types of arrow-heads discovered do not bear the mark of being made in chert, agate or jasper rocks. Though these rocks were known to the Neolithians and they have been used for manufacturing flakes and scrapers, still the arrow-heads of the Neolithians were only of the variety of the trap rock.

As a rule, the Neolithic people who were spread out in South India and the Deccan chose such places which had granite rocks in abundant measure. The natural fissures which were found in plenty in the granite rocks served as their building habitations providing shelter from the scorching sun and the heavy rain. There was another reason which prompted the Neolithic inhabitants to seek shelter under the granite rocks. This was due to the availability of water nearby. To the Neolithician, storage of water was important and there have been found a number of natural cisterns near their settlements containing perhaps rain-water which was of utmost importance for the day-to-day life of the Neolithic men. In spite of the evolution which was gradually taking place, still, one cannot say with definiteness that there were houses built by the Neolithic Indian. At least we have not come across their old habitations. It may be that their houses were of thatch and straw thrown over the mud walls and all of them being perishable material no trace of them could be seen now.

The absence of potsherds would itself indicate that this man of antiquity did not know the use of either manufacturing tiles or using them in buildings. Even in the districts of Bellary and Salem

search for Neolithic habitations has proved in vain; but in some places in these districts including Hyderabad there are a number of cinder mounds. Some scholars who have examined these cinders which are more or less yellow or grey in colour have come to the conclusion that they might be after all ash-cones due to the eruption of a volcano here and there. But it is more reasonable to suppose that they are the remains of Neolithic settlements. We are emboldened to make this inference from the fact that there are corn crushers, mealing stones, celts, animal bones, flakes and cores which are undoubtedly indicative of neolithic times. Whether these were permanent settlements or settlements for the time being we are not in a position to say. Bruce Foote has suggested that these cinder mounds represent the camps where the outposts of Neolithic watchmen existed. It is also suggested that these mounds might have been the result of a huge fire in cow-dung areas. Though these suggestions are curious and belong to the realm of imagination, still the fact is that cinder mounds have been discovered on a wide scale especially in the district of Bellary and the taluqs of Hyderabad.

In this connection the observations of Longhurst in the annual report of the Archaeological Survey, Southern Circle, Madras, for 1914-15 may be cited regarding the manufacture of Neolithic implements. "To the South and East of Demaketiapalle, a small village situated eleven miles to the east of Hindupur railway station in the Anantapur District of the Madras Presidency are a number of small rocky hills, more or less connected together and which rise abruptly from the plains. Running along the crest (of one of the hills) is an outcrop of black trap, which when viewed from a distance resembles the ruins of a fort-wall. . . . . Most of the boulders are not complete, as almost all of them show signs of having been struck with stone hammers in order to produce the flakes required for work-

ing up into finished celts. Hundreds of flakes and partly made stone implements, together with a quantity of stone hammers, may be found lying around the bases of these boulders, the latter showing unmistakable signs of being the original blocks from which the flakes were struck. In some cases I was able to replace the flakes on the very blocks from which they were struck and thus the first process of the manufacture of a stone celt became apparent, so much so, that I was able to produce a number of stone flakes. . . . by simply picking up a stone hammer and bringing it down with a good smart blow on the crown of one of the dome-shaped boulders. This part of the making of a stone implement is simple enough and does not require any practice, a stone hammer and a strong arm is all that is required. But the trimming of the edges of the flakes and the working of it up into an implement or weapon is a very different matter and a very difficult one. Judging from the number of partly finished celts lying on the ground, all of which were broken and useless as implements or weapons, it would appear that for every finished celt made, dozens of failures must have occurred. The finishing of the edges of the flakes must have been done by pressure and not with the hammer. I tried this myself and found that the use of the hammer for this work invariably broke the flake, but I was successful in trimming the edges by pressure applied by the aid of another stone."

This leads us on to an examination of the principal Neolithic sites. Mention has already been made that the extreme south of the peninsula including the Travancore region is not marked by the existence of palaeolithic or neolithic settlements but in the district of Tinnevely we find at Sawyerpuram and elsewhere abundant material to show that the Neolithic man made his habitation there. One notices in these parts scrapers, cores and flakes of cherts together with quartz indicating the presence of Neolithic



men in these parts. The cores discovered in these regions though diminutive in length, perhaps less than an inch, are still attractive in form. In shape they put on a good appearance. The stones themselves are not native to the soil but it can be reasonably conjectured that the Neolithic man was busy getting the materials immediately from his north. The sling stones and the arrow-heads found in the sites favourably compare with these implements discovered at the same time in Europe. From this we cannot draw the conclusion that one was the borrower and the other the giver. By sheer accident, in spite of the world unity in Neolithic culture, the Tinnevelly Neolithian made his arrow-head of stone and also sling stone. Therefore the models discovered either in England or in France have no significance to a student of the Neolithic age in the Indian Peninsula.

Coming on to the district of Madura we can confidently say that the several parts of the district are dotted by Neolithic settlements. Here we find scrapers of chert and mace heads of gneiss which recall to us the neolithic age but these rocks are not indigenous and as in the case of Tinnevelly they have been imported from the north. This may also suggest a migration of the north to the south. But the more plausible suggestion is that the ancient Neolithians of Madura were adventurous enough to import this material to their district. What is further interesting is the discovery of urns and menhirs near Manamadura, dolmens in the Palni hills and cairns near Kodaikanal. While pointing out the ways of the disposal of the dead to which we shall presently refer, these urns and dolmens are believed to be indications of Neolithic settlements, containing as they do a number of caves and caverns and a number of other lithic monuments as unearthed by the archaeologist. The neolithic movements may be taken to have been active in the Madura area.

But perhaps the most rich and the more reliable materials pertaining to Neolithic times come from the present Salem district. No one can gainsay the fact that in these times the Shevroy hills were the most important. Neolithic celts are abundant and are unearthed even to-day by the tillers of the soil. The trap implements, however crude and clumsy, were used by the man of antiquity and have been found at Bargour in the Krishnagiri taluq of the district. Evidently this was one of the oldest settlements of the Neolithician. But what is more important is the yield of a number of artefacts peculiar to the New Stone Age. Besides a number of celts, the Shevroy hills have yielded to us ring stones with a central stone, slick stone evidently for polishing earthenware. This find which is of interest to us to-day as also the pottery in the form of discs and others go to prove the high water mark of Neolithic civilization which reached almost in the extreme south of the peninsula.

One peculiarity that has been noticed in the tools and implements from the Salem district is in point of their polish and also grinding. A comparison between them and those discovered in the Deccan, shows a close resemblance between the two. We can even boldly say that the polish found in the Salem materials is of a higher order, thus suggesting the neolithic Salem passed on quietly and without much ado. The skilful workmanship of the finds shows that the workmen enjoyed more leisure and were free from invaders and marauders. Thus Salem proves to be the best example of what a Neolithic habitation appears to have been.

On the west coast of the peninsula survivals of the Neolithic establishments are also noticed though not on a large scale. True, a celt made of pale granite has been found there. There are also some beads and a good collection of pottery. From these materials one has to infer that though it belonged to the Neolithic times the site on the west coast must be attributed to a later stage in that epoch. But in

the Mysore State we witness rich Neolithic artefacts which may be termed Neolithic. Pottery is one of the special features of this group. At Talia as many as nine vessels and human bones have been noticed by the archaeologist. Among other articles discovered are a drilled stone perhaps used as socket for the pivot of a door. But whether doors as we know them to-day ever existed in those times is more a matter for conjecture. There were mace-heads and also flooring tiles. The latter suggests the existence of houses. But one needs be sceptic of a knowledge of house and house-building in those days. At least there is no evidence of any building among the Neolithic finds. The wheel of a toy-cart has been found suggestive of their knowledge of toys for the children to play with. Among the finds again there were sinkers. This suggests that fishery was practised on a large scale. But possibly this was not the fishery of the sea coast, which is yet to come in much later times. Mention has already been made of the finds of pottery here and there in Mysore. The pottery discovered is of two types, one polished and the other rough. From the fact that some of the pottery materials have been discovered, the inference is irresistible that the ancient Neolithians developed decorative motifs.

Passing on to the lower Deccan, the present district of Bellary may be singled out as the birth place of not only Palaeolithic settlements but also Neolithic ones. The fort hill in this district affords many examples that once Neolithic man spent his days there. Chips and broken tools were a common feature of this extensive site. Pottery and pottery-making were cultivated as an art in this region. Four miles to the east of Bellary is the Kapgallu hill where the manufacture of the Neolithic people is very much in evidence. Primitive man used the rockfloor of this hill for the purpose of mealing his grain. Side by side are found troughs of a polished variety. Different types of celts, adzes and scrapers

were also noticed in the site. An examination of the celts points out the several stages in their manufacture. The same is noticed in the Peacock hill but Gadiganuru site is more valuable for affording a kind of celt which is not of the usual variety of Neolithic settlements. Here were also seen heads of shell, bangles of chank-shell and the bull amulet which demonstrate clearly that the primitive folk had much faith in magic. Add to this the cinder mound of which mention has already been made, but we must not fail to mention the face hill at Bellary. Though it is considered to be a Neolithic site, still from the presence of iron slag and fragments of haematite one has to conclude that this site legitimately belongs to the Iron Age rather than to the Neolithic. But perhaps the Iron Age succeeded the Neolithic epoch in the gradual evolution of man's progress. It may be remarked that the Neolithic age passed on to the Iron Age in a peaceful manner. The face hill at Bellary will bear sufficient testimony to this.

Examining the artefacts found in the district of Anantapur, different places point out to their Neolithic antiquity. The flakes of agate meet our eye though the metal has to be brought from at least sixty miles away. Cores and bangles of chank still testify to the handiwork of the early man. In this settlement also there is much evidence of the Iron Age. Probably as in the case of the face hill at Bellary these Neolithians were slowly passing on from one epoch to other. One peculiar feature of this site is its pottery with various designs and colours.

Turning our attention to Cuddapah we find in it a lota (vessel) containing some *chunam*-like-matter, suggesting that there was prevalent a palm juice industry. Though this suggestion is interesting still one cannot hazard such an ancient age for the industry of palm juice. There have also been found numerous bangles most of them broken, thus testifying that the bangle industry was on a wide spread

scale in the district of Cuddapah. In Kurnool on the other hand are remains most of them coloured and attractive. There are drill heads, tattooing points, chert and Lydian stones. There are also vases, bowls, sling-stones and others bespeaking a rich variety of Neolithic relics. But the finds on the whole show that the people who occupied this area were near the Iron Age or on its threshold. The remnants of the Neolithic establishment either in the district of Guntur or Krishna have not been such as to deserve notice. But a word may be said of a comb made of wood found at Guntakkal, the only one of its kind available in all India.

But the case is different in Hyderabad from what we find there. The Raichur doab contains certain earthenware things which can be identified with corks for bottles. Probably they belong to Neolithic times ; and things were kept in receptacles. Among the other materials are the flakes, and adzes. One of the flakes is a saw-flake made of chert recognised as most attractive. From these and other materials the Raichur Doab has been considered as rich in Neolithic varieties. In the same way at Maski have been discovered a good number of flakes, some made of agate and others made of chert. Besides bangles of shell there are also pendants and also beads of cowrie shells. It is conjectured that cowrie was used as currency by the primitive peoples. But we believe that they were abundantly used for ornamental purposes. Toys and pottery are other finds in this area. There are also four-footed vessels and a lid. This is indeed a development of old pottery.

Lastly may be mentioned finds in Ceylon. Arrow-heads and scrapers are a characteristic feature of the Ceylon finds which are made of the quartz rock ; but this did not preclude the use of chert also. Though the finds betray the influences of the Palaeolithic man, still some scholars are inclined to put them down as Neolithic activities. Whatever

may be the case, Ceylon went through both the Old Stone Age and the New Stone Age almost like peninsular India.

### CULTURE DURING NEOLITHIC TIMES

Scholars have proved to the hilt the world unity of Neolithic culture. Types of arrow-head resembling those of France and the sling stones in Tinnevely resembling those in England, the thumb-stone resembling those in Switzerland show to what length the Neolithician must have wandered from one continent to another. We have also an example of the perforated celt in the Shevroy hills and the knowledge of hafting of the true axes. In this connection Bruce Foote observes "the hafting of true axes would have been done with less difficulty as from their elongate and slimmer shapes they have been fitted into a hole in the club-shaped branch of a tree of which the wood was very tough and durable, such as that of the hard *wickia* and *accha maram* of the Tamil people."

### OCCUPATIONS

Mention has been made earlier of Neolithic habitations but enough has not been said about the life of the Neolithicians. Their occupations were varied. It is legitimate to suppose that they carried on without a break the profession of hunting in which the Palaeolithicians so much indulged. Hunting was the primary occupation of the Neolithic period also. Primeval folk who took shelter in rocks and woods naturally were tempted to hunt the wild animals they came across and made a meal of their flesh. The Neolithic man spent most part of his time in hunting the quarry and making the best use of the chase. It was almost a pastime with him to be engaged in the chase of game which included bird-hunting also. Sheer economic motive could be attributed as the reason for this kind of occupation. Side by side with hunting, fishing was also practised on a large scale. There

is no strong evidence to show that the Neolithians made the coastline his habitation. But their settlements being uncertain, and being themselves wanderers from one part of the land to another, it may be that they confined their activities especially to fishing in the inland areas which afforded facilities for the subsidiary occupation also. It is difficult to accept the view that they lived in coastal regions and followed the occupation of coastal fishing by using primitive canoes. At this stage of civilization we do not know whether we can credit them with any knowledge of sea-fishing. No doubt man moved from one region to another and generally lived a life of migration and immigration. From this we cannot conclude that the early man anticipated the sea-fishing industry. He might have caught the fish found along the coasts. That fishing was one of their subsidiary occupations could be seen from the plethora of net sinkers in the Neolithic sites.

Another occupation of the Neolithician seems to have been rearing of flocks and herds of cattle. The tendency to domesticate animals grew with the progress of man who was merely a hunter to begin with. The attempt of the Palaeolithician to domesticate animals was very feeble and it was only given to the Neolithician to domesticate animals and use them in different ways for their livelihood. We cannot say that the Neolithians cultivated this rearing of herds as an industry and indulged in it permanently. But this much is certain that some animals which yielded them food in the shape of milk and butter and meat besides hides for clothing, were domesticated and maintained. But to maintain the herds of cattle and to tend them was a job and therefore the Neolithician had to wander in search of fresh pastures and grass lands. So long as this or that region satisfied him with grass for his animals he made it a temporary home and as soon as the material was exhausted he went to other places which would give him fresh pastures.

In this way it may be supposed that the mere hunting life so characteristic of the Palaeolithic period gave place to the pastoral life of the Neolithic period. The prime necessity of keeping the cows and cattle safe from the attacks from wild animals and to protect themselves from the ravages of marauders led perhaps to some evolution of orderliness after man passed through a very long period of wandering. The simple economy of co-operation to safeguard the interests of the community slowly began to take shape. Necessity drove the people to live in groups and to this perhaps may be traced the beginnings of the joint-family system of which so much is made in the present day economy. An ingenious suggestion has also been made that from the term *Kon* standing for cowherd has gradually evolved the institution of kingship or monarchy. But this might have happened in a very late stage when the pastoral peoples were permanently fixed to a certain locality. But whatever this may be in the story of human evolution, the Neolithician plays a significant part in the genesis of pastoral life while his elder contemporary was satisfied with a hunting life.

#### · AGRICULTURE

It has been considered from some of the evidences which have come to light from the Neolithic sites that the Neolithic man was also aware of agriculture. This is again rather difficult to accept. Perhaps at the last stage of the Neolithic civilization, what we may call the rudiments of agriculture were perhaps known to man. This age must almost be bordering upon the Iron Age that is yet to come. Perhaps we can credit the Neolithicians with a knowledge of agriculture. To begin with, the soil was broken with stone hoes and later when he got the knowledge of forked ploughs he perhaps used them with a plough-share of stone. But with such primitive tools of husbandry, cultivation of any crop on an extensive scale would not have been possible.



He certainly continued his old occupation of gathering fruits and lived upon them. Honey gathered from bee-hives served him also as a dish. He did not specially rear those trees which yielded him the necessary fruits and nuts though there is a view that the Neolithians planted such trees. It was primarily Nature that supplied him with the necessary things for his livelihood. He also collected the wild grains and roots which grew on the land. We cannot credit him with a knowledge of rice cultivation from the little evidence we have. In much later times among the finds in the Indus valley there was rice and that was found in a wild condition. In the cinder mounds unearthed by the indefatigable efforts of the archaeologist, remnants of *cholan* have been found and from this we need not rush to the conclusion that cultivation was systematically undertaken in Neolithic India.

It is reasonable therefore to suppose that no regular cultivation was attempted by the Neolithician and the little evidence shows that he mainly lived upon the wild grains. Again it has been taken for granted that the Neolithician knew the art of constructing wells and well irrigation. We doubt this very much. No doubt he conserved the waters in natural reservoirs and sometimes artificially also. Beyond this whether he utilised waters by means of lifts of which we have plenty to-day is a question that cannot be answered easily. Our view is that while the Palaeolithician practised hunting on a large scale the Neolithians took to pastoral life in addition to hunting. To credit him with the knowledge of ocean fishing and also cultivation of varieties of grains and pulses is much more than warranted by evidence.

#### FOOD AND DISHES

The food of the neolithic men was simple. Mention has been made that their chief articles of diet were fruits, roots and nuts. Meat and flesh of animals which they

chased supplemented their main diet. Wild varieties of cereals and pulses were occasionally taken. From the existence of corn-crushers, mealing stone, mealing troughs, mortar and pestle, the inference is irresistible that they were alive to some process of cooking and preparing dishes. The dishes themselves may be varied in character but the large volume of evidence shows that food was cooked and consumed. Otherwise there would be no meaning in their having mealing stones and corn-crushers. But it is difficult to say if they were alive to delicate dishes like those with which we are familiar to-day. As the pastoral life of the people developed, milk would have been an important article in their diet. But one cannot be sure whether the people had a knowledge of such milk products as curds and ghee though some people are of opinion that the discovery of these articles may be Neolithic. But having been accustomed to fruits and nuts from early times it stands to reason that they would have used toddy. For this one should indulge only in imagination.

### DRESS AND ORNAMENTS

In the matter of dress again what little evidence we have points out that the dress of the Neolithic people was very scanty. Men of this age roamed about with a loin cloth and the skin robe was almost a luxury though it was known. Leaves and barks of trees continued to serve as the dressing material as was the custom in the Palaeolithic times. It has been contended that they gained knowledge of the art of weaving as ages went by. One would accept that India was the first to utilise cotton and cotton goods. Though we have discovered cotton fabric among the archaeological finds in the Indus valley this could not be the clue that cotton manufacture was known to the Neolithians. It is true that there was a wild growth of this stuff in the western parts of India and the Deccan. It is also true that in the Neolithic sites

we have discovered slick stones but from these we cannot infer that cotton weaving was an ordinary manufacture in the Neolithic age. The numerous slick stones discovered show at the most that the Neolithic people knew how to plait leaves of which they were in abundant possession. It cannot be definitely asserted that the existence of slick stones points in any way to the prevalence of the art of weaving cotton or wool. But we may be permitted to say that the art of plaiting leaves might have led in course of ages to the idea of weaving cotton. According to our knowledge of weaving might have been gained by them towards the close of Neolithic epoch and towards the beginning of the use of metals, especially iron. More than this one cannot credit the Neolithician with a full knowledge of the art of weaving though some scholars are inclined to this view. •

Not only in the occupation of weaving but also it is remarked that they developed the art of dyeing. No doubt the culture of the rocks gave them an idea of the artistic sense from the different varieties of hues and colours which the rock presented. But it is too much to say that they had a knowledge of colours and used them for their clothes. While they were primitive even in the art of weaving it is not possible to conclude that they were proficient in selecting materials for the manufacture of colours. All we can say is that the late Neolithic men perhaps used the loin cloth and their women dressed themselves with hangings something like a petticoat. Even in advanced times like ours, some women, leave the upper part of their body uncovered. The Malabar women may be cited as an example. Climatic conditions of South India do not require a heavy dress for the people. All that the aboriginals wanted was to cover their nakedness which the leaves and barks of trees did. Those who could afford it used skin robes. The later Neolithicians perhaps began to use cloth though on a small scale,

With this is closely associated the weaving of wool. It has been suggested that he was also clad in woollen dress. This is to judge of the Neolithic Indian from the modern tribe especially Kurumbas. The fact seems to be that the art of wool-weaving was a much later discovery at least later than the Neolithic period. We must curb the tendency of inferring one unknown from another unknown. The knowledge of woollen manufacture of the Neolithician may be treated only as a suggestion and not as a fact.

But their ignorance of the manufacture of cotton or wool did not stand in the way of their dressing themselves in a suitable and elegant way. Speaking of the Neolithic women and the numerous finds in the shape of comb, neck-rest, beads, pendants, bangles and other ornaments the women of the day gave vent to their vanity to excel the men in outward display. One method of such display was to admire hair and dress it carefully. There are several myths and legends even among the illiterate hill-folk to-day about the importance of hair and how the ladies were particular about dressing it, and in this the comb played a significant part. Among some tribes even to this day the gift of a comb in marriage is a pledge of fidelity. It is therefore natural that the Neolithic women dressed their hair perhaps in an attractive fashion with the help of their combs.

The use of beads among the primitive folk is an interesting and comprehensive study as there were different varieties of beads. Recently a scholar has devoted his attention to the intrinsic study of these beads and has shown how they have been used in different ages. We can at once say that beads served as one of the principal ornaments of the women in the Neolithic days. They used besides pendants, rings and bangles. Shells and bones also served them to deck themselves with. From a study of these ornaments we may con-

clude that the Neolithic women cultivated a good taste for beauty. Whether they dressed themselves gorgeously and in attractive colours, as some people think, is beyond the bounds of certainty.

### CRAFTS AND ARTS

If the Neolithic man was anything he was first and foremost a craftsman. India developed her arts and crafts in various spheres and South India has specialised in them from time immemorial. One of the living crafts of South India is of pottery. There are among the Neolithic finds several places where pottery of different varieties has been found. The districts of Anantapur, Cuddapah, Kurnool, Tinnevely, Salem, Pudukkottah, Trichinopoly, and Bellary may be mentioned. In these regions in Neolithic settlements have been found several relics of pottery, sometimes plain, and sometimes decorated. Bruce Foote who was practically the first discoverer of pottery in these settlements suggested that originally kilns were not used for the purpose of burning the earthenware. He is perhaps right in this suggestion; for most of the vessels recovered are blackish in colour especially at the top and possibly imperfectly burnt. There is of course the red portion in the vessels which points out that some portion has been well burnt. In other words, the Neolithians must have taken to the art of pottery towards the close of the Neolithic epoch when they made imperfect and crude vessels, their shapes and colour not quite satisfactory or attractive.

But one must take account of these general surfaces and if we examine them, the pottery of these times falls into two groups, plain and decorated. In the first group belonging to the plain variety there are as many as four types. They are rough, smooth, polished and painted. The last two types are indeed rare, while we have enough vessels of the rough variety. The decorated pottery is also in evidence

and from the shells and bangles with decorative designs on them, one can safely say that the Neolithic women, if not men, were fond of decoration and this love of decoration has been found even with regard to vessels made of earthenware. A chatty of the Neolithic period has been found in the mounds at Gudivada in the Kistna district. The peculiarity of this pottery is that it is decorated. Not only decoration plays a prominent role but also fillets outside present impressions that the Neolithic man was moved by an innate artistic instinct.

It must be said at the outset that the representations on pottery are not human or animal figures but they are mostly patterns of natural objects around them; for example, fruits, flowers and leaves are being represented on pottery, giving us the impression that the Neolithic people were most familiar with these things of value. The Mysore pottery which is rich with these patterns may be cited as an example. There are several varieties among the decorated pottery of key hole patterns, purple stripes, implements with decorations and others. In the pottery unearthed from Tadpatri signs of decorating them are noticeable. In the graves belonging to the Neolithic settlements one notices burial urns, vases, bowls, lotas, cups, circular dishes, lamps, libation and other vessels which tend to excite the curiosity of the antiquarian. The libation vessels of Kurnool which are black but which are polished may also be cited as an example.

Though the various types of pottery unearthed from Neolithic settlements and graveyards present a respectable specimen of how the primitive mind worked, yet it is difficult to credit the aboriginal minds with the knowledge and skill for developing this art. In spite of the surprising variety of vessels we cannot credit them with a knowledge of all pigments which are necessary for producing attractive colours like green and blue. An exami-

nation of the majority of vessels belonging to this class shows that these vessels were almost lacking in colour. This indicates their want of knowledge in necessary pigments and their limited firing to different degrees. Also the South Indian Neolithians were not aware of the celadon ware peculiar to Karachi and Babylon.

Further, there is no evidence to show that the potter's wheel and its application were known to them. The rough surface of most of the vessels and the poor decorations added on to the dull colour with which we meet in the Neolithic pottery show beyond doubt that the original craftsmen could not be skilled workmen. For they bear a marked contrast to the pottery made in the Iron Age, which possesses attractive colours, polished surfaces and handsome mouldings. Bruce Foote, who has classified the localities where pre-historic potteries have been found, mentions as many as one hundred and twenty seven places out of which fifty six localities only are assigned to the Neolithic age. He is inclined to locate sixty other places in the Iron Age. Considering the small number of places and the unsatisfactory nature of these vessels one has to infer that though pottery as an art was an invention of the Neolithician still it was in a crude stage and the best variety of pottery was only available after the Iron Age was ushered in.

Before we close we may say a word about the colour perception which animated the Neolithician. One remarkable feature in regard to this ancient pottery of South India is the fast colouring of its surfaces. Side by side with the development of decorative art including the personal belongings the Neolithians developed a sense of colour which would have been afforded by the various hues with which they became familiar. With their limited knowledge of firing the earthenware vessels, some of their pottery give a few indications of some tints to which they were accustomed. Moreover, they should have had some idea of the

use of pigments from the different paintings which they have done in these vessels. They were already familiar with pistacite granite with its mixture of green and pink colours and also chrome gneiss with some greenish tints. Their familiarity with cherts and agates must have furnished them with at least a crude knowledge of colouring materials. With such knowledge they were able to produce vessels which were fast in colour and which evoke the admiration of the archaeologist to-day. But the age of better pottery was yet to dawn.

### RELIGION

The most noteworthy aspect of the Neolithic culture consists of the religious conceptions and beliefs of the people. In religion the Neolithians had not much advanced. They still clung to the old beliefs which were entertained by the Palaeolithians. The latter were animists and the Neolithians followed suit. There is one fundamental difference between the two cultures, Palaeolithic and Neolithic. While the Palaeolithians were mostly devotees of the mother goddess and offered worship to her in various forms especially to avert diseases, the Neolithians can be said to have made progress in the sense that they were worshippers of the Phallus or the *lingam*. Examining the Kapgallu hill, Bellary district, Bruce Foote found some rock bruising which were at the most sketches, sometimes of human beings and sometimes of animals. But what interests us is that a *lingam* and a bull in a crouching posture were found among others and this clearly indicates that the Neolithic man worshipped the Phallus which he perhaps housed in a hut. Whether it be a mother goddess or *lingam*, both were portrayed in stone and both were supposed to embody peculiar spirits and hence were objects of worship. Offerings were made to get protection from sickness and other diseases and it is reasonable to assume that such offerings were communal in character.



From the earliest times the objects of worship were made not in metal. In fact metal was tabooed as unclean material while wood and stone served as the sacred material which has no pollution of any kind. The most ancient worship in India then consisted of offering to the sacred stone which the Neolithians largely used and to which the Neolithician attached particular sacredness. He believed in spirits and their activities, without which he thought the world as he construed it could not get on. The worship of the Phallus and the Phallic god could well be attributed to the aboriginals of the Neolithic age. Notwithstanding the passage of thousands and thousands of years we have imbibed the tradition of Phallic worship which is being followed on a large scale even to-day.

Even now people associate a stone *lingam* with great sanctity. It is considered heinous and profane to scorn it. One has to take that the rudiments of Śaivism with which the form of worship is closely associated perhaps took their origin with the South Indian Neolithians. And Śaivism, the oldest form of religion, took deep root in the soil of Neolithician settlements. In the carvings at Kapgallu hill in the Bellary district, what is still more interesting is the find of a bull lying very near the *lingam*. God Śiva is intimately associated with the bull as his riding animal. One cannot boldly say whether this association of the bull with God Śiva is after all a Neolithician legacy to us.

Folklore and the myths which have been floating and which have been handed down from generation to generation and which were reduced to writing in the form of Purāṇas still contain many relics of the immemorial customs which were prevalent in the Neolithic period. As these people were still in the stage of pastoral life they moved from one place to another and had the mudhovels of the wandering community. In every area which they occupied and left, it was usual to erect a sacred hut and render offerings of what they

brought, and then consume them. These were chiefly flesh and drink. They believed in bloody sacrifices and the objects of sacrifice included several animals but buffaloes prominently figure; sometimes there were also human offerings. All these show that the people of the Neolithic age had not yet emerged out of the barbarism and savagery to which they were accustomed.

The one great service which the Neolithians of old in South India did to posterity was with reference to the system of Phallic worship. If we dive deep into the pages of the R̥g Veda, the earliest Sanskrit literature, we find it narrated that Indra was the object of worship with the Aryas while the Phallic god was treated as their enemy; but later on when we come to the days of the Atharvaveda, conditions have changed completely and the Phallic god is no more an enemy but a close friend of the gods. We are greatly astounded to read the hymns of praise with which the Phallic god is propitiated in the Atharvan lore. From this it can be easily imagined how the Sanskrit culture which was cosmopolitan in outlook and which accepted whatever was good in other religions, embraced like a true friend this system of worship and ultimately made it its own. While the worship of the *lingam* became advanced and popular this god was considered to be the father of all mankind. The father of mankind must have a spouse for the propagation of generations, and the Neolithic people perhaps in much later times transplanted the mother which the Palaeolithians revered, to be the Śakti for their primeval god. Hence by a healthy compromise which characterised the spirit of the aborigines, a harmony was effected which we now understand by the Śakta and Śakti.

#### DISPOSAL OF THE DEAD

The Neolithic brain was certainly advanced more than that of their predecessors. The old habit of exposing the

dead to the elements or birds and beasts was however continued. At least this was the system which was observed by the early Neolithic people, but the later Neolithians seem to have believed that the spirit of man after his death survived and therefore he prepared stone cists for preserving the remains of the dead. A hint is given in the word *Kuranguppattāḍi* — perhaps it was the corruption of the old term *Kurakkuppattāḍai*, which may literally mean a tomb in the lower part of the earth. Whatever this term may mean there is no doubt that there was the ancient custom among the aborigines to erect mud-pits in which their dead were buried. In other words, pits were dug deeply into the ground and the dead bodies were laid in them.

Later, perhaps on the advent of the age of metals, a new stage was reached when the dead body was placed in a pot made of earthenware and this pot was placed in the pit which was filled with sand. Along with the pot were also his stone tools and implements side by side with some of the foodstuffs. Evidently, the Neolithician believed in his post-mortem life. If not, there is no necessity to place the foodstuffs or even place the stone implements in the pots. The pot, however, was not left open and a lid made again of earthenware was used as a covering. The pit itself was covered with a stone slab which was placed above, and this indicates that it was a tomb. The shape of this tomb was oval, large in size and surrounded by stones all round. The sizes themselves varied from one tomb to another. For the use of the tombs they selected particular places of burial. The cists of stone and mud-pits were commonly known as burial urns. Urn burials and urn fields are numerous in South India especially in Pudukkottah. It is said that the graves of the New Stone Age were oval in shape and those that succeeded them in the iron age were oblong. Tombs made of huge blocks of stones have been termed *megaliths*

and our cists and cells resemble in most respects the megalithic tombs in Europe.

A large number of tombs have been uncovered in the districts of Bellary and Coimbatore. This shows primarily two things. One is that there was a diffusion of Neolithic culture from one region to the other; secondly, there was the great idea of ancestral worship the rudiments of which were deeply laid in the Neolithic period. The burial of the dead bodies was considered a matter of seriousness and was not to be treated lightly as during the days of Palaeolithic man. The numerous evidences of urn burials and the equally numerous testimony of trays of foodstuffs and tools placed along with the dead show that the Neolithic man took great care in disposing of his near and dear by systematic burial. In several Neolithic settlements there is the happy association of the burial urns and pottery.

Discovery has been made of hut-urns in the districts of Salem and perhaps in Maski, and Pallavaram of the Chingleput district. This suggests that potters were especially employed to manufacture hut-urns for funerary purposes. The urn itself resembled the hut or cottage in which the Neolithic man lived. The peculiarity of these urns is that some of them are legged while others remain unlegged. Many of the legged variety which are again of different sizes were unearthed in Mysore and even in Hyderabad. The one peculiarity of these vessels is that they are three-legged, and in some cases we meet also with the four legged vessel. Some coffins are tall and some are short. A close study of the funeral urns of South India will afford the antiquarian abundant material on primitive culture.

Confining ourselves to the bulk of deposits in the ancient burial grounds of the Tinnevely district we find that these deposits constitute evidence of pottery freely used, some of them being in good condition, purely attributable to the nature of the soil. In some cases the pottery dis-

covered is reddish in colour while in others it is black. But the common feature seems to be that pottery of this period demonstrates both colours combined. Another feature of the pottery associated with these urns is that they are not decorated. There is no ornamentation in the heaps of different kinds of pottery, sometimes placed in large bowls. The urns themselves are of coarse, thick and sometimes red pottery. There are jars, ring-stands and others in the different burial sites. From a study of the various methods which the aborigines adopted in disposing the dead, one finds strong evidence of urn-burials which persisted in this country in sufficiently later times. A searching study of the Śāṅgam works like the Puraṇānuru and the Maṇimekhalai shows that what we understand as megalithic burials continued in South India till about the commencement of the fifth century A.D., when the Śāṅgam age proper comes to an end.

It is a matter of utmost importance to note that the urn burials were closely associated with ancestral worship. The theory has been propounded, not with much evidence to establish it, that some of the temples had their origin, or some shrines were constructed on the burial grounds devoted to ancestral worship. This is perhaps from the confusion of the two terms *Tāli* and *Pāli* both occurring in early inscriptions and sometimes in literature. The term *Tāli* is generally associated with a burial urn while *Pāli* was a religious resort of the early people like the caves and caverns in the hills. From the expression *Tāli* which later meant the sanctum of the stone temples, it is said that temples generally were erected in the graveyards of well-known ancestors. This may not be a fact in the light of further evidence, literary or epigraphical, but this much may be said viz., ancestor worship like the worship of the phallic god came to remain with us as a permanent institution. One profound idea which is inculcated in Sanskrit culture is the worship

of the Pitrs which is 'nothing more than ancestor worship and which we can regard as the Neolithic legacy.

Curiously, several rites and rituals which are current at present with us and which pass for superstitions in modern literature such as ceremonies connected with birth and death, with naming of men and women, (Nāmakaraṇa), and even with the marriage are attributed to the Neolithician genius. Even a knowledge of the rudiments of astronomy and control of the mind over the body, the influence of nature over man etc., are further traced to the men of the New Stone Age but it is too far to stretch such a conclusion for these are still in the realm of myth and not of tangible facts.

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## LECTURE IV

### THE AGE OF METALS

#### *Introductory*

The Neolithic age in South India passed on to the Iron Age without any interval long or short. In fact, the last centuries of the Neolithic age witnessed the making of iron implements which the Neolithic people used on a large scale. The date of this transition or the length of its duration cannot be fixed with any satisfaction, though one school of archaeologists contends that 5000 B.C. may be roughly taken as the chronological limit for the beginning of the Iron Age in South India. In fixing the chronology of the period in Europe, for instance, it is only the glacial deposits that would be of any help. But India, especially South India, does not know of any glacial deposit which would help materially in fixing this age. It may be that the finding of iron and its use may be ascribed to a more ancient date, than we are apt to imagine. But whatever be the date when the Neolithic age passed on quietly to the Iron Age, it is not material for our present purpose. It is a fact that in South India we had no Bronze Age or Copper Age but only the Iron Age that emerged straight from the Neolithic age. If we study the Neolithic remains side by side with the relics of the early Iron Age, there seems to be a large quantity of these scattered in the districts of Anantapur, Cuddapah and Kurnool. This is also true of the Shevroy hills, the district of Tinnevely, and some other districts of South India. Bruce Foote who has studied the subject of pre-historic pottery in the Neolithic settlements has come to the conclusion that while two places show the transitional formation between the Neolithic and Iron Ages, as many as sixty



places have yielded pottery which clearly indicate that they are Iron Age types.

Opinion is divided as to the place in which man first discovered iron and smelted it for the purpose of making tools and implements. Some scholars believe that the use of iron was first introduced from North India into South, while another set of scholars believe that it was the other way about. Considering the nature and range of the use of this material we must support the theory that iron began to be used first in South India. While it is a fact of the utmost importance that Chalcolithic people largely inhabited the Indus region it was not so with South India. The Neolithic people of South India must have come across iron, perhaps accidentally, and found it more durable and tougher than the trappoid rock. Being familiar with rocks and stone for more than 20,000 years, the new stone age men must have discovered this durable material in the course of their heating and burning when making pottery of which we have plenty of evidence. It is estimated for instance that 5/6 of Bellary is covered with Archaean rock which can be classified as granitoid rock and gneissic. Of these the older are the granitoid. Most of the Archaean rocks are porphyritic granites of light grey colour. The Dharwar rocks are rich in beds of haematite quartzite of intense hardness. Further, the Sandur hills and the Copper mountains are rich in unlimited beds of haematite. These are rich in iron, perhaps the richest in all India. They are also superior to the magnetic iron of Salem. It is regrettable that this industry is practically dead now, though until very recently the softer ones were mined and smelted in a crude fashion. The Sandur range of hills contains Manganese ore besides traces of ancient gold working. It is therefore quite possible for the Stone Age men to have turned to iron as a more durable material for their weapons.

It was Prof. Gowland the well-known metallurgist and explorer of the Japanese islands, who expressed

the opinion that the smelting of iron may have been hit upon by sheer accident. This accident might have happened in peninsular India where according to the best minds the iron industry is much more ancient than in Europe. After the use of iron became familiar in South India, it began to spread in other countries especially Crete and Greece whose architectural monuments and shrines resemble in several respects those of South India. This is how Crete, Greece and other Western countries passed on also to iron culture from their Neolithic age. The Stone Age men were primarily living on hills and mountain fastnesses and also on the fringes of rich forests. If they had been used to wood it is not the forest wood that they cleared and felled but the wood in their neighbouring regions, very near their residential quarters. Only after the discovery of iron ore it is reasonable to suppose that primeval man took to the forest and made it his habitat. It is impossible otherwise to felling the trees and clear the forests. Therefore it is only iron culture that permitted the people of the hills to pass on to forest life.

. In the new stone age population increased as a result of the greater facilities man commanded with regard to food and foodstuffs. With the increase of population and its pressure on the means of subsistence man was driven to the necessity of finding new places where he could settle and where he could obtain plenty of fodder for his domesticated animals, the cattle, and the sheep. It has already been said that in the late period of the New Stone Age the Neolithic man began to tend cattle which supplied him meat and flesh and he perhaps gave up the hard life of hunting and killing wild animals which abounded in the forest beyond. As pastoral people they moved from one settlement to another in search of new pastures and this shifting from one place to another had its own advantages and hence the pastoral man yearned for new settlements which could afford security and protection from marauders. With the facilities

afforded by the Iron Age, this gradually led to agricultural life.

### THE BEGINNINGS OF AGRICULTURE

The ushering in of agriculture and agricultural life does not mean that people gave up completely the pastoral life and took to the profession of agriculture. The pastoral life continued to exist for several thousands of years afterwards, but what is of interest is that the pastoral people lived side by side with the agricultural people. Some of those who pursued pastoral life in the Neolithic times, later on by the sheer economic necessity of finding employment for more people took to the profession of agriculture. The riverine valleys and plains afforded facilities for carrying on agricultural pursuits, and the new Iron Age helped these people very much in their avocation. It is perhaps a mistake to say that the Neolithic people knew the art and science of agriculture and also practised it on a large scale. Mostly, the Neolithians lived on wild grains and might have brought some lands under cultivation through the aid of some crude stone implements which served as their plough-share. It is only when they knew the existence of iron and applied it to their material wood that cultivation of lands was possible on any extensive scale. So it is reasonable to assume that with the coming into use of iron, agriculture came to be practised on a large scale and people who had been leading pastoral life for ages together were attracted to this profession. Even then, it could not be asserted that agriculture claimed a large number of adherents to its fold. What were the prime necessities of life, so far as the food stuffs were concerned, the agriculturist began to cultivate.

It cannot be claimed that the invention of this industry was peculiar to ancient Egypt. It is mostly in the riverine deltas of the whole world, whether it be India or South India, Egypt or Europe, the Neolithic people took to the life of farmers and peasants. It is significant to note that in the

lower reaches of big rivers like the Kaveri or the Krishna that agricultural life began to flourish. For the successful carrying on of this industry people needed water facilities which the big rivers afforded. By means of extensive canals and channels dug from these rivers the waters were generally harnessed for purposes of irrigation. Not that all waters came from rivers. There were places fit for cultivation but which could not be reached by the river. In the early stages of iron culture man was not cognisant of the value of anicuts or storage of water for agricultural use. Some places were rain-fed and monsoon-fed. In some other places huge tanks and wells were dug and facilities for irrigation were provided by the simple and primitive method of water lifts ; even to-day much of the old life which men of the early iron culture led is with us.

Here and there especially in South India we come across the simple device of water lifts which do abundant service so far as irrigation purposes are concerned. This was true at a time when man was in the beginnings of a new industry, which afforded to him the necessary food which he badly needed. We cannot say that the early man even in the Iron Age cultivated all the products and all the grains of which we have to-day some knowledge. It is reasonable to suppose that he began with some pulses and some grain seeds, such as *tinai*, maize (*varagu*), millets and so on. Rice which is so much in demand to-day and to which we are accustomed through ages was still in an infant stage and one can boldly say that extensive rice cultivation was not yet taken up. This was perhaps resorted to in the later stage of iron culture when man was in possession of the knowledge of the ways and means of undertaking the successful cultivation of different crops. But there is no gainsaying the fact that when once lands were brought under rice cultivation people in general took to it more and more with the result South India became, as it were, a granary.

This was proverbial even before the Śāṅgama age (roughly 500 B. C.) began. As South India began more and more to specialise in rice cultivation so also the Indus valley became more and more famous for its wheat crop. Wheat growing was congenial to the soil of the Punjab and it is no wonder that the culture of ancient Mohenjodaro and Harappa contained much wheat and little rice and that too more or less of the wild variety. Therefore we may conclude that only after the introduction of iron and more familiarity with its uses, settled agricultural life commenced.

### RELIGION

The pastoral instincts of the people died hard. They continued to exist in spite of the advance of the agricultural industry. Their main business was to tend cattle and get milk which was in great demand among the agriculturist who occupied the riverine valleys. They had no permanent settlements. Theirs was more or less a nomadic life. They moved from one region to another.

But they were not godless and irreligious. They adopted some sort of primitive religion which gave them spiritual solace and satisfaction. They conceived god as a super-human being. Some divinity was attached to Him. He had abundant invisible powers which were invoked more at the time of distress. If any clue could be afforded by the passage in the R̥g-Veda especially Eighth maṇḍala, Sūkta 96, 13-15, we must postulate a theory that there was a tribe, called the Krishṇas literally black and this tribe is said to be the enemy of the Vedic God Indra. It is said that as many as fifty thousand Krishṇas were the victims at the hands of Indra, and with the help of Maruts and Br̥haspati, the Purohit of the Gods, Indra effected the defeat of this tribe. What is interesting is that the leader of this tribe was called Krishṇa. Still more interesting is that Krishṇa is called fleet Krishṇa. This word Krishṇa is significant as it

points that he was the god of pastoral tribes. Whatever may be the Krishna tradition which was built up later on in the Mahābhārata and the Purāṇas, and whatever may be the tales that have gathered round this mysterious figure, it is clear Krishna was a R̥g-Vedic deity who was perhaps the king of the early pastoral tribe.

Though the Indra cult which was prevalent even in the early centuries of the Christian era was given up, Krishna worship began to dominate the Hindu religion. Even in the *Bhāgavata Purāṇa* where Krishna is adored as the god of gods there are evidences to show that Indra was much disliked by this god Krishna. The stories themselves which find narration here and there in the *Bhāgavata Purāṇa* paint a picture of the simple and humble cowherds who shifted their places of residence from here to there and who delighted in the play of the flute to their cattle. Also the sporting attitude of Krishna with the village maidens, the Rāsa-līla of Sanskritists has a significant tale to tell us. Taking these into account and taking the fact of a Krishna being mentioned in the R̥g-Veda as the leader of a tribe, we have developed a sort of synchronism where we have reconciled the pastoral deity Krishna with the Vedic Vishṇu and the Āgamic Vāsudeva. What is important to our purpose is the association of a god Krishna who was adored and worshipped by the pastoral tribes of early times. As we have furnished already, this was the god who was identified later on as Vedic Vishṇu, the supreme Puruṣa who was conceived afterwards as Vāsudeva.

While the settled agricultural community developed the worship of *linga*, the phallic god, the pastoral tribe clung to the worship of Krishna as their supreme deity.

### THE SUN CULT

While speaking about the religion of the pastoral people we can add without any fear of contradiction that the Sun

must have been regarded with awe and veneration and this later on led to the beginnings of solar worship among them. Being men of simple pastoral pursuits they reckoned the day with the dawn of the Sun and were profoundly affected by both its scorching and mild rays. These rays, the aboriginal men thought, were responsible for the joy and happiness of cattle committed to their charge ; for the sheep and cows began to frisk and jump in the sunshine, while in the night these animals went to rest and awaited the dawn for their activity. Again life was so insecure especially due to the fear of wild animals, that the pastoral men moved only during the day when there was sunshine to guide them in their wanderings from one place to another in search of fresh pastures. They also came to believe that the rays of the sun were responsible for the rain and for the drying up of water storage in whatever form they might have been. In other words ancient pastoral man was afraid of darkness and was delighted when the sun rose spreading its rays and bringing him the needed comfort. According to the pastoral man natural light meant the light of the Sun and he believed that his existence was due to the rays of the sun. It is reasonable therefore to suppose that he venerated this natural element and offered his prayers to him viz., Sun God. As soon as he got up from his bed early in the morning, the first object of his prayer and worship was the Sun God, and this conception of the solar worship to whatever length it might have developed in later times, found its humbler beginnings in the arts of pastoral civilization which the early man developed.

### THE SERPENT WORSHIP

Another peculiar feature of the religion practised by the ancient pastoral man was the worship of the snake. We are to-day familiar with the snake cult, the origin of which we attribute to the primitive tribe called the Nāgas. But the Nāgas themselves are a later tribe whose totem may have

been the snake. But what we are more interested in is to find out the origins of snake worship in India. Traditionally the Sun has been connected with the snake and it is but reasonable to take that where and when the solar form of worship began to originate, there and then the worship of the snake may have also originated. This again may be attributed to the ancient pastoral people who came across reptiles of the worst kind, hiding themselves for safety among the thick grass in which the cattle were let loose to wander and graze. When the venomous reptiles were responsible not only for the loss of the life of the cattle but also for some of their kith and kin, the pastoral man found that these animals which were so harmful to him in every respect must be propitiated. Some sort of snake cult must have taken its root among the pastoral people of the Iron Age. It was the light that enabled them to discover this poisonous animal and deal with it.

### EAR-BORING

Perhaps this snake cult had its repercussion in promoting some custom's one of which may be said to be the practice of boring the ears. This custom is largely prevalent among us to-day. It is pertinent to ask how this custom which existed so largely among the ancient Greeks, Hebrews, Persians, South Indians, Ceylonese and people in many other islands of the Pacific came into existence. It may not be quite accidental that so many people adopted it which marked an undying feature of early civilization. It may be due to the diffusion of the peoples and contact with fellow people living in far-off places. But what we are more concerned with is how the custom would have begun and where. We are of course inclined to believe that this primeval custom has something to do with the snake worship and snake cult which were born among the pastoral people of South India and Ceylon. Later on in the story of evolution the Muruga cult (Sanskrit Subrahmanya) was



closely associated with the snake and for any trouble in the region of the ear propitiation to the presiding deity of snakes is offered. This is commonly known as Shashti Vratam. Though there might have been an esoteric significance for this custom, the habit seems to have been born among the people who attributed every phenomenon to the realm of magic.

### OTHER FEATURES OF HELIOLITHIC CULTURE

That is what we call and what is known as the heliolithic culture ; but there were other features of this heliolithic culture some of which may be mentioned : (1) Megalithic monuments ; (2) Tatooing ; (3) Stories of creation and the deluge ; (4) The worship of the sun and the serpent ; (5) The custom of boring the ear-lobes. Some other features of this culture are also mentioned by scholars but according to us most of these customs prevailed in the Iron Age of the ancient pastoral peoples, and hence they might be made responsible for originating such practices and ideas.

### COMMUNALISTIC OUTLOOK

It is again the idea of people living in groups that is another legacy of the pastoral culture. We do not know whether the ancient pastoral man developed any sense of social organisation among his community ; but we know definitely that continuous living and continuous profession almost in one region without developing peculiar modes of life and change of mental habits led this tribe to some sort of social organisation where security of life was ensured. A sense of kinship was evolved among them : and to protect their hearth and home an identity of common interest was also felt with the result that group life came into being. The herd instinct which they cultivated from their long contact with cattle and sheep and the oneness of their interest impressed deeply upon the primitive pastoral men the soundness of the theory that without cultivating a co-operative spirit they could not

present a united front in case of onslaughts which they had often to face. The pastoral region and the agricultural region as we shall see, favoured the growth and development of a communalistic outlook which was not however communal in character. To this we can attribute one important thing viz., that in the very nature of the community holding lands in common the idea dawned in their minds that the lands they occupied were for the benefit of all and where individualism as we understand it to-day had no place. In other words, there was no individual holding of land so far as the ancient community was concerned. It is only a union of families who were animated by a sense of kinship, for the necessary protection and the necessary defence against the intruders. It was indeed the tremendous leeward way which by a process of regimentation and compulsion tended to the well-being of their tribe.

#### WEAVING

It will now be apparent that we do not accept the crochets of most of the previous writers who have come to the conclusion that in the name of progress, the Neolithician knew anything and everything and it is only after the Iron Age that the high standard of living with a differentiation in social groups came into being. One such error is to attribute to the Neolithician knowledge of the art of weaving. It is true that ancient Egypt and Assyria imported cotton goods, and that cotton fabrics have been discovered among the finds in the Indus valley. Roughly the age of these primitive cultures has been assigned to 4000 B.C. and a little beyond. It is also true that to a considerable extent such cotton fabrics were more or less the monopoly of peninsular India and by export of such goods on a large scale they must have been familiar with cotton and its manufacture apparently before these times. This fact must be accepted simply because cotton was growing wild in places like Kathiawar, Guzarat and Khandesh and also on the two

ports of peninsular India not to speak of other regions in South India.

Traditionally used to simplicity and the wearing of barks of trees and skins, the thought dawned in the minds of the men of the Iron Age to utilise the wild growth of cotton in some form or other. Already they had inherited the conception of the art of plaiting leaves and this led gradually to the art of plaiting cotton which they saw all round. The plaiting of cotton gave the idea of weaving it with the necessary material. A clue was given and the ancients congratulated themselves on the success of the manufacture of one of the most important products of India even then. It is natural to suppose that when once the manufacture of cotton was taken up and when the ancient people thought that there was a heavy demand for such stuff not only in India but also in foreign countries, cultivation of the article was undertaken on a wide scale. Thus the cultivation as well as the manufacture of this product went a long way in promoting trade. Centuries passed by and realising that cotton goods had a market, the men of the Iron Age were further induced to make improvements in the art of weaving.

One such line of improving the manufacture of cotton was the discovery of the art of dyeing. Being heir to a civilization which had already some knowledge of colours, the art of dyeing was quite feasible and the manufacture of coloured cotton goods was largely undertaken. Thus the old simple civilization was growing from strength to strength as ages passed by.

While this may be true of the people who settled in the plains and river valleys and who carried on the noble profession of agriculture, the people of the pastoral region developed a kind of culture complex which rendered incalculable service to humanity at large. By tending flocks of domesticated animals, living on the slopes of hills and

forests and existing mainly on the flesh of animals which they killed, these people were familiar with the value of wool which they thought might be used for good purposes. They found by instinct that since most of the animals stood the climatic conditions especially in winter, wool would give protection to men even against biting cold as it did for the beast. The happy thought struck them that as in the case of cotton, the manufacture of wool might also be taken up and utilising the wool for the same purpose they found themselves successful in woollen manufacture. It is later on associated with the tribes called the Kurumbas who had spread themselves to the different regions of the peninsula and who had specialised in woollen clothing. Gradually the clothing of men and women in wool led to the manufacture of woollen blankets, the use of which is highly valued even to-day. There is no evidence of the manufacture of wool and cotton among the Neolithians notwithstanding the presence of slick stones among the Neolithic finds. Perhaps this material itself belonged to the last stage of Neolithic culture and could be treated as veritable testimony to the manufacture of goods on a large scale.

#### POTTERY

We come upon another aspect of the ancient culture of the Iron Age and this is the development of the Neolithic pottery. We must examine this question with some circumspection. No doubt the Neolithians knew the art of pottery and had to some extent a knowledge of the wheel which the potter skilfully used. But speaking generally about pottery it has been concluded that the vessels were more or less crude and presented a rough exterior. The majority of the vessels show that they were black in colour though the red variety was also known. But when we come to the age of the iron culture we see a surprising variety of vessels made of clay.

The vessels of this period are not rough but have a better polish. Gradually also the potter began to use varieties of colours. Though the necessary pigments for producing the greenish hue and blue variety are still later, we can credit the potter of the Iron Age with some varieties ranging from yellow, brown and grey. This shows that the potter had considerably improved his knowledge of firing the vessels which was rather limited in scope and extent till then. The pottery produced in this age is therefore not dull in colour but lustrous enough. In addition to this the potter of the Iron Age made his ware more and more an object of beauty by artistically decorating some of his vessels. Originally confined to the decoration of the objects with the figures of leaves and flowers, now we see more and more of human and animal figures. The use of decoration for beautifying human images or animal figures can be explicitly marked as belonging to the Iron Age.

Though it is difficult to define exactly the chronological limits still one can say that high polish and rich colours and representations of the figures, human as well as animal are characteristics of Iron Age pottery.

Another landmark in the gradual evolution of the potter's art is reached when moulding came into definite use. It is only in the Iron Age that moulding work was undertaken and executed with care. Pottery was again used in making the urn burials to which reference has already been made. One marked difference which we have noticed in the graves is while the tombs of the new stone age are oval in shape, those in the Iron Age are oblong and very often are divided into two square compartments. The tombs are generally lined with stone slabs and are found separated by a thin stone slab wall with a hole in the centre. The graveyards where we find big blocks of stones are generally called megalithic tombs ; but if we undertake excavation in several parts of the peninsula especially in the centre and

south, we meet with graves whose forms and shapes differ a great deal. But in the absence of a better expression we call them megalithic for such tombs in Europe have been so designated. There is an interesting Terra Cotta sarcophagus oblong in shape standing on short legs, found at Pallavaram near Madras and this is a good example of the Iron Age tomb. The Terra Cotta coffins are scattered in different parts of the sub-continent and the one at Pallavaram is said to resemble some Terra Cotta coffins at Baghdad, and it also recalls Etruscan tombs which again contain Terra Cotta coffins.

### THE SWASTIKA

Mention may also be made of the existence of the symbol of Swastika near Mysore ; Bruce Foote came across in the course of his investigation a part of a large " Chutty with two ornaments cuneiform in shape, with a small pap in each re-entering angle and raised garland like ring surrounding such cross ". This was discovered in Mysore and has been taken to be a Swastika symbol. What is more striking is that this peculiar shape finds its counterpart in the Trojan type of Swastika. This evidence alone is enough to point to the migration of peoples and, along with them, of their ideas. There is much truth in the saying that ancient Egypt was for many of its customs indebted to Babylon and Babylon itself was indebted to India.

### FORESTERS

Mention has already been made that on account of the discovery of iron the aboriginals of South India were able to fell the trees and clear the forests. The Palaeolithic man as also the Neolithic man did not venture to go into the thick of the forest as he was afraid of ferocious animals making an attack. In fact the fear instinct of stone age men was largely responsible for their not making the jungle their home. But in course of time facilities were created

by the find of iron and hence a large majority of the hunter were able to clear the jungles gradually and penetrate into the interior. So there was a movement of peoples into the forest-clad regions and these became later on the jungle men and the foresters who played not an inglorious part in the army even of the Guptas. Whatever this may be in later times, a portion of the old aboriginals continued to live in mountain fastnesses and plied their profession hereditarily and they were the ancestors of a number of jungle tribes and forest men. Apart from hunting the wild animals for their meat which served them as the principal food the forest men anticipated the later wood-cutter and continued the profession of felling.

#### FISHING

These aboriginals were primarily lake-dwellers for they wanted water as an essential article for the preparation of food and drink. Lake-dwelling afforded them advantages of living in pure air and in places where water was available to a considerable extent. Besides, these lakes and huge ponds served them as frontiers of defence against their enemies. Coming upon the trees which served as fine material for coastal shipping they seemed to have supplied plenty of this wood to the coastal men with whom they were in intimate contact. The men of the coast lived primarily by fishing ; some ages back they fished in ponds and lakes which were in the interior of the peninsula. Hence we find a number of net-sinkers among the neolithic finds ; but as ages passed when man was given to speculative thought and when agricultural civilization developed, he thought it would be profitable for him if the same methods were employed in coastal fishing also. The coasts of peninsular India were so shaped again due to geological formation that the aboriginals made it their home to ply their trade. By means of diligent fishing they were able to supply food material to their neighbours who were mainly agricultural.

Whether the first invention made was a woven cloth or a fishing net we cannot definitely say at this distance of time; but we venture to think that the fishing net was first invented and then the woven cloth. It does not necessarily follow that the invention of the woven cloth was confined to the men of the coast; on the other hand, if we can stretch our imagination a little further, we can boldly say that it was among the agricultural people that weaving of cloth was first begun. The people on the coast perhaps improved the art of fishing nets and they could sail a mile or two in the open sea and get good hauls of rich fish which would find a ready market.

In those days there was no currency nor was there need for it. Exchanges were simply by means of barter and this primitive economy prevailed for a long time. But when once the forest men came to exchange their goods with these coastal men, then the aborigines were led to believe that it profited them to withstand the storm and stress of the sea, and with the goods they could exchange with advantage. In this way simple shipping first along the coast led the adventurous people to venture far out and export commercial products and even finished goods to distant lands like the Ur of the Chaldees and even Egypt. The frequent intercourse of the early adventurers and merchantmen had a telling effect upon the customs and manners of the land which they visited and introduced into them fresh life and new thought. It was an age primarily when men were simple and their wants were few. Men were not unnecessarily excited mentally and by nature they were in a mood to learn new things from whatever quarter they came. Hence they imbibed the manners and habits of the foreign settlers in their soil, if they proved of some value to them.

More than the east coast the west coast which was considered safe for anchorage of these vessels must have profoundly influenced the distant countries like Egypt, Africa



and even countries that were lying on the Mediterranean coast. In this way began migrations from and into South India leading to mass movements in the long run. The vessels of this period were at the most canoes and dug-outs. *Katamarans* which we see even to-day in plenty in the sea-coasts of South India, were probably used also then for fishing in distant waters and were possibly survivors of this age. Thus in course of time were settled a coastal tribe of men whose main profession was fishing ; and some of the adventurers among them sailed for miles into the sea in search of new lands where their articles found a ready market.

#### MATRIARCHY

This seems to be the position of the 'society' when South India was at the threshold of her true historical beginnings. The influence of heredity is as yet not distinctly felt. This development requires varied experience and particular regions of environment. When once people fix themselves to certain regions and pursue their occupation hereditarily, then alone is born the hereditary trait which is due again to environmental conditions. The aboriginals of this period did not worry about either of the structure of the body or of their personality. The attitudes and aspirations of the primitive mind were wholly moulded by the environment in which man was placed. There was very little in his speculative thought about the origin and functions of society. Even in religion he derived his inspiration purely from Nature and its influence. His God is purely a tribal God and what is moral is what would appeal to the tribe. In this scheme there appears to be no code of moral behaviour. There seems to be no keen sense of relationship. Sexual communism and group marriages are the order of the day. The consequence of such a state of affairs is that matriarchy and not patriarchy, seems to have been prominent.

In the early stages of human development one could recognise the mother. Things being what they were, the natural tendency was towards the birth of a matrilineal society. Some of the aboriginal tribes now extant perhaps being survivors of this stage of human development, are imbued with such ideas as there is a lurking habit to count descent through the mother's side. Hence we see survival of mother-right even to-day lingering with some of the tribes. This matriarchal system must have been prevalent for a long time until the system of group marriage was considered heinous. But it was displaced by a system of individual marriage which reckoned descent through the male child of the family. But this is a later phase of the social organisation and a consequence of economic development, as well.

It is only when an agricultural community comes into being, that the system of individual marriage gains hold. Experience showed that in an agricultural tract it was better to have a supporter who might have complete control. Therefore when the agricultural life of the people was developed were sown the seeds of patriarchy as opposed to matriarchy. Originally a 'crowd' of people with or without a common aim actuating them, they settled themselves as a group of people at a particular place for their mutual benefit. This was what happened perhaps later in the Iron Age. Pursuing for ages one and the same occupation they came to be fixed as a social group or tribes as well. With the progress of the culture of the Iron Age and with increasing contacts with the outside world these various groups developed themselves into different tribes.

### GOLD

Next to iron, gold was the earliest metal discovered in South India by the men of the Iron Age. A study of the Chaldean inscriptions reveals the fact that it was abundantly

used in Babylonia especially in the city of Ur. That gold was an exotic material for the ancient Chaldean people is evident. It is said that the ancient vessels belonging to Ur brought gold from distant places. These were India and also Africa. It is reasonable to think that Indian gold was exported to Africa, and Africa in its turn sold the surplus to the Chaldeans. Leonard Wooley in his expedition to Ur in 1927 found that the buried queen Shubad had many ornaments of gold including the head dress, ribbon, rings, wreaths, garters and others.

For the extensive use of this yellow metal in early times, Mesopotamia must have been indebted to India. Another country in which gold was used in plenty was ancient Egypt. It is easy for this gold metal to flow from one part of the country to another or from one country to another. It is nothing surprising that gold flowed to Egypt also and Indians were for the most part responsible for the spread of human civilization in that country. Later on Phoenecia and Greece and other European countries utilised this metal for various purposes. We would not be far wrong if we say that gold was much in demand also in the Indus region and in the course of frequent intercourse between the Sindhu valley and South India, much of the gold must have been exported to that region.

We need not enter into the discussion whether gold was a material of the Sanskrit speaking peoples known as the Aryans, or whether it was bequeathed by the old inhabitants of South India. Examining the various points of view both in favour and against, we are almost driven to the conclusion that gold was first discovered in South India, though India as a whole had once been regarded as a land of gold. It is true even in the south there are only a few districts which can exclusively be said to be gold-bearing districts. It became a precious metal simply because gold was scarce and available only in a few parts of the land.

Considering this question impartially, it is clear that the practice of washing gold was known to the peninsula from the earliest times. It occurs in the river sands and gravels and it is naturally rich in the regions where alluvial deposits have been found. But the practice of washing the metal shows that gold was gathered though in limited areas in the earliest stages. But apart from this we know well that South India specialised in quartz and schist both found in plenty in the peninsula. Though the use of these materials is known from the Palaeolithic times, still man was not advanced enough to find out gold ores that existed in the hills and mountains where he lived.

But there is plenty of evidence that the man of the later age must have been alive to its importance and spent time and energy to obtain gold and gold ores. For instance, we may notice that in Devala in Namvolukodi Amsham in the Nilgiri hills, there is evidence to show a number of very ancient mining shafts. They are sometimes 70 to 80 feet and huge jungle trees grow out of them. The extent and variety of the indigenous gold workings round about Devala cannot be overlooked. It is evident that once enormous operations were carried on in this region. There are even now extant gold workers who narrate a tradition that in the dim past there were wonderful quarryings. Though the present men confined their activities to alluvial washings, yet, testimony is preponderating that the old mines must have come into existence in antique ages, though it is not possible to fix exact chronological limits.

In this connection we may say that tradition is strong to show that these ancient workers were conversant with the use of quick-silver. It is said "the method adopted by them seems to have been to select the most likely looking pieces of the broken quartz, and then having washed these to reduce them to a fine powder by means of heavy stone

roller which was worked by women on the surface of a flat scooped out of granite. This powder was then again washed and afterwards burnt so as to release the sulphur, a small globule of quicksilver being finally introduced to take up the gold. The amalgamated mercury and gold were then placed on a heated iron plate, the former escaping in the shape of vapour while the latter remained in its pure state."<sup>1</sup> Speaking about Ootacamund Mr. Grig<sup>2</sup> is inclined to believe that in the valley behind Bishop's Down and Fernhill there are remains of ancient gold diggers. It is further said that in this region and in the offshoots of the Nanjangud valley are mounds of earth along the banks of the rivers where the soil was washed for gold. In the valley near the streams are seen the quartz heaps which indicate that ancient gold workings were conducted not only on the hills but also on the Waynad and the Western Coast.<sup>3</sup>

The same state of affairs is met with in various parts of Mysore and Hyderabad. This clearly indicates that there were mining villages in ancient times exclusively engaged in mining gold. A peculiarity of these villages is that they were encircled by what we call fortwalls. From the ruins we can gather how the primitive man was careful to exploit this precious metal from very early times. But it is reasonable to suppose that work on gold came into extensive use after iron became popular. A close examination of the old mines over which has grown gigantic jungle trees has shown the continued effort of the ancient people in improving the method of mining gold and preserving it—for its economic value was great.

One other reason why we regard South India as the home of gold may be afforded from the early literary docu-

1. Sewell: *List of Antiquities*, p. 225.

2. *Manual*, p. 243.

3. *Ibid.* p. 226.

ments preserved in the Tamil language. Though this evidence may be regarded as much later, still, it is difficult not to recognise the value of literary tradition as embedded in our literature. Literary evidences point out that *Pon* (Gold) is found used to mean the national metal of South India. In later times when copper, silver, and other metals came to be popular, and the metal industry was developed on a large scale, the suffix *Pon* was used to distinguish one metal from the other. Iron had come to be known by the expression *Irumpon*, copper by *Sempon*, and silver by *Venpon*. In all these expressions the common suffix *pon* stands for the precious metal and men used that expression to all metals because the expression *pon* stood to denote the most precious of all metals.

Another fact that may be cited in this connection is the extensive use of jewellery in this metal especially by the South Indian people from very early times. Even in the burials of the Iron Age we find some remains of gold along with other implements. This would make clear the propensity and skill of the South Indian craftsmen to beat gold so as to suit different sizes and different articles from time immemorial. Hence our contention is that gold was originally a South Indian product though it became commercially wide-spread in course of ages. This is the reason perhaps why South Indian women are inordinately fond of gold jewellery even to-day inspite of its increasing scarcity.

#### COPPER-BRONZE AGE

In South India the age of iron witnessed towards its close the coming into use of copper and bronze. There are some archaeologists who are of opinion that this age of copper and bronze came before the age of iron and they cite as evidence one or two finds in Mysore and Hyderabad which contain besides other implements and vessels those of copper and bronze. One has to carefully study and examine the levels at which these vessels of copper and bronze were

found. Speaking for ourselves this theory of copper and bronze being the precursor of the metal iron cannot be accepted. The evidences are few and negligible. But there is overwhelming evidence in favour of the theory (now almost established as a fact) that the Iron Age succeeded the Neolithic People in South India who were more or less indebted to North India for their knowledge of metals like copper and bronze.

It is a well-known fact that a careful and systematic study of North Indian culture shows that the North Indians were ignorant of the use of iron first while they were proficient in the use of metals like copper and bronze and subsequently they came to gain knowledge of iron and began to use it. To be exact there was no iron culture as such in North India as there was in the South. It is certain that feeble contacts between North and South which resulted in a series of immigrations and migrations must have brought to South India wide knowledge how to make vessels and implements from copper and bronze, while in the case of Northern India it was knowledge of what uses iron could be put to.

This position is best illustrated by examining the culture of the Indus Valley which became known nearly thirty years ago. The monuments and remains that have been excavated in the region of the Indus valley especially Mohenjodaro and Harappa have since been the subject of studies in respect of their interesting chronology and the nature and character of the discoveries. Various theories on the authors of the Indus civilization hold the field. It was H. R. Hall who suggested in his *Ancient History of the Near East* the plausibility of Sumerian origins in the Indus Valley much before the archaeological finds were discovered in that region. Sir John Marshall who has issued the volumes on the archaeological excavations carried on in the Indus valley has given as his opinion that the culture was Dravidian in cha-

racter. The human remains in these discoveries are said to comprise four ethnic groups Proto-austroloid, Mediterranean, Mongolian and the Alpine. The Mediterranean theory cannot be countenanced for we have taken the position that the Mediterraneans could not have entered India through the north-west passes, but on the other hand it was the South Indian people that went to the Mediterranean region and its environs and spread their civilization there. Any way this theory apart, the people in the Indus region seem to belong not to one fixed period and fixed type, but to different periods of time and different types. There are on the whole twenty-six skeletons and among them there is only one specimen of the Mongolian and the Alpine type. Even the remaining skulls demonstrate not a homogenous but a heterogenous population.

This cosmopolitan character of the Indus people has baffled students of anthropology in fixing any definite chronological limits. One set of Indian scholars believe that this culture must be post-Rg-Vedic, for, in the Rg-Veda much is said of the village life and the Vedic people must have been generally ignorant of the amenities of city life. On the other hand the culture of the Indus valley shows a fairly high stage in the evolution of city life. If the Chalcolithic culture as illustrated by the Indus culture is post-Rg-Vedic, it can be placed in the age of the Yajur-Veda and the Atharva-Veda. But there is the theory that city life which is predominantly marked in the Indus valley civilization might have become extinct and given place to village life. Again in the Indus valley Phallic worship which must have evolved among the South Indian Neolithic people is largely prevalent and the Indus people attach special importance and value to the bull. They were idolaters and the cult of the mother goddess is prominent.

What is more interesting is that there are two moveable statues with head and neck quite erect and half-shut



eyes fixed on the tip of the nose, exactly in the posture of one engaged in practising *yoga*. Mention has already been made that there are figures of Śiva, figurines of the mother goddess, ring stones in the form of *linga*. There is also representation of the worship of trees, animals, water and a number of votive offerings, provided by the seal amulets which portray a variety of things. Among these is a strong bull with one horn. Perhaps the representations have failed to indicate the second. This animal has been identified with Urus-bull. A seal amulet found at Mohenjodaro shows the tiger as the emblem of a goddess. Perhaps the tiger goddess was the consort of the pre-historic Śiva. Another animal that is prominently seen on the seals is the goat which may be regarded to represent a minor deity. Later this was an important animal used in Vedic India for purposes of Yajña. This animal is sometimes associated with a god or the goddess of fertility.

There are several animals appearing on the seal amulets and sometimes we see several beasts merged into one. For instance the heads of a short-horned bull, a Urus-bull and an antelope are all depicted together. Another aspect of the Indus valley religion was the practice of consecrating votive figures of animals and human beings in shrines. This was probably for incurring the good will of the god and goddess. Among the objects discovered in the ruins of the Mohenjodaro and Harappa, the Swastika and something like the Greek Cross are found on the seal amulets. It must be remembered that these symbols are not peculiar to the Indus valley civilization but were known at an early date. They can utmost be regarded as symbols bringing luck and may be indirectly connected with the solar worship.

While speaking on the religion of the Indus people mention may be made of dancing which may be regarded as part of the religious practice. There is the scene on a fragment

of an amulet which distinctly indicates a man beating a drum and people dancing to music. There are other amulets which can be seen in Harappa depicting a man playing a drum before a tiger or near the Urus-bull and nearby a woman dancing. The dance could be interpreted as a religious dance having some connection with the rituals connected with the inhabitants of the Indus valley. There is an interesting bronze figure of a dancing girl, probably representing a temple dancer of Mohenjodaro. As it has been suggested she may be the progenitor of the institution of the dancing girls attached to the several temples even in modern India, now however become defunct in most of the temples.

Intimately connected with the topic on hand is the question of burials. Either at Mohenjodaro or Harappa no cemeteries on a large scale have been discovered but this does not mean that they had no burial customs or belief in an after life. Cases of burial of the dead have figured at a very early date and even in the Indus valley we find a number of jars and several earthen utensils with skulls. Burials and cremation were in vogue as evidenced by the fractional burials which have been discovered.

But what is more interesting and more widely spread is the use to which copper and bronze have been put. We have already mentioned this fact but details of the implements and tools made of these metals are interesting. One specimen of this even at the lowest level of Mohenjodaro contains as much as 23% of tin. For what we know tin was not a substance that could have been easily obtained in the Indus valley. It came from other parts of India and it would be rather difficult to say how and when it came to be used by the inhabitants of the Indus. Again copper in the Indus valley contains a good amount of nickel but the find of copper in a brick-lined pit at Mohenjodaro is a positive proof of the smelting of this metal. This is supported

by the fact that there are several copper ingots, their surfaces sometimes puckered. Though there is no evidence of soldering copper or bronze work, we can conclude that this process was known to them as the metal workers had employed it in the case of gold and silver. Engraving these metal vessels was not in vogue nor do these metal utensils have a handle or spout. We meet with blade axes which are of two kinds, sharp and broad. The longer ones perhaps were used as adzes. Both types have "double-slope, edges slightly sloping sides, and square-cut butts, and were cast in moulds and finished off with the aid of the hammer and an abrasive". Some of the blade axes are of considerable dimensions and one of them is eleven inches long. There is a bronze axe adze which is ten inches long. It is the first socketted implement that had been discovered at Mohenjodaro. We know socketted implements were known to a large extent in Sumer.

Much interest lies in the find of a bronze saw which is sixteen inches and a half in length. The toothed edge is undulated. Among the other finds figure two copper swords both in good condition.\* It has been said that they would have been more useful in slashing than in thrusting. Swords of this description are extremely rare at any site. There are also the spear blades made of thin bronze over fifteen inches in length and about five inches in breadth. To add to these there are quite a number of daggers and knives of different shapes and one common shape is possessing one edge with an upturned point. Though there are no stone arrow heads yet arrow heads with pointed barbs are common. There are besides a number of fish hooks made of bronze, and as many as four types of razors. "The fourth type which is very rare consists of a long thin, straight blade with a rounded edge at one end."

There are again plenty of chisels also of copper and bronze. Some of the tools unearthed contain pictographs

incised upon them and what this means we cannot say until the script of the Indus valley has been satisfactorily deciphered. Bronze in plenty is used for figurines and for models for small animals. It is curious to know that lead was another metal which was worked by the inhabitants of the Indus valley. One of the utensils excavated in this region is a leaden one something like a modern dish. For weights and measures however stone material was largely used and for this purpose alabaster and lime stone quartzite, slate, and jasper were abundantly used. A close examination of the finds shows that the metal-smith of Mohenjodaro had a distinct place in the economy of the land and he commanded plenty of material and plenty of skill.

We must not fail to examine the specimens and types of pottery which have been unearthed at Mohenjodaro. Pottery in the Indus valley is plain and undecorated. The painted ware is also seen though in the lower levels. But what is more common is the plain pottery, sometimes ornamented. The ornamentation consists of black lines. Another type of pottery is found which is made of light pink clay. The advantage of this pottery is that it is not porous as the ordinary red ware. In the Indus valley not only are there different shapes in the vessels but also we notice a distinct advancement in the technique. Some vessels seem to possess handles. They are noticed more distinctly in the case of small cups and beakers. Another type of pottery that is found at Mohenjodaro and Harappa is a kind of ornamented jar. Notwithstanding the numerous specimens the majority of the vessels, some of them miniature vessels are made of faience. Some of them may have served as toys and some as the containers of scents or scented oil. But what is more interesting is the presence of "reserved slip wear". There are also pottery boxes and pottery stands but these are few and far between. Potsherds contain now and then some marks. For example, one sherd at Mohenjodaro con-

tains on one side the picture of a boat and on the other a couple of pictographic characters.

Mostly the pottery of Mohenjodaro has flat vases. There were also a few narrow vases. One notices also large jars kept in almost all the houses. It is reasonable to suppose that these vessels were used for storing jewellery. There was also a smaller variety of jar which was perhaps used as a drinking vessel. On a close examination of the shape and make of these jars it has been suggested that they were used on water-wheels. This indirectly shows that the inhabitants of the Indus valley were acquainted with the water-wheel. Not only jars were made of clay but other utilitarian vessels are also in evidence. These are traps, cages, and drain pipes. Figures of deities, human beings and animals were also a feature of this civilization. An examination of the numerous varieties of pottery will at once show to the impartial critic that they were much advanced in that craft.

Before we close this section mention may be made of a pottery candle-stick and this throws the much needed light to the question how the houses were lighted. It is certain that oil lamps were known to them and they were made use of by them. But it is useful to note that the use of candles was known at a very ancient period. At Mohenjodaro as also at Harappa we come across a number of spindle-whirls with round tops and flat bases. This forms an important evidence to show that the people of the Indus culture were conversant with the art of spinning and weaving. Whirls sometimes contain one hole, some two or three, serving as a split spindle. Some contain a groove round the edge. This was perhaps used for rubbing the thread. The specimens of the spindle-whirls so far discovered at once show that the material used must have been cotton. They are too small and too light to spin wool. It stands to reason to imagine that these people developed the art of spinning

wool after they came into intimate contact with those of iron culture. Until they came to know that iron was useful for spinning purposes, men and women of Mohenjodaro and Harappa made use of cotton and cotton goods.

Examining the normal attire of the inhabitants of the Indus valley which is definitely possible from a study of the figures and figurines, which have been discovered in the Indus region, they point out that these figurines are often bare to the waist and only a skirt is worn which again extends as far as the knees. The skirt which is usually seen in the female figurines is represented as held by a girdle or a fastening of some kind. The head dresses were also there. Perhaps it was made of a stiffened cotton cloth. In between there are some nude figures but generally these figures are of bronze and perhaps they represent the dancing girls. Anyway proof is positive that cotton fabrics were generally used in Indus region. There is no direct evidence of linen or woollen wear. Possibly there exists a case that these stuffs were imported into the country and it is natural to suppose that the people of the Indus valley were well provided with cotton and other stuffs. In support of our contention that cotton was largely used for clothing and dressing, we may mention that among the finds there are fragments of cotton cloth wrapped around a hoard of jewellery. Not only was cotton known and cultivated but also wheat, barley, melons and dates whose seeds have been found and identified. They were also cultivated. So agriculture must have flourished as one of the important industries supplying food to many a town.

Speaking about the personal ornaments we may note that the people of the Indus valley have made some progress which are pronounced in character. We have for example such finds as ear-rings, nose-ornaments, finger-rings, anklets, and others which show much advancement in the art of jewellery. These ornaments show that there were skilled

goldsmiths and silver smiths who must have been known for their workmanship, and skill. Side by side we see the existence of combs, sometimes made of ivory, mirrors of bronze, razors, and a peculiar eye-ointment. The various and numerous cosmetics found, could not have been used but for the fact that they were then quite common.

In this bird's eye view of some of the important aspects of the civilization of Mohenjodaro and Harappa, we have not taken into account all the aspects of the culture which prevailed at that time. We have only examined such of the aspects as are relevant to our study of early South Indian history. Believing as we do in intimate contacts due to migration of peoples, mostly for purposes of trade and commerce, the South Indians came into contact with metals like copper and bronze, tin and lead which were usefully employed in the northern area. In the same way the inhabitants of the Indus region freely borrowed iron tools and implements from the south to supplement their needs and wants. In the story of migrations, religion also played a dominant part and whatever institutions appealed to them were copied without any reserve making similar religious beliefs and customs almost common not only in North India but also in South India. That the people of South India were acquainted with the civilization which dominated the Indus region for thousands of years is evident from one single expression that occurs in a Tamil epic, *Silappadikāram*, though it belongs to the second century A.D. This expression is *Kaneluttu* which can be literally rendered as pictographic writing which is ordinarily found in most of the seal amulets and others in Mohenjodaro and Harappa. This indicates clearly and distinctly that people in South India were familiar with this mode of writing, which baffles us to-day.

It is equally important that there are other evidences of an indisputable character, which go to show that imports and exports from the Indus valley to South India were

extensive. In the Indus region has been discovered the amazon stone which can be taken as semi-precious, if not precious and there is the fact that amazon stone is only found in the Nilgiri hills and is not a product of either Mohenjodaro or Harappa. The inference is therefore irresistible that the inhabitants of the Indus valley should have brought this kind of amazon stone from the Nilgiris. Another factor of importance is that Southern India is noted for gold and the fact that the find of the Indus valley shows that gold was used in plenty by the people of that region is another proof that there existed frequent communications between the Indus region and Southern India. Yet again among the discoveries made at Mohenjodaro there was a cup which was made of green stone and that beautiful variety of stone is seen only in Mysore. Therefore the testimony is infallible that Mysore supplied this variety of green stone to Mohenjodaro. Otherwise we cannot answer satisfactorily the find of a cup in that region.

#### DATE

No question is more vexed than the determination of the date of this Chalcolithic culture. Not only were there communications with the rest of India but also there were more or less the same objects found in countries farther west such as Egypt, Crete or Greece. There are also similarities of workmanship and also make-up of various discoveries in the excavations carried in Sumer, Mesopotamia and other places. The one conclusion we can arrive at is that the dwellers in the Indus valley carried these arts and crafts to countries outside and had even direct commercial connection with those countries. The picture of a boat with a mast on a potsherd in the Indus valley points out that its products were carried westwards by sea. This does not however bar the various land routes which were employed by the people of the Indus valley for purposes of trade. Once it is established that there are interesting comparisons between the pro-



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## LECTURE V

### ETHNOLOGY

The racial history of Southern India or for the matter that of any country in the East or West is an extremely complicated subject and deserves a very careful scrutiny. Any amount of construction or reconstruction or even shifting by anthropologists, ethnologists, or historians is bound to be tentative in character. Centuries have rolled by, millenniums have flown and the mist of the ages has covered all the tracks over which early man began to move from one part of the country to another or from one part of the globe to another. It cannot be denied for a moment that in ancient times, notwithstanding the dearth and paucity of transport facilities, which we command so easily to-day, people were not stationary and living in particular areas. Means of communications such as they knew were there. And the ancient people utilised them for their own advantage. We knew that there were several movements of people in different directions from earliest times, some for adventure, some for commerce, and others in search of new homes. By nature man cannot be expected to sit idle. He must be up and doing and the early man was no exception to the rule. We must also remember in this connection one fact viz., that man moved from one place to another along with his family. In other words, women followed men with their children in search of new places of habitation and in search of fertile pastures. They settled in places generally agreeable to their mode of living. But they had necessarily to adapt themselves to the new environs and surroundings and had to modify their modes of life and conduct according to the new conditions and altered circumstances. This means that the geographical factors played a conspicuous

part in deciding the ways of life of a group of people settled in a particular region.

This grouping is roughly reflected in the population. But this would not give the certain clue to write or re-write the racial history of South India or any other country, if we do not simply look at things or even look beyond them and endeavour to see through them. The present Indian population is a composite mixture of several racial strains ranging from the palaeolithic to those of more recent times. According to well-known geologists rocks of great antiquity, whether of the Deccan traps or the foundation rocks of the south, are found on the Indian peninsula which is reckoned to be one of the most ancient land surfaces of the globe. The Nilgiris, the Palnis and the Ānamalais are supposed to be primeval and date far back from recorded history. It is common knowledge that the Palaeolithic man of South India lived on hilly plains and eked out his livelihood. The Neolithic man, on the other hand, who sometimes frequented the jungle area was leading a life like his contemporaries in other countries.

Whether some of the tribes which we meet now in the hills and forests of South India can be the descendants of the palaeolithic and neolithic South Indians is rather a difficult question to answer. Some say that they are and some say that they are not. A comparative study of the finds discovered as a result of the survey of the Yale-Cambridge-India expedition and those discovered in different parts of South India and the Deccan, shows that the stone culture of India as a whole was an extension of South Indian stone culture, or perhaps the stone culture of North India was just independent of that of South India.

In determining definite landmarks in the study of the racial history of any country the skeletal remains of early man may be taken into account with profit. But unfortu-

nately before the Chalcolithic period of Indian history we have not been able to find any traces of skeleton remains which might have otherwise provided a definite source of information. Even here from a study of the physical types one finds them complex in character making it difficult to fix the possible affinities of a certain physical type. At the least three distinct types can be distinguished: two long-headed strains, one of moderate stature and the other of tall stature together with a broad-headed strain with high cranial vault and prominent nose. These bear close resemblance to the racial strains of Al-ubaid and Kish in pre-Sargonic Mesopotamia. Further, a study of pre-historic craniology has revealed that the Mohenjodaro skulls of the proto-austroloid type are related to the skulls from Adichanallur and those of the modern Veddhas.

According to Elliot Smith, an Adichanallur skull is indistinguishable from the early Egyptian type. The current theory is that the earliest inhabitants of South India were negroid in type most akin to the Kadar and the Uralis of the South Indian forests. Those were displaced by the proto-austroloids as ages went by. Then appeared on the scene the men of the Mediterranean race who have been termed Dravidians. Our theory is the other way about. Why should we suppose or even take for granted a penetration of a Mediterranean race into India in general and into South India in particular? If man lived in Southern India from geological times, as has been pointed out, surely the Palaeolithic man and the Neolithic man as well must have been negroid in type. It may be argued that these tribes got mixed with proto-austroloid in the neolithic times and this mixture is perhaps responsible for the find of skulls of the proto-austroloid type. Thus the commingling of peoples would have been spread over the ages and millenia.

Our theory can be briefly told. About the end of Neolithic epoch in South India, man was perhaps enriched

by the contributions of the proto-austroloid which were possibly the boomerang and the blow-gun. Animated by a love of adventure the ancient Southern Indian left his shores by sea to the Mediterranean regions and the Far East and colonised these regions feeling the necessity for new homes. Those who left for the Mediterranean region were responsible for making the new Mediterranean race. Perhaps some of them might have come back to India and stayed in their original homes. We must not forget that there was also a land route which led them to the Indus Valley, Baluchistan, Mesopotamia and Egypt. Thus there was contact, perhaps intimate contact of peoples and cultures. These we may call tentatively the makers of, and the people responsible for, the Dravidian culture and civilization.

When this long process of Dravidianization was going on in Southern India, Western India and the valley of the Indus region, we meet with another movement of peoples and these were really the carriers of the Aryan culture. This movement has perhaps its germs in Kashmir and North-West India and subsequently spread towards the plains of Hindusthan. At what epoch this movement was effected we cannot now say with any definiteness. But one thing we can say definitely is that this movement spread throughout the length and breadth of Hindusthan proper. That is why the region between the Himalayas and the Vindhya was designated Āryavarta in some well-known Sanskrit works. It is perhaps possible and even probable that at the earliest phase of the Vedic period there was a movement of the people from Central Asia and its environ and these got mingled with the Aryan community and made the Indian plains their home. And these peoples in their turn went towards the west carrying their arts of civilization and expanded themselves over the European continent. We must sound a note of caution here. All these theories are at the most tentative in character. No finality could be

reached and no conclusions could be drawn on the slender foundations of possible evidences. The racial problem is a complicated one and requires much more archaeological exploration, and accurate study and scrutiny by ethnologists and anthropologists. It is impossible to reach any final conclusion at the present stage of our knowledge of the early social history of India.

In problems which concern racial affinity, a study of physical types is involved and for purposes of ethnology physical characters may be definite as well as indefinite. To take the latter first, indefinite characters point to the colour and texture of the skin, of the colour and form of the eyes, the colour and character of the hair, and the face formation as well as other physical features of man. These characteristics may be conspicuous by their presence in some or absence in others. Some physical features may be common while other physical features may differ. In several cases the physical features presented may be dubious or elusive. If colour alone is taken into consideration a critique<sup>1</sup> remarks that the racial characteristic of skin, colour, nasal index, are more the result of climatic conditions and geographical influences. While this may be true to a large extent, yet it cannot be the whole truth. In India and especially South India it is very difficult to find variations in the case of the eyes and hair though the skin demonstrates divergences in texture. Throughout India the eyes are ordinarily dark-brown and nowhere one comes across with woolly or frizzy hair, loosely applied to the Dravidians. It may be granted that there may be some exceptions here and there of grey eyes or pale and even blue eyes. But these are only a few which can be counted.

On the other hand physical characters can be said to be definite in the sense that they can be measured and enumerated. It is a measurement, often precise of the stature and of the different limbs. While craniometry is concerned with skulls of human beings, anthropometry deals more with living people. About 1895, the first attempt was made to apply systematic research to Indian Ethnography. Scientific anthropometry was also undertaken on a large scale in India also. At the same time the craniometric researches were made in different parts of India and at the same time anthropometric researches were made by Edgar Thurston and Sir T. H Holland in South India. No doubt they yielded valuable results. This enabled students of anthropology to apply themselves earnestly to the study of Indian races including those of South India. The method generally adopted is to distinguish the skull as dolichocephalic or the long-headed type, from the brachycephalic or the broad-headed type. The former is that where the length of the head exceeds the breadth by about one-fourth. The latter is that type where the length exceeds the breadth from one-fifth to one-eighth but all are not long-headed or broad-headed. There is an intermediary group which is medium-headed. This type is termed as mesocephalic.

It may be pointed out at the outset neither the shape nor the size of the head is an index. For, the study of the present day Indian peoples exhibits generally a long-headed type whether it be in the plains of the north or peninsular India. In the latter region with which we are concerned there is a mixture of medium heads. In Bihar also the prevailing type is the medium. But confining ourselves to the west coast from Guzarat to Coorg the predominant type seems to be that of the broad-head. It may be well to remember that the coasts of India were now and then influenced by foreign peoples, Malayan or Indo-Chinese on the east, Persian, African and later the Arabs on the west.

This influence may be probably responsible for mixed peoples, very difficult indeed of classification. Speaking again of Southern India while the people in the Punjab and Rajputana are taller, the stature here is generally lower than in the plains. The application of a nasal index which indeed is a doubtful criterion exhibits the broad type of nose in Madras, in the Central Provinces and Chota Nagpur. We are not concerned with the rest of India most of which contains the medium type of noses. What we want to say is that we are confronted with definite gradation of physical types in India. To sift them and to fix them in their proper place, is indeed a laborious task for the anthropologist, not to speak of the historian.

Relying as he did on these physical data, Risley is inclined to divide the peoples of India into seven types. According to him the seven are the Turco-Iranian, the Indo-Aryan, Scythio-Dravidian, the Aryo-Dravidian, the Mongolo-Dravidian, the Mongoloid and the Dravidian. In the census of India Report 1931 (p. 440) Hutton who examines the castes and races of India does not see eye to eye with Risley in this classification. In fact Hutton speaks of three main types in India, the Indo-Aryan, Turco-Iranian and the Dravidian. Though we are not concerned with India proper, still something may be said upon the alleged influences of the Scythians and Mongolians on the Indian population. It may be rightly asked whether the invading Scythians were numerically strong enough to make such an impression. Anthropologists and historians of India exaggerate the Scythian influences on Indian population. If only we consider the territory occupied by them and the duration of their stay in that territory, one can hardly believe that they could have left any impress on the life of India. Granting for the sake of argument that they made their influences felt, the Scythians themselves were as much dolichocephalic as brachycephalic. Therefore it stands to reason that it is



not possible, or even probable, that the Scythians could have effected any change in the physical type of the main Indian population.

Again, the influence of the Mongolian element on the peoples of India is another favourite theory with the early anthropologist. It is contended that the Bengali Brahmanas are brachycephalic as the consequence of the Mongolian intrusion. It is a mere theory and cannot be accepted for a moment. If that were so, remarks Hutton, the degree of brachycephaly should increase inversely in the social status whereas the contrary seems to be the case. In the light of this critical test the types distinguished as the Scythio-Dravidian and Mongolo-Dravidian could not be taken seriously in our examination of the racial history of India.

Curiously enough, the late Kanakasabhai propounded a theory that the Mongolian tribe emigrated to South India from Tamralipti, also spelt as Tamaliti, and he rendered this term as Tamils. He took it for granted that the name Tamil was an abbreviation of the word Tamalittis. The Tamraliptis are no doubt the inhabitants of Bengal ; but to connect them with Southern India is a hypothesis that has no legs to stand on. It is further said that the old Mongolian tribes who invaded Southern India must have conquered the Nāgas, who were then a predominant tribe. These Mongolian tribes must have been the Mārars and the chief of this tribe was known as Paḷaiyan meaning the ancient settlers in the Southern part of India. No doubt mention is made of Paḷaiyan Māran in the ancient Tamil classics and his capital is said to be Mohur. Māran can also be claimed to be a title of the Pāṇḍyan kings. Māran, a Tamil word, cannot be connected with the Mongolian tribe. To find an identification the late Kanakasabhai equates Māran with Mranmar which name the Mongolian tribe seems to have borne in the first century A.D. when they conquered the Burma country. But that the name Mranmar is a Mongolian name can-

not be finally established on the slender evidence available. There is again the theory of Sir Arthur Pharye who derives the word Mranmar from 'Brahma'. If this were so, Mranmar cannot be associated with any Mongolian tribe. The Mongolians might have come as settlers, perhaps to Bengal or as settlers to Burma. They might have crossed Bengal. Anyway we cannot definitely say that they have left their impress either in Bengal or Burma. But it is totally incredible that they were settlers in Southern India and mingled with the Tamil population and even became a ruling race.

Though the origin of the word Māran as applied to the Pāṇḍyan is obscure, still it is not altogether unreasonable to derive it from *maram* (valour). Some of the Marava chiefs of Southern India who took to the profession of arms call themselves Pāṇḍyaṁs and from this, one can infer that the ancient Pāṇḍyans who were renowned as *veeras* (warriors) styled themselves Māran. Though the Pāṇḍyan seemed to be an out and out Tamil chief, there is a plausible theory connecting him with the cowherd tribe, and a poet actually sings that he who once drove the cattle with his stick was then ruling the land by controlling his subjects with the sceptre, implying thereby that originally the Pāṇḍyans arose as kings from the cowherd tribe. But from the title alone one cannot judge one's family descent. Whatever may be the theories propounded in favour of the origin of the Pāṇḍyas, from an appellation here and a designation there, it cannot be controverted that they were an indigenous people and there was no connection between them and the Mongolian tribes. The Mongolian theory of invasion and conquest of Southern India is from all points of view untenable and difficult of acceptance.

Be this as it may, we shall return to the Neolithic period of Southern India and see what became of the population who inhabited this region in very early times. A moot question is what became of the Neolithic population and the

Palaeolithic as well. Did they pursue their arts and civilization and did they become civilized at all? Were they the legitimate ancestors of the later South Indian population who may be designated for convenience sake as Dravidians. Did they migrate to forests and jungles, hills and caves and lead their own primitive lives, not caring for what was going on beyond them in the plains? Did some of them come to the plains and carry on a better life and add to their amenities of life? These are some of the questions which have to be tackled satisfactorily and convincingly not only by the ethnologist and the anthropologist, but also by the historian of ancient Southern India.

Ethnology, if one may say so, is a fleeting science, if it can be termed a science at all. And anthropology is its cousin. The historian of ancient Southern India is baffled by a number of conflicting theories propounded by the Ethnologist and the Anthropologist. The theories not only conflict with one another but also are based on little or no evidence. Most of them are imaginary, unconvincing and untenable. The pity of it is that these theories now largely proclaimed with a certain amount of enthusiasm, are mostly drawn from the living specimen of tribes and people who have mingled with various other tribes, with their arts and crafts, and with their peculiar amenities, for ages and ages together.

The real fact seems to be that the so-called Dravidians who are supposed to be migrants into peninsular India from different parts of the world and hence alien to the soil, could not be foreigners to the land but indigenous and autochthon of South India. The original Neolithic population seems to have advanced in several directions especially towards the close of their period, some taking to cattle-tending, some to rice cultivation, some to fishing while others were leading the old life in hills and forests. This seems to be a fairly reliable analysis of the situation at the

close of the Neolithician epoch. This coupled with the age of the metals characterised chiefly by the use of iron, further led to the final settlement of community on the plains which resulted in the progress and promotion of civilized arts and crafts. Agriculture became their mainstay and this led to the formation of different communities among them. The fisherman plied his trade while the man of the hills and forests continued his old profession.

Hence among the earliest tribes of the Tamil land we note two characteristic appellations, the *villavar* and the *minavar*. Pursuing their trade for ages together they became ultimately settled tribes and were designated bowmen and fishermen. Those who settled in caves and hills were known as the *villavar* and were perhaps akin to their compeers, the Bhils in the north. So also must be told the tale of the fishermen or the *minavar*, the Minas of Sanskrit literature. Geographically speaking every land had its own jungle folk, its own fishermen, its own agriculturists and Southern India was no exception to this rule. Helped by the discovery of iron and knowing the several uses it could be put to, the agriculturist promoted his art, so much so, many professionalists had to depend upon him for their profession and earn their livelihood. For instance, the carpenters, the blacksmiths and other professionals had to help him in the pursuit of agriculture. Slowly, on him depended the washerman, the barber and those who tended the cattle. Further the weaving class provided him with clothes, and the village goldsmith and silversmith supplied the jewellery for their women-folk.

As civilization progressed step by step, the amenities of life also increased with the result that the agriculturist became the landed proprietor of the village. This necessitated a regular supply of oil by the oil-monger, of milk and curds by the milkman, etc. What we derive at is and why we are at some length on this

point is, there now emerged for the first time an organised society in which one depended upon the other. It was the agriculturist who paid mostly in kind and some times in cash to the various people in different professions. In course of time these professions became more or less fixed and in several cases hereditary so much so that the son was trained by the father in his own profession, and in time when the father had to retire, the son took his place having become an expert in that particular profession. It can thus be readily seen that it became a society of an unchanging type. From the end of the second millenium B.C. to practically the first century B.C. this conditions of affairs remained stationary with the result that we can speak of as many classes and communities which could be numbered as many professions necessary for the carrying on of a decent livelihood.

That is why the reputed grammarian, Tolkāppiyānar, was able to divide society of his time into five classes according as they lived in particular region. Tolkāppiyānar speaks of five regions into which the whole Tamil land was divided. These are Neydal, Marudam, Kuriñji, Mullai and Palai. In his time, roughly 4th century B.C., the region of Palai had become extinct and so prominence is not given to this particular region. It may also be that there was no *Palai* or desert region worth mentioning in the Tamil land of his time. So four regions are given primary importance and the gods and peoples of those different regions are mentioned together with their duties to the then known society. In the Kuriñji region which consisted of mostly hills and forests there were people though in a low stage of civilization pursuing their own arts. In the Marudam region there were agriculturists mention of whom has already been made, and who were in a fairly advanced state of civilization. These were eager to better their conditions in life whenever opportunities were available. In the Mullai region, however, there were herdsmen tending cattle and sheep and supplying the village with

milk and milk products. These were a little away from the homes of the agricultural class. Hence they were known as Idaiyars. The term Idaiyar in Tamil literally means those who lived between the jungle and the plains. The people intervening between the agricultural classes and the jungle population were the herdsman. In the Neydal region there were men engaged in fishing and pearl-diving. They continued their age-long profession and remnants of this group are still with us and are known in some places as Paradavar.

Between the metal age, and the age immediately preceding the Śāṅgam, there were several centuries when the old type of society was flourishing. During this period, if literary evidences can prove anything, there were some tribes like the Yakshas in Ceylon and Nāgas in South India who played a conspicuous part and spread themselves out over several parts of South India as also in different parts of North India. Confining ourselves to the Yakshas of Ceylon, they seem to have become extinct as a tribe, sometime by the 5th century B.C., perhaps about the time of the landing of Vijaya in that island from North India. Before this time the Yakshas seem to have been a prosperous people. Even in early works in Sanskrit, the Yakshas are deemed to be a tribe of semi-divine people who seem to have attained godhood and who were once the inhabitants of the Himalayan region. Whether they went from the Himalayas to Ceylon or vice versa we cannot definitely say. All that we can say is that roughly up to the 5th century B.C. they seem to have been active. Perhaps they were the descendants of the old people who were thriving in Ceylon.

But after the Yakshas, historically speaking, another famous tribe whom we call Nāgas attained the same prominence and loved travel and adventure and consequently spread throughout the length and breadth of India. We cannot treat them easily as semi-divine beings but they seem to

have been men and women in flesh and blood. They were not only famous as rulers of mighty kingdoms but they were plying a roaring trade carrying their merchandise to far and near places. In the course of their enterprise they seem to have come to South India, settled therein and made it their home. Otherwise we are not able to explain how they received recognition by the Tamil population. Some of the Tamil poets were of the Nāga community and some were influenced by their culture. One poet refers to the contest between two Nāga kings for the sacred seat of the Buddha. The same poet mentions that the island of Maṇipallavam was the country where the sacred seat was established. And it lay at a distance of thirty yojanas to the south of Kaveripattinam. We have also a description of the meeting of one of the ancient Chola kings, Killivalavan and a Nāga princess. And this resulted in their marriage. The late Kanakasabhai proceeds to identify some of the early Tamil tribes such as the Maravar, Eyinar, Oviyar, Aruvālar and Paradavar as belonging to the Nāga tribe. But there is not much evidence to show that these were kinsmen of the Nāgas or the Nāga blood flowed in their veins.

At the most they were tribes war-like in character and therefore very powerful, led independent lives, were perhaps in a low state of civilization and were conquered by the Chola and other kings. It need not necessarily be that these tribes had anything to do with the Nāgas as such. But it goes without saying that the Nāgas were adept in several arts especially in the art of weaving. They supplied fine Muslins to the Tamil and to other foreign countries. Once upon a time they were highly prominent in the town of Kaveripattinam, one of the capitals of Cholanāḍu. So much so, the town came to be known as Champāpati. But the Chola kings like Mucukunda conquered the Nāgas and established their sovereignty. We do not hear any more of the Nāga

activities. For some centuries to come the three Tamil kings seem to have held their sway undisturbed.

### THE KURUMBAS

Several tribes persist with us from Neolithic times pursuing their age-long profession and living in a low state of culture. Among the tribes that made the jungle and the hills their home a few wandered and mingled themselves with the pastoral tribes and formed an important nucleus in the pastoral stage of civilization. One such tribe that spread to Mysore, Andhradesa and the Tamil country is the Kurumbas. To-day we distinguish in this tribe, sometimes called Kuruba and sometimes called Kurumbar or Kuruman, the Kurumbas, who are the modern representatives of the old tribe who frequented not only jungles but also the pasturage intermediate between the jungles and the plains. Sometimes a distinction is made between these various tribes. But to us this does not appeal. We take it for granted that these tribes though definitely known in different parts of South India belong to one and the same stock from which they must have branched off. According to environment and climatic conditions, this tribe seems to have picked up the local traditions and local dialects and in some cases some civilized professions also. We must make a clear distinction between the old and the new tribes. The new tribe of Kurumbas who took to the tilling of the soil and who inhabited the regions of the plain and who began to speak the old Canarese dialect were more or less confined to the Mysore territory and beyond. Though this branch belonged originally to the old Kurumba tribe, still we need not take into account the growth and development of this tribe in later years especially after the 7th century when the Pallavas predominated as a ruling race in South India.

We are more concerned with the old tribe of Kurumbas who still lead the life of the ancient jungle folk and who



persevere in their old methods of wood-cutting, blanket-making and honey-gathering which were indeed the professions of the men of Neolithic times and also the men of the age of metals.

According to an account preserved in the Mackenzie manuscript, Tondamandalam was early occupied by the community of Vedar and Kurumbas. We have then evidence to show that originally the Kurumbas were the people of the Tamil land, engaged more or less in hunting and cattle-tending. Ptolemy refers to a tribe called Pulindas and says that they subsisted on raw flesh and roots or wild fruits. The Pulindas as a tribe are already familiar to us from the Mahābhārata and the Rāmāyaṇa. Perhaps the Pulindas and Puṇdras may be a variety of the same tribe ; but the moot question to decide is whether the Pulindas had anything to do with the Kurumbas. No doubt Aśoka mentions the Pulindas after the tribe Pitinikas and Andhras. It may be the Kurumbas were in a state of a very low civilization and may have had in common some of the characteristics of the Pulindas. Beyond this we cannot say anything which would go to identify the Pulindas with the Kurumbas.

At the most we can say the Kurumbas were a tribe more or less akin to the Pulinda tribe. We are at some length on this point because recently an attempt has been made to identify them with the old Pulindas. In our view the identification cannot stand examination and it may be that the Kurumbas were originally an ancient Tamil tribe and were also occupying parts of Tondamandalam. Some of them might have taken to the hunting profession and some to pastoral life. To-day the Kurubas or Kurumbas are spread over not only in the Mysore territory and the Andhra region but also in Tamil districts and Malabar. The Kurubas of Mysore and Bellary as well as the jungle Kurubas of the Nilgiris and the Kadars and Malaivedars allied to them bear more or less the same physical characteristic. But in two points stature

and nasal index on anthropometric evidence there is a slight difference which can be noted below :

Name	Stature Average cm	Stature Maximum cm	Stature Minimum cm	Nasal index Average	Nasal index Maximum	Nasal index Minimum
Kurubas, Mysore	163.9	176.4	155	73.2	85.9	62.3
Kurubas, Bellary	162.7	175.4	153.4	74.9	92.2	63.3
Kurumbas, Niligiris	157.5	163.6	149.6	88.8	111.1	79.1
Kadirs	157.7	169.4	148.6	89.8	115.4	72.9
Mala Vedars	154.2	163.8	140.8	84.9	102.6	71.1

This table is very interesting as it shows a distinct gap between the Kurumbas who had been domesticated and the Kurumbas who had made the jungle their home. People who are under-statured and who have broad nose can be said to be most ancient people occupying peninsular India for milleniums together. They are the descendants of the peoples who lived on roots and fruits and who were almost unclad, and who were not quite clean in their habits. The popular tradition as to the origin of the community in this part or the other part of the land need not deter us. We have the Kurumbas in different stages of civilization, from the most uncivilized to the highly civilized. Some of the civilized Kurumbas especially in the Mysore territory are followers of the Lingayat religion and even worship the bull as the Lingayats do. Surely, this must have been after their contact with the Lingayat people ; but there are Kurubas

who are still leading their old life and sticking to their old customs. They are generally worshippers of Śiva. Some of the Kurubas claim to belong to the right hand class and also claim the privilege of passing through the chief bazaar in days of procession. Some castemen like the Mudaliars and Naidus have no objection to eat, drink and smoke with the Kurumbas.

Already mention has been made of the Kurumbas of the jungle and of the Kurubas who live in the plains. The profession of the latter seems mainly confined to tending of cattle and sheep and weaving of blankets. This section of the tribe seems to have once been in high power and influence that it was able to win the rank of rulership in some parts of South India. It is stated that the final fall of this independent power of the Kurumbas was effected by the Chola king Ātonḍai about the 7th century A.D. But historically speaking we cannot attest to any such victory. In some places the Kurumbas might have been influential, might have even held the rank of a chieftain ; perhaps it required a Chola king to curb the power of these tribes.

But much more interesting is the section among the jungle tribes of the Kurumbas. They are found in the Nilgiris and the Wainad and also some hills in Malabar. As has been already said, wood-cutting is their chief occupation and gathering of forest produce is their secondary occupation. A sub-division of Malabar is named Kurumbarnāḍu and this is enough to show their once powerful position. There is no doubt that these belonged to an aboriginal tribe of the Tamil land. The jungle Kurumbas are generally active in their habits and able to endure great fatigue. They are experts in hunting wild animals, and their children are said to move about without any fear in the jungle regions. Generally speaking they are a rude tribe exceedingly poor and miserable also. In the course of their search for food this wild tribe cleared the forests.

Speaking of the Kurumbas of Malabar, we see that they are divided into four or five communities, each following its own profession. For instance we have the Mullu Kurumbas engaged in Mullu or bamboo work. We have again Tēn Kurumbas who are actively engaged in collecting honey. Among the different communities which go to make up this tribe one notices a class superiority among them. They have their own headman and their caste deity. There are also Urali Kurumbas who work on metals. We notice some of them officiating as priests to the Badagas and some employed as musicians on the occasions of wedding or funeral. They are experts in making baskets of rattan while their women confine themselves to activities at home.

It is said that the Todas are indebted to them for two ceremonial objects. One is a tall pole used in the dance at the funeral ceremonies and burnt afterwards. The other is the teik or a post at which the buffalo is killed. The Kurumbas in the Nilgiris seem to help the Badagas with sowing the first grains for which they are entitled to a proportion of the produce at harvest time. It seems to be a custom among the Kurumbas of Nilgiris for several brothers to take one wife in common. There seems to be no rigid marriage rite. From their death rites and practices, it is conjectured that the Kurumbas are the remnant of a widely-spread people who may have erected dolmens. Besides, the Kurumbas are credited with a knowledge of medicinal roots and herbs and they have a reputation as medicine men. There is a belief among the Badagas, that they would bring disease and death into a village.

Thus in a rapid survey of this ancient tribe we find that while some of the Kurumbar live in the old state of civilization, others have spread themselves out and taken to more decent ways of living. This enables us to distinguish between

the older type of Kurubas who frequent the hills and jungles and the new group of Kurumbas who have a better standard of living making the plains of the open country their home. Their service by supplying woollen blankets to the needy and also a number of forest articles cannot be minimised. By their profession and culture they seem to carry on the thread of the old civilization, be it that of the Neolithic or the metal age.

### TRIBES IN MALABAR

On the ethnographic map of India a close and critical study of the habits and manners of primitive people is by far the most important subject. Unfortunately, the culture of the primitive people who are the heirs to palaeolithic and neolithic communities is fast dwindling, and in some cases is rapidly declining on account of the sweeping changes which have taken place by the influence of not only modern civilization but also by the peculiar environment in which these ancient peoples have been situated for ages long. Therefore a historical study of the most primitive hill tribes of South India is very interesting especially those of Malabar. Most of the hill tribes are primitive in the sense that they belong to the original population of Southern India from almost the neolithic times. We shall first take up the Cherumāns.

The Cherumāns or Śirumakkal form an inferior community of agricultural labourers in Malabar. According to the Madras Census Report while the agricultural classes in South Malabar go by the name of Cherumān, those in the north are designated the Pulaiyans. Among the Cherumāns themselves there is a sub-division called Pula-Cherumān. The other communities which are more or less engaged in one and the same profession are the Kanakkan, Irulan, Kūdan and Rolan. While the Kūdan and the Irulan are found in the Valluvanāḍu, Irulan are prominently seen

in Palghat. The Cherumān occupies a low position in the social scale and even their approach to persons of superior caste was said to cause pollution. Their only occupation seems to be the cultivation of the fields of their masters, by ploughing, sowing seeds and reaping the harvest. In summer when there is no cultivation they look after the vegetable gardens or otherwise look after their master's work.

The home of the Cherumān is called a Chala or hut made up of a thatched roof mostly of grass and palm leaves. An underground cell serves the purpose of the granary. The furniture of the house is simple and consists of a few earthenware pots. Their dress is also simple. When they are actually engaged in cultivation they put on a few green leaves which are generally of the plantain tree. Round their waist these leaves are tied and a cap again of plantain leaves forms their head dress. The women folk of this community too were once having the simple leaf dress, but now-a-days due to their contact with civilized people they tie round their waist a piece of cloth of cotton, their chest being left uncovered. Besides this simple clothing the Cheruvi is fond of jewellery which again consists of necklace, rings and bangles all made of glass and brass. Sometimes iron rings are also seen. They are experts in stick play and their women sing in chorus especially at a wedding. As regards the disposal of the dead, as soon as a Cherumān dies the body is bathed in oil and the corpse is removed to the burial ground and interred in a grave already dug. A mound is raised on the way. The mourners of the house fast on the day of death. In the burial ground there is a singer who is known as *Kalladi*. The spirit of the deceased is said to speak through the Kalladi. They worship certain crude images. Cocks are offered in sacrifice to these deities. Sylvan gods, garden deities and field goddesses are also propitiated. Of late the Bhagavati of Kodungalur is regarded as a guardian deity by the Pulaya section of the Cherumāns.

After the fashion of the Hindus they have taken to festivals. The Cherumāns and Pulayaś of Malabar are short-statured and dark-skinned like the Koragas of South Kanara. To venture a conjecture the Cherumāns may be identified with the original sons of the soil, because Malabar is known as Chera country from almost pre-historic times.

The next tribe that may engage our attention is the Kādir tribe. The Kādīrs or Kādāns occupy some important mountainous ranges called the Ānamalais which stretch southward into Travancore. Though they have not been affected by their contact with modern culture, still it cannot be gainsaid that the Kādīrs have undergone some transformation especially in their manners and customs. Having been confined for a long time — how many centuries we cannot say — to jungle life, they possess little or no knowledge of cultivation. Their weapon of honour seems to be a keen-edged bill-hook. Their habitation consists mostly of bamboo huts and the house itself is partitioned into verandahs and rooms, the partition being done by bamboo *thaties*. They have permanent abode and they always live in small communities. They roam about in the jungle and shift from one place to another. The one faithful companion of theirs is the dog. Whatever things they would gather, they are in the habit of carrying them strapped on the back instead of on the head. Though they do not possess any land as such, still they seem to enjoy the forest produce such as wax, honey, cardamum, deerhorn, etc. Some Kādīrs are excellent trackers and a few of them are good *shikaris*. To them the principal food consists of the roasted flesh of animals.

The religion of the Kādīrs seems to be a crude polytheism. Stone images are worshipped in plenty. Besides other gods and goddesses, they are accustomed to the worship of Kālī. When they fall sick they propitiate this goddess and believe by such acts they will be rid of the dis-

ease. They believe and seem to think that the miraculous working of the spirits is the root cause of all diseases. They are also good exorcists and have great belief in magic and witchcraft. For the disposal of the dead, the Kādīrs do not have any special burial ground. Very near where death took place some spot is selected and the dead are buried. Sometimes the corpse is placed in a crevice between the rocks and covered over with stones. The grave dug is four to five feet deep. The clothes used by the deceased are spread under the corpse and the new clothes are placed on it. It is tied up in a mat and carried to the burial ground on a stretcher usually of bamboo. It is their belief that the dead go to heaven.

In general appearance they are short in stature but deep-chested. Their chest girth and muscular development are indeed remarkable. They are hardy and true mountaineers. They refuse to eat with Malasars, another tribe akin to them because the latter have taken to beef-eating. Though they are primarily a jungle people inhabiting a forest tract, still from a study of their marriage rites and ceremonies, one has to conclude that they have been affected by the customs and habits of the plains.

Another tribe which is prominently seen in the Cochin tracts and also in the Coimbatore district is the Malasar tribe. As a forest tribe the Malasars are experts in game tracking. They also live in bamboo huts known as *pathis*. They dwell also at the foot of the hills bordering on the plains. They are supposed to be good axemen and are at present employed as coolies. There are different grades of Malasars and their chief food seems to be carrion of the bison and the cow. They are adept in catching wild elephants and gathering honey. When food is scarce and is not available they dig up yams. Now-a-days some of them are employed as agricultural labourers. But they seem to be remnants of the old people who lived in jungles and hills. In point of reli-



gion they believe in ancestor worship. They also have their own gods and goddesses to whom they sacrifice beasts and buffaloes. As for the disposal of the dead they usually bury them with face upwards. If an elder of the family died, his personal belongings such as clothes and bed are buried with him. Sometimes the practice of cremation is also seen among some sections of this tribe. But at times the dead bodies are buried in a sitting posture in a niche on one side of the grave.

There is a community called Malai-Araiyan originally a hill tribe but now they show signs of civilization due to their contact with men who live in the plains. In the matter of disposing their dead, however, the Malai-Araiyan usually bury their dead. We see a number of ancient tumuli in their hills (suggesting that once they were the graves of some chieftain) scattered here and there with pottery, stone figures, iron implements, etc. They make little cells of stone and place them on the grave-yard. On the anniversary day the stone is lifted, offerings made and then they are closed. One can notice numerous vaults in these hills.

Among the backward classes of Malabar the Nāyadis are prominently seen. They live in thatched sheds and all their property consists of few earthenware vessels and a chopper. They have their own religion and are primarily ancestor worshippers. They have got representations of the departed to which offerings are made on important occasions. The representations are of stone set-up in a circle around the scene. They are highly superstitious and are of opinion that a brass toe ring would protect them from snakes. Of late some of them have become converts to Christianity, and some to Islam, and the culture of these primitive peoples is being lost.

Mention may be made of Tandans who were sometimes pressed into military service. In return for their services

rent-free lands called Ūrali-pparambu were given to them. But by profession they are largely palm-tree climbers and engage themselves in the manufacture of ropes though rough, out of the barks of trees nearby. Several sections of the Tandan are distinguished but we are not much interested in it. Suffice it to say that in case of death there is a curious custom by which only the eldest member of the family is cremated while the others are buried.

In the same way the Vaṭṭuvans of Malabar are again an ancient tribe perhaps akin to the Tamil Veṭṭuvans. Ethnologically they are connected with the old tribe of Veḍan whose chief profession was hunting. They are touched by the fringes of modern civilization but still they are remarkable in maintaining their old culture and habits. Basket-making is a profession while some take to jungle cultivation. In spite of modern civilization their women-folk use only scant cloth ; but leaves as dress are not yet tabooed. To-day, most of the members of this tribe live on the cocoanut plantations of the higher classes whose habits they have copied in their marriage rites and death ceremonies. They should not be confounded with the other tribe in Malabar called Veṭṭan sometimes Veṭṭuvan. Thus we have seen in a rapid survey some of the primitive tribes who are indeed survivals of the original population and whose traditions are rooted in the country. These tribes as a class seem to follow the *Makkatayam* form of inheritance. Only very recently a small section of a tribe or two have taken to *Marumakkatayam* perhaps after their masters. But the *Makkatayam* form of inheritance is generally observed among them. It is unfortunate that the ancient culture of these primitive peoples is being lost to us, and before it becomes dead or defunct, the ethnologist should make a complete survey of these primitive peoples still happily with us, and collect information first-hand as to their mode of living, marriage, religion and death ceremonies.

## THE TODAS.

Among the tribes of South India special mention must be made of the Toda tribe which has made the Nilgiri hills and its environs its home from very early times. We are not in a position to say how and why the Todas came to this part of the Tamil country. But the fact remains that they have occupied these hills for a very long time and have subsequently copied most of their manners and customs from the Hindu religion. Nevertheless they maintain their individuality in certain particulars and a study of this tribe is particularly interesting to the Ethnologist.

The origin and history of the Todas is as usual shrouded in mystery. Attempts have been made to study their tradition and that at close quarters, and these have proved futile. If a surmise is possible the Todas must have been an offshoot of the ancient tribes of South India when each tribe began to settle in different parts of the peninsula. If one would compare the social and religious customs which are prevailing among the Todas they bear close resemblance to those of Malabar. From this it is inferred that the Todas originally belonged to the West coast and then migrated to this part of the country which they made their home. The Toda tradition is even seen in the Mysore territory and also in Coorg. But from this we cannot conclude that they came from either Mysore or Coorg or even from Malabar. Perhaps some of the Todas migrated to these places and settled there. Whatever this may be, as a tribe they are very interesting.

The chief feature of the Toda tribe is that it is divided into a number of clans each with its distinct ceremonials and social organisation. We have, for example, the Tarthar clan, which is again sub-divided into several divisions. In the same way we can divide the Teivali clans. But the most interesting information based on their social organisation is

the existence of these two divisions of the Toda people with different functions and social duties. Restrictions are even seen in their marriage ceremonies. With regard to marriage the analysis shows that the Todas recognise the wedding of the daughter of a father's sister or mother's brother as legitimate, while that of the daughter of a father's brother and a mother's sister is prohibited. The system of polyandry seems to prevail largely among the Todas ; for while the marriage of a woman with a man takes place it is understood that woman becomes the wife of his brothers as well. There is also to some extent the system of polyandry though it is not common. Besides regular marriage, convention recognises union between men and women which is called *mokhthoditi*. In this type two forms are distinguished. In one the woman lives with a man just as his wedded wife and in the other, the man visits the woman. The second form is quite common. Descent among the Todas is usually reckoned in the male line. And very little is seen of the system of mother right among them.

Land is held in common by the clan and over each clan there is a headman called *etudol*. But the most interesting feature from the archaeological point of view, which may perhaps shed some new light on the origin of these people, relates to their funeral rites and funeral places. The funeral rites of the Todas more or less bear a striking resemblance to those of the people of Malabar. But what we are concerned with is the belief which the Todas entertain that their dead go towards the West. In examining the grave-yards and other monuments of the Todas, we have plenty of cairns, barrows, and cromlechs scattered over the length and breadth of the Nilgiri hills. In addition to the figure of the buffalo which is held sacred, there are also other figures of many animals besides metal work and pottery. The pottery itself shows that it consisted of different designs and was artistically

adorned. If this were the evidence on the primitive culture of the Todas, we must say from a study of the existing institutions among them that a sort of degeneration has overtaken them; but their ancestors were imbued with a sense of high culture.

We must not fail to take note of the Toda religion and rituals. There is the ritual of the dairy and several other ceremonies connected with the buffalo. The typical Toda god is distinctly anthropomorphic and is often named Teu. Legends which have grown around this figure demonstrate that he has got his own dairies and buffaloes. There are several gods and goddesses of the Todas and any account of these would only swell the volume. In the village dairies prayer is offered generally in the evenings. There is then the dairy ritual which need not detain us. Certain Todas are experts in the art of divination and others in the art of sorcery. They have their own prophets and magicians as well as medicine men and priests. They have also their own sacred places and sacred objects to which offerings are made. Though we could see the influence of other religions on their faith, yet much could be said of their deities and sacrifices for them. To repeat, they have always held the buffaloes very sacred.

Among the different institutions which are peculiar to the Toda people mention has been made already of the village dairy on which the Todas bestowed much attention. There was indeed the village dairy, but usually a village had more than one dairy. Every dairy had its own water-place, the place specially intended for drawing water which may be a different part of the same stream. There were different grades of village dairy and there were also the daily procedure, the qualifications and rules of conduct of the dairyman, and others connected with the dairy. We can distinguish two kinds, the Tarvali and Kudrpali. The Tarvali was always associated with the ordinary form of dairy. The

dairyman is a member of the village but nothing prevents one from being chosen from another clan or another village. But usually he is not entertained from the other division of the Toda people. The dairyman is looked upon by the Todas as the servant receiving certain wages for his services. There are some restrictions with regard to the dress and daily life of this person. He is in charge of the buffaloes, takes them to the grazing ground and goes into the dairy to churn. Before and after taking the buffaloes from and into the pen he utters prayers.

The Kudrpali has got its own dairy and it contains one or more of the bells called *mani*. The ceremonial of this dairy is somewhat complicated. There is a process of putting milk on the bells and of this the Todas say 'feeding the bell'. At present the only clan which has a Kudrpali in use is that of the Kars. Other clans use it in certain seasons. An analysis of the different clans and their relation to the village dairy shows that Kudrpalis are not considered as the property of the whole clan but they belong to different families, and each family has in addition to ordinary buffaloes, sacred buffaloes, which are tended by their own dairymen. Whatever it is the buffaloes play a prominent part in the daily life of the Todas.

A word may be said in conclusion about the physical characteristic of the Toda people in general. W. H. R. Rivers who has studied this question at some length says "the average height of the men is about 5' 7" and that of the woman 5' 1"; both are well proportioned and the men robustly built. Their heads are distinctly dolichocephalic, the cephalic index of the men being 73·3". Speaking about their nose the nasal index seems to be 74·9. This means they have no broad noses. The skin of this people is generally of a rich brown colour. Women have skin lighter than that of men. Men grow thick beards and the hair on their bodies shows much growth. The men are strongly

built and stand any amount of fatigue. They believe in their physical and mental resources and regard themselves as superior to the surrounding tribes. They are generally dignified and well-meaning in their intentions. They live in small villages scattered about the hills. These villages are generally near sholas which again are near the woods and the hills. A typical Toda village is characterised by a small group of huts and in most villages there is a dairy or dairies. Near the village would be at least one stream. One cannot distinguish their huts from those of the Badagas and in point of dress there is not much difference between men and women. Each wears a mantle thrown round the shoulders and underneath is a loin cloth. Taking a birds' eye view of the people it can be confidently asserted that their daily life is more devoted to their buffaloes and their dairy.

#### SOME TRIBES OF THE ANDHRADESA

Our study of the ethnology of Southern India will not be complete if no mention is made of the several tribes of the Āndhradeśa who are, to all intents and purposes, to be put down as primitive peoples, who once inhabited the jungles and forests of the Telugu country proper. Though most of the tribes have fallen a prey to the inducements and caprices of modern civilization and adopted professions other than their own due to economic necessity, still there are some lingering habits among at least a small section of these peoples a study of which would be of great value to the antiquarian. It would be a great loss to ethnology if some of the characteristics of these tribes are not studied in time and the results recorded duly. For instance, there is a tribe called the Yenādis who form numerically a large proportion of the primitive folk of the Telugu land. To-day, one can notice as many as eighty-nine divisions among these tribes, each pursuing its own walk of life, some of them being too modern. The island of Śri Harikotta in the dis-

trict of Nellore is considered to be the centre of this Yenādi population. But here to our great surprise there is a Government school mostly intended for the children of the Yenādis where lessons in which they have specialised are imparted in a scientific manner.

We do not find fault with the activities of the government in improving the standards of living of any tribe in general and the Yenādis in particular. But as students of history our concern is that much of the valuable material from the anthropological point of view may disappear and sometime hence, it may be possible to wonder whether these tribes were once primitive in character. In some cases even the names of these people are changed to such an extent that one has to doubt any authentic tradition of theirs. The Yenādis speak the Telugu language but some words seem to be compounds of Telugu and Tamil, for instance, *pandikutti* for pig. The mixture of Tamil with Telugu words which is noticeable in the language of the Yenādis may point out their age-long connection with the Tamil speaking peoples and may support our theory that once they belonged to the same stock of people of which a branch settled in Āndhradeśa.

The Yanādis can be credited with the knowledge of the forest flora and the fauna as well. They lived in low conical huts of rude construction mostly built of bamboo and palmyra leaves. Though these habitations afford shelter from heat and rain, generally this tribe is more acquainted with outdoor life and do even their normal business of cooking, eating and sleeping outside their huts. Whatever the Yenādis have now substituted, their once staple food was the flesh of the animals of the forest which they hunted, the yams, date-palm and the fruits of trees which they could easily obtain. Like the Irulas they are very partial to sour and fermented rice water.



The Yenādis as a class pretend to be soothsayers and pride themselves in the fact that they have communion with gods and goddesses. Though most of the Yenādis are returned as Hindus in the Census Report, yet some of them are known to be animists. The animistic nature of their religion, the production of fire by friction, the primitive profession of hunting and fishing, all these demonstrate fully that they still cling to what we call the primitive stage of culture, though most of their compeers have emerged from this state of civilization. Their places of worship are not temples but they are called houses of gods. To speak in their own language, these houses of gods are called *devara indulu*. Besides they worship a household god and also the village goddess of importance. But what is more important is that like the Nilgiri Kurumbas they boast themselves as accurate soothsayers. They seem to predict their future in songs in which the rural folk take abiding interest.

Generally, the Yenādis bury their dead. The corpse is laid on leaves in front of the hut, washed and even clothed. Then it is placed on a bier and covered with a new cloth. Next it is carried to the burial ground, where it is laid on a cloth face downwards. The eldest son and other relatives throw three handfuls of earth into the grave and in this way the grave-yard is filled up. We are not concerned with the other customs associated with the death ceremony. The Yenādis are noted for gathering the forest products such as honey while some men of their community are interested also in fishing. They are expert anglers and usually catch the fish with a triangular net or wicker basket. Sometimes they dive in the waters and catch the fish concealed in rocks or buried in mud. Again they are not afraid of cobras and they very boldly catch them by drawing them out of their holes. They could remove the poison-sac with a knife. Having lived long which could be measured in terms of centuries and millenia, they have learnt by experi-

ence the properties and uses of herbs and roots, and are conversant with remedies for fever, rheumatism, elephantiasis and other diseases.

Lastly, mention may be made of their dancing habits especially on festive occasions. Their only wind-instrument seems to be the bag-pipe. They used to smear the body with turmeric, wear flowers, and drum rudely singing meaningless songs. In fact, their dressing for the occasion is fantastic. When they are dancing one can infer from their action that the Yenādis are a very simple people who once led the life of a nomad. Physically they are dark-skinned, short-statured and belong to platyrrhine tribe. Their name has been a subject of speculation and even now one cannot conclude as to the origin of either the tribe or of the name of the tribe.

#### CHENCHUS

By far the most prominent of all aboriginal tribes in the Telugu country is the tribe of the Chenchus. Though there are a number of aboriginal tribes scattered here and there we can single out only one or two primitive tribes to understand their ancient culture. Though culture contacts with the civilized neighbours have wrought much havoc in their old habits, still in the detailed study of this tribe there can be discerned several primitive features. Some of the people still prefer to live in the jungles and carry on their old professions. Though we cannot be certain about the earlier strata of society in the stone culture of this vast peninsula, still there is general agreement that once the population of this peninsula consisted of dark-skinned people with wavy or curly hair. Notwithstanding the fusion of the Veddas of Ceylon and the earlier Indo-Negroids, still the oldest stratum is not much disturbed. Throughout the Madras Presidency and parts of Hyderabad the Chenchus are distributed.

Originally, a tribe of semi-nomadic food-gatherers, these Chenchus are of medium stature, the average height of man being 163 cm.; but there are several men under 155 cm. Their eyes are generally brown and also black. Their hair is coarse, wavy or curly. Even the facial growth is not very strong. All Chenchus as a class are dolichocephalic and bear the cephalic index which ranges from 72·89 to 74·3. Though we can distinguish two types of facial features, yet the one represented by a low face, steep forehead, a depression at the root of the nose, and broad flat nose is characteristic of the primitive tribes amongst the Chenchus.

It goes without saying that they have retained some of the primitive characteristics, if we closely study the many elements in their culture. They are expert tree-climbers and good swimmers. They generally cross the river Krishna by swimming though the use of rafts is not rare. They are not particularly clean but one cannot say that they never wash. They use some cloth to cover their body. Their dress is filthy owing to the conditions of their life, especially continued jungle life and the frequent contact with the soil. They are not in the habit of cutting their hair but allow it to grow. Women, however, make a knot near the nape of the neck and they use string or creeper to bind their hair. But no ornaments are worn in the hair.

But now-a-days changes in their physical characteristics are perceptibly noticed. Chenchu women, especially imitate their neighbouring peasant in their clothing. But in ancient times jungle leaves were sufficient to clothe them. Even with regard to ornaments, the old jewellery have given place to new, though there is still a practice among old women to cling to those of their ancestors. Speaking about the economic life, one can venture to say that the Chenchus retain their semi-nomadic mode of existence. The sense of owning property is rarely seen among them though with a

more settled life this is being gradually developed. But the mainstay of the Chenchu's life is the digging-stick. With this stick he is able to dig the hardest of earths and gather roots and tubers. Also in sowing grain, the digging-stick is prominently seen. It is usually a bamboo shaft with iron spike. In very ancient times when Chenchus relied for their existence only upon hunting, digging-sticks were not much in use. Slowly, the old profession of hunting was given up. The bow which was used is rarely seen ; but the Chenchus still possess five different types of arrows of which three are metal-tipped. The metal tips are the handicraft of Chenchus themselves and arrows without iron heads are not much used by them.

In addition to the digging-stick and the bow, the Chenchus possess also an axe and a knife. Without these implements they never leave their homes or wander in the forest. Among their traditional occupations mention may be made of honey-gathering. In former times, the Chenchus produced fire by friction which is now being slowly given up. Examining the household goods of a Chenchu home one notices several kinds of earthen pots and wooden ladles. Though these are largely used now, still they remember that once upon a time they had not even pots but only bamboo vessels and gourds. Besides honey-gathering the Chenchus spend their time also in basket-making. Here one notices two kinds, one being coarse and the other fine. Baskets of the latter variety are of globular shape and they are called honey-baskets by them. They do not however know to make articles of plaited basket work. They also do not know the art of tanning and all they knew was the use of wooden combs to plait their hair with. They generally live in thatched houses and the instinct of migratory habits is prominent. They do not regard these migrations with disfavour. They go to places wherever food can be collected easily. They do not have

the habit of settling down in places permanently, though the advantages of permanent settlement have more or less dawned in their minds.

The Chenchus at present use a number of musical instruments but several of them seem to be very recent. Closely studying their semi-nomadic habits and primitive leaf shelters, there can be no doubt that they represent in social ethnology a survival of one of the early tribes, who roamed the forests in family groups without any aim. Undoubtedly it may be said that the Chenchus belong to an ancient tribe of hunters and food collectors. Indeed in their economy there has been no provision for the future. Their problem is immediate and they are concerned only with the present. And if there was any division of labour it is only between the sexes. They are largely dependent on each other. But there is vast transformation in the Chenchu society which is inevitable due to the activity of the public and the government to raise their low standard of living.

#### WHO ARE THE DRAVIDIANS?

We have seen in more than one place that at the close of the Neolithic age, the people of the peninsula were automatically settled in different regions of the country, and each group pursued its own profession and occupation so that the various groups became the unchanging types more or less. There are curious theories, most of them untenable and unacceptable, that have grown round the term Dravidian. Scholars in Ethnology and Anthropology honestly believe in the existence of Dravidians as a group of peoples coming into South India from the north-west, perhaps from their original home in the Mediterranean regions. But these specialists who have their own theories base their conclusions on forms and institutions common to both the countries. But the curious thing about the theory is that the people in old Europe can be generally divided into three ethnic

groups. One group is the Alpine stock brachycephalic in character which went through the plateaus of Asia Minor and North Persia to Afghanistan, Baluchistan, Central Asia and India, especially Bengal. There was another European group which is well known as the Nordic race. This was a medium-headed stock of peoples inhabiting the British isles and Scandinavia and bearing close resemblances to those in the Madras Presidency. There was a third stock which is dolichocephalic and which is called the Mediterranean race, and which extended to North Africa, south of Asia Minor and major portions of India. The Ethnologists think that the Indians must have belonged to one of these races and they pitched upon the Mediterranean race answering to the Dravidians in their character and culture.

On this assumption a number of theories have been built up, to explain the mysterious Dravidians who were really the people of South India. Ethnologists of authority say that the ancient Egyptians bore striking similarities to the Dravidians and two eminent professors, Elliot Smith and Perry hold the view that all civilization began in Egypt, and even the culture of Sumeria and Elam was Egyptian in origin. But these views cannot be accepted. Even F. J. Richards remarks that it is not possible for a handful of mariners to spread their civilization among any indigenous people. There is then the Mesopotamian theory according to which the Dravidians were in the vicinity of Mesopotamia. Col. Holdich gives explanation to this view in his book *Gates of India*. According to him the Brahuists were a Mongol people who conquered the old Dravidians and themselves adopted the Dravidian tongue. But it is difficult to believe such fantastic and far-fetched theories.

There is yet another theory regarding the Dravidians that they were Semitic in origin. It is pointed out that both Semitic and Dravidian cultures agreed in the main in the *Marumakkatayam* system and the

worship of women. The arguments put forward in support of this theory cannot bring conviction to us. One other theory that is untenable from the point of view of philology and ethnology is the Turanian theory. This theory says that the ancient Dravidians may be related to a Scythian group. There is yet another theory that the Dravidians were connected with the Brahuīs, and it is remarked that the Brahuīs were one of the Dravidian tribes which entered into Hindustan. But it must be remembered that ethnically there is a vast difference between the Brahuīs and the Dravidians and it is very difficult to accept that both of them belonged to one and the same race. If any linguistic affinity can be traced between the Dravidian languages and the Brahui tongue it must be due to the contacts between the Brahuīs and the Dravidian peoples. So any theory that the two peoples belonged to a common race falls to the ground. Reference has already been made to the Mongolian theory which is most unconvincing from every point of view.

The immigration of the Dravidian people into India and especially South India is no matter of concern to a student of history, who stands not for prestige but who is an humble seeker of Truth. It is taken for granted that there was a Mediterranean race which was a civilized one. It expanded here and there until it went to India and settled in the southern regions of the country. Though F. J. Richards would regard the so-called Aryan identical ethnologically with the so-called Dravidian, still he would connect the Dravidian with the Mediterranean race which is said to have expanded not only by sea but also by land. He observes the "resemblances between Dravidian India and the Mediterranean area are too numerous and essential to be ignored". This view is shared by Prof. Elliot Smith and Dr. Slater who honestly believe that a branch of the Mediterranean race evolved a Dravidian race and culture. From

the cranial variations of the people of the south as long, longish, roundish, round and ultra-round and the evidence of a comparative study of nasal index, again dividing it into narrowish, medium, broadish, broad and ultra-broad it is concluded that the whole of South India can be roughly divided into three people: 1. Pre-Dravidian; 2. The Mundas; and 3. The Dravidians. We do not know whether there is much force in this argument, for, recently it has been demonstrated that a correlation exists between climate and nose form. What applies to the nose may also well apply to the stature of man. After all climate and environment have to do to a large extent with the whole build of man than with a particular organ.

It seems to us that these conclusions of the Ethnologists are at variance with one another and have no legs to stand on. At best they have only slender evidences to support them. Years ago Herbert Risley who happened to divide the whole people of South India into seven types with which, as has already been said, we cannot see eye to eye, has struck upon the problem of the Dravidian almost rightly. Examining their stature and complexion, their eyes, heads and noses, Mr. Risley rightly identified that the Dravidians were the descendants of the original inhabitants of the soil. This theory seems to appeal mostly to us who also believe there is no Dravidian race as such, that it was not definitely a branch of the Mediterranean race whatever it be, that the peoples of South India had contact with other countries, their cultures and civilizations, that they adopted some of them while they imparted some of their own customs to them, and that they were autochthons. Risley hit the right mark when he declared the Dravidian to be indigenous and not exotic. We can dismiss therefore the theory promulgated by the Ethnologists and the Anthropologists and adopted in a certain degree by the historian of India, that these Dravidians were a separate people ethnically and ethnologi-



cally and that they were not related in any way to the original inhabitants of the soil.

Among the different ethnological groups into which the Neolithic people formed there were the advanced tribes among them which became more and more civilized, and the healthy influence of frequent contacts with other cultures and peoples made them more and more cultured. While some tribes chose to find for themselves homes in the hills and jungles and pursued their hereditary profession, others more advanced than these took to varying cultures, and these people we designate for want of a better term 'Dravidians'. Therefore in the light of what we have said the question of pre-Dravidian and Dravidian does not arise and it is an unproven mistake of the Ethnologist to say that there were pre-Dravidians who were the original sons of the soil and the Dravidians were a branch of the Mediterranean race who entered the gates of India. To a comparative student this problem of pre-Dravidian and Dravidian is simple. He rightly believes that there was no divisions as pre-Dravidian and Dravidian as such, and the so-called Dravidians were only the lineal descendants of the Neolithic peoples who inhabited South India for ages together and who had left a precious legacy to their successors. Therefore we conclude rather boldly that the Dravidians are as much autochthons as the so-called pre-Dravidians whom we are inclined to designate as the advanced Neolithic people of South India.

We must not fail to note that a huge superstructure has been built on the slender theory of proto-Dravidians with little or no foundation. According to James Hornell<sup>2</sup> the proto-Dravidians were a Mediterranean people who came to India with the special knowledge of navigating the seas with boats and coracles, perhaps from Egypt and the Levant. These people after living for some time in the Indus region

of the Punjab commingled with the original types of people in South India. Though the identification of the Sindhu people with Dravidians is still a question which requires solution, still we can take for granted that the people who occupied the Indus valley were akin to people in South India who might have migrated to the Indus region and made it their home.

To repeat the Dravidians and the Aryans are dolichocephalic, while they have no resemblance either with the Mediterranean race or the Alpine race in their physical characteristics. The better suggestion would be that the Dravidians who were also experts in the art of navigation could have influenced the Cretan and Aegean culture not only by their customs and manners but also by the various symbols. This might have been possible as the Dravidian culture flowed through Mesopotamia, Lycia and other countries. Therefore it would be plausible to suppose that the South Indian ideals which made a mark in Mohenjodaro and Harappa flowed both by land and sea to the countries of the Mediterranean region whose finds resemble remarkably those found in Southern India. Whether we accept the theory of proto-Dravidians or Dravidians in the Indus valley or not, we could safely say that its culture affected the Western world to a large extent, and even to-day we see survivals of this culture even in some of the terms which are more akin to Tamil than to any other language in the world. And Tamil no one can dispute is the language of the Tamil Agam which comprises the southern districts of Southern India.

The problem of pre-Dravidian, proto-Dravidian and Dravidian has thus been set at rest by our discussion at an acceptable level. But still there is the question of the affinities of the Munda-speaking people with Dravidians. Before we proceed to examine this problem a word may be said about the Negrito strain in South India, not to speak of other countries at the close of Neolithic age. The disappearance of the so-called Negrito race is a question of fact though

their presence in the Andaman islands and Malay peninsula is still to be seen. According to one view the present Andamanese are the descendants of the primitive people characterised by their black skin and rizzy hair. Dr. Haddon who examines this problem closely is of opinion that the Negritos were an undeveloped type of peoples from which the African Negroes on the one hand and the Melanesians on the other with some modifications may have sprung up. There seems to be no one opinion among the Ethnologists as to who the Negritos were and in what manner they influenced the culture of the Neolithic peoples. It seems almost certain that there was no Negrito influence in South India. Though the Ethnologist will speak of the mixture of the Negrito element yet evidences are more in favour of the theory that the Negritos never lived in South India.

Dismissing this question of Negrito element in Dravidian people, we may take up for examination whether the early South Indians were affected by the Munda element. The Mundas are mis-called Kolarians in text-books of history. Though there may be some resemblance physically, between the two types as dark-skinned and dark-haired, still one cannot say that in all respects they resemble one another. For, while the Kols or Kolarians are characterised by a broad nose, a narrow nose is the distinguishing characteristic of the Dravidians. When we are discussing this question we must take into account the fact that the Kolarians came to India by the North-eastern passes while the theory is that the Dravidians entered by the North-west frontier. It is conjectured that both these peoples met in Central India and the Dravidians proved more than a match to the Kolarians. Then it was the lot of the Dravidians to conquer all Southern India and become its masters. The Kolarians, however, survived here and there but in complete isolation.

If we sift the truth of this matter, it seems possible on the face of it. But there is no underlying evidence to prove that

such a thing happened. In addition to this is the linguistic difference which has been pointed out by no less an authority than Dr. Grierson. Speaking of the Dravidian and Munda tongues he says "whether we consider the phonetic system, the methods of inflexion or the vocabularies, the Dravidians have no connection with the Munda languages. They differ in their pronunciations, in their modes of indicating gender, in their declension of nouns, in their method of indicating the relationship of a verb to its objects, in their numerical systems, in their principles of conjugation, in their methods of indicating the negative, in their vocabularies".<sup>3</sup> This is also the view of Dr. Caldwell. This means that there is no similarity or even close proximity between the Munda and Dravidian. It has been said elsewhere the Mundas do not seem to have ever come to Southern India. Perhaps the Mundas or the Kolarians who came through the north-eastern passes spread up to Central India and the little evidence points out that they did not penetrate beyond and did not have any intercourse at all with the South Indian peoples. We can therefore rule out the possibility of their intercourse with the Dravidian speaking peoples, and come to the conclusion that the Mundas had nothing to do with the Dravidian peoples as such.

Thus it may be seen that the South Indian peoples whom we designate Dravidians are descendants of the Neolithic peoples with a distinct culture and civilization maintaining their individuality through the ages until the Sanskrit speaking peoples came to them and largely influenced them with their ideas and ideals, most of which they imbibed in the course of ages. They were an indigenous people and not foreigners to the land of Southern India. Ethnically what we to-day call Dravidians and Aryans are one, but their cultures due to peculiarities of environment are quite

different, one standing for a Dravidian culture and the other for Sanskrit culture. Both cultures met like the mighty rivers, the Jumna and the Ganges and coalesced into a confluence of unified culture, and were responsible for the evolution of the Hindu culture, which is a vitalizing force living with us to-day.

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## LECTURE VI

### SOUTH INDIAN LINGUISTICS

By South Indian Linguistics we mean the science of linguistics as it grew in ancient South India though a comparative and historical study of the subject allied to the languages of North India and even other countries is not precluded thereby. I am not a Linguist myself but I want to approach the subject in a general way dealing with linguistic problems especially of South India from the historical standpoint. Though the science of linguistics is a modern one yet we cannot dismiss the importance and value of this science as it developed in ancient South India. As is well known, the language or languages in all countries and in all climes began with what we call mystical origins. Originally, man believed and had full faith in supernatural beings. All his thoughts were devoted to non-human speech-forms. Rightly or wrongly in the earliest stages of the evolution of human society when men were prone to group-existence, they had some dialect by which they distinguished that which was sacred from that which was profane. Anything pertaining to God was felt sacred and the ancient man attributed every action of his to the divine faith and believed that every action of his was shaped by God. So he began to distinguish between godly speech and the speech of human beings. But godly speech was uttered by human instruments and hence there arose a mass of literature in later times which we call folk-lore and this folk-lore became in course of time transformed into human speech forms.

It was the belief of the ancients that all speech forms are not of the same order. Varieties of speech forms existed as godly speech, demoniac speech, human speech, etc. In the North Indian lore *chandās* which formed the regular Vedic



literature began to be regarded as something divine, something uttered by god and hence godly. To a scientific mind this *chandās* represents folk-lore though by non-scientific means. Therefore to the layman Sanskrit is a divine speech or *Devabhāṣa*. Bhāṣa may be any language. Originally, mankind was divided into people claiming divine origin, and people claiming Asuric origin. The Asuras, whoever they be, (according to one school they are Assyrians) had their own speech as distinct from the godly speech. Notwithstanding the restrictions imposed upon the two speeches still, the frequent contact of the two speeches led to the rise of a common speech, the speech of the man in the street. This we may consider as the normal speech, something intervening between the sacred speech and the vulgar speech, if we may so designate the speech of the Asuras. This process continued for a long time, for how long we cannot possibly say. But tradition persisted and there was what we can call the birth of linguistic speculation in early South India or North India for that matter.

In the course of several thousands of years in the Palaeolithic and Neolithic ages, man found the necessity to dwell in groups which were isolated from one another by the geographical conditions of the day. This gave birth ultimately to a number of obscure dialects spoken in the different corners of the peninsula most of them we can presume have become extinct, when the modern language began to form. At this time no interest of a scientific character was aroused among the earliest linguisticians by the speech of the common man. In spite of the various dialects that obscured the horizon of South India there existed some living dialects which continued to be spoken and which promoted a body of literature by which it was possible for the earliest grammarians like Agattiyanār and Tolkāppianār to take note of this fact and formulate their rules and regulations so as to conform it to the ordinary laws of

language. What has been growing on inductive lines was given a deductive turn by the ancient grammarians.

It is surmised not incorrectly that all the languages of India could be traced to one original family of languages and this family cannot be the Indo-Germanic as is assumed, but native to the soil, having its birth in Neolithic times if not earlier. This is certainly true if we make a comparative study of the North Indian and South Indian vernacular dialects, for, in both we see the same fundamental grammatical structure. By substituting one word for another it is easy to translate these languages from one to another. This evidences the fact that the growth of languages was indigenous. It is common sense to remember that originally there could be human speech. For we contend that man was originally born in South India if not in the Deccan, and for man to spread and become numerically strong he must have developed one dialect, and that language in course of time developed into different dialects according to the environment which the original inhabitants had chosen. It is reasonable to suppose that this original dialect was at first confined to the priestly class as such and the dialect of the priestly class became in course of time a spoken language or vernacular. Originally the dialect was what we call the uncultivated language. Ages continued in this condition before the dialect became a cultivated one. We are therefore inclined to state that the present Tamil belonged to this linguistic group which has nothing to do with the Indo-Germanic or other families of languages. The late P. T. Srinivasa Iyengar spoke almost the truth when he said that "in the most ancient layers of the Tamil language can be discovered not only ample trace of Neolithic culture but also the birth of the iron age culture which succeeded it."<sup>1</sup>

It cannot be contended for a moment that man either in the Palaeolithic or Neolithic stage went with no form of speech and one must credit him with some knowledge of some speech cultivated or uncultivated. He conveyed his ideas not only to his family and children but also to his kith and kin. He is besides credited with coming into contact with the cultures of the different countries and communicated his ideas and thoughts and adopted their ideas and thoughts in turn. It is also said that the Neolithic man developed a sense of religious belief and hence developed a form of religion. However crude the religion may have been, he would have uttered his prayers to God through perhaps an intermediary in the shape of the priest. All these urge upon the ancient man the importance and necessity for a speech, however vulgar it might be. By what means he exhibited his thoughts and ideals, whether by writing of the pictures of men and animals with which he was familiar or by any other device, we cannot definitely say at present. If the evidence of modern grammarians and lexicographers can be trusted, one of the means by which ancient man communicated his thoughts was by pictorial writing.

This possibility we cannot exclude and therefore we can suppose that there was an age of many centuries when pictorial writing was in common use and it was easy for man to portray his thoughts and communicate them to others. This condition of affairs continued for a very long time until the alphabet was discovered and words and sentences came to be written. There must have been also other modes of communicating ideas and thoughts which could be well imagined but which could not be described. One thing is certain that there were some spoken though broken dialects and these dialects led in their turn to the formation of ballad tales or folk-lore which continued to be popular for ages together. Therefore we see a tendency among the linguists to-day to examine obscure dialects in any corner of the world and

closely study them to find out scientifically how originally a language came into being.

Before we take up for examination the long winding process in the history of language we must clear ourselves of the terms dialect, folk-lore and language. A recent writer remarks "the distinction between language and dialect has still to be grasped. The exact relation for instance, between Tamil and its dialect, Telugu and its dialect, and Kannada and its dialect remains yet to be made out."<sup>2</sup> No doubt the Epigraphist who has studied the various inscriptions had made remarks then and there, but the remarks by themselves are so few and scattered that they are not quite helpful for the purposes of studying the origins of language. A dialect as we understand it is one that is quite different from the standard language of any country. In a dialect we meet with the words and expressions which have a particular meaning and which retain that meaning, and also some words and expressions which have undergone a change in their construction and meaning as well. The same may also be said of the pronunciation of certain words in a dialect different from the pronunciation which is uttered in a settled language. There are also other peculiarities like the inflexions which seem to be preserved in a dialect. Therefore a dialect seems to be one which contains vestiges of the original variety of the language. They do not seem to be incorporated when the language takes its final shape. To a certain extent the dialect does not conform to rules laid down by the grammarians. In certain cases we see practically some of the dialects are above any grammatical laws.

Folk-lore on the other hand can be said to be the lore of the folk or the common speech of the common man. Here also one notices traces of the old language when it is

being formed. The study of folk-lore is particularly the study of people on the lower planes of culture. Folk-lore contains customs and beliefs of that people to whom they relate. The tales in the folk-lore smack of the myths and legends connected with the folk before they reached any kind of civilization. In certain particulars the figures which occur in these days are said to represent ancient gods and goddesses to whom the early man and woman offered their prayers. This should not shut out the fact that even civilized people had their own folk-lore which could be analysed and classified. These folk-lores are more concerned with their beliefs and customs and with narratives which explain such beliefs and customs. Art also plays a prominent role in the folk-lore of even civilized people.

Folk-music and folk-drama can be particularly mentioned containing songs and proverbs and superstitions. But the folk-lore of the uncivilized was to be looked upon as of a different category and contains food for thought for a good student of anthropology; for to him nothing is more interesting than a study of the folk custom and belief as enshrined and expressed in the folk-tales themselves. They may contain superstitious beliefs and practices which one can connect with natural phenomenon. In fact it is Nature that invoked the spirit of the ancient man and made him worship trees and plants and believe in the existence of ghosts and goblins which naturally led to their practice of witchcraft and magic in general. Hence we see a number of customs and rituals connected with birth, marriage and death. A study of these peculiar rituals and ceremonials affords much interest to the antiquarian especially, the Anthropologist. Besides throwing a flood of light on the primitive conditions and ways of life they offer us a sure glimpse of how the original speech was spoken and how ancient man developed his vocabulary and language.

In this crude vocabulary was born the future polished language of the country. The pronunciation was different.

The meanings of words might have also been different; but still the dialect was there. Some perished and others continued preserving the original words and expressions. In this way we have to understand the folk-ballads and folk-tales which are prevalent in South India to-day. Before the influence exerted by the language over folk-lore they must have contained some words which might have been syllables or monosyllables, the sense of which closely followed the sound. Anyway in the beginning what is noteworthy is that sounds were suggestive of the ideas of the speaker. Sound cannot generally be converted into an idea. But sound can convey a thought in this way that a particular sound is invariably associated with a particular object denoted by an idea; and therefore a particular sense comes to be fixed up to a particular sound-complex in the march of time.

It may be interesting to know from the origin of the sister language, viz., Sanskrit that by the term sound we need not necessarily mean *varna*, for, *varna* is *nitya* or imperishable. Sound may be either *dhvanyātmaka* or *Varnātmaka*. *Dhvanyātmaka* sounds are like the crying of a child or the roaring of an ocean, whereas *Varnātmaka* sounds are words indicating a definite relation between the word and the object denoted by it, as for instance a chair, a table etc. Some such origin may be given to the antique South Indian language Tamil, which on all hands has been admitted to be very ancient. So it can be accepted without any difficulty while the syllable is composed of sounds so also the word is composed of syllables. The word can be thus taken to be a definite speech unit distinct from the alphabet on the one hand and the sentence on the other. Originally we had purely syllables, words and sounds which perhaps lay scattered throughout the length and breadth of the land. When the community feeling arose in the minds of the people, the words and expressions scattered came to be fixed in their meaning and moulded into particular types of languages.

But in moulding a particular type the early man took care that a certain word constituted two elements, the sound element and the sense element. In some cases the sense element predominated while in other cases the sound-complex predominated. Where the element of sense was strong the sound was nearly treated as an apparel of the word. But later on when the grammatic literature began to grow up, almost all the grammarians were of the view that the sound element was more essential than the sense element in any word. This is what happened when the science of grammar was authoritatively promulgated by Tolkāppiyānār.

Speaking about the language we can tread upon firmer ground less speculative in character. The little evidence that we are able to collect shows some sort of development in speech forms, and these speech forms proceed not from sentence to sound but rather from sound to sentence. We may compare the original speech of man with that of children uttering broken words and when infused with the elements of sound and sense, the meaning of the sentence words (words conveying the meaning of one full sentence) will be realised. These sentence words became converted into circumlocutory sentences as man gained experience by contact of other cultures. These circumlocutory sentences were used for a long time but the ideas were not fully conveyed by them as by the expression of the sound. Ages went on like this before we had a fixed convention recognising sentence. Language is according to the author of the Encyclopaedia Britannica a whole body of words and combinations of words as used in common by people for the purpose of expressing thought by verbal utterance.

But in this long process of the evolution of the finished language many experiments were made, some metrical, some etymological and some terminological. Before the final sentence was finally recognised, there was for instance the verbal system. But the verbal forms were dissimilar in

character on the surface but that they were all congeneric and inter-related to one another. This may be apparent to any student possessing a good knowledge of the language and its various systems. In some cases the verbal forms and nominal forms can be said to be congeneric.

In this connection the views of Dr. Caldwell who has taken some pains to examine the Dravidian languages may be briefly told. In speaking of the characteristics of Dravidian roots he groups them in two classes: (1) Verbal roots capable of being used also as nouns ; and (2) Nouns which cannot be traced to any extant words. On verbal roots the Dravidian languages are said to differ from Sanskrit and a considerable proportion of Dravidian roots are used either as verbal themes or as nouns, without addition or alteration in either case. The use of any root as a noun may be derived generally from its use as a verb. For instance *Sol* in Tamil as a verb means ' to speak ' and as a noun it denotes, ' a word ' ; *tari* means as a verb ' to chop off ' and as a noun ' a stake ' , ' a loom ' ; *muri* in Tamil means ' to break in two ' and as a noun ' a fragment ' , or ' a bond ' . In these examples we find that the radical meaning of the word is unrestrained and free to take either a verbal or nominal direction. Further as a Dravidian adjective it is not separate from the noun. Each root may be put to three uses viz., as a noun, as an adjective, and as a verb. It seems that originally there was no difference between the verbal and the nominal form of the root in the Dravidian dialect. After the dialects became more and more cultivated, separation took place. But this need not deter us. In several cases in ancient usage, especially in poetry, the word is seen indifferently used either as a verb or as a noun. But later when we come to prose it is used commonly either as a noun or as a verb.

### NOUNS

The number of nouns cannot be traced with certainty; but such nouns are only few compared to the entire num-



ber. Most nouns which have for their second syllable *Al* seem to have sprung from verbal roots. Some Tamil words which are regarded as primitive are derived from roots for example, *viral*, 'a finger' from the root *virī* — 'expand'; *kadal*, the sea and the root seems to be *kada* which means 'pass beyond'; *pagal* — 'day' from *pagu* to 'divide'. There are several words in the Dravidian languages referring to primary objects which are almost identical with the existing verbal roots. One might suppose the name of the object was fixed not long ago but the fact is these words have remained unchanged from a very early period. The change that has come to stay is a mere addition to the root of a formative particle or lengthening of the vowel of the root. In either case the name of the object is simply a verbal noun with the signification of a noun of quality. To illustrate, *nilam* in Tamil means 'ground'. It comes from *nil* to 'stand'. *Nāḍu*, any country, from *naḍu* to 'plant'. *Viṇ* — 'the sky', from *vil* 'to be clear'. *Kudirai* — 'a horse' from *kudi* 'to leap'. In several cases the names of animals cannot be imitations of the sounds they make but are predicative words. Though a great number of Dravidian nouns are to be regarded as verbal derivatives there still remain certain words which cannot be traced to any ulterior source e.g. there are personal nouns. A majority of the Dravidian suffixes and adverbs and of the particles employed in nominal and verbal inflexions are verbs or nouns adapted to the special occasion to convey the proper meaning. Thus in Telugu the signs of the instrumental ablative *che* and *cheta* are the nominative and locative of the word 'hand'.

The Dravidian roots when closely examined seem to be originally monosyllabic. "The great length of Dravidian words arises partly from the separation of clashing consonants by the insertion of euphonic vowels, but chiefly from the successive agglutination of formative and inflexional particles and pro-nominal fragments". In some cases the

first syllable denotes the root while the second is a particle added to it for the purpose of expanding or restricting its signification. Whatever be the length and complication of the Dravidian words they could be traced up to monosyllabic roots if we carefully remove successive accretions.

To mention one example we can take the word *perugugiradu* in Tamil the final *adu* represents the pronoun, *gir* shows that it is present tense and *perugu* is the verbal theme. Of the verbal theme *perugu*, *gu* is only a formative, restricting the verb to be intransitive or neutral. By removing it we come to *peru* which is the real root signifying great, but the dissyllabic *peru* cannot be the ultimate condition of the root. It can be at the most euphonised form of *per* and the monosyllabic form is *per*. Thus in this way by successive agglutinations a word of six syllables which means 'increases' grows out of one syllable. Thus the radical element remains unchanged. The root stands out always in distinct relief. It can therefore be explained that once, monosyllabic roots have become lengthened by the addition of euphonic vowels or by formative additions or in both ways. The euphonic addition to the final consonant is clearly seen in grammatical Telugu and Kanarese, in words ending in a consonant, whatever be the number of syllables they contain. Formative suffixes are generally added to the crude bases of nouns and verbs. The additions are not only to verbal derivatives but also to primitive nouns.

In Tamil where these formatives are largely used the initial consonant of the formative is single in intransitive or neuter cases. The single consonant characterising the intransitive formative is often euphonised by prefixing a nasal. In Tamil the intransitive *perugu* which means 'become increased' is used as transitive *perukku* meaning 'cause to increase.' While Tamil seems to nasalise the formative of the neuter, Telugu nasalises the transitive and leaves the neuter in the primitive un-nasalised condition. From the

above statement it is reasonable to conclude that whatever Dravidian verbs or nouns are found to end in any of the syllables, there is reason to suppose that the first part of the word contains the root. The verbs and nouns belong to the class of bases containing a monosyllabic root pointing to the generic signification and a second syllable, originally perhaps a formative addition to expand or restrict their signification. This root system which exists in almost all languages of the Dravidian family is particularly noticed in Tamil. Stability in the root vowels is the rule while any change is the exception.

#### INDEPENDENT OF SANSKRIT

Dr. Caldwell has examined the six cultivated Dravidian dialects, viz., Tamil, Telugu, Kannada, Malayalam, Tulu and Kudage. It is concluded that the Tamil and Telugu languages in respect of the majority of the roots are identical. But a casual reader will be misled due to the peculiarities of inflexion and dialectic changes. In his study of the Dravidian languages Dr. Caldwell is of opinion that the Dravidian languages grew and developed independent of Sanskrit though there were scholars who from many Sanskrit words and idioms which are prominently seen in the Dravidian languages now extant, have come to the conclusion that there may be more of Sanskrit influence in the development of these South Indian languages.

Orientalists of the last century who have specialised more and more in Sanskrit and less in Dravidian languages were of the opinion that the South Indian vernaculars might have derived from the Sanskrit tongue. Though there are similarities of a different character with regard to the Dravidian language in general and Sanskrit in particular, we cannot yet assert from this fact that one language was indebted to the other or that one language was derived from another. One fact cannot be

forgotten and that is the language of any country before it became a modern one was growing, changing, transforming and borrowing. Mutual influence of languages due to contact of peoples speaking those languages must be a fact that has to be reckoned with. The language which is seen in the Samhitās is different from the language in the Brāhmaṇas and this language is again different from that used in the epic and later literature. Therefore we cannot speak of one language Sanskrit as fixed and steady. And our practical experience shows that this is not so. In the same way we have to treat other languages also.

Similarities or dissimilarities apart, speaking of the South Indian languages especially, Tamil, which seems to be the oldest language of the so-called Dravidian group of languages, we would be justified in saying that this language grew independently of any other language including Sanskrit. When we closely examine the extant literature of this language, especially of the Sangam and pre-Sangam era, when the influence of Sanskrit was not much felt, we find a majority or at least 90% of Tamil words and the rest are Sanskrit words. This used to be the case with regard to Sangam literature in general. This shows that the Tamil language has been developed independently and has grown out of some mysterious origin for which we can give no satisfactory explanation. Again, if we examine the pronouns and the numerals of the South Indian languages and also their verbal and nominal inflexions, besides the syntactic arrangement of their words in which the true spirit of the language lives, they seem to be radically different from Sanskrit. These two facts could not be overlooked in any thesis on the formation and growth of a language. In structure and vocabulary also we cannot trace anything like a Sanskrit derivative in a large majority of words. After carefully considering a good number of roots and their meanings, and also the

inflexional forms of the words in most of the South Indian languages, we do not feel that we could subscribe to any hypothesis of even a remote affinity between Dravidian languages, especially Tamil and Sanskrit.

Not only Tamil or any South Indian language is not derived from Sanskrit, but if we examine closely we find more analogies which go to confirm our opinion that the Dravidian languages have to a great extent influenced the Sanskrit and even Vedic dialects.

(1) It is probable that a considerable number of words and bases have been borrowed from the Dravidian languages. This is more the province of Dravidian philology which we cannot discuss for the present but there is one word in the Vedas, Śiva. It is used as an epithet of God Rudra. Śiva in Dravidian means red while Rudra in Ṛg. Veda means red. Here we can trace the probability of the God Rudra-Śiva having a tinge of Dravidian thought. It is therefore not only philologically but even on the modes of thought that the Dravidian languages have exerted a good deal of influence at a very early period of History.

(2) Phonologically again it is supposed that the Dravidian languages have influenced Sanskrit. Sanskrit is generally included in the Indo-European languages but the Indo-European languages do not possess the cerebral letters and these cerebral letters are found in Sanskrit, which it is reasonable to suppose must have been adopted from the Dravidian languages ; for the cerebral letters form an important element of Dravidian phonology. This may give strength to the idea that Sanskrit is indebted to the Dravidian language.

(3) Again in the use of the consonant *l* the South Indian languages must have influenced the Sanskrit pronunciation of the word. It is pronounced

and used irregularly. Bishop Caldwell has shown that the change of *r* to *l* is quite common in South Indian languages. Perhaps the use of *l* from the Vedic times down to the present day is due to the Dravidian influence.

(4) In speaking of the inflexional system too one has to note some influence of Dravidian languages over Sanskrit. What is remarkable is that in all the Indo-Aryan vernaculars we find the post-positions are added not to the base but to an oblique form and this is true of South Indian languages where the oblique form is commonly the genitive.

(5) Another point of analogy with South Indian languages is that the conjunctive participle is used more and more in secondary sentences. The periphrastic future is sparingly used in the Brāhmaṇas but frequently in later Sanskrit literature along with the active perfect participle. These two verbal forms look more like the Dravidian.

(6) Sanskrit is almost spirantless. We have to admit one characteristic of the South Indian languages is the poverty of spirant. If we examine the sound system of the Indo-Aryan languages we are struck with the fact that the South Indian languages have a good deal influenced the Indo-Aryan sound system. "Spirants are more natural in pronunciation than simple occlusives, since even a very little less or a very little more of energy than is just required in pronouncing a pure occlusive, converts it into a spirant".

Therefore Dravidian influences are far-reaching in character and must be held responsible for the transformation into its present form of the original Sanskrit language. In several of these respects we will be able to bring analogies of similar character which would have equally influenced the South Indian languages and helped especially Tamil to become the *Tamil* or the sweet language of the Tamil *agam*. The foregoing facts and figures must show to any casual observer that one language

profoundly affects the other in several respects and it was so with regard to Tamil affecting Sanskrit and *vice versa*. We cannot therefore speak of Tamil being derived from Sanskrit but we have to acknowledge the fact that the South Indian languages had an independent growth and if they came under Sanskrit influence it was only in much later times than we are apt to imagine.

#### SCYTHIAN AFFILIATION ?

“The relationship of the Dravidian languages to the languages of the Scythian group — whether the relation of lineal descent, or the relation of sisterhood or the wider relationship for which I plead — has not been universally admitted by students of Dravidian philology”. Thus writes Dr. Caldwell in his book on the Comparative Grammar of the Dravidian languages (pp. 69-70, 3rd edition). Let us begin with the question whether we have anything like a Scythian family of languages. If we examine closely the various languages that are supposed to be Scythian, there are very many diversities among them, diversities of a pronounced character, such as the numerals of every Scythian family, that it is difficult for us to speak of a Scythian family as we can speak of the Indo-European family. At the most we can treat with the various Scythian tongues as a group of families and not one family as such. It is therefore puerile to speak of a Scythian family or the relationship to that family. But what is the Scythian family to which we are treated by this scholar of standing ? At first this term was employed to a group of languages comprising the Finnish, the Turkish, the Mongolian and the Tungunesian. These languages were so designated because they had one and the same grammatical system and were governed by the same general laws. By some the Scythian languages have been grouped as a Tartar family of languages while others are of opinion that they comprise the Finnish, the Altaic, the Mongolian or the Turanian. So the term

Scythian goes a-begging and the writers who have classified and grouped these languages which are themselves vague, cannot be complimented.

If the story is to be told bluntly, it was Professor Rasak of Copenhagen who suggested that South Indian languages were probably Scythian. But it remained for a long time a suggestion only. Subsequently a scholar not too well-known by name Pritchard further suggested in his researches a solution of the problem viz., the relationship which the Dravidian languages bore to the Scythian. But the solution fell wide off the mark. The next author of importance who attempted to solve this problem was our Bishop Caldwell. He threw out boldly some ingenious ideas of the relationship between the South Indian languages and Scythian tongues. But notwithstanding the various similarities which were attempted to be shown between the two group of languages, yet anything like a satisfactory and convincing solution of the question cannot be said to have been achieved by him.

But the main fact in the consideration of the Scythian theory seems to have been afforded by the Behistun tablets. The inscriptions which were discovered at Behistun in Western Lydia give the autobiographical sketch of Darius Hystaspes. The inscriptions themselves are in old Persian, in the Babylonian and in the Scythian tongue of the Medo-Persian empire. What interests us here is the Scythian part of the epigraph. Examining this, which to all intents and purposes is Turanian, one finds some similarity between the idioms of the Dravidian language and the language of the Scythian family. But be it noted that this language of the Scythian family belongs to the 5th century B.C. By this time a student of Tamil history knows the Tamil language had fully developed and almost at the same time Tolkāppianār, the famous author of the Tamil grammar now extant wrote his treatise. For Tolkāppianār to write a grammar



he must have been in possession of a cultivated literature and roughly we can put down 500 to 1000 years for this literature to have grown and developed.

Therefore the question is whether the Scythian languages of the 5th century B.C. have developed or the Tamil language. The inference is irresistible that Tamil language has developed to such an extent as to impress any language or group of languages with its profound influence. The points of resemblance between the Dravidian languages and the language of the tablets should therefore be due to the Tamil influence on the Scythian language and not *vice versa*. In the use of consonants of the cerebral class *t d n* which is found in the tablets under reference, in regarding the same consonant as a surd in the beginning of the word and as a sonant in the middle and in pronouncing the same consonant as sonant when single and as a surd when double, the use of the genitive case by suffixing the syllables *na*, *nina* or *inna*, as *ni* in the Telugu and *in* in Tamil in the ending of ordinal numbers like Tamil *am*, in the use of the pronoun of the second person and in the use of the relative participle of the Behistun tablets, the language conforms to the Dravidian tongues. From this one has to draw the inference that the Dravidian usage had already become familiar to the Scythian speaking peoples, and the peculiarities noted were made use of in the Scythian language.

From the large number of Dravidian words and expressions in the main Scythian and also from the Scythian language in the Behistun tablets, one has to conclude in conformity with the original theory that the Dravidians moved in the westerly direction not only by sea but also by land in days of unrecorded history. They left their impression here and there, in the countries which they passed through and this largely explains why such languages which were at that time uncultivated or un-

developed, adopted some of peculiar features of the Tamil language which had appealed to them most. This will also explain that the movement of the people which took place before the Hellenes and the Celts, was a movement that was led by the people of South India. They penetrated through these probably due to the overflow of population and therefore in search of new homes to settle or more probably for purposes of trade and commerce. If this theory of a peaceful penetration by our people be accepted then the problem that is taxing the minds of so many scholars, Indian and European, since the days of Prof. Rask will be set at rest.

In fact, the analogies and resemblances of one group of languages to the another could be noticed if we study comparatively the various languages. For example, if we study the North Indian languages, few traces of Dravidian elements are seen. If the Dravidians had, as generally accepted, entered India from North-Western passes and settled in all parts of India before the so-called Aryans came and overpowered them, it is reasonable to suppose that there could not be much difference between the Dravidian vocabulary and that of the languages of North India. The very fact that the difference between the two groups of languages is wide especially with regard to primary roots, demonstrates that the Dravidians could not have come and settled in North India as the theory goes. But one curious fact about North Indian languages is that we notice the Scythic termination in the pronouns of almost all languages. The letter *n* forms the final of most of the pronouns. Another peculiarity in the North Indian languages is the absence of the nominative of the Sanskrit pronoun of the first person singular and substitution for it of the Turkish, like *man*. From the fact of these similarities it would be wrong to conclude that the North Indian languages have the Scythian element.

If we proceed to examine some of the Semitic languages we will not fail to notice some analogies especially in the vocabulary of the Dravidian languages particularly Tamil. For instance, though we find in Latin *aveo* 'to desire' and in Sanskrit *av* "to desire" yet the corresponding Tamil *avā* 'desire' and *āval* 'desire' appear to be more allied to the Hebrew *avah* 'to desire'. But the Semitic analogies corresponding to Tamil are not sufficiently numerous to attract the attention of a linguist. But on these analogies a student of history will be emboldened to come out with a theory as to the pre-historic connection of the Dravidian tongue even with the Semitic idioms. The primitive Dravidian people were at one period of their history associated with Semitic peoples and left their impress upon them.

The same can be said of the languages of the people in Southern and Western Australia. The Australian pronouns of the second person and those of the Dravidian languages resemble distinctly and are apparent not only in suffixes but in pronominal base itself. A close study of some of the Australian dialects and the languages of the Scythian group shows some resemblance, between them. But on this account we should not hazard a theory that there was a Dravidian element or a Scythian element in the dialects of Australia. From the foregoing survey one thing is clear that the Dravidian languages could not have any affiliation with the Scythian languages; nor from one or two analogies one should conclude that one language is indebted to another for its growth and development. We shall conclude with the remarks of Dr. Grierson, "The denomination Scythian is a very unhappy one. The Scythian words which have been handed down by Greek writers are distinctly Iranian, i.e., they belong to the Indo-European family. But nevertheless the word has been used as a common designation of all those languages of Asia and Europe which do not belong to the Indo-European or Semitic families. Moreover those lan-

guages, cannot by any means be brought together into one linguistic family. The monosyllabic languages of China and neighbouring countries are just as different from the dialects spoken in the Caucasus or from the speech of the Finns and Magyars, as is the Indo-European family. The points in which they agree are such features as recur in almost all languages, and they are by no means, sufficient to outweigh the great and fundamental characteristics in which they differ from each other. With regard to the Dravidian languages the attempt to connect them with other linguistic families outside India is now generally recognised as a failure, and we must still consider them as an isolated family”.

#### THE MUNDA FAMILY

We have already touched upon the Munda problem in a previous lecture and shown that anthropologically and philologically we cannot find any semblance or admixture of blood of the so-called Mundas in the peoples of Southern India. Generally speaking, the Indian languages are divided into four main types, viz., the Austric, the Dravidian, the Indo-Aryan and the Tibeto-Chinese. Of these we are not concerned with the last two in this survey but we are concerned more with the South Indian languages and their alleged affiliation to the Austric tongue. It is said that once the Austric family of languages was prevalent throughout the length and breadth of India and extended to Madagascar and South Africa. But we are not much inclined to believe this. Whatever this may be the Munda family of languages are spoken in Northern India and Central Provinces in particular. We further discredit the theory that these Mundas were the original inhabitants before the Dravidians who are said to have invaded India and made Southern India their home. But we believe in the homogeneity of the Dravidian peoples, that they are the lineal descendants of the aborigines of India who lived in Neolithic times, and who evolved

their own languages and literature unaffected in race or language from outside.

It is said that the Munda languages are closely allied to the Mon Khmer. Though a vestige of this remains in Assam more of this is seen in Burma, Nearer India and Farther India. But for various reasons anthropologists have come to the conclusion that they are a race distinct from the Dravidian types of Southern India. Already mention has been made that the same theory holds good with regard to the affinities of the Australians. We have to emphasise once again that neither anthropology nor philology warrants the conclusion that the ancient Dravidians belonged to either the Munda family or the Australian family or even the Brahuīs who cannot be said to belong to the Dravidian type. But to speak in the language of anthropology these Brahuīs are to be classed with the Iranians.

But Anthropology persists in telling us that the Dravidian race once comprised Mundas and Dravidas and that the Dravidas are not the lineal descendants of the aboriginal population of Southern India. But Anthropology is not the sole evidence in determining the origin and development of a tribe or a language or even a family of languages. Though the evidence of Philology is again a doubtful one, still the light it throws on the problem cannot be completely neglected. While the Anthropologists proceed on the assumption that the Dravidians were foreigners to India and came from outside, our theory is that they never came from outside and they were the legitimate descendants of the aborigines of the South. Whatever search may be made to find out traces of a common stock, the search is not fruitful at least from the philological point of view ; but we cannot go into this question elaborately here. It is sufficient to state that the Munda family of languages bears no resemblance to the Dravidian family of languages and both must have evolved

as separate entities. On this vexed question of an apparent correspondence between the Munda and the Dravidian languages some scholars have attempted to show that some relationship existed between the two families. First of all the question is whether there is the Munda family of languages though several pages have been devoted to it in Vol. IV of the *Linguistic Survey of India*. But in the introduction Dr. Grierson has admirably pointed out that both the Munda and Dravidian families from a philological point of view have no resemblance whatsoever. We shall follow him and show in support the soundness of his conclusion.

Speaking on the phonology of the Munda languages semi-consonants are said to be the striking characteristics of these languages ; but when we turn to the Dravidian languages there is nothing like that. But on the other hand we notice the interchange between soft and hard consonants in the Dravidian languages which could not be noticed in the Munda tongue. Secondly, in the formation of words there are two things that we observe. One is the question of suffixes. Speaking about suffixes one can say that the use of suffixes is not only common to the Munda and Dravidian languages but it occurs in all languages especially Indian languages. We can reverse the position and say the use of suffixes in Munda is more due to the influence of languages either South Indian or North Indian. The second point is infixes. Here again the Munda infixes have nothing in common with the languages of Southern India.

Thirdly, everybody knows that the nouns in the Dravidian group of languages are of two kinds and these two kinds have their own differences in the formation of the plural. The two kinds of nouns are to repeat, one denoting rational things and the second denoting irrational things. These differences are not found in the Munda languages. The principle of classification is quite different. Again the Munda languages make no distinction with regard to the

masculine and feminine singular of nouns with which we are familiar in the South Indian languages. Further, the Munda dialects contain three numbers while the languages in the Dravidian refer only to two numbers viz., singular and plural. Again the so-called languages under the category Munda have nothing like the oblique base found in the Dravidian. Fourthly, so far as the adjectives are concerned there seems to be some correspondence between the two families of languages but this vanishes into thin air once we classify these languages under the head agglutinative, for all the agglutinative languages possess the same kind of adjective.

Fifthly, with regard to numerals we cannot establish any correspondence between the Munda and Dravidian numerals. While tens are counted in the Dravidian languages, twenties are counted in the Munda.

Sixthly, even a semblance of relationship between the two families Munda and Dravidian could not be traced so far as verbs are concerned. When we examine the conjugational system which occurs in both groups of languages we find in Munda an almost confused mess of conjugational forms while this is not the case with the Dravidian language which has two or at the most three tenses. "The Dravidian verb can be characterised as a noun of agency ; the Munda verb is an indefinite form which may be used at will as a noun, an adjective, or as a verb". The South Indian languages possess what we call negative conjunction which we seek in vain in the Munda language. What is common to both languages, Munda and Dravidian, is that which is common to the entire agglutinative group of languages. Therefore we cannot say that the original common to the agglutinative group is Dravidian, Munda or any other dialect.

In this connection we have to reckon another important factor viz., the place in which these so-

called Munḍa dailects are spoken. They are supposed to be found in the hills and jungles and especially in the Chota Nagpur plateau. If the Munḍa language has left any influence or the Munḍa tribe has made any impress upon the so-called languages of South India, then there must be something common between them. But we fail to trace any common origin or development either in the language or among the peoples. On the other hand traces and remnants of the old Munḍa element seem to occur in some of the Tibeto-Burman dialects spoken in the Himalayas. If, therefore, there is any influence of the Munḍa languages it must be found in some of the Northern dialects, and yet in the case of Aryan languages it is impossible to trace much influence. If at all there was any connection between Mon-Khmer dialects the connection is faintly traceable in the Tibeto-Chinese languages ; but even anthropologically those who speak Mon-Khmer languages have their own difference from the Chinese. If there is any relationship, it exists between the Munḍa and Mon-Khmer languages. The Dravidian languages have nothing to do with it.

In the foregoing survey we have particularly mentioned two names, Dr. Caldwell and Dr. Grierson who were good students of South Indian languages and have done notable work in the comparative study of these languages. Hence we have tried to follow them closely and have even adopted their findings wherever plausible and differed from them in some particulars. In the difficult and intricate problems of linguistics it is not possible to assert categorically that one conclusion is right and another is wrong. But generally speaking, our thesis is that Tamil had an independent development and was later on influenced by Sanskrit literature ; while other languages in South India fell in with Tamil and were influenced largely by Sanskrit in much later times. As it cannot stand comparison with other languages not only in India but also outside, we feel inclined to come



to the conclusion that Tamil alone developed in this peninsula from the earliest times and grew out of the primitive dialects spoken here and there by the different tribes inhabiting the different regions of the peninsula. Tamil, therefore, occupied a unique position of isolation and cast its influence in course of time on the neighbouring languages like Telugu, Kannada and Malayalam.

### THE TERM DRAVIDA

We have been loosely using the term 'Dravidian' languages in this lecture but we must first of all know what we exactly mean by the term Dravidian. An emphasis, whether warranted or unwarranted was given to the term Dravidian by Dr. Caldwell in his book, *Comparative Grammar of the Dravidian languages*. For the sake of convenience we have accepted this term in examining the various linguistic problems connected with South India. Now it has become a widespread practice with all scholars, Indian and European to designate South Indian languages as Dravidian languages. We see no harm in accepting this term for this particular purpose ; but the term *Drāviḍa* from which the word Dravidian has been derived is after all a Sanskrit term which once denoted the Dravida country proper. In early Sanskrit works *Drāviḍa* is mentioned with various other tribes which also lived in the Deccan. In mentioning this word the geographical limits of the region were limited and fixed. Even an author like Bharata who lived about the 3rd century B.C. refers to a country called *Drāmiḍa*. By this he undoubtedly meant *Drāviḍa deśa*. Ptolemy also refers to this in his geography. From these evidences one can demonstrate fully that the *Drāviḍa deśa* and its culture were known to the people of North India even in the 3rd century B.C.

Long before this, how long we cannot say at this distance of time, Sanskrit influence must have been

slowly but surely penetrating into this region. To return to the term Drāviḍa, it must be a corruption of the word Tamil, the phonetic transition being successively, Drāmiḍa, Drāmiḷa, Dāmila. The hard T is softened into d and ḷ displaced the l. Considering the surd character of the last letter l in the word Tamil, and in the absence of a better etymology we can equate Drāviḍa with Tamil or Tamil with Drāviḍa. This clearly shows that the Sanskritists meant by the terms Drāmiḍa or Drāviḍa only the Tamil country proper and did not mean all South India including the Andhra and Kannada deśas. So the Dravidian must legitimately refer to the growth and development of the Tamil language. But the word has been extended by modern scholars to all the allied languages and even as the generic name for all South Indian pèople. Here we think modern scholarship has gone wrong. It must denote only the Tamils and none else. What the Sanskritists mean is the geographical name given to a particular area, and this being a Tamil country where the Tamil language was predominant, they call it Drāviḍam. So the term Dravida must refer to the Tamil people, their language and their country.

In course of time the Tamil language — the term Tamil by the way means Sweet — was cultivated and developed with immense success. All castes and creeds in the peninsula not excluding Brahmanas helped in the growth and development of this language. In the extant śāngam literature we can count some Brahmana authors who contributed to the evolution of the Tamil literature. Still later on the people who lived south of the Vindhya ranges were designated as Pañcha Drāviḍas viz., Maharāṣṭra, Āndhra, Drāviḍa, Karnāṭaka and Gurjara. Whether this classification of the Dravidian people will be a scientific one is a moot question to the Anthropologist, Ethnologist and even the Philologist. There may be some justification in bringing Āndhra and the Karnāṭaka under the Dravidian group,

though among the five divisions Drāviḍa is separately and specifically mentioned.

But in the case of Mahratta and Gurjara languages the enumeration under the Dravidas must be treated as erroneous. In point of structural considerations both these languages belong more to the northern group so that they have nothing to do with the country of the Dravidian languages. In enumerating the five Dravidian groups of peoples the later writers have confounded one country with another, one tribe with another and one language with another. But the redeeming feature in this classification is one of its forms, Dravida, which means purely Tamil. So even for the later writers the feeling that the term Drāviḍa means Tamil is not absent. Therefore by the term Drāviḍa which is being used as a synonym for Tamil is meant the Dravida country which according to the literary evidences comprised the region between the southern Kumari and the Northern Venkaṭam (*Tolkāppiyam*). This is in other words the abode of the Tamils or what we call Tamilagam. The people who lived in the Tamil country proper were designated as Dravidian peoples and their language as Dravidian language. Be it noted that the geographical limits of the Tamilagam included modern Travancore, Cochin and Malabar also. But the people in the West coast were cut off from the mother country, viz., Tamilagam and cultivated a sort of dialect including what we can call Kodumtamil and Prākritic Sanskrit which came to be known later as Malayalam. This is of course a later phase in the linguistic history of South India and has nothing to do with the development of pre-historic South India.

What we want to make out therefore is that the term 'Dravidian' can particularly refer only to the Tamil land, and its people can only be called Dravidian. Any other region or language would not come under this category. Ethnologically the term has nothing to do with any parti-

cular race. To say that the Dravidians are aliens to the soil and came from outside India cannot stand the test of any scientific examination. As civilization grew slowly the aboriginees of South India became more and more advanced in culture and these became later on the Tamils who developed a language of their own and a literature which can take its rightful place if we will only compare it with some other literatures of the world. In fine any amount of argumentation to treat them as a separate race will not stand any critical test.

### NON-ALPHABETIC WRITING

In the history of the Indian alphabets which are according to one authority as many as one hundred and ninety-eight, ancient and modern, no script is more taxing than the typical Tamil script. In his *Archaeological Survey*, Burgess reads 32 Indian alphabets from 250 B.C. to 800 A.D. Minute local distinctions apart, practically in the time of Aśoka a common script for all India, we may conjecture, was evolved. At that time we see some of the Edicts of Aśoka which have been written in Brāhmi characters nearer our home. The inscriptions generally of the Aśokan period were all in Brāhmi lipi throughout the length and breadth of India excepting for some corner of North-west India where they have been written in the Karoshti script. A scientific student must investigate a problem from the known to the unknown.

There is a theory which seems to be accepted by many a scholar that the South Indian alphabets may have been derived from the Brāhmi which was in vogue in the 3rd and 4th centuries B.C. Though an element of reliability seems to attach to this theory one cannot depend on it too much. We have our own doubts whether the Tamil alphabet has not been evolved at or before the time of Aśoka. If Tolkāppiyanār flourished

during this time there is evidence to show that he was conversant with all the thirty letters, vowels and consonants which form the Tamil language. This he says in the very opening *sutra* of the *Eluttu Adhikāram*. From this one has to conclude that though the Tamil literature was written in *Brāhmi*, still the Tamil alphabet more or less in its present form had come into being and it was largely used in writing. It seems therefore that the theory that the alphabet was evolved from *Brāhmi* and *Brāhmi* alone cannot be accepted.

Leaving this question apart now and reserving it for examination further on, we can go into the primitive Tamil script which was evolved perhaps in Palaeolithic and Neolithic times and which took several centuries to evolve into an independent script and which again took several centuries to form finally an independent alphabet. We have already spoken about the sound and sense values which were evolved in the land and which were primarily conveyed through a system of picture writing with simple ideograms. The earliest attempts at this graphic art must have been made, one can infer, from the picture writing yet undeciphered in the Indus region. "Every system of writing," says Dr. Issac Taylor, "has begun with rude pictures of objects ; these pictures more or less conventionalised, were gradually assumed as the representatives of words, and afterwards became the symbols of elementary sounds." If this is true one can say that writing as such began with ideograms. Ideogram has been divided into two parts, (1) picture writing which actually represented objects and (2) pictorial symbolic writing which was used to denote abstract ideas. We are conversant with picture writing that was evolved by the primitive hunter, examples of which are scattered all the world over. And in the second classification of writing which we can for the sake of convenience say pictorial symbols, illustrations can be had in plenty from the regions of Mohenjodaro and Harappa discovered in our own land and generally spoken of as the fruits of Dravidian

culture. If this is so, the people in Mohenjodaro developed upon the previous writing which amounted to representation of objects and abstract ideas about men and things in general.

As the development of ideograms whether it be pictures or pictorial symbols will take a long stretch of time to grow into phonograms which can be rendered as symbols of sounds, we suggest that the date of the Indus culture may be pushed back and it would not be far wrong to say that the Indus culture began about 5000 B.C. But whatever this may be, in the march of time ideograms became phonograms. But what is phonogram? Dr. Taylor who has examined this question distinguishes three stages in the development of phonograms. First were the verbal signs which indicated the full word or words. The second was syllabic signs standing for the articulations of which words are composed. Thirdly were the alphabetic signs or letters representing sounds into which the syllable can be resolved. That is to say that the largest time taken in the evolution of the script was when it was in the stage which we can define as phonogram.

In this period came into existence the hieroglyphic monuments of Egypt or the cuneiform script of Babylon and Assyria which have much in common with the culture of the Indian continent. Though pure picture writing can be developed without the help of language it cannot be the case with the phonogram. Here there is the beginning of the language though sounds take a prominent place. This transition was perhaps effected by the necessity of expressing proper names. Anyway there was a phonogram which bridged the gulf between ideograms and phonetic characters. The Mexican picture writing vindicates this point clearly. We have already drawn attention to the verbal and symbolic signs which played a prominent part in the development of the Tamil language. That the

Tamil language went through the various stages which we have mentioned is quite clear from the evidences which though late must be taken into account. In the commentary on the last *sutra* of the Yāpparungala Virutti it is mentioned thus :

வடமொழியைப் பாணினிக்கு வகுத்தருளி யதற்கிணையாத்  
தொடர்புடைய தென்மொழியை

From this one could gather that before the alphabetic writing was introduced into the Tamil land, three stages were gone through: and these stages are *uruvu* which can be represented by the picture symbols, *unarvu* which can be represented by gestures to express one's thought and feelings and *oli* or sound corresponding to verbal expressions of ideas and thoughts. Uruvu-Unarvu may be what we call ideograms. Oli may represent the stages of the phonogram. Lastly comes *tanmai* which can be simply rendered as alphabet when alphabetic signs or letters came into being. From this commentary on the *Sutra* one has to conclude that in the Tamil land as elsewhere generally, the primitive people began with pure picture writing which developed into phonograms and which ultimately developed into alphabetic writing. It is reasonable to infer that before Agattiyam the first grammar in Tamil there was a kind of solecism when grave offences were unconsciously committed against idiom or use of words or even use of writing.

Seeing this confused state of affairs it was felt by a Tamil scholar who lived at this time that certain regulations should be introduced so that certain literary conventions may be established for the language so that it may take its place in the comity of languages which were then prevalent. It was given to Agastya to whom a reference has already been made to occupy the place of honour as the first writer of Tamil grammar and the first founder of the Tamil academy of letters.

It should not be understood that that there was no language or literature before Agastya. A language can exist even when writing was unknown. This was the position of the Vedic literature itself. In this time the verses were hereditarily passed on by rote from father to son or from teacher to pupil. This was also the position of Tamil literature before the time of Agastya. Hence there is a case that there was a literature abundant enough for an author like Agastya to draw freely from and standardise the forms of its usage. Perhaps at this time the Sūtra style of composition came into vogue to serve as mnemonics for easy memorisation.

That the sound system was predominantly adopted before the introduction of alphabetic writing is attested by evidences in the Tolkāppiyam and its commentaries. Ilampuranar, the celebrated commentator of the Tolkāppiyam, in commenting upon the Sūtra 6 of the *Eluttadhikaram* writes: *Eluga*. This is a significant expression. This means that which rises from the navel. It has something to do with the system of *oli* or sound and is different from the writing of word. If it is mere writing of a complete word then the expression should be *Eluduga*. But Ilampuranar seems to make a distinction between the two expressions *Eluga* and *Eluduga*. This is not mere imagination, for in later Sūtras, 83 and even 92, Tolkāppiyānār explains the different stages which are passed before the pronunciation of a certain letter or word. He says that a certain idea arises in the navel part of a man and goes straight through to his head and from there it passes on to his neck and heart whereon by the action of teeth, lips, tongue and nose it gives birth to a particular expression. From these Sūtras one can infer that the sound system was predominant once upon a time when the Tamil script was in a non-alphabetic stage and only in the alphabetic stage sounds came to symbolise thoughts and ideas which later on developed into alphabetic



writing. In this way we have to reckon the various processes which could be thought of in the evolution and development of the Tamil language in its phase of non-alphabetic writing.

### HISTORY OF THE SOUTH INDIAN ALPHABET

If Sanskrit is a divine language as it is claimed to be we can treat Tamil language equally so. Tamil tradition persists even to this day in saying that this language has *Daiva-tanmai* meaning thereby that it has got divinity attached to it. In India according to tradition there were two languages, one northern and the other southern. The northern language is called Sanskrit while the southern language is Tamil. Both languages on the authority of no less a personage than Kambar, the reputed author of the *Rāmāyaṇa* in Tamil are divine in origin and both are attributed to one God who is the Creator of all things in the world. The same idea is given by Śivajiñanamunivar though he lived in much later times. He says :

உலகமெலாந் தொழுதேத்தும் குடமுனிக்கு

வலியுறுத்தார் கொல்லேற்றுப் பாகர்

.....

உருவே யுணர்வே யொலியே தன்மையென

இருவகை யெழுத்து மீரிரண் டாகும்

i.e., when the language was in confused condition and required definite rules of grammar to regulate the use of words and idioms it was the great God who taught the grammar of Sanskrit to Pāṇini while he taught the grammar of Tamil to Agastya for the benefit of the world. So Agastya is considered to be the primary authority for the Tamil grammar and this tradition persists in the land from immemorial times.

About Agastya himself there are many legends and myths which have grown around this mysterious figure. His

name is as old as the Ṛg Veda. His name occurs in the Atharva-Veda, in the Brāhmaṇas and the Āraṇyakas. His name is again known in the Mahābhārata and the Rāmāyaṇa. He is well known in the Tamil land and is considered a great deity in the Far East. But to a student of history the same Agastya could not have lived from the Ṛg Vedic times down to the period of his deification in the Far East which might have happened in the first centuries of the Christian era. We are therefore to reckon a number of Agastyas and one such is the author of the Tamil grammar and he must have been according to tradition a contemporary of the well-reputed Pāṇini.

Out of the many legends that have grown what interests a student of the history of South India of bygone days is the tradition narrating the episode that sage Agastya was present on the occasion of Śiva's marriage with Pārvati in Kailāsa where all the gods and sages assembled to witness the unique function. At that time it is said that the Vin-dhya mountain suddenly overgrew its size which it was feared would cut off the north from the south. At that time Agastya was found fit to enter into a compact with the mountain to arrest its further growth. The sage readily agreed and it is said that Agastya's compact with the Vin-dhya was to refrain from growing until he returned to the north from the South. But according to well-known accounts he never returned to the north and therefore the mountain ceased to grow. This has been remarked as an effort of Agastya to try to redress the balance of the earth which was rudely shaken and felt in the north. This feat on the part of Agastya was successfully accomplished and Tamil tradition says that in this endeavour Agastya migrated to the south first by himself and later on, he sent one of his pupils to fetch his wife from the north.

Add to this another tradition that seems current in all parts of Tamil land. The story goes that Śiva in the form

of Naṭarāja began to dance the famous Tillai dance at Chidambaram, the heart of the Tamil country, and used his little drum (Damarukam) in the course of his dance and the sound that was produced from the little drum gave birth to a number of sounds which form the nucleus of the future Tamil alphabet. Though these two traditions which are prevalent in the Tamilagam even to-day might have been coloured by the religious bias still there must be a certain element of truth ; for after all a persistent tradition must contain a historical truth which is the background of history. So we would not be far wrong in our conclusion that this great Tamil language has a divine source for its origin and hence what we call the Tamil language to-day must be a divine language.

In the formation of this language there are various traditions connected with Agastya. But Agastya comes into the picture when the language had come to be and literature had come to stay. But the literature that was extant was far from being arranged and the structure of language was far from being settled. So Agastya's service in the linguistic story of South India was to systematise the language by framing such rules and regulations as would be acceptable to all Tamil scholars. Agastya, who according to tradition was first initiated in the grammar of this interesting language, thought it right to start an Academy of letters, now known as the first Śāṅgam according to Iraiyanār Agapporul Urai. He called upon the leading men of the time to assist him in the work of reforming the language and the literature which was extant at that time. In this assembly of learned men it is said even gods like Śiva, Muruga and the Sun were present. To a student of South Indian history this may seem rather fantastic for gods to have had instruction and training from a personage, however great he may be. To us it appears the names mentioned in this list are not the names of gods themselves but the names of gods borne by men of light and learning.

But tradition as is usual divinised them in its religious faith and looked upon them as gods. After all they must have been ordinary mortals, men of flesh and blood like any of us. But scientific investigation of the Śāṅgam literature by modern scholars has resulted in rejecting the tradition of not only the first Śāṅgam but also the second Śāṅgam. Scholars are almost agreed on one point, that the story of the three Śāṅgams is a myth, and that the third Śāṅgam can be accepted as having existed in very early times. Whether the criticism advanced on the existence of the three Śāṅgams is a sound one or not, we cannot judge after this stretch of time. It is quite possible that if the Third Śāṅgam existed the First Śāṅgam could also have existed. Some scholars speak of the duration of these Śāṅgams. If we are prepared to accept Agastya as a contemporary of Pāṇini and if Tamil language and literature flourished before Agastya it might have been in existence for hundreds of years before the time which is usually assigned to the Third Śāṅgam. Pāṇini is said to have flourished, by no less an authority than Goldstucker, in the 7th or 8th century B.C. If this is true historically, Agattiyanār, the author of Agattiyam who was his contemporary must have flourished at the same time, i.e., about the 8th century B.C. One portion of the tradition connected with Agastya says that Tolkāppiyar, the great author of the extant Tamil grammar, was a pupil of this Agastyar. If he were a direct pupil, Tolkāppiyānār must have also flourished in that century though it is agreed by almost all Tamil scholars to put down Tolkāppiyānār in the third or fourth century B.C.

But there is a small difficulty in assigning such a date for the Tolkāppiyam. The Pāyiram of the Tolkāppiyam, (evidently the author of this Pāyiram was a contemporary of the author of the Tolkāppiyam), says that Tolkāppiyānār followed more Indra's grammar (*aīndram*)

which students of Sanskrit literature know is a work much anterior to Pāṇini's grammar. Again not only Tolkāppiyar does follow the rules laid down in the *Aindravṛyākaraṇa* but he does not mention by name even once the grammar of Pāṇini. From this a discerning scholar may conclude that Tolkāppiyānār must have flourished before Pāṇini. But if we critically examine the position of the Tolkāppiyam it is reasonable to take Tolkāppiyānār either as a direct pupil or a later pupil of that school. This is because Tolkāppiyānār has unmistakably referred to the Sūtras of Agastiyānār in more than one place. The conclusion may therefore be that though Tolkāppiyānār might be later than Pāṇini and might have had knowledge of Pāṇini's grammar still *Aindravṛyākaraṇa* appealed to him most and therefore he followed it though he had a knowledge of the extant Pāṇini grām̐mar. To-day a student of Tamil literature might swear in his writings by Tolkāppiyam and not mention Nannūl even once though he has knowledge of the Nannūl which has existed for some centuries. On this account we cannot say that the *Nannūl* as a grammar is not in existence and that only Tolkāppiyam exists. In the same way we can treat Tolkāppiyar who had followed the grammar of Indra.

We have digressed a little on the date of Tolkāppiyar which is not quite relevant to the subject on hand but which being intimately connected with the Agastya tradition and Agastya school of grammar obliged us to make these remarks. Though books have been written to prove the Agastya tradition in the Tamil land as a myth still the evidence of Tamil literature beginning with Tolkāppiyam and the extant fragmentary sūtras of *Agattiyam* now unfortunately lost to us, and the unmistakable reference in the Tamil Purāṇas to Agastiyar's service to Tamil literature besides the full-fledged tradition in all Tamil literature, we have to conclude that Agastya whether he came from the north or belonged to the south was a great man of letters

and flourished before the time of Tolkāppiyar and was the first to formulate principles of grammar for Tamil language and literature and a leading authority at that time. Agastya was therefore an undoubtedly and definitely a historical figure.

### ALPHABETIC WRITING

One of the unsolved riddles of ancient Southern India is the origin of alphabetic writing. From the earliest written documents that have been discovered, for example, the Āśokan inscriptions found in South India, it is almost concluded that South India had no knowledge of the art of writing. And it is only from the days of the inscriptions of Āśoka in Brāhmi characters that writing began to be practised on a large scale in South India as also in North India. We are not now concerned with North India as such but confining our attention to Southern India proper we can approximately say how the art of writing was developed and when. For one thing as we have already said the Tamil alphabet cannot be regarded as having been derived from Brāhmi. If *Brāhmi* is then ruled out, there are some theories which point out that the art of writing in South India was imported into India by foreigners.

First is the theory of a Semitic origin of the Indian alphabet. There may be some indications also that the Indian alphabet was perhaps introduced by the early traders who came direct from Phoenicia. There is a third theory that the Indian alphabets might have been derived from an Aramaic character used in ancient Persia or rather ancient Babylonia. Although these theories have been considered no definite conclusions have been arrived at as to the origin of writing in South India. Apart from these considerations why the possibility and even the probability of the alphabet being as indigenous invention has been ruled out, passes our comprehension. It is difficult to admit

of the Phonician or other exotic origin of South Indian characters. They say that the Phonician alphabet was itself indebted to the so-called Egyptian signs about the 19th century B.C. But our theory is the Egyptian signs themselves are indebted to Indian ones. It is true that the only written documents of certain date begin with the southern inscriptions of Aśoka. It is true again that it is an important landmark in South Indian palaeography. But it cannot completely shut out the possibility of the knowledge and practice of the art of writing in South India before the third century B.C.

There is an important tradition in South India especially in Tamil literature that during the days of Agastya, the first grammarian of Tamil literature, there was some sort of writing practised in South India. In the absence of any reliable inference for the period of undated history, tradition plays a significant role as a source of information to students of Indian history in general and South Indian history in particular. Though unfortunately that great work *Agattiyaṃ* is now lost to us, still here and there some fragments are preserved which show that *Agattiyaṃ* once wielded a powerful influence in the historical development of letters in South India. To take only one instance even a late commentator like Mylāināthar who has commented very ably on the *Nannūl*, a grammar well-known to us, says while discussing Sūtra 256 that Agattiyanār was acquainted with the art of writing in Tamil land. In the commentary he compares the relation between a letter and sound it stands for, with an idol to the deity. And in quoting this Agattiyaṃ unmistakably refers to writing.

To all intents and purposes it is tradition again that makes Agattiyanār a contemporary of the great grammarian Pāṇini. Pāṇini in his sūtras uses many expressions to show that he was familiar with writing as known in his time. In one of his Sūtras he

indicates that the figures *eight* and *five* were then used for marking cattle. If Pāṇini can be placed about 700 B.C. according to Goldstucker, then it is clear that writing was known before his time. And as we take Pāṇini to be a contemporary of Agastya, and Agastya has indicated his knowledge of writing in his *Sūtras* which are in Tamil, we may not be far wrong in inferring that writing was known in Southern India by about 700 B.C. and before. We know definitely that it took several centuries to invent an independent script from the largely prevalent sound system. That is why perhaps if we venture to make a conjecture that even the *Tolkāppiyam* largely explains the *olilakkanam* and *eḷuttu ilakkanam* (sound grammar and language grammar). We are therefore right in surmising that the first alphabet was born out of a sound system that was prevalent for ages together in South India. This was prior to the state of affairs that obtained in South India in 1000 B.C. and before. We do not therefore attach much importance to the theories in vogue viz., that the art of writing was borrowed by South India at some distant date from foreigners.

It is then legitimate to ask, if the writing was indigenous and if it evolved out of the prevailing sound system what shape did the first alphabets take in the Tamil land. It is rather difficult at this stretch of time to determine the form and shape, the alphabets of this time took, with any precision. One suggestion has been made by Dr. Burnell who has written an authoritative work on South Indian palaeography that most of the letters are descended from the character of the Western caves. But Dr. Burnell is more concerned with modern Tamil perhaps Telugu and Kannada also, rather than with old Tamil alphabets. Some of the letters of modern Tamil may resemble the character of the Western caves but on this account it is difficult to make out a theory that these letters might have been derived from the Western caves themselves. We are then told that the



sources of Telugu and Kannada alphabets may be the inscriptions of the dynasties of Vatapi, Vengi and Chalukya which ruled in the Deccan, and the source for the Tamil and Malayalam alphabets was the great Chera inscriptions which may perhaps be dated 467 A.D.

It is stated that since the commencement of the alphabet two scripts were developed. One was cursive and the other was literary. The cursive character of the script is being represented by Tamil while the literary script developed into a *grantha* alphabet used for Sanskrit. Two other vernacular alphabets, one the Tulu *grantha* and the other Malayalam were supposed to be derived from this literary script. We think that Dr. Burnell is nearer the truth when he remarks that the Tamil characters might have been derived from Vaṭṭeḷuttu. What the Vaṭṭeḷuttu is and how it came into being and how it was practised we cannot say definitely. But we can say almost with some definiteness that it represents a very ancient cursive alphabet, perhaps the primitive South Indian alphabet which existed long, long before the inscriptions of Aśoka. Vaṭṭeḷuttu literally means round hand. The inscriptions of the seventh century in the Malabar region represent perhaps the survival of an ancient form of writing known. To unravel this tangled skein we may generally agree that the original form which ancient Tamil took (Vaḍiveḷuttu) was perhaps derived from this Vaṭṭeḷuttu, or it itself represented the shape into which the original Tamil alphabet was resolved. No doubt the Vaṭṭeḷuttu has become nearly extinct by the end of the 10th century in Tamil India if South Indian palaeography would be an evidence. It was then modern Tamil supplanted it.

The later *grantha* characters correspond to the old Vaṭṭeḷuttu retaining the four signs *l*, *l*, *r*, and *gna* because *grantha* did not possess their equivalents. "The *grantha* Tamil differs from the *grantha* alphabet in precisely the same way as the Vaṭṭeḷuttu as far as the reduplication of consonants

and expressions of the absence of the inherent vowel (virāma) are concerned." The Vaṭṭeḷuttu could not have been derived from the Aśokan characters. Nor is it possible for the Aśokan characters to be derived from the Vaṭṭeḷuttu. So we have to conclude both *Brāhmi* and *Vaṭṭeḷuttu* are independent, the first more allied to Sanskrit and the second more allied to Tamil. In this connection we may note the difference between the Vaṭṭeḷuttu and the Telugu and Kannada alphabets. Whatever be the spelling and the meaning the modern Malayalam language for Vaṭṭeḷuttu, to distinguish it from Kōleḷuttu meaning sceptre-hand as against the round hand, it seems to us that the original expression may have been *vetṭeḷuttu*. This *vetṭeḷuttu* might have been corrupted as *vaṭṭeḷuttu* from perhaps the preponderating cursive form of the letters which were more or less circular in shape. But the surmise that the original expression was *vetṭeḷuttu* is by no means unreasonable if we only notice the materials on which writing was practised from ancient times.

First, there was the use of the bark of trees or *burcha patra*. Perhaps this is peculiar to North India. The early man wanted to record his deeds on an imperishable material and found the stone quite *suited* for his purpose. Therefore we find many epigraphs inscribed on stones and stone pillars throughout the length and breadth of India. Even in later times it was a practice that when the kings took to temple building they inscribed their grants on the walls of temples which were mostly of stone. This practice of inscribing on stones persisted even when the inscriptions were copied on metal plates. Even when metal plates were available ancient rulers thought stone was a better material than metal for leaving their records. But in course of time it was found that minute details and many details could not be inscribed either on stone or in metal: for they took great time and greater energy on the part of the sculptor and others. So literary men took to writing on palmyra leaves

*tāla patra* which was used in South India even in the early centuries of the Christian era as has been pointed out by no less a foreigner than Nearchus. It seems to us that while royal grants were engraved on rocks and stones and even metals, the literary men of the period took more and more to writing on palmyra leaves which they were able to preserve for centuries together with the simple use of some lamp black or some charcoal powder.

It is only about the 13th or 14th century that people in South India took to paper which seems to be a foreign product. Even now some orthodox pundits have a prejudice against making use of this writing material. And it is popularly known as *Kagidam* which is perhaps the *Kāghaz* of the Arabs. From this short review of the different stages in the development of writing material one thing is clear viz., that the ancients valued inscribing their deeds on imperishable material viz., stone. One can inscribe only when he has got a knowledge of the art of writing and the first forms of writing which were derived from the prevalent phonetic sounds must be more or less in cursive letters as the old letters of the *Vatṭeluttu* would indicate. Therefore it is possible to conjecture that man originally called this writing by the designation *vetṭeluttu* because he had to cut the letters on stone corresponding to the sound it represented, by means of the fine chisel which he profusely used for the purpose. Therefore the writing began incisional in character (*Vetṭu eḷuttu*), *vetṭu* meaning incise and *eḷuttu* representing the alphabet. So our inference is that *vetṭu eḷuttu* became in course of time in common parlance *vatṭeluttu* by which term we mean the round characters.

Thus we have come to the final conclusion that the first alphabetic writing in Tamil was lineally descended from the phonetic system and was indigenous in character. To say that the art of writing was borrowed from outside cannot

carry conviction even to a superficial thinker. In the art of writing we must also take into account the material or materials which were used and taking all these things into consideration, we feel that the alphabetic writing was the natural sequence of the conditions of the time in which writing came into vogue. When literature grew as also the age-long method of imparting that literature orally from teacher to the student directly, the necessity arose for dissemination of knowledge through the literate who began to use the palmyra leaves for that purpose. Literature even in the first century B.C. became so rich that it evoked a pregnant remark from Tiruvalluvar, the author of the immortal *Tirukkural*, that writing and numerals represent the two eyes of the man and without them they are not eyes but only sores.

In the foregoing pages we have been dealing with the so-called Dravidian languages but great emphasis has been laid on the antiquity and the individuality of the Tamil language. We have already referred to the fact that the word Dravidian is a misnomer and could possibly refer only to the Tamil language, Tamil country and Tamil people. The word itself is a Sanskrit word and in its Prakrit form it is known as Davila and Davida as testified to us by the Prakrit literature of the Jains. All evidence points out that the term Drāviḍa meant only Tamil and the word itself is a Sanskritised form of the expression Tamil. In the whole range of Tamil literature, however, we do not come across the word Dravida but every reference is made only to Tamil, Tamilagam and Tamil people. We have taken the position that from the phonetic system, we passed on to the gesture system, and from this a script was evolved, and long after the script, a grammar came into existence which practically fixed the use of words in an appropriate manner. For any language to maintain its life and soul, or in other words to express the mental life and history of the people speaking that language, grammar is essential according to Prof. Sayce

and this was furnished by no less a personage than Agastya which goes after his name and is called Agattiyam. In course of time the language became more and more cultivated and refined, and a crop of literature followed.

Be this as it may, the intricate question that faces a student of South Indian languages is not only the region of the Dravidian language but also the relationship of the various languages to one another. We can enumerate once again the South Indian languages which are grouped as Dravidian languages such as Tamil, Malayalam, Kannada and Telugu. They have been all of them literary languages with their own alphabets and with their own grammar and literature. There are besides a number of dialects such as Tulu, Kudagu, Badaga, etc., which can be termed as uncultivated languages.

We have now to determine the distinctive features, if any, of the four important languages and leave the uncultivated dialects for the present. Besides the correspondence which would make any casual observer think that these languages are more or less cognate and owe their existence to a parent language, still there is in some particulars a wide gulf of difference which makes the critical observer pause and think before he could pronounce a judgment. First of all we shall take up Malayalam. While modern Malayalam can have the status of an independent language with its own alphabet and literature we are afraid that it seems to have had no ancient history. However, *Torṇam Pāṭṭukkal* relating to Kali worship would seem to date the origin of the Malayalam language earlier than is supposed. At the most one can regard the Malayalam language as one of the best developed dialects of the old Tamil. If the Tamil literature is taken as evidence, we do not find the term Malayalam used in any of its works.

Nor again is it mentioned in early Tamil books like the *Aingurunūru* or *Śilappadikāram*. Nor even Cheraṁān

Perumāl of the 8th century A.D. or the famous Kulaśekhara seems to have used it. All of these without any exception wrote in Tamil, and Malayalam at that time even up to the 12th or 13th century A.D. was regarded as part of the Tamil country proper. For it is said that the celebrated poet Kamban delivered in Tamil lectures on the Rāmāyaṇa in Kerala during this period. From this reference we can note that Tamil predominated the Malayalam region proper even as late as the 12th or 13th century. It is only after that, Malayalam separated itself from its parent literature, Tamil and became an independent language. It was more a mixture of Tamil, colloquial Malayalam and Sanskrit. We cannot therefore give serious credit to the statement of Dr. Caldwell that the separation of Malayalam from Tamil took place at a very early period.

To add to this a satisfactory Malayalam grammar was not in existence in the early phases of its development. Even the use of Sandhi in the Malayalam literature seems to follow neither Sanskrit nor Tamil. Some follow the rules of Sanskrit and others Tamil. Sometimes Sanskrit rules are applied to Tamil words. And when the language was formed several Tamil words and Tamil expressions were gradually dropped. Perhaps they could not develop an early literature because of the frequent troubles from the invasions however, peaceful of Christians and Muhammadans from Western Asia and their influence in the land. As we are concerned with only the pre-historic period of South India we cannot go into the growth and development of the language itself.

A word may be said about the formation and the growth of the Telugu language. Telugu is called Andhra by Sanskritists. From the days of the *Aitareya Brāhmaṇa* the people who occupied the Telugu country proper were designated Āndhras. Even Pliny calls them Andare. The Tamils

themselves called the Telugu as Vaḍugar in their ancient literature. Perhaps the term Vaḍa means north and the whole country lying to the north of the Tamil land was called the country of Vaḍugar. This was undoubtedly the Telugu country.

The name Telugu occurs in different forms, Telungu, Telinga, Tailinga, Tenugu and Tenungu. To venture a conjecture the term would have been derived from Trilinga, literally, the language of three *lingas*, viz., the country which had for its boundary three famous temples devoted to *linga* worship. If the traditional story can be believed, the three *lingas* of the Telugu country are distributed in Kaleśvara, Śrīśaila, and (Draksharama) Bhimeśvara. But pundits are always ingenious and as they gave the synonym, 'sweetness', to Tamil, the Telugu pundits derived Telugu from the term *Tene* or honey meaning the honeyed language. It is said that when the Telugu language came into being, there were writers on Telugu grammar but unfortunately none of them are extant, and the culture of the Telugu people is outside the scope of these lectures.

Again the Telugu script seems to be more an adaptation of a Sanskrit alphabet which is also the case with Kannada. In old Telugu inscriptions we meet with characters closely identical with the Kannada lipi and this perhaps gave rise to the term Kannada-Telugu alphabet. Up to the beginning of the fourteenth century there was no perceptible difference in the form of the letters to distinguish the alphabet as Telugu and Kannada. In Telugu again, as also in Kannada there are different signs to mark off surds and sonants. On the other hand we notice in Tamil nasals only combined with sonants. But in Kannada and Telugu languages the combination is seen along with surds also. While in Tamil the nasal is generally used and we notice the absence of *bindu* in that language, the case is otherwise with Telugu and Kannada languages. Here

*bindu* is present and optionally used for the nasal. We can multiply some more instances like this. What we wish to point out is that there are appreciable differences between the Tamil language on the one hand and the Telugu and Kannada languages on the other.

Though we have referred to some of the differences between the Tamil language and the Kannada language still one or two words may be said about this language. Though the name Karnāṭaka is ancient as it occurs in the Tamil classic Śilappadikāram of the second century A.D., yet we cannot speak of the same with regard to literary origins. Karnāṭaka is perhaps derived from Karunāḍu meaning the elevated region. As to the antiquity of the language there is a tradition among the Jains that Brāhmi, the daughter of Rishabhadeva, the first Tirthankara invented 18 alphabets including Kannada. It is said that among the second century (A.D.) papyri found at Oxyrhynchus in lower Egypt was a manuscript containing some old Kannada words. This shows that spoken Kannada was more ancient than the actually written Kannada. Though this language resembles in some respects the Tamil language yet one has to notice some points of difference between the two languages. This does not mean that it is one with Telugu in all respects.

There are several differences between Telugu and Kannada. But while referring to the range of these literatures we can approximately fix it to be much earlier than the 9th century, as furnished by the particulars in the *Kavirājamārga* of the Rāshtrakuta king Nṛpatunga. But one notices the several differences between the Tamil alphabet and the Kannada alphabet, for instance, in not having aspirated letter, in using the same symbol for both surds and sonants, etc. When we closely examine the grammatical structure of these languages, especially in the use of verbs, nouns and pronouns we notice several differences in every one of these languages. One thing is by their contact the



words have changed and several meanings are given to one and the same word. But for the language to grow in strength it must be rich in vocabulary and this can only result from the constant intercourse among people speaking different languages. And it is no wonder that Sanskrit words chiefly have entered into the vocabularies of these languages in their true forms *tatsama* (pure) and *tadbhava* (corrupt). All these languages have borrowed several Sanskrit words especially to express abstract ideas of science, philosophy and religion. But be it noted that such *tadbhavas* are not due to any influence or have anything to do with the original formation of the language, though they have gone to enrich their vocabulary.

We do not propose to record the changes or the contributions made by the Kannadigas to their literature. It is beyond the scope of the subject. As there is old Tamil compared with modern Tamil we can also speak of old Malayalam and modern Malayalam, old Telugu and modern Telugu, old Kannada and modern Kannada. As one of the Sūtras in the *Nannūl*, Tamil grammar, has it, that Obsolete forms must give place to new ones with the progress of the time. And century after century any language gets rid of old obsolete words and gets in turn new idioms and expressions. But these new words and idioms cannot be accepted without some check or control, and it is not surprising that in every generation we see some sort of protest against the infiltration of new words. For reckless and indiscriminate acceptance of such words would denationalise the language and be suicidal to its very existence. We do not want to be understood that we are not in favour of adopting foreign words. We believe that the growth of a language must be natural and unconscious. Any pressure or reform from without would not only tend to cut at the root of the purity of the language but also mar its individuality.

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Jagavirapandyan : *Agattiyamunivar.*

## CONCLUSION

In the course of these six lectures we have briefly dealt with the main features of life in pre-historic South India in its various aspects. A knowledge of the influence of the geology of the area is necessary for an understanding of pre-historic South India. Though writers on history begin with a description of the influence of geography on history, little or no attention is paid to geology and its influence on historical geography. The rocks of South India belonging to the Archaean era are found everywhere in South India. These rocks consist of a series of granite and gneisses. They were subjected to mechanical deformations and can be said to be the foundation rocks of all the sedimentary systems. We also find rocks in large numbers which are a form of granite popularly called charnockite. They are distributed in the mountains of South India including the Nilgiris, Palnis, Shevroys, Anamalais and parts of the Eastern Ghats. It is believed that at the close of the Archaean era, the whole of South India had become one solid land mass. In this way several thousands of years passed after which we notice another series of sediments, remnants of which can be seen even now, as sandstones in Kurnool.

Millions of years in the geological history of South India can be counted before peninsular India became isolated. At the end of Cretaceous period and the beginning of the Eocene period, some territory went under water and some got fissured and drifted apart. It is believed, however, that India and Africa were even then connected by an isthmus to which the name of Lemuria has been given. Supporters of this theory point out by line the position of Madagascar, Mauritius, Maldives, and the Laccadive islands. On the east also,

there was a mountainous belt called the Madras Mountain belt that ran as far as the Andaman Islands and even occupied the area that is now the Bay of Bengal. The land connection of India with Madagascar, Ceylon and South India contains similarities especially in the rocks of similar nature and suggests that these areas perhaps once formed part of one land mass. It is further believed that a tremendous outburst of volcanic energy must have occurred in the tertiary epoch. Due to this there must have been formations which go by the name of the Deccan trap. These traps are found up to Belgaum in the South, Rajahmundry in the South-east and Cutch in the North-west.

We must remember in this connection one fact that denudation was at work for ages and ages and it is only time that has converted this lava plateau into beautiful table-topped hills separated by vertical walls. The Deccan traps consist of quartz, carnelian, onyx and different varieties of chalcedony used often as precious stones. Confining ourselves to the south the Tertiary seas have here and there left some remnants like the lime stone in Quilon and the Ratnagiri rocks in the Canara coast, and some loose sandstone in the east coast, extending from Vizagapatam to Cuddalore. The Cuddalore sandstones may be said to belong to the Miocene or early Pliocene age.

There are also in abundance rocks and rock formations which are named laterite. They are a kind of vesicular clayey rock. They are a form of regolith peculiar to India and a few tropical countries. They are soft when quarried fresh but change hard when exposed to air. They are abundantly used as building material. They occur in almost in every place in the east coast. In the areas which contain low-lying laterite the earliest remains of the pre-historic man may be traced. These remains are found in the shape of stone implements. This age is perhaps post-tertiary.

Speaking of the Pleistocene age in South India, we can generally call this age as the age of the human epoch. We find in several areas implements ranging from crude stone chippings and coarse flakes to fashioned knives and needles made of stone or bone. They point to the progress of humanity from the primitive stage of existence. From these records one can decipher three stages of the human epoch, viz., the crude stone age, the polished age of stone instruments and the metal age. To sum up the peninsula has been a land area since the Cambrian period. Examining the drainage system of the peninsula one notices the easterly trend of its main channels. The western parts form mainly the water shed. In the southern coast of the peninsula we find more and more of the marine and estuarine deposits. These must belong to post-tertiary age. But while reading the stratigraphical geology, the student must examine a number of problems like crust formation, volcanicity, extinctions of life forms and others which have occurred in the many millenia of ages which are surely inscribed in the pages of the rock register.

A word may be said about the historical geography of ancient South India. Two factors, viz., environment and heredity have been responsible largely for the development of man and his culture through the ages. With regard to the mountainous systems of the peninsula, the old Sahyadri hills, now known as the Western Ghats, contain ghats or passes easily accessible to the coast, and among them are the Bhore Ghat, Tal Ghat and the Palghat gaps. Once the Bhore Ghat was considered the military route to the Deccan. But the Eastern Ghats are more simple in character. Examining further the river system of South India the bulk of the drainage is, as has been said, to the Bay of Bengal. The bigger rivers have got deltas ; hence there is not much momentum especially in the flood seasons. But the historian is more concerned with the influence of the rivers and

riverine valleys on the political history of the country. It is only on the banks of the mighty streams that civilizations have been born. One of its chief elements is the development and extension of agriculture. Though it used to be said that agriculture was born in the Nile valley we are led to think that it grew independently in all regions and climes, wherever big rivers flowed east or west. In South India particularly there were several kingdoms whose boundary was more or less a river or a riverine basin. This is true of the later Chola or Pāṇḍyan empire.

The coast line of South India is uniform and regular for all intents and purposes. Only on the Malabar coast there are few lakes and backwaters. The coast also affords facilities for inland water communication. There is of course evidence of the recent transformation of shore line on a large part of the coast. That the sea has eroded on land can be evidenced by the remains of a temple at Sadras, at Tranqubar, at Rameswaram and other places. If we can examine the position of some of our ancients who had their habitation on the coast line, they were mainly fisher folk, some centuries even before the commencement of the Christian era. Accustomed at first only to short voyages they were able to develop their profession of making ships and floating them on the wide seas in search of new lands. Soon they became able mariners and cultivated a taste for ship-building which became almost an art with them. They were brave mariners and ventured far beyond the seas east and west. There is sufficient evidence to prove that these ancient people from South India went to Sumatra, Java and Borneo and settled there comfortably and peacefully. They were the people who spread the customs and manners of South India which were readily adopted by them. In a word the culture of the Far East was due to the South India navigators who were bold enough to sail in their out-riggers.

This also happened in the west. for. centuries together they were in active communication with the west especially, the Mediterranean region and were responsible for spreading South Indian civilization and culture in that area. Migrations and contacts with the different peoples of the East and West, some animated by commerce and some for occupying new lands, were perhaps responsible for spreading the Indian civilization not only in Indonesia but also among the Polynesians. The Polynesians have a tradition which can be treated as history that their forbears came originally from Indonesia. And Indonesia bears almost full cultural similarities with South India in particular. Therefore it is reasonable to suppose that the civilization of ancient America was indirectly influenced by the civilization that obtained in India. For, if we examine the antique manners and habits of the Peruvians, the Mayas and even Astecs we find the influence of our religion, ceremonies, ceremonials and even our modes of life. We have a host of evidence to show that the people who discovered ancient America must be the people of India and this is proved by the presence of the Indian elephant, God Gaṇeśa, Indian temples, Nāgas and even food plants.

Lastly, the climate of a country has much to do with the life of man. The environment forms a potent factor in tracing the development of man. Even the physiological processes and the ability to constant effort and energy are determined by the climate. It has also much to do with man's mental development and outlook. True, South India has experienced always an enervating climate. But it is equally true that the articles of food and clothing were abundantly available and could be easily had. This improved and considerably facilitated the intellectual and philosophical activities in the country. If we examine the historical times of South India we can boldly say that the people commanded great leisure and hence were devoted to think and to contribute



substantially to the philosophical and religious speculations that were going on in the land for centuries together.

From geology and geography we shall turn to archaeology. When and how man appeared is still a moot problem. Geology furnishes evidence to show that life emerged originally in the form of invertebrates. Then fish, amphibia and then reptiles and birds appeared on the scene. This corroborates to a certain extent with the tradition contained in the *R̥g Veda Samhitā*, *Taittiriya Samhitā* and the *Purāṇa* literature. In our opinion the conception of *Daśāvatāra* which has been elaborately discussed in our *Purāṇas* is nothing but the outline of the life history of man. But the most important problem is to fix the original birth-place of the earliest man. It was Sir Arthur Keith who postulated a Pliocene predecessor of man who perhaps hailed from the Indo-African continent. Considering the fact that we have scarcely any trace of volcanic eruptions or earth-tremours, as they frequently occur in North India, it may be said that South India was the part of the world to settle first as a land mass. It is probable that the original man might have come into existence first in South India, although the possibility of the Siwalik hills as the original home of mankind cannot be ruled out. We prefer however that South India may have been the original home of man.

Whatever may be the case there is the undoubted evidence that man occupied several parts of South India in the old stone age. He perhaps avoided forest tracts and his activities were confined to plains and plateaus. Palaeoliths of chert and several weapons and implements together with a knowledge of quartzite show that palaeolithic life generally prevailed in several parts of South India. Some Palaeolithic implements were hand-axes, flake industries, blades with blunted backs and also microlithic industry. These have been found recently in the Kortalaiyar valley, Alicoor valley, Vaḍamadurai, localities round Madras, etc. Though

these attest to the existence of the Palaeolithic man in the various regions of South India still the culture of this man is important to students of ancient Indian archaeology. He commenced his life as a food-gatherer and in course of time he became a skilled hunter. It is certain that he did not know the use of pottery. He went almost naked for only barks of trees and leaves besides the hides of the hunted animals served him his wear. And this simple dress was enough for him, if one would particularly note the climatic conditions of South India.

Perhaps he was interested in art also if the Kurnool caves which contain some figures and pictures, however crude they may be, are the test. One observes the absence of graves and graveyards and it is possible the palaeolithic man had no faith in the existence of soul after his death. But towards the end of this period he built something like a family kinship and began to regard the Mother Earth as something sacred. He believed that it was the Mother who afforded all protection to the human being and hence he devoted himself to the worship of a Mother Goddess which naturally developed into a mother cult. Even now the conception of the mother goddess is important in our religious beliefs. We believe that the system of matriarchy grew out of this conception of the palaeolithic people. Recent studies in the different parts of the peninsula have shown unmistakably that the microlithic industry flourished in the transition period between the Palaeolithic and the Neolithic age. For instance at Sawyerpuram in the Tinnevely district some Mesolithic artefacts have been found and they justify that Mesolithic culture prevailed though the Palaeolithic culture continued to survive even in Neolithic times. But it was not so marked in its features as to deserve special study.

Though archaeologists entertain an opinion that the Neolithic age in India was not a continuation of the

Palaeolithic age yet, reflecting upon the fact there was no geological transformation which affected the life and culture of the Neolithic people, we are firm in believing that the transformation from the old stone to the new stone age was gradual, peaceful and continuous. Examining the finds of the Neolithic tools and artefacts from the Neolithic sites we see that gradual evolution of life as testified to by the polished variety of tools as against the crude appliances of the Palaeolithic people. Though the use of quartzite was still continued, preference to the black-coloured rock as largely seen among the gneiss and granite formations, as found in Kurnool and Cuddappah systems, was shown by the Neolithic. It may be noted that the trap rock was not the only material used by the Neolithic. Among the artefacts of the polished variety there are as many as twelve types of celts, six varieties of chisels, three kinds of hammers, two varieties of adzes and two different kinds of mealing stones, which demonstrate that the Neolithic workers never worried themselves about their material which was easily accessible.

In some of the Neolithic sites we meet with animal figures and others which go to indicate that the Neolithic man had advanced on the lines of his Palaeolithic predecessor. We do not also come across any Neolithic habitation but perhaps it may be surmised that they lived in some sort of houses, but it can be definitely said that they did not know the use of either manufacturing tiles or using them in constructions. The principal Neolithic sites may be portions of the present Tinnevely district, of the Madura district and of the Salem district. Salem positively shows that there was once a Neolithic habitation there. Survivals of the Neolithic establishments are also on the west coast of the peninsula, in Mysore, and other places like the present districts of Anantapur, Cuddappah, and Kurnool, not to speak of Ceylon.

About the culture in Neolithic times, scholars have shown that there was some world unity in Neolithic culture. Types of arrow-head resembling those in England, and the thumb stone resembling those in Switzerland may be cited as examples. The main occupation of the Neolithician was hunting. Fishing was also practised on a large scale. But it was confined to inland fishing and as yet they had no knowledge of sea-fishing. Rearing of herds of cattle was yet another occupation of the Neolithician. As life advanced the simple economy of co-operation to safeguard the interests of the community began to take shape and led in a way to the birth of pastoral life, though the conservatives among them were still satisfied with the life of a hunter. From some evidence it has been said that the Neolithic man was aware of agriculture and agricultural pursuits. Though we can credit him with some primitive tools of husbandry still we cannot say that cultivation of any crop was undertaken on an extensive scale. To credit him with the knowledge of ocean fishing and the cultivation of grains and pulses is much more than one could say. In the matter of dress, and from the slick stones which have been discovered from some of the Neolithic sites, it is concluded that they had the knowledge of the art of weaving cotton or wool. The slick stones probably show that the Neolithician had knowledge of plaiting leaves. This may have perhaps made him gain a knowledge of the art of weaving cotton or wool, but this must be in the very last stage of the Neolithic period.

One feature of the civilization of the Neolithician was his knowledge of arts and crafts. This largely consisted of pottery of different varieties. And these can be classified into two groups, plain and decorated. But there is no evidence that a knowledge of the potter's wheel and its application were known to them. Most of the vessels discovered have rough surface and are very poorly decorated and their colour is dull. These bear a marked contrast to

the pottery made in the iron age with attractive colours, polished surfaces and handsome mouldings.

In religion, the Neolithic people do not show much advancement over the Palaeolithic. But one may venture to suggest that they were primarily worshippers of the phallus or the *lingam*. This is evidenced by the Kapgallu hill, Bellary district where one notices beyond doubt a *lingam* together with a bull in a crouching posture. It is therefore reasonable to suppose that the Neolithians who believed largely in spirits and their activities introduced the cult of the phallus and the phallic god. From this it can be surmised that the rudiments of Śaivism with which this form of worship was closely associated, perhaps had their beginnings with the South Indian Neolithic. The father of mankind which the *lingam* represented must have spouse for the propagation of generations, and hence the Neolithic people transplanted the mother who was revered by the Palaeolithic man to be the *śakti* for their primeaval god.

In referring to the method of the disposal of the dead the later Neolithians seem to have advanced over their predecessors. They made mud pits where they buried their dead. Here is evidence that the Neolithians believed in the post-mortem life. For, the use of tools, the cist of stone and mud pits were commonly used and these went by the name of urn burials, largely seen in Pudukkottah. In the district of Salem and perhaps in Maski and in Pallavaram in the Chingleput district, discovery was made of the hut urn. The urn itself resembled the hut or the cottage where the Neolithic man inhabited. It may be interesting to note here that the urn burials were intimately associated with ancestral worship. Perhaps the worship of the Pitṛs still with us is a Neolithic legacy.

It may be said without any fear of contradiction that the Neolithic age in South India passed on to the Iron age and no interval long or short seems to have separated the

two ages. In fact, in the last centuries of the Neolithic age, iron was discovered and it came to be used largely in the shape of tools and implements. In South India there was no Bronze age or Copper age as such but it was the Iron age that succeeded the Neolithic age. If we study the Neolithic remains side by side with the relics of the early Iron age, a large quantity seems to be scattered as is found in the districts of Anantapur, Cuddapah, and Kurnool. Also the Shevroy hills, the district of Tinnevely and other parts of South India contain vestiges of the mixture of Neolithic and iron implements. It is not yet settled where iron was first found and smelted. There is no truth in the saying that it was introduced from North India to the South. Our belief is that the Neolithic people of South India should have come across iron accidentally and found it more durable and tougher than the trappoid rock. It may also be said that the iron industry in South India is more ancient than that of Europe. It began to spread to other countries especially to Crete and Greece where architectural monuments and shrines resemble in several respects the South Indian ones.

It is further our belief that only after the discovery of the iron ore the primitive man moved to the forests and made them his home. It is impossible otherwise for him to have felled the trees and cleared the forests. It is only the iron culture that was responsible for the people of the mountains to pass on to the forest life. This was also the age that ushered in agriculture and agricultural life. These agricultural people lived side by side with the pastoral people who had appeared on the scene several thousands of years earlier. With the coming into use of iron, agriculture came to be practised extensively and claimed a number of followers to its fold. It is a mistake to suppose that the invention of this industry was first made in ancient Egypt. Our view is whether it be Egypt, India, or Europe, the industry grew independently in all the riverine deltas. For

agriculture to flourish there must be water facility and irrigation facility which were afforded by these river basins.

Examining the pastoral instincts of the people of this age we may say generally that they led more or less a nomadic life. They moved from place to place in search of pastures new, but at the same time we cannot consider them as godless or irreligious. They conceived God as a super-human being. Perhaps their god was known as Krishṇa. The Ṛg-Veda Samhitā shows that originally there was a tribe called the Krishṇas inimical to the Vedic God Indra. And the leader of this tribe was called Krishṇa. Whatever may be the later Krishṇa tradition as Viṣṇu and Vāsudeva, it is clear that Krishṇa was a Ṛg Vedic god who was perhaps the king of the early pastoral tribe. The conclusion then is irresistible that while in settled agricultural communities developed the worship of the phallic god, the pastoral people clung to the worship of Krishṇa as their supreme deity.

We can also suppose that the ancient pastoral man was afraid of darkness and it was comforting to him to see the sun rise spreading its rays far and wide. Taking the light of the sun to be the natural light he began to venerate this natural element. The conception of the solar worship, to whatever length it might have developed in later times, had its nucleus in the pastoral civilization of the early iron culture in South India. Perhaps the worship of the snake or the snake cult as we understand it, was also a legacy of these ancient pastoral men. It was then again that while these pastoral people took more and more to the occupation of weaving wool, the manufacture of cotton was largely undertaken by the agriculturists on the plains.

What arrests our attention is the development of pottery in the Iron age. Here we have high polish and rich colours and representations of the figures, human and animal. There is a gradual evolution of the potter's art where mouldings took prominence. It is only in the Iron

age that the moulding work was undertaken with attention and care. The tombs of the new stone age which were oval in shape yielded places to those which were oblong in the Iron age. For want of a better expression we call these tombs megaliths as such tombs in Europe have been so designated. In course of time the fishing net was made and fishing began to be practised on a large scale. Ocean fishing was also undertaken. This was again the period when the simple fishing of the coast led adventurous people to export commercial products and even finished goods to distant lands like Ur of Chaldees and even Egypt. The intimate contacts of these adventurers mostly in the shape of commerce had a far-reaching effect by spreading the civilization of their own and by introducing fresh life and new thought among the people with whom they commingled. It can also be said that they imbibed the manners and habits of the foreigners if they proved of some value to them. In this way began migrations from and into South India leading in the long run to more frequent and intimate contacts.

This seems to be the position of the society in South India when it was on the threshold of her true historical beginnings. There was no keen sense of sex relationship and promiscuous marriages were common. The natural tendency was to give birth to a matrilinear society. But as social organisation was advanced and an agricultural community of peoples settled once for all then, a system of individual marriage gained hold and the seeds of patriarchy were sown as opposed to matriarchy. This perhaps happened in the later Iron age. With the progress of the culture of the Iron age, and with the increasing contact with the outside world, the different groups of peoples began to develop themselves into different tribes.

Not only iron was discovered in South India but also perhaps gold. A study of the Chaldean inscriptions shows that gold was an exotic material. Perhaps two places may



be suggested as the original home of this material, India and Africa. It is reasonable to think that India exported to Africa, and Africa in its turn sold its surplus to the Chaldeans. Perhaps the gold of ancient Mesopotamia came also from our land. The same may be true of Egypt also. It is probable that the intimate contact with the Indus region of South India led to the export of gold to that region and from there it flowed to several countries in the west. We have abundant evidence in the peninsula from the rich alluvial deposits and from the remains of villages and forts devoted solely to these indigenous gold workings, that gold was found originally in South India. It is further reasonable to suppose that these ancient workers in gold were conversant with the use of quick-silver. There is also Tamil literary evidence to point out that *pon* or gold is the national metal of South India. This is perhaps the reason why South Indian women are still fond of jewellery in gold notwithstanding its scarcity value.

Side by side with the age of iron in South India was the age of bronze and copper in North India, especially in the Indus region. To be almost exact no iron culture as such was witnessed in North India in the same way as there was no Chalcolithic age in South India. Examining the finds here one meets with a figure in the posture of one practising *yoga* and also there are figures of Śiva, figurines of mother-goddess, ringstones in the form of the *linga* and the worship of the bull. These evidences are enough to indicate that this culture has been very much influenced by the culture and civilization which prevailed in the extreme south of the peninsula. From these and other similarities it has been suggested that the Indus culture was almost Dravidian in character. The several features of this culture may not be taken into account except the prominent ones whose aspects are relevant to our study of early South Indian history. There is an expression in the Tamil epic of the second cen-

tury A.D., viz., *Śilappadikāram*. This expression is *kaṇḻuttu* which can be possibly rendered as pictographic writing, an evidence to show that imports and exports from the Indus valley to South India and vice versa existed several thousands of years ago. According to a mighty authority the civilization of the Indus valley was one that had become already age-old and stereotyped on the Indian soil. How old it is we cannot definitely say at this stretch of time, but we can certainly say that it was in the later stage of the iron culture of South India; for in our opinion the iron culture of South India may be dated from eight to 10,000 B.C. Therefore it is not strange that the Indus culture had many millenia of human endeavour behind it.

Any study of pre-historic South India will not be complete if we do not say a word about the racial history of the region. Anthropologists, ethnologists and even historians have their own evidences to construct or re-construct the history of pre-historic South India. With the little means of communication and the dearth of transport facility, it is a fact of utmost importance to note that the early man went from one place to another or from one country to another and adapted himself to the new environ and surroundings. Though we cannot definitely determine landmarks in the racial history of any country, still skeleton remains may be taken into account with profit. We are not able to find many of these skeleton remains which would otherwise have served as a definite source of information. But a study of pre-historic craniology has revealed that the Mohenjodaro skulls are related in a way to the skulls from Adiccanallur and those of the modern Veddhas. According to one writer an Adiccanallur skull cannot be distinguished from the early Egyptian type.

Geology furnishes evidence that man lived in South India from geological times. Perhaps by the end of the Neolithic epoch, the South Indian got to know the use of

boomerang and the blow gun, being the contributions of the proto-Austroloid. He was adventurous enough to cross in course of time the raging seas. He went to the Mediterranean regions as well as to the islands and countries in the Far East and colonised them. Those peoples who went to the Mediterranean regions were responsible for the new Mediterranean race. It may be some of them came back to India which was their original home. One must not fail to note in this connection that there was a land route not only to the Indus region, but to the distant countries like Baluchistan, Mesopotamia and Egypt. Thus there was contact of peoples and cultures which was responsible for the so-called Dravidian culture and civilization. Ethnologists generally believe in the physical characteristics of man in determining the racial affinities of peoples, characteristics pertaining to the colour and texture of the skin, of the eyes, of the hair, of the face formation and of the nose. Some may be definite and some indefinite. The characteristics of the skin, colour and nasal index are largely the consequences of climate and geography. Hence these tests cannot in any way be said to be conclusive. For instance neither the shape nor the size of the head is an index. Relying as he did on these physical data, Risley is inclined to divide the people of India into seven types and Hutton speaks of three main types.

The theory that the Mongolian tribe migrated to South India from Tamralipti can be discredited. A moot question that must be answered is what became of the Neolithic people and the Palaeolithic people as well? Cannot they be the ancestors of the later South Indian people who may be Dravidians, designated so, for the sake of convenience. Neither Ethnology nor Anthropology proposes a satisfactory theory convincing enough to the historian not to speak of the layman. In our opinion the original Neolithic population of South India seems to have advanced in different directions, some taking to the profession of cattle-tending,

some to rice cultivation, some to fishing, while others took to life in hills and forests. This strikes us as a fairly reliable analysis of the condition in the early Iron age. Those who settled in caves and forests became the Villavar or the bowmen and those who settled on the coast were the Minavar or the fishermen. On the agriculturists depended professionalists like the carpenter, blacksmiths, washermen, barber, goldsmiths and silver-smiths. In the regions between the plains and forests lived the herdsmen known as the Idaiyar because they intervened between the hilly people and the agricultural people. In this way came a number of tribes each definite in character and fixed to one region or another. Hence we see a number of tribes which persist with us from almost Neolithic times.

These tribes spread themselves over Mysore, Āndhra-deśa and the Tamil country. We may mention, for example, the Kurumbas, the Cherumans, the Kadirs, the Malasar, the Nayadis, the Tandans, the Todas, the Yenadis, the Chenchus, etc. But the most important question relates to the origin of the Dravidians. The Ethnologists and Anthropologists believe the Dravidians to be a group of people coming to South India from the North-west, perhaps their original home being the Mediterranean region. But there is not much force in this argument which is purely speculative in character. There is one theory connecting the Dravidians with the Semitics, another with Turanians, a third with the Brahuis and a fourth with the Mongolians. But none of them is tenable. There is yet another theory that the whole of South India can be roughly divided ethnologically into three divisions (1) Pre-Dravidian, (2) The Mundas and (3) The Dravidians.

It seems to us that at the outset there is no case for a Dravidian race as such. The so-called Dravidians are absolutely indigenous and did not come to India from any part of the globe. They were indigenous in the sense

that the peoples of the Neolithic age and the Iron age as well found for themselves homes in the hills and jungles and pursued their hereditary profession. Others were more advanced and took to pastoral life and agricultural life. It seems to us that there was no distinction such as Pre-Dravidian and Proto-Dravidian or the Dravidian. All these were one and the lineal descendants of the peoples who came from the Neolithic age and beyond. Therefore we can conclude that instead of building a superstructure of a so-called Dravidian race on the flimsy foundation of the theory of Proto-Dravidian or Pre-Dravidian, we may assume that all these people were autochthons and not alien to the soil. We can only speak of a Dravidian culture which left its mark not only on Mohenjodaro and Harappa but on the countries of the Mediterranean region or the Far East.

Before we close we may say a few words about the affinities of Munda speaking people. First we can say there was no Negrito influence on South India. Secondly, we can say that the Mundas miscalled the Kolarians do not resemble the Dravidians physically in every respect. While the Kols were characterised by a broad nose, the Dravidians are distinguished by a narrow nose. It is almost uncertain whether the Kolarians came to South India at all. If we compare the Dravidian and Munda tongues we see no connection between them. There is not even close similarity between the two languages. We can therefore dismiss the theory of any connection between the Munda and the Dravidian speaking peoples. We can thus see that the South Indian people whom we designate Dravidians are the pure descendants of the Neolithic peoples of South India unaffected by the cultures and civilizations of any country, maintaining their individuality through ages until the Sanskrit speaking people came and largely influenced them with their ideas and ideals. Ethnically what we call Dravidians and Aryans to-day are one, but their cultures were different due to the

environment in which they were placed. Both cultures met and coalesced into a confluence of unified culture and this we call the Hindu culture to-day.

No aspect of pre-historic South India is more interesting than that of South Indian linguistics. Linguistics is almost a modern science and on that account we cannot dismiss the importance and value of this science as it developed in ancient South India. In the course of thousands of years of the Palaeolithic and Neolithic ages some obscure dialects must have been spoken by the people and in course of time two dialects came to be distinguished, one as godly speech and the other as human speech. When men grew in numbers a sort of group life developed among them with the result that each group began to cultivate one dialect or another. Different dialects thus grew. But what we call folk-lore or ballads must originally have had their rudiments before any language was formed. In a dialect we meet with words and expressions which convey a particular meaning and which retain that meaning for ages together. That is why we see a tendency among the Linguistics to-day to examine obscure dialects for the first-hand knowledge in any part of the country.

Originally the dialect was what we call the uncultivated language. This condition remained for a long time, but how long we cannot say. But it is a fact that this uncultivated dialect became a cultivated one in course of time. We are inclined to think that so far as Tamil is concerned, it or its sister or more probably daughter tongues have no relationship of any family of languages outside India. We fully believe that the Tamil language has been gradually evolved out of the originally uncultivated dialects of the Neolithic times, when man conveyed his thoughts and ideals by making drawings of men and animals, and we take it that this pictorial writing was a means of expression and continued

to be a vehicle to convey the thought and ideas of men in ancient times. This infused with the elements of sound and sense led to some sort of development of speech forms and it may be noted that these speech forms proceeded not from sentence to sound but rather from sound to sentence. Ages went on like this before South India had a fixed convention recognising a full sentence.

We have to-day six cultivated Dravidian languages Tamil, Telugu, Kannada, Malayalam, Tulu and Kudagu. The majority of the rules governing both Tamil and Telugu seems to be identical. It seems to us the Dravidian languages and particularly, Tamil developed independently of Sanskrit, though there are scholars who contend that there was Sanskrit influence in the development of the South Indian languages. We cannot agree with the view that one language was indebted to the other or that one language was derived from the other. Similarities or dissimilarities apart, speaking with particular reference to Tamil, the oldest language of the so-called Dravidian group, there is justification in saying that this language grew independently of any other language including Sanskrit.

There are various theories promulgated by scholars about the origin of the Dravidian languages. The first theory is that Tamil belongs to the Scythian tongue. In fact, it is not correct to speak of a Scythian family of languages. Then we have the Munda family of languages with which a relationship of Tamil has been adduced. But anthropologically or philologically one cannot find any similarity between the two languages. There is then the third theory of the affiliation of Tamil to the Austric tongue. When we are speaking on the Mundas we may remark that the theory that these were the original inhabitants of South India before the Dravidians is to say the least unconvincing. The same thing can be said of the Australian affinities. We can also draw attention to the fact that the Brahuīs of Baluchis-

tan are said to belong to the Dravidian group but to speak in the language of anthropology they could be classed more with the Iranians. Even from the philological standpoint there is not much resemblance between the Brauhi and the Dravidian family of languages.

That the sound system was predominating before the growth of alphabetic writing is attested to by the evidence in the Tolkāppiyam and its commentary. Ilampuranar, the celebrated commentator of the Tolkāppiyam, in commenting upon Sūtra 6 of the Eḷuttuadikāram uses the significant expression *eḷuga* meaning that which rises from the navel as distinguished from *eḷuduga* which indicates mere writing. From a study of the several *sūtras* the inference may be made that once upon a time when the Tamil script was in a condition of non-alphabetic writing, it was the sound system that made itself prominent and these sounds symbolised ideas and thoughts before the alphabetic writing came to be practised.

It is rather mysterious to probe into the origins of alphabetic writing in South India. The earliest written documents are the Aśoka inscriptions in Brāhmi characters. But the Tamil alphabet cannot be regarded as having been derived from the Brāhmi. Then there are the theories of the Semitic origin of the Indian alphabet, of the Phoenician origin, of its origin in ancient Persia or rather in Babylonia without taking into account the possibility of the alphabet being an indigenous invention. Our theory is even the Egyptian signs are indebted to the Indian ones, evolving out of a prevalent sound system. A study of South Indian palaeography does not help us much to know how originally the alphabet came to be written. But two kinds of scripts can be noted, one cursive, and the other literary. Perhaps the literary script developed into the *grantha* alphabet used for Sanskrit. Taking into account the various probabilities



we may venture to think that the Tamil characters might have been derived not from the *Ṽaṭṭeḷuttu* but from the *Veṭṭeḷuttu*. No doubt there is some similarity between *Vaṭṭeḷuttu* and the ancient cursive alphabet; and so *vaṭṭeḷuttu* may mean round hand. But originally it must have been *vaḍiveḷuttu*, perhaps derived from *Veṭṭeḷuttu* which means literally that the characters which were incised on imperishable material as the stone was. This practice of inscribing on stones persisted even when the inscriptions were copied on metal plates. It is only about the 13th or 14th century A.D. that people in South India took to writing on paper which perhaps came from the Arabs.

Thus we have to conclude that the first alphabetic writing in Tamil was a lineal descendant from the phonetic system and was indigenous in character. The theory that the art of writing was foreign cannot carry conviction. We feel that the alphabetic writing was the natural sequence of the conditions of the times in which writing came into vogue. In this survey of the history of pre-historic South India, an endeavour has been made to show that South India was a unit by itself from the geological to the historical times.

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