

but this was forbidden by the Viking laws. Horse-flesh was largely eaten in the neolithic age, and even in the historic period by the Iranians and Scandinavians.

It seems difficult to believe that the art of making cheese was unknown to the northern nations till they had come in contact with Latin civilisation, but such appears to have been the case, since the name is a loan-word from the Latin *caseus*, and spread from the Teutonic to the Slavonic languages. Koumis, however, seems to have been made both by the Goths and the Lithuanians, whose nobles intoxicated themselves on a fermented beverage prepared from the milk of mares.<sup>1</sup>

It is very remarkable that there is no common name for fish in the Aryan tongues. The Zend and Sanskrit words agree, so do those in Latin, Celtic, and Teutonic, as well as those in Lithuanian and Armenian, while the Greek name is isolated.<sup>2</sup> This defect in the linguistic record is not by itself decisive, since the primitive word for "father" has disappeared from Slavonic, for "sister" from Greek, and those for "son" and "daughter" from Latin. But in the case of fish an inference may be safely drawn, as the divergence of the names is curiously corroborated by other evidence, so that we may conclude that it was only after the linguistic separation that fish became a usual article of food among the Aryans. Not only is the name for fish different in Greek and Latin, but all the terms connected with the art of fishing—the net, the line, the hook, and the bait—were independently evolved.

<sup>1</sup> Hahn, *Wanderings of Plants and Animals*, p. 55.

<sup>2</sup> Schrader, *Urgeschichte*, p. 171.

It is noteworthy that while the Greek word for fish cannot be traced in Latin, the Latin name, *piscis*, reappears both in Celtic and Teutonic, one out of many indications that the final separation between Greeks and Latins was earlier than that between Latins and Celts, or between Celts and Teutons.

There is no mention in the Vedas of fish being eaten, and only exceptionally in Homer, while "fish-eater" is used as a term of reproach by Herodotus. In the pile dwellings of the valley of the Po, which were so favourably situated for the practice of the fisherman's art, neither hooks nor any other implements for catching fish have yet been found. Fish-hooks are extremely rare in collections of prehistoric antiquities, the great museum at Dublin containing only one single specimen.<sup>1</sup> In the very early lake settlement at Schussenried, in Württemberg, where the flint implements are of a type as primitive as those in the kitchen middens, hardly any fish bones have been found.

The taste for fish and the art of fishing seem to have been developed at a comparatively late period. Fish hooks have been found in the Celtic settlement of Hallstadt, in Austria, which is of the iron age, and others of the same pattern at Nidau, on the Lake of Bienne, and elsewhere, but they are more common in settlements which come down to the iron age than in those which belong to the ages of bronze or stone.

In the kitchen middens of Denmark fish, especially herrings, formed an important article of food. This fact, taken in connection with the absence of any common Aryan word for fish, and the curious

<sup>1</sup> Lubbock, *Prehistoric Times*, p. 33.

aversion to fish among the Indian, Hellenic, Italic, and Celtic races, is not without its bearing on the ethnic affinities of the primitive Aryans.

Oysters formed no inconsiderable portion of the food of the people of the Danish kitchen middens, and oysters were placed in the tombs of the royal personages buried at Mycenæ. The name is found in all the Aryan languages of Europe,<sup>1</sup> but is wanting in the Indo-Iranian family. If the Aryans originated in Europe, the loss of the word in lands where the oyster is unknown is perfectly intelligible; but if the European nations successively migrated from Central Asia, the adoption of the same designation is difficult to explain, more especially since the linguistic gulf between Greeks and Celts, or between Teutons and Latins, is more profound than that between Iranians and Slaves, or Greeks and Indians.

The vine appears to have been unknown to the lacustrine people of Switzerland. A vine stock was found in one of the pile dwellings in Italy, but the art of making wine was probably introduced by Greek colonists.<sup>2</sup> The name is probably a loan-word obtained from the Semites.

The earliest intoxicating drink was prepared from wild honey. Words etymologically related to our English *mead* reappear in Sanskrit, Greek, Celtic, Slavonic, and Latin, denoting either honey, sweetness, mead, wine, or drunkenness. In Northern Europe mead was replaced by beer, the English word *ale* corresponding to the old Prussian word *alu*, which means mead.

<sup>1</sup> Latin, *ostrea*; O. H. G., *auster*; Old Irish, *oisridh*; Russian, *ustersu*; Greek, *ὄστρεον*.

<sup>2</sup> Hehn, *Wanderings of Plants and Animals*, pp. 72-74.

§ 7. *Dress.*

The clothing of the Aryans of the neolithic and even of the bronze age consisted chiefly of the skins of beasts, the flesh, and perhaps the hair, having been removed by stone scrapers, which are extremely numerous, even as late as the bronze age. These skins were sewn together by means of bone needles, which are found in great abundance. Cæsar says of the Britons *pellibus sunt vestiti*, and Tacitus tells us that the same was the case with some of the Germans. In the Swiss and Italian pile dwellings fragments of leather, tanned by some rude but effective process, have been found.

Flax, whose very name implies that it was used for weaving (Latin *plecto*, German *flechten*), was spun and woven by the women of the neolithic household, as is evidenced by the spindle whorls and loom weights so abundantly found in the Swiss dwellings of the stone age. In several settlements linen fabrics have been discovered. The threads of the warp, consisting of two fibres of flax twisted together, must have been hung with weights from a horizontal bar, the similar threads of the woof being interlaced by means of needles of bone or wood. That the flax was cultivated is shown by the stores of linseed which have been found. In some of the earlier settlements in Southern Germany, where flax was unknown, ropes and mats were made of bast, prepared from the bark of the clematis or the lime. There is no evidence that hemp was known in the age of stone or even of bronze.

Curiously enough, though flax was so commonly

used for weaving in the stone age, there is no evidence in the pile dwellings of Switzerland or Italy of the weaving of wool, even in the bronze age, when sheep had become numerous. Evidently the sheep skins were worn with the wool on, as is still the case with the peasants of Central and Southern Italy. Woollen fabrics have, however, been found in Jutland, and in Yorkshire, associated with interments of the bronze age.<sup>1</sup> From the Rig Veda it would appear that wool rather than flax was the material employed by the weaver. Bone needles are found in early deposits of the neolithic age, as at Laibach, where flax and even cereals are absent; and our verb "to sew" can be traced in the Sanskrit, Greek, Latin, Teutonic, and Slavonic languages. The word probably denoted the stitching together of skins, since in the Swiss pile dwellings, where linen fabrics are abundant, only one hem and a pocket laced on with string have been discovered, and there is no trace either of a seam or of a cut piece.<sup>2</sup> Probably the texture of the linen was too flimsy to admit of cutting or sewing. The woven fabric seems to have been worn only as a wrapper, since there is no sign of any garments having been fitted to the figure. The first trace of any such advance in the art of tailoring is afforded by the word "brecks," which, as is proved by the old Irish *bracæ*, must, at the period when the Celts still inhabited Central Europe, have been borrowed from the Celts by the Teutons and the Slaves. But these "brecks" were doubtless made of skins.

No distinction seems to have been made in early

<sup>1</sup> Greenwell, *British Barrows*, pp. 32, 376; Lubbock, *Prehistoric Times*, p. 48.

<sup>2</sup> Keller, *Lake Dwellings*, pp. 56, 512.

times between the dress of the women and the men, which is itself a sign of a very primitive stage of civilisation. In Greece the *chiton* and the *himation* were worn both by men and women; at Rome the toga was originally the dress of both sexes; and Tacitus says of the Germans, *nec alius feminis quam viris habitus*.

The Agathyrsi, in Transylvania, painted or tattooed their bodies, and ruddle has been found in so many deposits of the stone age that we must assume that the practice was common, if not universal.

The antiquity of the practice of shaving has been the subject of much controversy, and affords a good instance of the way in which philological conclusions have been corrected by archæology.

Benfey argued that the primitive Aryans shaved their beards, on the ground of the identity of the Greek ξυρῖν and the Sanskrit *kshurá*—words which both denote a razor; and he explains the absence of the word from the rest of the Aryan languages by the hypothesis that in the course of their wanderings the other Aryans may have lost elements of the primitive culture. But since it would be difficult to shave with a stone, however sharp, and as the Swiss pile buildings show that the early Aryans were still in the stone age, and since no razors were found in the very early cemetery at Alba Longa, Helbig argues that this word may have originally denoted the flint flakes which were used for scraping the hair off hides, found in great numbers in the earliest settlements, the name being afterwards transferred, after the invention of metals, to razors for shaving the chin.<sup>1</sup>

<sup>1</sup> Schrader, *Urgeschichte*, p. 53.

§ 8. *Habitations.*

The undivided Aryans were no longer troglodytes, but had learnt to construct huts. It has been already noticed<sup>1</sup> that the long barrows of the pre-Aryan population of Britain are imitations or survivals of the cave, while the round barrows of the Aryan invaders were constructed on the model of the circular hut.

These huts were of two kinds—the summer hut, constructed wholly above ground, and the winter hut, which was a circular roofed pit. As to the former, we have to rely chiefly on descriptions or pictorial representations; of the latter we have actual remains.

The pit dwellings at Fisherton, near Salisbury, and elsewhere, the remains of which are still to be seen, are proved to be of neolithic age by the absence of metal, and by the spindle whorls of baked clay and fragments of rude pottery. The pits are carried down through the chalk to a depth of from seven to ten feet, and the roofs were made of interlaced boughs coated with clay. They were entered by tunnels excavated through the chalk, sloping downwards to the floor. We learn also from Tacitus that in the winter some of the German tribes lived in similar holes dug in the earth, the roofs being plastered with the dung of cattle.<sup>2</sup>

That the undivided Aryans also constructed huts above ground, with roofs, doors, and door-posts, is proved by the linguistic evidence. The Latin word *domus* reappears in Sanskrit, Greek, Celtic, and

<sup>1</sup> See p. 78, *supra*.

<sup>2</sup> Tacitus, *Germania*, cap. 16.

Slavonic, while the German *dach*, roof, which has become *thatch* in English, may be traced in Greek, Latin, Celtic, and Lithuanian. Our English word *door* is the same word with the Sanskrit *dvara*, the Greek *θύρα*, the old Irish *dorus*, and the Latin *fores*, while the name for the door-posts, in Latin *antæ*, appears also in Zend and Sanskrit.

For the real character of these houses, whose existence throughout the whole Aryan region is established by the foregoing linguistic facts, we have to rely on the archæological evidence, which proves beyond contention that they were not houses, in the modern sense of the word, but mere huts of the rudest kind.

Even in the bronze age, as late as the eleventh century B.C., the Umbrians, who among the Aryan peoples were second only to the Hellenes in the civilisation they had attained, possessed no better habitations than wattled huts, from nine to twelve feet in diameter, daubed with clay and thatched with reeds. No trace of masonry or mortar has been discovered in their settlements.<sup>1</sup>

According to the testimony of Strabo, which is borne out by the evidence of the carvings on the column of Marcus Aurelius at Rome, the Celtic or Teutonic tribes on the Danube, even as late as the second century A.D., lived in reed-thatched huts of wood or wickerwork. They were undoubtedly ignorant of the use of mortar, as also were the Germans in the time of Tacitus.

Even imperial Rome must at one time have contained nothing better than such huts, as is proved by two venerable survivals. The *Casa Romuli* on the

<sup>1</sup> Helbig, *Die Italiker in der Poebene*, p. 47.



Palatine was a hut of twigs and reeds; and the house of Vesta in the Forum, the oldest seat of Roman worship, long preserved under the guardianship of the sacred virgins, was a mere hut of wickerwork and straw.<sup>1</sup>



HUT URN FROM ALBA LONGA

The hut urns discovered at Alba Longa doubtless represent the early abodes of the Aryan settlers in Italy.

The inhabitants of the Swiss lake dwellings had learnt to fell large trees with their stone axes, and drive the piles deep into the soft mud, and to construct on the piles platforms of beams, which were morticed together with considerable skill. On these platforms they built square or circular huts, with perpendicular walls of poles and wattle, plastered with clay, thatched with bark, straw, or reeds, and furnished with a wooden door, a clay floor, and a sandstone slab for a hearth. The modern Swiss *châlet* seems to be a survival of these pile dwellings, the living rooms being on the first floor, the lower storey merely serving as a store-house for fuel or fodder.

Even when the Rig Veda and the Avesta were composed the craft of the mason was unknown, the habitations of the Indo-Iranians long after their separation being merely huts of wood, or bamboo, thatched with reeds or straw. The Iranians also constructed pit-dwellings, roofed over with poles and thatch like those of the neolithic people of Britain.

Since the Gothic *gards*, which corresponds to the

<sup>1</sup> Helbig, *Die Italiker in der Poebene*, p 51.

Latin *hortus*, is represented in Greek by *χóρος*, which denotes primarily place for dancing, we cannot conclude from these words that the huts or seed-plots of the primitive Aryans were fenced and surrounded by enclosures.

The mason's art, and the use of mortar, are believed to have been introduced into Europe by the Phœnicians. The megalithic tombs at Mycenæ, and the huge dolmens of France and Britain, are at once a testimony to the skill of the neolithic Aryans, and a proof that the use of mortar was unknown. The vast labour of roofing these structures with enormous slabs weighing many tons would never have been undertaken if the builders had known how to construct them of smaller stones cemented together by mortar. The huge megalithic circle at Stonehenge, with its five great trilithons, one of the most impressive structures in the world, is now generally assigned by archæologists to the brachycephalic race which first introduced bronze weapons and Aryan speech into Britain, and forms an astounding testimony to the bodily and mental powers of those who planned and executed it.

### § 9. *The Boat.*

Some sort of boat, or rather canoe, must have been constructed in the primitive period, since the Latin *navis* can be traced in Sanskrit, Greek, Celtic, and Teutonic. But the word cannot at first have denoted more than the trunk of a tree hollowed out by the stone axe, with the aid of fire. This is indicated by the etymological relation of the Sanskrit *daru*, a boat, to the English *tree*, and the Celtic *daur*, an oak.

## THE ORIGIN OF THE ARYANS.

Similarly the old Norse *askr* denotes a boat as well as an ash tree. Several "dug-outs," hollowed out of a single trunk, have been found in the neolithic lake settlements of Switzerland, Italy, and Ireland. The Celtic *barca*, the old Norse *barkr*, and the English *barge* and *barque* are indications that the Northern Aryans also constructed canoes of the bark of some tree, probably the birch.<sup>1</sup>

The canoes were propelled by oars or poles, since the Latin *remus* can be traced in Sanskrit, Greek, Celtic, and Teutonic. Sails, however, were unknown in the primitive period, as is shown by the fact that the German *segel*, our *sail*, is a loan-word from the Latin *sagulum*. Thus the Teutonic invasions of England were only made possible by previous contact with Roman civilisation.

An examination of the nautical terms in Latin yields some curious results. According to Georg Curtius, they divide themselves into three classes. We have first the proto-Aryan words *navis* and *remus*; secondly, *velum* and *malus*, which are words of Italic origin, not belonging to the general Aryan vocabulary; and thirdly, a large number of loan-words from the Greek, such as *gubernare*, *ancora*, *prora*, *aplustre*, *anguina*, *antenna*, *faselus*, *contus*, and *nausea*. Hence it would appear that the undivided Aryans had invented canoes and oars, that the mast and the sail were used on inland waters after the linguistic separation of the Italic and Hellenic races, while the fact that the Latin word for sea-sickness is a loan-word from the Greek may indicate that the Italic peoples did venture to navigate the sea before they

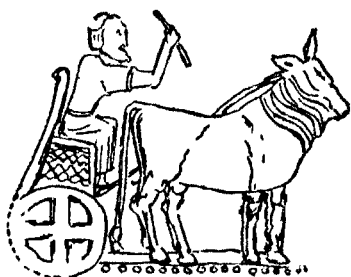
<sup>1</sup> Kluge, *Etymologisches Wörterbuch*, pp. 18, 35.

came in contact with Greek civilisation.<sup>1</sup> It has already been noted that while the words relating to pastoral and agricultural pursuits are to a great extent identical in Greek and Latin, those referring to fishing, such as the names of the net, the line, and the hook, are entirely unrelated.<sup>2</sup>

### § 10. *The Ox-Waggon.*

Indubitably the greatest invention of the primitive Aryans was the ox-waggon. The names of the wheel (Latin, *rota*), of the yoke (Latin, *jugum*), of the wain (Sanskrit, *vahana*), and of the axle (Sanskrit, *aksha*), are common to all Aryan languages. The old Irish *carr* and the Latin *carrus* may also be compared with the *karama* which Hesychius tells us was the name of the covered waggon, or tent upon wheels, in which the nomad Scythians moved from place to place in search of pasturage for their cattle.

On a Thracian coin of the beginning of the fifth century B.C., which is attributed to the Odomanti, who inhabited the pile dwellings in Lake Prasias, we have the earliest representation of the primitive Aryan ox-cart.<sup>3</sup> The body is of wicker-work, poised over the axle, and is drawn by means of a pole by a yoke of oxen.



A similar ox-cart, conveying three female captives,

<sup>1</sup> Schrader, *Urgeschichte*, p. 112.

<sup>2</sup> Heltig, *Die Italiker in der Poebene*, p. 75.

<sup>3</sup> Head, *Historia Numorum*, p. 180.

is depicted on a bas-relief of Shalmaneser.<sup>1</sup> At the beginning of the New Empire both the Egyptians and the Hittites possessed war chariots drawn by horses. The signet-ring of Darius Hystáspes represents a lion hunt, in which the king is mounted on a car of the same construction as that seen on the coin of the Odomanti, but drawn by horses instead of oxen;<sup>2</sup> and the Persian kings are frequently thus represented on their coins.

The primitive ox-waggon must have been constructed without metal. The wheel and the axle were probably in one piece, made out of the section of the trunk of a tree, thinned down in the middle so as to form an axle, and leaving the two ends to serve as wheels. Such waggons are still used in Portugal. They are drawn by oxen, and have two wheels only. A log is cut from the trunk of a tree, and the centre is hacked away, leaving two solid wheels united by an axle.<sup>3</sup> A disc of walnut wood, apparently used as a wheel, was found in an Umbrian lake dwelling at Meicurago, near Arona, in Northern Italy.<sup>4</sup>

## § 11. *Trades*

In the primitive age there could have been little division of labour. The earliest trace of a trade is that of the makers of flint implements, an art which requires considerable skill. At Brandon, in Suffolk, the neolithic people obtained flints by excavating shafts and galleries in the chalk with picks made of

<sup>1</sup> Lenormant, *Histoire de l'Orient*, vol. iv. p. 197.

<sup>2</sup> Head, *Coinage of Lydia and Persia*, p. 31.

<sup>3</sup> Pöschke, *Die Arier*, p. 98.

<sup>4</sup> Keller, *Lake Dwellings*, p. 350.

stags' antlers; and at Cissbury, in Sussex, where thousands of flint implements have been found, there must have been a regular factory of neolithic implements.<sup>1</sup> As the undivided Aryans were in the stone age there is no common name for the smith, whose occupation must have been specialised early in the bronze age. Down to a late period, however, bronze implements were imported into Britain from the Continent. In the Vedas only two trades are mentioned, those of the smith and the carpenter. In Homer the τέκτων is both mason, carpenter, and shipwright.

The art of pottery dates from the beginning of the neolithic period, but there is no well-recorded case of pottery being found in association with palæolithic implements.<sup>2</sup> The neolithic pottery was made by hand, and there is no certain trace of the invention of the potter's wheel before the later settlements of the bronze age, such as those at Concise, where wheel-made vessels have been found.<sup>3</sup> With the invention of the wheel the potter's art seems to have become a trade, as is evidenced by the more elaborate and conventional style of ornament which is gradually introduced.

The invention of the potter's wheel may be approximately dated by the facts that it was known when the Homeric poems were composed, while all the pottery found in the burnt city at Hissarlik is hand-made,<sup>4</sup> and that no wheel-made pottery has been found in any of the North Italian settlements of the

<sup>1</sup> Dawkins, *Early Man in Britain*, p. 276.

<sup>2</sup> *Ibid.*, pp. 209, 227, 229; Mortillet, *Le Préhistorique*, p. 558.

<sup>3</sup> Keller, *Lake Dwellings*, p. 278.

<sup>4</sup> Schliemann, *Ilios*, p. 329.

bronze age. In some of the amphoræ found at Hissarlik the forms seem to have been imitated from those of water skins, the handles being survivals of the fore-legs of the animal, while the navel has developed into a central ornament, which was supposed by Dr Schliemann to represent the head of an owl.

### § 12. *Social Life.*

It has often been assumed that the Greeks brought with them into Hellas a somewhat high degree of culture, but Thucydides possessed probably a keener historical insight when he acknowledges that they were at first barbarians. The primitive civilisation of the Italians and Hellenes cannot have been higher than that of the undivided Aryans, or so high as that of the Sarmatians, Scythians, Dacians, Celts, and Teutons, as described by ancient writers. The culture of Italy and Hellas must have been the result of a lengthened process of historical evolution, stimulated, and to a great extent imparted, by contact with the higher culture of the Semites, which again was derived from the proto-Babylonian people.

It is evident that even as late as the time when the Homeric poems were composed the Greek princes lived in dirt and squalor. There were muck-heaps in the palace of Priam, and at the door of the palace of Ulysses. In the hall where the suitors caroused, the hides and feet of oxen and the offal of beasts recently slaughtered for the feast lay upon the floor.<sup>1</sup>

When we read that at the funeral of Patrocles Achilles slaughtered, with his own hand, twelve noble

<sup>1</sup> Homer, *Il.*, xxiv. 640; *Od.*, xvii. 290; xx. 209; xxii. 363.

Trojan captives, four horses, and two dogs, and when we read the description of his dragging by the heels the body of Hector thrice round the walls of Troy, it is manifest that the golden age imagined by the poets was in reality an age of brutal savagery. In the older Greek myths and legends we find traces of human sacrifice, such as prevails at Dahomé, of infanticide, of the exposure of children, of the capture and sale of wives, which must be regarded as survivals from an earlier stage of barbarism.

We find traces of the same practices among other Aryan nations. Human sacrifice prevailed among the Celts in Cæsar's time, and among all the Teutonic tribes,<sup>1</sup> and did not cease in Iceland before the conversion of the Scandinavians to Christianity at the close of the tenth century.

When a war galley was launched by the Vikings, men were bound to the rollers, so that the keel was sprinkled with their blood.<sup>2</sup> The practice of breaking a bottle of wine over a ship's stem at the launch may be regarded as a survival of this savage Scandinavian practice of "reddening the rollers," as it was called, just as the custom of leading an officer's charger before the coffin at his funeral is a survival of the old practice of sacrificing a chieftain's wives and horses at his pyre.

There is reason to believe that infanticide, human sacrifice, and even cannibalism were practised in Britain, if not by the Celts, certainly by the Iberians; and Mr. Bateman affirms, as the result of his explorations among prehistoric graves, that there is accumulated evidence to prove that wives were burnt

<sup>1</sup> Maclear, *History of Christian Missions*, p. 28.

<sup>2</sup> Vigfusson and Powell, *Corpus Poeticum Boreale*, vol. i. p. 410.



on the funeral pyres of their deceased husbands.<sup>1</sup> There can be no doubt that it was an early Aryan custom to kill the widow at her husband's funeral. Children were exposed, and infant daughters especially were put to death at the father's will. Among the Indians, the Iranians, the Scandinavians, and the Massagetæ, the aged were killed when they became an encumbrance.

Even the people of the Swiss lake dwellings fashioned the skulls of their enemies into drinking cups,<sup>2</sup> and the Greek *κόμβος*, which may be traced in Sanskrit and Zend, may indicate that the same savage custom was not unknown to the Indo-Iranians and the Greeks. The Sanskrit word *gola*, a round pot, reappears in Greek, and the Latin *testa* in Zend and Lithuanian.

The primitive Aryans were undoubtedly polygamists. Herodotus attributes polygamy to the Persians, and Tacitus to the Germans; and there are traces of ancient polygamy in the Vedas. But primogeniture seems to have been the Aryan custom from the first. Even at the very earliest period the Aryans had passed beyond the polyandrous stage of society. The tribal community of women, of which obscure survivals may be traced in the customs of exogamy, and of inheritance through the mother, doubtless existed among non-Aryan tribes, such as the proto-Medes, the Lycians, the Etruscans, and the Picts, and in more recent times among the Lapps, the Ostiaks, the Tunguses, and the Todas.

The curious custom of the *couvade* seems to be Iberian rather than Aryan. It is practised in Corsica,

<sup>1</sup> Lubbock, *Prehistoric Times*, p. 176.

<sup>2</sup> Gross, *Les Protohelvètes*, p. 107.

the South of France, the North of Spain, and in Western Africa, regions where we find traces of the Iberian race.<sup>1</sup>

Marriage by purchase, which prevailed among the Germans, the Thracians, the Latins, and the Vedic Indians, is a stage in advance beyond marriage by capture, of which we find traces among the ruder Dorians, and perhaps in Italy.

Only three words denoting family relationships are found in every branch of Aryan speech. These are the names for mother (*matar*), brother (*bhratar*), and father-in-law (*socer*). The last<sup>2</sup> is of especial value, as it affords a conclusive indication of the institution of marriage, and of orderly family arrangements among the undivided Aryans.

The primitive designation of the daughter-in-law<sup>3</sup> is nearly as widely spread, being wanting only among the Iranians, the Celts, and the Lithuanians. Such terms are unknown among savages, and go further than any other words that have been adduced to establish the social relations of the Aryans at the very earliest epoch.

The names for father (*pitar*), husband (*pati*), son (*sunus*), daughter (*duhitar*), as well as for sister, step-mother, and son-in-law, are also believed to be primitive, though they are wanting in one or more of the Aryan languages. But we must beware of such little idyllic pictures as that of "the father calling his daughter his little milkmaid,"<sup>4</sup> as it is more

<sup>1</sup> Lubbock, *Origin of Civilisation*, p. 18; Guest, *Origines Celticae*, vol. 1. p. 63; Tylor, *Early History of Mankind*, p. 303.

<sup>2</sup> Latin, *socer*; Slavonic, *svekre*; German, *schweiger*; Welsh, *chwegron*; Greek, *ἐκρός*; Sanskrit, *çvaçura*.

<sup>3</sup> Latin, *nurus*; Greek, *νύβς*; Sanskrit, *snushâ*; Slavonic, *snucha*; Teutonic, *snura*.

<sup>4</sup> Max Muller, *Essays*, vol. i. p. 324.

probable that *duhitar* means simply the "suckling," like the Latin *filia*, and not the milker of the cows.<sup>1</sup>

The unit of society was the family, comprising wives, children, and slaves; but investigations into the common Aryan names for "nation" or "tribe" yield no very definite result. Probably it was at some period later than the linguistic separation that the family grew into the gens, thorp, vicus, or *φρατρία*. Neighbouring *gentes* then combined for mutual protection, and some central hill, where the dead were buried, was surrounded by an earthen mound as a place of refuge in time of common peril, and the tribe was governed by the *rex*, whose chief duty was to declare the ancient customs of the tribe. The oldest words for "law" primarily denote "custom." The duty of blood revenge and the permission to atone for blood by a *wergeld* seem to have been among the earliest sanctions of customary law, and may be traced among communities so widely separated as the Afghans, the Homeric Greeks, the Vedic Indians, the Iranians of the Avesta, and the Germans of the time of Tacitus.

That the primitive Aryans had nothing which we can call science may perhaps be inferred from the fact that the Teutonic word "leech," for a professor of the healing art, though found in Celtic and Slavonic, does not extend to the Southern or Eastern tongues. The Aryan words for herbs, healing drugs, poison, and magic, are mostly unrelated. The Aryan languages, however, possess common words denoting wound, vomit, cough, and heal.<sup>2</sup>

That the undivided Aryans had devised the decimal

<sup>1</sup> Rendel, *The Cradle of the Aryans*, p. 11.

<sup>2</sup> Schrader, *Urgeschichte*, p. 409.

system of notation, enabling them to count up to a hundred, is a proof that they were in advance of some existing tribes of savages, who are only able to count up to three or five. The notation was digital, as is shown by the fact that the word *five* means hand or fist. They were, however, unable to count up to a thousand, a number which is differently designated in Latin, Greek, Sanskrit, and German.

The oldest Aryan designation for periods of time was the "month," which takes its name from the moon, the universal "measurer" of time. The week is not a primitive conception, the months being divided into half-months by the light half and dark half of the moon. The names of the week and autumn were the last to be devised. The name of the "year" is not primitive. The Aryans noticed the winter, *hiems*, the time of snow, and the summer, and reckoned at first by seasons rather than by years. The Greek *ἔτος* is etymologically identical with the Latin *vetus*, and meant the "old" or past time. The Latin *annus* is the ring or circle of the seasons, while the Teutonic "year" is the Greek *ἔρρα*, and meant the "season" or the "spring." It has been already noted<sup>1</sup> that the fact of the autumn being the last of the seasons to receive a special name is an indication that the primitive Aryans were in the pastoral rather than the agricultural stage of civilisation.

The primitive Aryan worships and conceptions of religion are, so important in any estimate of the culture they had attained that their discussion must be reserved for a separate chapter.

The most widespread Aryan word for sea is *mare*, but since this only means "dead" water as dis-

<sup>1</sup> See p. 164, *supra*.

tinguished from running water, it does not follow that the primitive Aryans knew the sea. The word may have originally designated merely a stagnant lake or pond. Perhaps the most singular defect in the linguistic record is the want of any common word for river.

We may now briefly sum up our conclusions, which are essentially those of Hehn and Schrader, and have been obtained by correcting the earlier conclusions of philology by the safer evidence of archæology. We find the undivided Aryans were a pastoral people, who wandered with their herds as the Hebrew patriarchs wandered in Canaan, or as the Israelites wandered in the desert. Dogs, cattle, and sheep had been domesticated, but not the pig, the horse, the goat, or the ass, and domestic poultry were unknown. The fibres of certain plants were plaited into mats, but wool was not woven, and the skins of beasts were scraped with stone knives, and sewed together into garments with sinews by the aid of needles of bone, wood, or stone.

The food consisted of flesh and milk, which was not yet made into cheese or butter. Mead, prepared from the honey of wild bees, was the only intoxicating drink, both beer and wine being unknown. Salt was unknown to the Asiatic branch of the Aryans, but its use had spread rapidly among the European branches of the race. In winter they lived in pits dug in the earth, and roofed over with poles covered with turf or plastered over with cow dung. In the summer they lived in rude waggons, or in huts made of the branches of trees. Of metals, native copper may have been beaten into ornaments, but tools and weapons were mainly of stone. Bows were made of the wood of the

yew, spears of ash, and shields of woven osier twigs. No metal was used in the construction of their waggons; and trees were hollowed out for canoes by stone axes, aided by the use of fire.

According to Hahn, the old or sick were killed, wives were obtained by purchase or capture, infants were exposed or killed, and after a time, with tillage, came the possession of property, and established custom grew slowly into law. Their religious ideas were based on magic and superstitious terrors, the powers of nature had as yet assumed no anthropomorphic forms, the great name of Dyaus, which afterwards came to mean God, signified only the bright sky. They counted on their fingers, and the earliest abstract conception was decimal numeration, but they had not attained to the idea of any number higher than a hundred.

### § 13. *Relative Progress*

We have hitherto considered mainly the civilisation attained by the Aryans before the linguistic separation, but the science of linguistic palæontology yields some interesting results as to the relative progress of the different Aryan families.<sup>1</sup> We have already seen that the advance was unequal, some nations, for instance, being still in the stone age, while others were acquainted with bronze, and others with iron. Culture spread by means of commercial intercourse along the great trade routes, from Phœnicia to Greece and then to Italy, from Italy to the Celts, and from Celts to Germans.

It is plain from the character, of the culture words

<sup>1</sup> See Schrader, *Urgeschichte*, pp. 74-96.

common to Zend and Sanskrit that the Indians and Iranians had before their separation advanced farther in the path of civilisation than any of the other Aryan nations. They knew themselves as a united people (Sanskrit *ārya*, Zend *airya*). They had common words for bridge, column, battle, fight, sword, spear, and bow-string, and they could count up to a thousand. But the agreement in religious terms is the most striking proof of the stage of culture they had reached. They had common words for priest, sacrifice, song of praise, religious aspergation, for the sacred soma drink, for God, Lord, for heroes and demons, and for Mithra, the god of light. The chief Indian god, Indra, the god of storms, who in the Rig Veda is a beneficent deity, becomes in the Avesta a malignant power. It was formerly believed that a religious schism was the primary cause of the separation of the Indians and Iranians, but this notion is now universally given up.

Next to the Indians and Iranians the Slaves and Teutons exhibit the greatest community of culture. They have common words for gold, silver, and salt; for hoe, quern, beer, ale, and boots; for swan, herring, and salmon; for rye and wheat; and for many trees, including the aspen, the maple, the apple, and the wild cherry. They have the same name for the smith, and for many weapons; for autumn and thousand; for various maladies; as well as for lies, shame, sorrow, trouble, scorn, and, perhaps more significant than all, we discover that venal vice was accounted opprobrious.

But there are a host of culture words common to all Teutonic languages, which they do not share with their near neighbours the Slaves. In the first rank of such words are those which indicate that

while the Slaves were an inland people the Teutons lived near the sea. Such are designations for sea, haven, cliff, strand, island, flood, whale, seal, gull, and many words connected with the building and steering of boats. Among trees the name of the lime; among animals those of the roe, the reindeer, the squirrel, and the fox are peculiar to the Teutons. Many names of weapons, and terms connected with metallurgy, cookery, and dress, are confined to the Teutons. Hose and shoes are peculiar to the Teutons, breeks are common to Celts and Teutons, and boots to Teutons and Slaves.

The Teutons have a special name for the horse, and peculiar terms connected with horsemanship, such as reins, spurs, and saddle. They have a new name for the house, which however was still built of wood, and new terms denoting autumn and winter, as well as for battle, victory, fame, honour, as well as for letters and the art of writing; while the names of deities and the words referring to religion are almost wholly different among the Teutons and the Slaves.

On the other hand, the undivided Slaves, after their separation from the Teutons, acquired special terms to denote iron, knife, javelin, sword, spur, needle, anchor, plough, ploughshare, corn, wheat, barley, and oats; but there are no words common to all the Slavonic dialects for steel, paper, velvet, or pavement. The still undivided Slaves cultivated the cabbage, pea, bean, lentil, leek, poppy, and hemp; they knew the oak, lime, beech, birch, willow, fir, apple, plum, and nut; they had common words for weaving and for clothes, for woodwork and iron-work; they dwelt in villages, and had huts or houses made of intertwined boughs; but all their terms



ected with masonry are loan-words from foreigners. They had common words to designate law courts, family and tribe, but none for inheritance property—an indication that the land and all connected with it still belonged to the undivided household or *mir*.<sup>1</sup>

The relation between the Celts and Germans is clear. Linguistically they are far apart, proving the separation dates from a very early period; there are numerous culture words of an advanced character which seem to show that at some period subsequent to the original separation they were in actual contact, the Celts, as the more civilised, exercising a political supremacy over some of the Teutonic tribes. The line of contact, as has already been suggested, was probably the range of the Rhenish forest which separates the basins of the Rhine and the Oder from the basin of the Danube.

The connection of the Celtic and Italic languages is structural. It is much deeper than that of the Celts and Teutons, and goes back to an earlier time. Celts and Latins must have dwelt together as undivided people in the valley of the Danube, but must have been at a much later time—after the Cimbrians and Latins had crossed the Alps—the contact of Celts and Teutons came about.

We have already seen that the Teutons got their knowledge of iron from the Celts, and it will be seen in the sixth chapter that Woden, the great Teutonic deity, may be identified with the Celtic Llew. The words for law and king are the same in Celtic and Teutonic languages. Another indication of an early supremacy exercised by the Celts

<sup>1</sup> Schrader, *Urgeschichte*, pp. 90-93.

the significant fact that many words relating to husbandry and peaceful avocations, the names for house, field, wood, plough, acorn, apple, fig, wine, oil, salt, honey, milk, dog, ox, bull, calf, sheep, ram, and swine, are identical in Greek and Latin.

It is, however, only the most rudimentary terms connected with agriculture which agree in Greek and Latin. The names for the various species of grain, for the various parts of the plough, for the winnowing fan, for the hand-mill, and for bread, are all different. So also are the words denoting the most elementary legal and political conceptions, as well as the words relating to metals, seamanship, fishing, and war, and the names of weapons, such as *tela*, *arma*, *hasta*, *pilum*, *ensis*, *gladius*, *arcus*, *sagitta*, *jaculum*, *clupeus*, *cassis*, *balteus*, *ocrea*, none of which can be traced in Greek.

Greek, in such matters, has more in common with Sanskrit than with Latin, the Indian and Hellenic words for the spearhead, the sling-stone, the arrow being the same. The name of the axe, *πέλεκυς*, is peculiar to Greek and Sanskrit. Greek also agrees with Indo-Iranian in the words for the ploughshare, the tilled field, the "fork" for digging, the spindle, town, revenge, and punishment, and in the names of three deities.<sup>1</sup>

We must therefore conclude that the Italic and Hellenic families separated at the very beginning of the agricultural stage, before the most elementary political ideas had been formed; before there was any conception of law, citizenship, or sovereignty; before the bow, the spear, the sword, or the shield had been invented; while the Greeks remained in contact with

<sup>1</sup> Schrader, *Urgeschichte*, p. 315.

the Indo-Iranians till the rudimentary forms of the later weapons had been developed.

The Indo-Iranian has several points of cultural contact with the Slavo-Lettic languages, such as the words for the master of the house, marriage, holy, noon, cock, bitch, corn, and two divine names, Bogu and Perkunas.

While there is little agreement between Greek and Slavonic, yet the agreement of both with Indo-Iranian is too marked to be the result of accident. It therefore seems probable that the Indo-Iranians remained in contact on the one side with the Greeks and on the other with the Slaves for some time after the final separation of Greeks and Slaves.

The Baltic and Indian languages have, however, very few culture words in common. The old Norse *ás*, god, spirit, is the Sanskrit *ásu*, life, which is plainly the primitive meaning. The old High German *ewa*, law, is the Sanskrit *eva*, custom; and the Gothic *hairus*, sword, the Lithuanian *kirwis*, axe, and the Sabine *curis*, spear, are the Sanskrit *çaru*, a thunderbolt.

The Celts share with the Slaves the words denoting winter, silver, plough, wheat, beer, yeast, wax, apple, thousand, and some words referring to tillage.

Armenian shares with Greek words for honey, salt, wine, field; with Lithuanian the name for fish, and with Latin the name of the moon.

The Celts, Albanians, Slaves, and Teutons have all borrowed the Latin *murus*, a sure indication that the art of masonry was obtained from Italy by the northern nations. The Latin *mina* and the Greek *μνᾶ* are Semitic loan-words, showing that weights and measures were brought to Europe by the Phœnicians. The Teutonic *pfunt* and *pfeil* are loan-words from the

Latin *pondus* and *pilum*, and the Slavonic *chlebu*, bread, is a loan-word from the Teutonic *hlaifs*, loaf.

Just as the Finns borrowed countless culture words from the Teutons and Slaves, so the Greeks borrowed no less than a hundred culture words from the Phœnicians.

As a general rule the terms relating to a pastoral life are identical among the European and Asiatic Aryans, whereas the words relating to fixed tillage differ more or less—an indication that the separation of the Indo-Iranian family from the European Aryans took place during the nomad pastoral stage of civilisation.

In any case we conclude that the undivided Aryans must have been a numerous people occupying an extensive territory before any but the rudest civilisation was developed, and that the separation began at a time when, like the Tartars at the present day, they roamed in waggons with their flocks and herds over a wide region.

## CHAPTER IV.

### THE ARYAN RACE.

#### § 1. *The Permanence of Race.*

OUR next task is to examine which of the neolithic races has the best claim to be identified with the primitive Aryans.

It is manifest that Aryan blood is far from being co-extensive with Aryan speech. Aryan languages must have extended themselves over vast regions which are occupied by the descendants of non-Aryan races. That this should have been possible is due to the fact that change of language is more easy and frequent than change of physical type.

Broca has insisted on the fact, at one time almost forgotten, that language as a test of race is more often than not entirely misleading. He has rightly maintained that the ethnological characters of the first order of importance are physical, not linguistic.

Mixed races are not so common as is sometimes supposed. They are found, however, in some parts of Europe, especially in England, Normandy, and Central Germany, as is shown by the existence of persons combining blue eyes with dark hair.

It will, however, be impossible to do full justice to the theories of Pösche and Penka, presently to be considered, as to the extension of Aryan speech,

without setting forth the reasoning by which they explain the disappearance of intrusive races, and the reversion to primitive types.

It is alleged that in the case of conquest, when two races are diverse, or where the environment favours one race more than the other, it is found that the offspring are infertile, or that there is a tendency to revert to one of the parent types. We get fertile hybrids from different varieties of the dog, or of the pigeon, but not from the dog and the wolf, the horse and the ass, the pigeon and the ringdove.

It is the same with the races of mankind. A mixed race may arise when the parent races do not very greatly differ. But this is not the case when the difference is great. Scherzer says that the child of a European father and a Chinese mother is either altogether European or altogether Chinese. According to Admiral Fitzroy, the half-castes between Europeans and Maoris are unmistakably red, without any tendency to yellow.<sup>1</sup> The same is the case at Tahiti, where the offspring of French fathers and native mothers are copper-coloured.<sup>2</sup>

A Berber, with blue eyes and no lobule to the ears, married an Arab woman who was brown, and with ears regularly formed. They had two children—one like the father, the other like the mother. An Englishman had several children by a negress, some of whom were of the European, others of the African type. I was much struck with a case I met with at Palermo. A tall, fair, blue-eyed gentleman, of the pure Scandinavian type, had married a short, swarthy, black-eyed Sicilian lady. They had three boys. The eldest was the image of the mother, the youngest of the father,

<sup>1</sup> De Quatrefages, *Hommes Fossiles*, p. 493.

<sup>2</sup> *Ibid.*, p. 494.

while the second had the eyes and complexion of one parent and the hair of the other.

But even when a half-breed race has come into existence the tendency is to revert to one of the parent types—a tendency which is powerfully aided by environment. At the close of the last century the Griquas, who are half-breeds between the Dutch Boers and the Hottentots, were numerous at the Cape, but as early as 1825 they had practically reverted to the Hottentot type.

Different races do not possess an equal faculty for acclimatisation. In the West Indies and the Southern States of North America it is said that the half-breeds between the Anglo-Saxon and negro races tend to become sterile, while the offspring of French or Spanish fathers and negro women are more fertile. Posche affirms that his own observation, extending over many years, has led him to the conclusion that without an infusion of fresh blood no race of mulattoes has maintained itself to the third generation.<sup>1</sup> In Jamaica both the whites and the mulattoes become sterile, while the negroes are prolific; and hence the type is lapsing into the pure negro. The European element is dying out, not only through sterility, but by the liability to tropical diseases, which are not so fatal to the natives of the equatorial regions. The English race is doomed to disappear, leaving behind it nothing but a corrupt English jargon as an evidence of its former dominance.

Negroes succeed in the West Indies and the Gulf States, but die out in Canada and New England. The English race succeeds in the Northern States and Australia, but fails in India and the tropics.

<sup>1</sup> Posche. *Die Arier*. p. 10.

The Dutch fail to naturalise themselves in Java and Sumatra ; and in the third generation even the Malay half-breeds become sterile. The Dutch have left no descendants in Ceylon, but at the Cape they have large families, possessing great stature and physical power. The French succeed in Canada and the Mauritius. In the West Indies and New Orleans they can exist, but they do not increase in numbers. In Algeria emigrants from the Northern Departments of France fail to become acclimatised, while those from the Southern Departments succeed. The Spaniards, a South European race, succeed in Mexico and Cuba, and, together with Maltese and Jews, thrive better in Algiers than any other emigrants from Europe.<sup>1</sup>

In Egypt no foreign race has ever naturalised itself. The Egyptian Fellah still exhibits the precise type seen upon the monuments. The Ptolemaic Greeks have left no trace, the Mamelukes were unable to propagate their race, the Albanians and Turks are mostly childless, and there is great mortality among the negroes.

In India the children of Europeans fade away unless they are sent home before they are ten years old. There is in India no third generation of pure English blood. The Eurasians do not possess the vigour of their fathers, or the adaptation of their mothers to the Indian climate. Hindustan is Aryan in speech, but not in race. There are in India some 140 millions of people who speak Aryan languages, but the actual descendants of the Aryan invaders are very few. They are represented by certain Rajput

<sup>1</sup> Topinard, *L'Anthropologie*, p. 407.



families, and by the Brahmins of Benares and some other cities on the Ganges.

As a rule it is found that Northern races die out if transplanted to the South, and the Southern races become extinct in the North.

At St. Petersburg the deaths exceed the births, and in North Russia the Slavonic-speaking population only maintains itself owing to the blood being mainly Finnic or Samoyed.

Races become numerically predominant in localities where from physical causes the birth-rate is greatest and the death-rate least. The fair race holds the Baltic lands, the brown race the shores of the Mediterranean, and the black race holds the tropics. It is for this reason that intrusive conquest or colonisation has usually left little or no trace. The Gothic blood has nearly died out in Spain, the Lombard in Italy, and the Vandal in Northern Africa. Southern Germany was originally Celtic or Liguian. It was Teutonised in speech by German invaders: the Row Graves of the Alemannic warriors show a mean index of 71.3, and only 10 per cent. of the skulls have an index above 80. But the dolichocephalic type of the Teutonic conquerors has now disappeared from South Germany, and the prehistoric brachycephalic type has re-asserted itself, except among the nobles, who are of the Teutonic type. The mean index in the Swabian, Alemannic, and Bavarian lands is now 80. Plainly the fair northern dolichocephalic race has been unable to maintain itself, and has left little more than its Teutonic speech as an evidence of conquest.

As a rule the fair races succeed only in the temperate zones, and the dark races only in tropical or sub-tropical lands.

This has been attributed to four causes—

(1) Sterility.

(2) Infantile mortality.

(3) The tendency of an unsuitable climate to enfeeble the constitution so as to prevent recovery from ordinary disease.

(4) The liability to certain special maladies. Pulmonary affections carry off the negroes in the North, while gastric and hepatic disorders are fatal to Europeans in the tropics. Thus, while yellow fever proves deadly to the whites in the West Indies, the negroes escape, and a very slight infusion of negro blood acts as a prophylactic. Negroes succumb readily to the plague, which weeds them out in Egypt, but they enjoy comparative immunity from diseases of the liver. Italians resist malaria better than the English or the Germans.

On the other hand, feeble indigenous races are unable to maintain themselves in presence of the higher civilisation of an invading race which happens to be suited to the environment.

In the United States the Red Indians are rapidly disappearing before the whites, while in Mexico the Aztec race shows a continually increasing preponderance over the descendants of the Spanish conquerors. But the Tasmanians, Australians, Maoris, Fijians, and Sandwich Islanders have disappeared or are destined to disappear. The Arabs in Algeria are withdrawing to the Sahara, but the Berbers prosper and increase. The French conquest has resulted in one native race being supplanted by another, just as in the West Indies the European occupation has caused the Carib tribes to disappear before the

more vigorous negro race which has been introduced.

These results are partly due to the destruction of former means of subsistence, the older population being unable to adapt itself to new modes of life. The wholesale destruction of the bison and the kangaroo has manifestly accelerated the extermination of the Red Indians and the Australians. The transformation from a hunting to a pastoral life, or from the pastoral to the agricultural stage, cannot rapidly be accomplished. New habits are slowly learnt.

But the introduction of new diseases is an important factor in the disappearance of native tribes. The first outbreak of measles carried off nearly half the population of Fiji, and small-pox and scarlatina have elsewhere proved nearly as deadly.

From the foregoing facts it is maintained that hybrid races are not so common as has been often assumed. When two distinct races are in contact they may, under certain circumstances, mix their blood, but the tendency, as a rule, is to revert to the character of that race which is either superior in numbers, prepotent in physical energy, or which conforms best to the environment.

The extreme cases of Haiti and Jamaica may suffice to prove that a dominant race may impose its language on a servile population, and then in the course of two or three centuries may become extinct. These considerations may prepare us to recognise the possibility that Persia, Northern India, and even some parts of Europe, may be Aryan in speech, though they may not, to any appreciable extent, be Aryan in blood.

§ 2. *The Mutability of Language.*

While race is to a great extent persistent, language is extremely mutable. Many countries have repeatedly changed their speech, while the race has remained essentially the same.

Language seems almost independent of race. Neo-Latin languages are spoken in Bucharest and Mexico, Brussels and Palermo; Aryan languages in Stockholm and Bombay, Dublin and Teheran, Moscow and Lisbon, but the amount of common blood is infinitesimal or non-existent.

In France it is probable that nineteen-twentieths of the blood is that of the aboriginal races, Aquitanians, Celts, and Belgæ; while of the later conquerors the descendants of the Teutonic invaders, Franks, Burgundians, Goths, and Normans, doubtless contributed a more numerous element to the population than the Romans, who, though fewer in number than any of the others, imposed their language on the whole country. Again, the speech of Belgium is French—a neo-Latin dialect; and yet it may well be doubted whether in Belgium there is any Roman blood at all. Coming to Italy, the south is Japygian, Sicanian, and Greek, while the north is Etruscan, Ligurian, Rhætian, Celtic, Herulian, Gothic, and Lombard; while the speech is the speech of Rome, a city which itself contained an overwhelming proportion of Syrians, Greeks, and Africans. The actual amount of Latin blood in Rome was probably extremely small, and yet the speech of Rome extends over Italy, France, Spain, Portugal, Belgium, and Roumania, as well as over a

part of Canada and of the United States, and over the whole, or nearly the whole, of Central and South America.

In modern Europe the same struggle for linguistic existence is going on, and the great national languages are exterminating the small isolated tongues. English has replaced Celtic speech in Cornwall, and is encroaching on it in Wales, Ireland, and Scotland. In Brittany the Armorican will speedily become extinct; and in the Basque lands Aryan speech is, as usual, exterminating a non-Aryan language. Basque still survives near St. Sebastian and Durango, but in the neighbourhood of Pampeluna and Vittoria it has already given place to Spanish. Though the French and Spanish Basques speak dialects of the same language, they belong anthropologically to different races, one of which must have imposed its speech upon the other. The disappearance of the Ladino of the Tyrol, and of the Romansch of the Grisons, is only a question of time.

Within the historic period German has replaced Celtic speech in the valleys of the Danube and the Main, and has more recently extinguished two Slavonic dialects, Polabian and Wend. The old Prussians spoke a sister language of the Lithuanian; they now speak German. In spite of a strong national sentiment, Hungary and Bohemia are becoming bilingual, and there can be little doubt as to the ultimate result. On the Volga, Russian is exterminating various Finnic languages, such as the Mordwin and the Wotiak. Tartaric speech is disappearing at Kasan and in the Crimea. In America all the aboriginal and local languages are doomed to extinction at no very distant time. English has

replaced, or is replacing, Spanish in California, Florida, and Texas, and French in Louisiana. In Lower Canada the French-speaking population is being out-numbered by the English. English is now extending itself over large portions of the globe, as was formerly the case with Latin.

Or look at Mexico. The Spanish conquerors, few in number, succeeded in imposing on the natives their Latin speech, their religion, and their way of life; but the blood is mainly Aztec. After three centuries, the descendants of the Conquistadores are dying out, and the conquest has left its mark mainly in the Latin dialect which has been substituted for the ancient Aztec idiom, and in the allegiance to an Italian bishop.

But these very Spaniards who have imposed a Latin dialect on so large a portion of the New World, were they Latins, or even Aryans, in blood? Spain was originally Iberian or Berber. In pre-historic times the Celts wrested a large portion of the peninsula from the Iberians, the Phœnicians founded populous and important cities, the Vandals, Goths, and Suevi poured in from the north, and the Moors and Arabs from the south. The speech, and very little more than the speech, is Latin; the Romans, of whose blood the trace must be extremely small, have imprinted their language upon Spain, and the Spaniards, by reason of their speech, are often reckoned among the Latin races.

The speech of Tunis has been in turn Numidian, Phœnician, Latin, Vandal, and Arabic, and may ultimately become French. In Syria the speech was

First Semitic; it afterwards became Aryan, and is now <sup>the</sup> ~~one~~ more Semitic.

Arabic, the local dialect of Mecca, has become the language of numerous non-Semitic peoples. A host of non-Aryan tribes in India speak neo-Sanskritic languages. The Turks in Candia almost universally speak Greek; at Damascus they speak Arabic. Many of the Papuas speak Malay dialects, and so do the Chinese in Borneo. In Africa languages of the Bantu class are spoken by races as dissimilar as the Caffres and the Guinea negroes. The Huzaras, who are pure Mongols, descendants of the followers of Ghengis Khan, still preserve their marked Mongolian physiognomy, but speak good Persian. The Tschuwash and Bashkirs, who are of Finnic race, speak Turkic dialects.

The Huns who followed Attila have left their name in Hungary, but not their speech. The Gauls who wandered from the banks of the Moselle, and finally settled in Asia Minor, left their name on the province of Galatia, but their language has become extinct. The Bulgars in Dacia acquired the language of their Slavonic subjects.

There is no reason to suppose that the political, social, and religious causes which have brought about such extensive changes of language during historic times, and which have not ceased to operate, were less effective in the prehistoric period. Aryan speech especially seems to possess the power of exterminating non-Aryan dialects. Finnic, Basque, Magvar, Turkish, are gradually, but surely, being replaced by Aryan languages in Europe. In America, North and South, in South Africa, Polynesia and Australasia, Aryan speech is rapidly extending its domain. Four hundred years ago Aryan language was spoken on the great

continent; in much less than four hundred years hence there will not, save in the names of places, be a vestige left of any non-Aryan speech. Three thousand years ago the speakers of Aryan languages in India numbered a few thousands; now they number 140 millions. In the neolithic period Aryan languages can hardly have been spoken by more than a million persons. At the present time they are spoken probably by 600 millions—half the population of the globe.

Among the chief causes which have effected such wide extensions of certain languages are slavery, conquest, numerical superiority, commerce, political supremacy, religion, and superior culture. Slaves or serfs readily learn the language of their masters. The negroes in Haiti and the Mauritius speak French; in Cuba, Spanish; in Jamaica, English; in Brazil, Portuguese. In Mexico the pure-blooded Aztecs, who form the larger part of the population, speak Spanish, and so do the Guaranis of Paraguay.

Isolated local dialects are at a disadvantage when in contact with great national languages. To this cause we may attribute the retrocession or extinction of the Wendish and Lettic dialects in Germany, of Finnic dialects in Eastern Russia, of Etruscan, Celtic, and Greek in Italy, of Cornish in England, and of Basque in Spain. Within a measurable period all the Celtic, Euskarian, Finnic, and Turkic languages will have disappeared from Europe, and the whole continent will be Aryan in speech.

In the case of conquest it by no means invariably happens that the language of the conquerors prevails. As in the instances of the Scandinavian conquest of Norway, of the Norman conquest of England, or of



the Roman conquest of Gaul, the conquered country is for a time bilingual, but ultimately one of the two languages must infallibly supplant the other ; usually, however, as we shall presently see, undergoing in the process certain modifications, partly phonetic, and partly in the direction of a simplified grammar.

The Roman conquest of Gaul and Spain, the Mahomedan conquests in Syria, Egypt, and Northern Africa, the Teutonic conquest of Southern Germany, and the Anglo-Saxon conquest of England are the chief instances in which the language of the conquerors has prevailed. But the reverse has been even more frequently the case.

Greek, which was established for a while by the conquests of Alexander as the court language at Antioch, Alexandria, Seleucia, and Samarkand, has now disappeared, leaving nothing but a few coins and inscriptions. The present inhabitants of Greece are largely a Slavonic race, which in the eighth century occupied the lands and learned the speech of the Greeks. There is probably as much of the old Greek blood at Syracuse, Salerno, or Brindisi as in some parts of Hellas. The kingdoms established by the crusading Franks have left behind them only the crumbling ruins of vast fortresses, and perhaps half-a-dozen Western loan-words which have found their way into Arabic. No vestige of Mongolic speech attests the European conquests of Attila or Genghis Kha.

The Bulgars exchanged their own Turkic speech for the Slavonic dialect of their subjects. In Normandy the Northmen acquired French, which in England they exchanged for English. The Franks, the Lombards, the Sueves, the Vandals, and the

Goths were unable to impose their Teutonic speech on the Southern lands which they overran. Dr. Hodgkin has described for us the process by which the Gothic language and nationality were extinguished in Italy. The Teutonic invaders were scattered over the land, nominally as paid protectors, really as masters, each receiving what may be designated either as salary or tribute. They became inmates of the Roman homes, enjoying half the house, half of the produce of the vineyard and the farm; they became in most cases the sons-in-law of the Roman citizens whom they protected, but their children were brought up to speak the language of their mothers. Even in Burgundy, where the conquerors were the more numerous race, as is shown by the fact that in the Department of the Doubs the racial type is Teutonic, the speech is now a neo-Latin dialect.

Plainly the laws which regulate the survival of language do not conform to the same conditions as those which regulate the survival of race. The language which prevails in the struggle for existence is sometimes that of the less numerous race, sometimes that of the race which is physically the feeblest. It is sometimes that of the conquerors; sometimes it is that of the conquered. Some other law must evidently be sought. The law seems to be that the more civilised race, especially when it is politically dominant, and numerically preponderant, is best able to impose its language on the tribes with which it comes in contact. This law has been thus formulated by Professor Sayce. "We may lay it down as a general rule," he says, "that whenever two nations equally advanced in civilisation are brought into close contact the language of the most numerous

will prevail. Where, however, a small body of invader's brings a higher civilisation with them, the converse is the more likely to happen. Visigothic was soon extirpated in Spain, but English flourishes in India, and Dutch at the Cape. Conquest, however, is not the sole agent in producing social revolutions extensive enough to cause a total change of language. Before the Christian era, Hebrew, Assyrian, and Babylonian had been supplanted by Aramaic. It was the language of commerce and diplomacy."<sup>1</sup> The influence of a powerful religious belief, especially when enshrined in the pages of a sacred book, has immense influence. The Arabs were inferior in culture to the Roman provincials of Syria, Egypt, and Northern Africa, but the language of the Koran has prevailed.

We may now apply these principles to the spread of Aryan speech in prehistoric times. As the Aryans were probably in most cases numerically fewer than the races whom they Aryanised, we must believe them to have been their superiors in culture as well as in physical force.

The Hellenes when they invaded Greece were undoubtedly more civilised than the non-Aryan aborigines; and the Umbrians were more civilised than the savage Ligurians and the Iberian cannibals whom they found in Italy. The round barrow Aryans of Britain were superior in culture to the feebler long barrow race which they subjugated and supplanted.

The Avesta affords some indications of the struggle between the Iranians and the non-Aryan indigenous tribes on whose territory they encroached; but the Vedic poems supply the best picture we possess of

<sup>1</sup> Sayce, *Principles of Comparative Philology*, p. 167.

the gradual advance of Aryan speech and culture which must have gone on in other lands.

The Aryan invaders, few in number, who were settled on the banks of the Upper Indus, are found gradually advancing to the south and the east in continual conflict with the Dasyu or dark-skinned aborigines, who spoke a strange language, worshipped strange gods, and followed strange customs, till finally the barbarians are subdued and admitted into the Aryan state as a fourth caste, called the "blacks," or Sudras. The higher civilisation and the superior physique of the northern invaders ultimately prevailed, and they imposed their language and their creed on the subject tribes; but the purity of the race was soiled by marriage with native women, the language was infected with peculiar Dravidian sounds, and the creed with foul Dravidian worships of Siva and Kali, and the adoration of the lingam and the snake.

The Aryanisation of Europe doubtless resembled that of India. The Aryan speech and the Aryan civilisation prevailed, but the Aryan race either disappeared or its purity was lost.

The rule that it is the more civilised race whose language prevails in the struggle for linguistic existence will incline us to discover the primitive Aryan race in the most civilised of the neolithic races. It is not probable that the dolichocephalic savages of the Kitchen middens, or the dolichocephalic cannibals who buried in the caves of Southern and Western Europe, could have Aryanised Europe. It is far more likely that it was the people of the round barrows, the race which erected Stonehenge and Avebury, the people who constructed the pile dwellings in Germany, Switzerland, and Italy, the brachy-

cephalic ancestors of the Umbrians, the Celts, and the Latins, who were those who introduced the neolithic culture, and imposed their own Aryan speech on the ruder tribes which they subdued.

### § 3 *The Finnic Hypothesis.*

The mutability of language and the permanence of race make it easy to understand that the greater part of Europe may be non-Aryan by blood, but Aryan in speech.

The neolithic races of Europe are so distinct in their anthropological characteristics that only one of them can represent the primitive Aryan race; the others must be regarded as Aryanised by conquest or contact.

The examination of the existing and prehistoric European types has led us to the conclusion that the primitive Aryans must be identified with one of four neolithic races, which, for convenient reference, may be re-enumerated as follows—

(1) The Scandinavians, a tall Northern dolichocephalic race, represented by the Row Grave and Stængenæs skeletons, and the people of the kitchen middens. The stature averaged 5 feet 10 inches. They were dolichocephalic, with an index of from 70 to 73, and somewhat prognathous, with fair hair and blue eyes, and a white skin. They are represented by the Swedes, the Frisians, and the fair North Germans.

(2) The Iberians, a short Southern dolichocephalic race, represented in the long barrows of Britain and the sepulchral caves of France and Spain. The

stature averaged 5 feet 4 inches, and the cephalic index 71 to 74. They were orthognathous and swarthy. They are now represented by some of the Welsh and Irish, by the Corsicans, and by the Spanish Basques. Their affinities are African.

(3) The Celts, a tall Northern brachycephalic race, represented in the round barrows of Britain, and in Belgian, French, and Danish graves. They were macrognathous and florid, with light eyes and rufous hair. The stature was 5 feet 8 inches, and the index 81. They are now represented by the Danes, the Slaves, and some of the Irish. Their affinities are Ugric.

(4) The Ligurians, a short Alpine brachycephalic race, represented in some Belgian caves and in the dolmens of Central France. They were black-haired, mostly orthognathous, with an index of 84, and a stature of 5 feet 3 inches. They are now represented by the Auvergnats, the Savoyards, and the Swiss. Their affinities are Lapp or Finnic.

Aryan languages are spoken in Europe by races exhibiting the characteristics of all these types; and in India and Persia by Asiatic types, Dravidian and Semitic, the Aryan blood having been merged in that of conquered races. Hence the primitive Aryans must be sought for among the four European races—Scandinavian, Celtic, Ligurian, and Iberian.

Some thirty years ago a theory which was originally propounded by Retzius, and supported by Baer and Pruner-Bey, was very generally adopted. There are in Europe two races, then believed to be autochthonous—the Finns and the Basques—whose languages do not belong to the Aryan family of speech. Retzius, assuming that both the Finns and

the Basques were brachycephalous, and remarking that the Swedes were dolichocephalous, formulated his celebrated "Finnic theory," which long dominated ethnologic science, and is even now not without adherents. He maintained that the primitive population of Europe was a brachycephalic "Turanian" race, the sole survivors of which are now represented by the Finns and Basques. He supposed that this aboriginal population was overwhelmed by dolichocephalic invaders speaking an Aryan language, who are now represented in their greatest purity by the Swedes. These invaders penetrated into Europe from the East, exterminating or enslaving the "Turanian" aborigines, the Basques taking refuge in the Pyrenees, and the Finns in the swamps and forests of the North. This theory has been stated by Professor Max Muller with his habitual lucidity. He informs us that "wherever the Aryan columns penetrated in their migration from the East to the West they found the land occupied by the savage descendants of Tur."<sup>1</sup>

The "Finnic theory" of Retzius was very generally accepted,\* but little by little new facts were slowly accumulated, which proved that the proposition of Retzius must be reversed. Broca showed that the Spanish Basques, who are the true representatives of the Basque race, are dolichocephalic, and are not, as Retzius had supposed from an examination of skulls of some French Basques, brachycephalic. De Quatrefages and Hamy then proved that the supposed

<sup>1</sup> Broca objects,\* not unreasonably, to "Tur," and remarks, somewhat sarcastically, on this passage, "Voici un personnage vénérable, qui fut oublié par Moïse, et qui vient s'asseoir aujourd'hui à côté des fils de Noé."—Broca, *La Linguistique et l'Anthropologie*, p. 238.

Aryan invaders were in fact the earliest inhabitants of Europe, and actually possessed a lower culture than the "savage descendants of Tur." The order in which the skulls are superimposed at Grenelle proves that both the dolichocephalic races preceded the two brachycephalic races.<sup>1</sup> The most ancient skulls of all are those of dolichocephalic savages of the Canstadt and kitchen midden type, who subsisted mainly on shell fish, and must be regarded as the ancestors of the Scandinavian, North German, and Anglo-Saxon race. Next in order of time we find the Iberian race of savages, who subsisted on the chase, and practised cannibalism and human sacrifice, and whose descendants are found in Corsica, Spain, and Northern Africa. These Iberians were pressed back by the brachycephalic Ligurian race, who arrived in the reindeer period, and are possibly of Lapp affinities. The most recent type of skull is that of the tall brachycephalic "Turanian" people of the Finno-Ugric type, who arrived in Belgium and Britain towards the close of the neolithic age. Their civilisation was higher than that of any of the previous races. They do not seem to have been troglodytes, but were nomad herdsmen, living in huts.

The two "Turanian" races were the last to arrive. The brachycephalic Ligurian race drove the dolichocephalic Iberians to the South and West, and the brachycephalic "Celtic" race drove the dolichocephalic Scandinavians to the North. The result is that Central Europe is brachycephalic, while the North and the South are dolichocephalic. Hence the "Finnic theory," as propounded by Retzius, has been completely overthrown.

<sup>1</sup> See p. 116, *supra*.



The primitive Aryans—that is, those who spoke the primitive Aryan speech—may have been one of the four neolithic races, or they may have been a later intrusive race. The objection to this last hypothesis is that there is no archæological evidence for any such intrusion. The four European types may be traced continuously in occupation of their present seats to the neolithic period; and in the case of the Italic and Swiss pile dwellers, and of the round barrow people of Britain, we must believe that their speech in neolithic times was Aryan—either Celtic or Italic.

We are therefore compelled to adopt the hypothesis that one of the four neolithic races must be identified with the primitive Aryans, and that this race, whichever it was, imposed its Aryan speech on the other three.

We have now to examine in turn the claims of each of the four neolithic races to represent the primitive Aryan stock. The question cannot be considered as determined, the French and German scholars being ranged in opposite camps. All that can be done is to lay impartially before the reader the evidence, such as it is, for forming an opinion. For convenience we may commence with the two short, dark races, the Iberians and the Ligurians, with whom the difficulty is least.

#### § 4. *The Basques.*

The singular Basque or Euskarian language, spoken on both slopes of the Pyrenees, forms a sort of linguistic island in the great Aryan ocean. It must represent the speech of one of the neolithic races,

either that of the dolichocephalic Iberians, or that of the brachycephalic people whom we call Auvergnats or Ligurians.

Anthropology throws some light on this question. It is now known that the Basques are not all of one type, as was supposed by Retzius and the early anthropologists, who were only acquainted with the skulls of the French Basques. Broca has now shown that the Spanish Basques are largely dolichocephalic. The mean index of the people of Zarous in Guipuzcoa is 77.62. Of the French Basques a considerable proportion (37 per cent.) are brachycephalic, with indices from 80 to 83. The mean index obtained from the measurements of fifty-seven skulls of French Basques from an old graveyard at St. Jean de l'Luz is 80.25. The skull shape of the French Basques is therefore intermediate between that of the Auvergnats on the north, and that of the Spanish Basques on the south.

It is plain that the Basques can no longer be regarded as an unmixed race, and we conclude that the blood of the dolichocephalic or Spanish Basques is mainly that of the dolichocephalic Iberians, with some admixture of Ligurian blood, while the brachycephalic or French Basques are to a great extent the descendants of the brachycephalic Auvergnats.

We have seen that the South of France was, in the early neolithic age, occupied exclusively by the dolichocephalic race. It has been shown that the sepulchral caves and dolmens of the Lozère supply evidence that early in the neolithic period their territory was invaded by the brachycephalic race, which drove them towards the Pyrenees, where the two races intermingled. One race must clearly have acquired the language of the other. The probability

is that the invaders, who were the more powerful and more civilised people, imposed their language on the conquered race, in which case the Basque would represent the language of the Ligurians rather than that of the Iberians. All the available evidence is in favour of the solution.

The attempt of Wilhelm von Humboldt<sup>1</sup> to identify the old Iberian language with the Basque is now generally held to have failed. The highest authority, Van Eys, considers that it is impossible to explain the ancient Iberian by means of Basque. Vinson comes to the same conclusion. He holds that the legends on the Iberian coins are inexplicable from the Basque language, and he considers that they point to the existence in Spain of a race which spoke a wholly different tongue. This tongue belonged probably to the Hamitic family.

We possess some two hundred ancient Numidian inscriptions which exhibit very old forms of the Berber tongue, now spoken by the Towarag and Tamasket tribes and the Kabyles. These inscriptions suffice to prove that the Numidian belonged to the Hamitic family of speech, and that it is distantly allied to the Nubian and the old Egyptian.<sup>2</sup> With this Berber or Hamitic family of speech the Basque has no recognisable affinity. Many philologists of repute have come to the conclusion that Basque must ultimately be classed with the Finnic group of languages. Professor Sayce, for instance, considers that "Basque is probably to be added" to the Ural-Altaic family.<sup>3</sup>

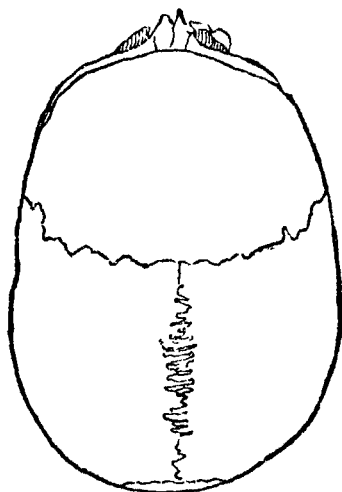
<sup>1</sup> Von Humboldt, *Prüfung der Untersuchungen über die Urbewohner Hispaniens*. (Berlin, 1821.)

<sup>2</sup> Sayce, *Science of Language*, vol. ii. pp. 37, 180.

<sup>3</sup> Sayce, *Principles of Philology*, p. 98.

He says—"With this family I believe that Basque must also be grouped. Prince Lucien Bonaparte, Charencey, and others have shown that this interesting language closely agrees with Ugric in grammar, structure, numerals, and pronouns. Indeed, the more I examine the question the nearer does the relationship appear to be, more especially when the newly-revealed Accadian language of Ancient Babylonia, by far the oldest specimen of the Turanian family that we possess, is brought into use for the purposes of comparison."<sup>1</sup> "In spite of the wide interval in time, space, and social relations, we may still detect several words... which are common to Accadian and Basque."<sup>2</sup>

These philological conclusions are in accord with the anthropological evidence.



SKULL OF A SPANISH BASQUE.

The skulls of the pure Iberian race, such as those which are found in the long barrows of Britain, or the Caveine de l'Homme Mort, are of the same type as those of the Berbers and the Guanches, and bear a considerable resemblance to the skulls of the ancient Egyptians. The skulls of the Spanish Basques present a modified form of this type, the cephalic index having probably

been raised by admixture with the Ligurian invaders.

<sup>1</sup> Sayce, *Principles*, p. 22.

<sup>2</sup> *Ibid.*, p. 108.

<sup>3</sup> Compare with this the Auvergnat skull figured on p. 111, and the Iberian skull from Gibraltar on p. 123.

We have also seen that the skulls of the Auvergnats, with whom the French Basques must be classed, belong to the Finnic or Lapp type, a fact which increases the probability that the Basque speech, whose affinities are with the Finnic group of languages, represents the primitive speech of the ancient brachycephalic inhabitants of Central France.

But at the beginning of the historic period the speech of these people, the true "Celts" of history and ethnology, differed little from the language of the Belgic Gauls, which we usually call Celtic.

Not to speak of the evidence of inscriptions, this is sufficiently established by Glück's examination of the names of Gaulish chieftains and of local names.<sup>1</sup> Thus in Belgic Gaul we find such names as Noviomagus, Lugdunum (Leyden and Laon), Mediolanum, and Noviodunum; while in the part of Gaul inhabited by Cæsar's Celts we find names either absolutely identical or of the same type, as Noviodunum, Lugdunum (Lyon), Mediolanum (Meillan), and Uxellodunum.

This Southern extension of the language of the Belgic Gauls is no matter for surprise, since the sepulchral caves and dolmens of the Marne and the Oise afford evidence that the Northern race gradually extended its domain to the South.

Aryan speech, as we have seen, possesses in a high degree the power of extirpating languages less highly organised. When the tall powerful Belgic Gauls extended their dominion over Central France, they would almost inevitably impose what we call "Celtic" speech upon the feebler brachycephalic Basque-

<sup>1</sup> Glück, *Die bei C. J. Cæsar Vorkommenden Keltischen Namen*. (München, 1857.)

speaking Auvergnats, who ethnologically are entitled to the Celtic name.

If so, we should expect to find that the Ligurians, who ethnologically belong to the same race as the Auvergnats, spoke a language of the Basque, and not of the Celtic, type. We have only one undoubted Ligurian word, *asia*, which, as we learn from Pliny, denoted, in the speech of the Taurini, grain of some kind, probably rye or spelt, and this word has as yet been only explained from Basque sources.<sup>1</sup>

Helbig is of opinion that we have an undoubted Ligurian word in the name of Cimiez, near Nice, which was formerly Cimella, or Cemenelum.<sup>2</sup> The word "Cima," which we have in the name of several Swiss peaks, such as the well-known Cima de Jazi, must have meant a hill. Vestiges of the oldest races are commonly found in the names of mountains, and it is worthy of note that the great mountain mass of Auvergne bears the name of the Cevennes, a corruption of *Kéμμενος ὄρος*, afterwards known as the Cebenna Mons.

The comparison of local names is beset with uncertainties, but it may be noted that certain names in Liguria, such as Iria, Asta, Astura, and Biturgia, are identical with local names in Spain.<sup>3</sup>

Still more notable is Humboldt's failure<sup>4</sup> to discover in Spain, with the exception of names in *briga*, which may be otherwise explained, any names of the ordinary Celtic type which are so common in Gaul. The conspicuous absence of names ending in *dunum*, *magus*, *lanum*, and *dorum*, looks

<sup>1</sup> Diefebach, *Origines Europææ*, p. 235.

<sup>2</sup> Helbig, *Die Italiker in der Poebene*, p. 30.

<sup>3</sup> Humboldt, *Prüfung*, p. III.

<sup>4</sup> *Ibid.*, p. 100.

as if the "Celts" and Celtiberians of Spain did not speak what we call a "Celtic" language.

On the other hand, Celtiberian Spain, which is supposed to have been the district conquered or colonised by the Celts, contains numerous tribe names in *etani*, which is explained as the plural locative suffix in Basque, meaning "those who dwell in" the district designated by the first portion of the name. In Gaul we only find this suffix among the Aquitani, who were the ancestors of the French Basques. That the language spoken by the Aquitani, which must have been an ancestral form of Basque, was actually designated as the "Celtic" speech is indicated by a curious little piece of evidence which may be taken for what it is worth. The French Basques occupy the same territory as the Aquitani of Cæsar, the corner between the Garonne and the Pyrenees. Now Sulpicius Severus, writing in the fourth century A.D., distinguishes between the "Celtic" and "Gallic" speech. A Gaul, he says, speaks *Gallice*, an Aquitanian speaks *Celtice*.<sup>1</sup> Gallic was undoubtedly what we now call "Celtic," while the Aquitani, who lived in a district where "Celtic" has never been spoken, nevertheless spoke what Sulpicius called Celtic, which must be the language which we should call Basque. This would be decisive if it were not for the doubt whether the Aquitania of Sulpicius was co-extensive with the Aquitania of Cæsar, or whether it included the district between the Loire and the Garonne, which was added by Augustus to the older Aquitania for administrative purposes.

It may be as well to sum up briefly the argument set forth in the foregoing pages.

<sup>1</sup> See Perka, *Origines Ariææ*, p. 156.

The tall, fair-haired Gauls were of a wholly different type from the short, dark Auvergnats. It is impossible to believe that the language of both races was originally identical, as it had become in the time of Cæsar. One of these races must have imposed its language on the other. Not only were the Belgic Gauls the conquering people, but their language had been extended to Belgium and to Britain, where no traces of the Liguian race have been discovered. Hence it is most probable that what we call "Celtic" speech was the original speech of the Belgic Gauls, and not of the Auvergnats, the true "Celts" of Broca. Basque must represent either the speech of these true "Celts" or that of the Iberians, as no other neolithic race is found in the Aquitanian region. The race type of the Iberians was that of the Berbers, and their tongue was probably the same—a language of the Hamitic family. Hence we conclude that the language of the "Celts" is now represented by that of the Basques, who, if we may trust Sulpicius Severus, spoke a language which he calls "Celtic."

The Iberians were a feeble race, in a low stage of culture, without cereals or any domesticated animals, and their pottery is of the rudest type. On the coasts of Portugal we find shell mounds resembling the kitchen middens of Denmark, and we discover traces of cannibalism in some of their heaps of refuse. It is not probable that they were able to impose their language on the more highly civilised Liguians. We therefore conclude that the language of the Silurian or Iberian race which occupied Britain, Gaul, and Spain at the beginning of the neolithic age was akin to that of the Hamitic race, to which they belong



anthropologically, its nearest congener being that of the Numidian inscriptions.

Towards the close of the reindeer period a short, dark brachycephalic race of Finnic or Lapp blood, who are the Ligurians of modern ethnologists and the "Celts" of Cæsar, speaking a Euskarian language which is believed to belong remotely to the Ural-Altaic class, made their appearance in Western Europe. They found Gaul occupied by a short, dark dolichocephalic people, Silurians or Iberians, who retreated southwards to the region of the Pyrenees. Here the Ligurians amalgamated with them to some extent, and imposed on them their language. This mixed race is known as Basque or Celtiberian.

Later in the neolithic age a tall, xanthous, brachycephalic race, belonging to the Ugric type, and speaking an Aryan tongue which philologists call Celtic, made their appearance in Belgium, north of the Sambre and the Meuse, and gradually drove the Ligurians before them out of Belgic Gaul. Throughout Central France the Ligurians acquired the Aryan speech of their conquerors, while south of the Garonne they retained their own language, which we know as Basque, but which is called Celtic by Sulpicius and Cæsar. Thus of the three neolithic races of Gaul, it seems most probable that the original speech of the Iberians was an Hamitic language, akin to the Numidian; that of the Ligurians was Euskarian, a Ural-Altaic language; while that of the Gauls was Celtic, an Aryan language.

Hence we conclude that neither of the southern races, the Iberians or the Ligurians, can be identified with the primitive Aryans. It remains now to examine the claims to the Aryan name of the two

northern neolithic races, the Celto-Latin people of the pile dwellings, and the Scandinavian people of the kitchen middens.

### § 5. *The Northern Races.*

If, as seems probable, the speech of the Iberians was Hamitic, and that of the Ligurians was Euskarian, neither of these races can be identified with the primitive Aryans. Two possibilities remain to be discussed. The introducers of Aryan speech must have been either the dolichocephalic Row Grave race, now represented by the Swedes, the Frisians, and the North Germans; or, in the alternative, the brachycephalic round barrow race represented by the Lithuanians, the Slaves, the Umbrians, and the Pelgic Gauls.

The question has been debated with needless acrimony. German scholars, notably Posche, Penka, Hehn, and Lindenschmit, have contended that the physical type of the primitive Aryans was that of the North Germans—a tall, fair, blue-eyed dolichocephalic race. French writers, on the other hand, such as Chavée, De Mortillet, and Ujfalvy, have maintained that the primitive Aryans were brachycephalic, and that the true Aryan type is represented by the Gauls.

The Germans claim the primitive Aryans as typical Germans who Aryanised the French, while the French claim them as typical Frenchmen who Aryanised the Germans. Both parties maintain that their own ancestors were the pure noble race of Aryan conquerors, and that their hereditary foes belonged to a conquered and enslaved race of

aboriginal savages, who received the germs of civilisation from their hereditary superiors. Each party accuses the other of subordinating the results of science to Chauvinistic sentiment.

Thus Posche, in somewhat inflated language, writes:—"The true scientific theory, which uplifts itself, calm and clear, like the summit of Olympus, over the passing storm-clouds of the moment, is that a noble race of fair-haired, blue-eyed people vanquished and subjugated an earlier race of short stature and dark hair. In opposition to this is the new French theory, without scientific foundation, originating in political hatred, which asserts that the primitive Aryans were a short and dark people, who Aryanised the tall, fair race."<sup>1</sup>

M. Chavée, on the other hand, contends that the intellectual superiority lies with the other race. Look, he says, at the beautifully-formed head of the Iranians and Hindus, so intelligent and so well developed. Look at the perfection of those admirable languages, the Sanskrit and the Zend. The Germans have merely defaced and spoilt the beautiful structure of the primitive Aryan speech.

Ujfalvy says "if superiority consists merely in physical energy, enterprise, invasion, conquest, then the fair dolichocephalic race may claim to be the leading race in the world; but if we consider mental qualities, the artistic and the intellectual faculties, then the superiority lies with the brachycephalic race."

De Mortillet also is strong to the same effect. The civilisation of Europe is due, he contends, to the brachycephalic race.<sup>2</sup>

<sup>1</sup> Posche, *Die Arier*, p. 44.

<sup>2</sup> De Mortillet, *Le Préhistorique*, p. 62.

The disputants seem, however, to have forgotten that neither the French nor the Germans, any more than the English or the Americans, can claim to be an unmixed race. North-eastern France, from Normandy to Burgundy, although of Latin speech, is largely of Teutonic blood, while Central and Southern Germany are occupied by brachycephalic races which have acquired Teutonic speech.

The claimants who have the best pretensions to a pure Aryan pedigree are the dolichocephalic Swedes and the brachycephalic Lithuanians, neither of which has played any very prominent part in history. It is rather the orthocephalic people, found alike in Germany, France, England, and the United States, who, having acquired their physical endowments from the one race, and their intellectual gifts from the other, have reached the highest standard of perfection.

The French cannot claim to be descended from the Gauls any more than the Germans can claim to be descended from the Teutons. When Niebuhr, from the pages of Diodorus and Polybius, described the Gauls who invaded Italy, with their "huge bodies, blue eyes, and bristly hair,"<sup>1</sup> he received a letter from France complaining that he had described not Gauls but Germans. In like manner the Teutonic tribes, Alemanni, Suevi, and Franks, who Teutonised Southern Germany, differed altogether from the existing type. In the Row Graves, which are the tombs of these invaders, the mean cephalic index is as low as 71.3. The nobles, descended from these invaders, are still blue-eyed and dolichocephalic, but the burghers and peasants are brachycephalic, with a mean index of 83.5.

<sup>1</sup> Niebuhr, *Lectures on the History of Rome*, p. 262.

In order to determine the affinities of the primitive Aryans we must go back to an earlier time, and compare the Row Grave race, who were unmixed Teutons, dolichocephalic and platycephalic, with the round barrow people, who were pure Celts, brachycephalic and acrocephalic.

The types are so different, and can be traced so far back into the neolithic age, that they cannot be identified. One only can be Aryan by blood, the other must be merely Aryan in speech.

On this question experts differ in opinion, according to their nationality. The problem is difficult, possibly insoluble. No very confident decision can be given, but the arguments on either side, such as they are, may be placed before the reader.

The German writers urge that the dolichocephalic Swedes, whom they claim as the representatives of the primitive Teutons, are the purest race in Europe, and that it is difficult to suppose that they could have acquired a new language without some admixture of blood, whereas Swedish graves, from the neolithic period down to the present day, exhibit precisely the same type of skull. They moreover contend that while the peasantry and middle classes over the greater part of Europe are brachycephalic, the nobles and landed proprietors approximate rather to the Teutonic type. This, they say, is a proof that a brachycephalic autochthonous people was conquered and Aryanised by Teutonic invaders.

It has, however, been already shown<sup>1</sup> that it is not the speech of the conquerors but the speech of the more numerous and more civilised people that usually prevails, and in the case of the Normans,

<sup>1</sup> See p. 210, *supra*.

the Goths, and the Burgundians, Teutonic conquerors have acquired the speech of the more civilised subject races. This argument cannot therefore be considered as conclusive.

Penka has also accumulated a considerable body of evidence, which has already been summarised,<sup>1</sup> to prove that when a Northern race comes under the influence of Southern skies it tends to die out, and he thus accounts for the fact that there is now no trace in Greece or Italy of the tall, fair, blue-eyed Scandinavian type, which he believes was originally that of the Greeks and Romans, as well as of the Persians and Hindus.

Since Penka's theories have met with wide acquiescence in Germany, and have obtained in England the adhesion of such influential scholars as Professor Rendel,<sup>2</sup> Professor Sayce,<sup>3</sup> and Professor Rhys,<sup>4</sup> it is less needful to repeat them at full length than to state the difficulties which must be met, and to examine certain arguments on the other side which, as yet, have hardly received the attention they deserve.

In determining which of the two Northern races has the best claim to represent the primitive Aryans two kinds of evidence have to be taken into account. One is linguistic, the other archæological.

It will be shown in the next chapter that when any race abandons its old language and adopts another, the acquired speech is liable to undergo certain changes, both phonetic and grammatical, owing to the difficulty of pronouncing unaccustomed sounds, and of learning the niceties of an elaborate

<sup>1</sup> See pp. 199-203, *supra*.

<sup>2</sup> Rendel, *The Cradle of the Aryans*, pp. 49, 63.

<sup>3</sup> Sayce, *Report of the British Association for 1887*, p. 890.

<sup>4</sup> Rhys *Race Theories*, p. 4 (*New Princeton Review*, Jan. 1888).

Hence a language which has lost many of the primitive inflexions, and also exhibits extensive phonetic changes, is more likely to be an acquired speech than a language which in these respects has suffered little change.

Judged by this standard the Lithuanian, among European languages, has the best claim to represent the primitive speech. More perfectly even than Greek, far more perfectly than Gothic, it has preserved the original inflexions as well as the original sounds.

The Teutonic languages, on the other hand, have undergone extensive mutilation. They have lost many of the old inflexions which have been preserved in the Slavo-Lettic languages, and more especially in Lithuanian. Gothic has lost the dual, the old ablative, and nearly all the old datives. In conjugation it has lost the aorists, the imperfect, and the future, and has only preserved the present and a very faint trace of the reduplicated perfect. Lithuanian has retained the dual and all the cases, as well as the present and the future; the South Slavonic has retained the aorist and imperfect. In all these points the Slavo-Lettic languages are nearer to the proto-Aryan speech.

The Lithuanian phonology is also the more primitive, as will be seen by comparing the Lithuanian *dalptan* with the Teutonic *delfan*, to delve; *gibanti* with *giban*, to give; *woaxis* with *ask*, an ash; *lomiti* with *lam*; *pulkas* with *folc*; *klente* with *hrind*; *kiausze* with *haus*; *kaistu* with *heito*, *heiz* and *hot*; *gladuku* with *glat*; *tukstantis* with *thusandi* and *thousand*.<sup>1</sup>

<sup>1</sup> See Schmidt, *Verwandtschafts verhältnisse der Indo-Germanischen Sprachen*, pp. 36-45.

If the Teutons are not Aryans by  
 Aryanised, how did they acquire Aryan speech?  
 Geographically they were hemmed in by the Celts  
 and the Lithuanians. The relations between Celtic  
 and Teutonic speech are not so intimate as to make  
 it probable that either could have been derived from  
 the other. But with the Lithuanian it is different.  
 The Lithuanians belong to the great brachycephalic  
 race, the Teutons to the dolichocephalic. The two  
 races are, and as far as we know have always been,  
 in geographical contact, and Teutonic speech is nearer  
 to Lithuanian than to any other Aryan language.  
 According to Penka's theory, the ancestors of the  
 Lithuanians acquired Aryan speech from the ancestors  
 of the Teutons; according to the other theory, the  
 ancestors of the Teutons acquired it from the  
 ancestors of the Lithuanians.

It is difficult to believe that the Teutonic, which  
 has lost so many of the primitive inflexions, which  
 has mutilated so many Lithuanian words, and has  
 added the primitive phonology, can represent the  
 speech from which Lithuanian was derived;  
 there is no such insuperable difficulty in  
 that Teutonic may have been obtained  
 from an older form of Slavo-Lettic speech. More-  
 over, on Penka's hypothesis a still greater difficulty  
 has to be met. It will have to be explained how the  
 speech of the brachycephalic Celts and Umbrians, to  
 say nothing of that of the Greeks, the Armenians, and  
 the Indo-Iranians, was obtained from that of the  
 dolichocephalic Teutons; how a people which in  
 neolithic times was few in numbers, and in a low  
 stage of culture, succeeded in Aryanising so many  
 tribes more numerous and more civilised.



We have now to consider the other department of the evidence—the evidence of archæology and of linguistic palæontology. We have already seen<sup>1</sup> that the general law is that when two races in different stages of culture are in contact the speech of the more cultured is likely to prevail in the struggle for linguistic existence. This rule has a most material bearing on the question. If with Penka we are to believe that the Teutons were by blood the only pure Aryan race, which Aryanised all the rest, their relative culture should be high. But if we go back to the early neolithic period, the time when, if at all, the Teutons must have imparted Aryan speech to the other race, we find that the dolichocephalic people of the Baltic coast were in the lowest grade of savagery, while the brachycephalic races of Central Europe had made no inconsiderable progress in civilisation, and had reached the nomadic pastoral stage.

Coming down to a much later period, we find that at the close of the neolithic age the Teutonic race was the more backward, since their culture words are largely loan-words from the contiguous Slavonic, Lettic and Celtic languages. This is the case even with words referring to agricultural and pastoral life.

As M. d'Arbois de Jubainville and other writers have shown, Celtic, in its fundamental morphological structure, is more closely related to Latin than it is to Teutonic. The relations between Celtic and Teutonic date from a comparatively late period, and are valuable as showing the relative civilisation which had been attained by both peoples. Several Celtic

<sup>1</sup> See p. 210, *supra*.

loan-words which have found their way into Teutonic relate to matters of civil and military administration. They can hardly be later than the time of the Gaulish empire founded by Ambigatos in the sixth century B.C. We gather from them that at this, or some earlier period, the culture and political organisation of the Teutons was inferior to that of the Celts, and that the Teutons must have been subjected to Celtic rule. It would seem from the linguistic evidence that the Teutons got from their Celtic and Lithuanian neighbours their first knowledge of agriculture and metals, of many weapons and articles of food and clothing, as well as the most elementary, social, religious, and political conceptions, the words for nation, people, king and magistrate being, for instance, loan-words from Celtic or Lithuanian.

The hypothetical Aryanisation of Europe by Teutonic conquerors which Penka's theory demands must be referred to a very remote period, long before the rudiments of civilisation had been imparted to the Teutons by contact with the more civilised Celts. It is difficult to suppose that the Teutons, several millenniums before they had acquired the conception of sovereignty, of a nation, of an army, or of a state, could have Aryanised by conquest the ancestors of peoples so much more advanced in social organisation and the arts of life as the Indians and the Iranians, or the Homeric Greeks and the people of Mycenæ and Tiryns.

These hypothetical Teutonic conquests must have taken place very early in the neolithic age, or how can we explain the Aryan speech of the Celts and Umbrians, who erected Stonehenge and Avebury, and

constructed the lake dwellings in Southern Germany, Switzerland, and Italy.

We must inquire whether at so remote a time the dolichocephalic people of the Baltic coasts had arrived at a stage of civilisation which would make it probable that they could have conquered and Aryanised all the brachycephalic Southern races.

We learn from the science of linguistic palæontology that the undivided Aryans were a neolithic people who had reached the pastoral stage, and may have practised some rude form of sporadic agriculture. It is certain that they had domesticated the ox, and probably the sheep, following their herds in waggons, and constructing huts with roofs and doors, but they were probably unacquainted with the art of catching fish, which they did not habitually use for food.

With this linguistic evidence as to the grade of civilisation attained by the undivided Aryans, we may compare the archæological evidence as to the civilisation of the neolithic ancestors of the Teutons and the Celts.

It has already been shown that the neolithic people of the shell mounds of Sweden and Denmark represent the ancestors of the Scandinavians and Teutons, while the neolithic people of the pile dwellings of Southern Germany, Switzerland, and Northern Italy are to be identified with the brachycephalic ancestors of the Celto-Latin race.

At the earliest period to which our knowledge extends the valley of the Danube was occupied by dolichocephalic savages of the Canstadt race, who sheltered themselves in caves. They were replaced, in the early neolithic age, by the brachycephalic people whose remains are found in the

mound graves of this region, and who are believed to belong to the same race as the round barrow people of Britain. To this race the pile dwellings must be assigned. In the peat bogs and lakes of Carniola, Austria, Bavaria, Wurtemberg, and Baden, we find the remains of pile dwellings which are the prototypes of the later pile dwellings of Switzerland and Northern Italy, and which to all appearance were constructed by races essentially the same, who extended eastward to Dacia and Thrace. According to Herodotus, there were pile dwellings in Lake Prasias, in Thrace. The Dacians were an Aryan people akin both to Thracians and Celts, and a representation of a Dacian pile dwelling may be seen on Trajan's column at Rome.<sup>1</sup> Remains of pile dwellings, belonging to the neolithic age, have also been found in the Lithuanian region. The practice of erecting pile dwellings seems therefore to have been common to the Aryan-speaking peoples of Central Europe.

One of the oldest pile dwellings hitherto discovered, coeval it is believed with the Danish shell mounds,<sup>2</sup> has been disinterred from a peat moss at Schussenried, on the Feder See, in Wurtemberg. The stage of culture here disclosed is precisely that which linguistic archæology proclaims to have been possessed by the primitive Aryans. The people lived mainly by the chase. The bones of the stag are more plentiful than those of any other animal, but those of the wild boar are common. The dog, the ox, and the sheep had been domesticated, but no bones of the goat or of the horse have as yet been found. The implements were

<sup>1</sup> Helbig, *Die Italiker in der Poebene*, p. 56.

<sup>2</sup> Keller, *Lake Dwellings*, vol. i p. 589.

of stone, horn, and bone. Mealing stones were found, and charred wheat, but cereals are less abundant than stores of hazel nuts, beech mast, and acorns. Linseed was found, but no linen, the only fabric being a bit of rope made of twisted bast. It is to be noted that no fishing implements of any kind were discovered; there were a few vertebrae of a pike, but the extreme rarity of fish bones is remarkable.

Remains of a somewhat later settlement exist in the Lake of Starnberg, in Bavaria. Here the bones of the dog, the ox, the sheep, and the goat are numerous, together with hazel nuts and barley.

It will be noticed that the civilisation disclosed in these settlements, and in some similar ones on the northern shore of the Lake of Constance, agrees very remarkably with that of the primitive Aryans.

Older probably, if we may judge from the absence of cereals, is the very ancient lake dwelling which has been disinterred from the peat bog on Laibach Moor, in Carniola, about fifty miles north-east of Trieste.<sup>1</sup> That this region was occupied by a Celtic-speaking people is indicated by the fact that the moor is intersected by a river which bears the common Celtic name of the Isca, which was also the ancient name of the Devonshire Exe and the Monmouthshire Uxe. The inhabitants of this settlement were in the pastoral stage; they possessed cows, sheep, and goats, but lived principally by fishing and the chase, their food consisting chiefly of the flesh of the stag and the wild boar. They cultivated no cereals, but laid up stores of hazel nuts and water chestnuts (*Trapa natans*), which they pounded in stone mortars. They were in the neolithic stage, the implements are chiefly of stags' horn,

<sup>1</sup> Keller, *Lake Dwellings*, vol. i. pp. 506-618.

the stone implements are rude, not superior to those of Denmark. They were wholly ignorant of agriculture ; neither grain, flax, nor linen, which are common in the Swiss settlements, have been found. The only woven fabric yet discovered was a piece of bast matting, manufactured from the bark of some tree.

The Laibach settlement was not abandoned till the age of metal had begun, a store of copper or bronze implements having been discovered on one spot—a fact which connects the settlement with the historical occupation of this region by the Latovici, who, according to Zeuss, were of Celtic speech.<sup>1</sup>

By this route, through Camiola, which forms the easiest passage across the Alps, the Umbrians, the near congeners of the Celts, may have penetrated into Italy. The other route, by the Brenner, was occupied by the Rhatians, who were probably of Ligurian race.

The Celts of the British round barrows and of the Belgian caves were in much the same grade of civilisation as the Celts of the earlier pile dwellings.<sup>2</sup> The round barrows of the stone age were the sepulchres of a pastoral people, who had domesticated the ox, the sheep, the goat, and the pig.<sup>3</sup> Though no remains of corn have been discovered, the mealing stones, which are not uncommon, are believed to prove that they used cereals of some description.<sup>4</sup> In all essential points the civilisation of the neolithic Celts of Britain was identical with that of the undivided Aryans as disclosed by linguistic archæology.<sup>\*</sup>

<sup>1</sup> Zeuss, *Die Deutschen*, p. 257.

<sup>2</sup> Greenwell, *British Barrows*, p. 114.

<sup>3</sup> *Ibid.*, pp. 168, 130, 132.

<sup>4</sup> *Ibid.*, p. 114.

We now turn to the people of the Danish shell mounds, who belonged to the tall dolichocephalic type now represented by the North Germans and the Swedes. This type has been so confidently identified by recent German writers—Lindenschmit, Penka, and Posche—with that of the primitive Aryans, that the question of the grade of civilisation which they had attained has become an important factor in the discussion as to the ethnic affinities of the Aryans.

The vast mounds called *Kjakkemøddings*, which line portions of the Danish and Swedish coasts, have already been described.<sup>1</sup> They are manifestly the refuse accumulated during long ages by a race of savages. They are composed chiefly of the shells of oysters and other mollusks, but contain also numerous bones of wild animals, of birds, and of fish. Implements of stone are numerous; they are mostly rude, but in some instances carefully worked. Bone pins and implements of horn are found, but pottery, so abundant even in the oldest lake dwellings, is extremely rare. The rudeness of the stone implements and the rarity of pottery show that during the immense period required for the accumulation of these mounds the people who formed them had made little progress in the arts of life.

We now apply to these mounds the same linguistic tests which have been applied to the lake dwellings. They contain bones of the stag, the beaver, the bear, the otter, the hedgehog, the lynx, the fox, and the wolf, all of which, according to Schrader's linguistic investigations, were known to the primitive Aryans. This, however, is not decisive, since the bones of the horse, the hare, and the squirrel, animals also known

<sup>1</sup> See p. 61, *sup.* a.

to the undivided Aryans, are absent. Still more important is the absence of the bones of animals which, on linguistic grounds, are believed to have been domesticated before the separation of the Aryans. There are no remains of the goat, the sheep, or even of the ox, but only a few bones of the urus, which doubtless belonged to the wild animal, slain in the chase. The absence of the bones of the reindeer, which are found in the caves of the brachycephalic people of the Lesse, is an evidence of the comparatively recent date of the kitchen middens, and may also indicate that the Lapps had already retired farther to the North.

The only animal that had been domesticated was the dog, who was occasionally eaten when other food was scarce. The domestication of the dog has been established by Professor Steenstrup, who, as we have already seen, found by experiment that certain bones of birds, and certain portions of the bones of quadrupeds, which are invariably absent from the refuse heaps, are precisely those which are eaten by dogs, while those bones which do occur are those which dogs habitually reject.<sup>1</sup>

Now, the evidence of the Stængenæs skull identifies the kitchen midden people with the Scandinavian race, while the earlier pile dwellings are believed to be as old as some of the kitchen middens. The stage of civilisation disclosed by the earlier pile dwellings agrees with that which on linguistic grounds we must attribute to the undivided Aryans, while the civilisation of the kitchen middens was far ruder; not higher than that of the Fuegians or of the Digger Indians of Oregon.

<sup>1</sup> Lubbock, *Prehistoric Times*, p. 240; and see p. 130, *supra*.



Virchow, Broca, and Calori agree that the brachycephalic or "Turanian" skull is a higher form than the dolichocephalic. The most degraded of existing races, such as the Australians, Tasmanians, Papuas, Veddahs, Negroes, Hottentots, and Bosjemen, as well as the aboriginal forest tribes of India, are typically dolichocephalic; while the Burmese, the Chinese, the Japanese, and the nations of Central Europe are typically brachycephalic. The fact that the Accadians, who belonged to the Turanian race, had, some 7000 years ago, attained a high stage of culture, from which the civilisation of the Semites was derived, is a fact which makes it more probable that the language and civilisation of Europe was derived from the brachycephalic rather than from the dolichocephalic race.

There was an essential difference in the mode of life of the two races. The Aryans, before the linguistic separation, were a pastoral people, who had invented the ox-waggon, and had therefore certainly domesticated the ox, but were unacquainted with the art of fishing, since the words for the net, the line, the hook, and other fishing implements, differ in most of the Aryan languages; while fish-bones and hooks are absent from the older pile dwellings in Germany and Italy. The kitchen midden people, on the other hand, had not domesticated the ox, but subsisted chiefly on oysters, mussels, cockles, and periwinkles, varied by the products of the chase. They were, however, very skilful fishers, as the bones of the herring, the dorse, the dab, and the eel are extremely numerous in the shell mounds. If the Aryans are descended from the kitchen midden people, it is difficult to understand how they should have lost the

taste for fish, or have relinquished their chief art—that of the fisherman.

It is not less difficult to believe that the repulsive savage of the kitchen middens, with his narrow brow, his retreating forehead, his low skull, his prognathous jaw, his prominent orbital ridges, and his animal propensities so clearly indicated by the occipital development, a mere nomad hunter, without fixed abode, and making use of no regular sepulchres, could have been the ancestor of the noble Aryan race. It is easier to believe that the Aryan civilisation originated with the broad-headed race of Central Europe, which possessed the skill to construct, with rude stone tools, the pile dwellings of Switzerland and Italy.

It may be urged that the two civilisations were not synchronous, and that the accumulation of the shell mounds ceased long before the earliest of the pile dwellings were erected. This, however, does not seem to have been the case. The two periods are believed to have overlapped for some two or three thousand years, while the types of the flint implements found in the lake dwellings at Schussenried are thought to be more archaic than some of those from the kitchen middens.<sup>1</sup> Moreover, there are reasons for believing that the mode of life of the shell mound people lasted down to the historic period. Virchow, as we have seen,<sup>2</sup> claims to have discovered the descendants of the ancient Frisians in the platycephalic inhabitants of certain islands in the Zuider Zee, whose skulls are of the low 'Neanderthal type. It must be the inhabitants of these islands who are

<sup>1</sup> Kellier, *Lake Dwellings*, vol. i. pp. 584, 589.

<sup>2</sup> See Chapter ii., section 6.

described by Cæsar as the fierce barbarians who lived at the mouth of the Rhine, and subsisted on fish and the eggs of birds.<sup>1</sup>

If these islanders were, as Virchow maintains, the ancestors of the Frisians, whose language preserves an archaic form of Teutonic speech, we must believe that they were an isolated survival of the pure Teutonic race. In their skull form they agree more nearly with the Swedes than with any other European race; while their manner of life in Cæsar's time corresponds to that of the people of the kitchen middens, whose skulls are also of the dolichocephalic Swedish type. But if in Cæsar's time these fish-eating Frisian coast tribes were still mere savages, it is hardly possible to identify them with the primitive fish-loathing Aryans, who, before the linguistic separation, had reached the pastoral stage, had domesticated the ox, if not also the sheep; and who had invented the ox-waggon, in which they travelled as their herds moved in search of pasture.

We have already seen that when two races are in contact the probability is that the speech of the most cultured will prevail. It is an easier hypothesis to suppose that the dolichocephalic savages of the Baltic coast acquired Aryan speech from their brachycephalic neighbours, the Lithuanians, than to suppose, with Penka, that they succeeded in some remote age in Aryanising the Hindus, the Romans, and the Greeks.

<sup>1</sup> Describing the Rhine, he says:—"Ubi Oceano appropinquat, in plures diffluit partes, multis ingentibusque insulis effectis, quarum pars magna a feris barbarisque nationibus incolitur (ex quibus sunt, qui piscibus atque ovis avium vivere existimantur), multisque capitibus in Oceanum influit."—Cæsar, *De Bello Gallico*, iv. 17.

Physically the Teutonic race is taller, larger-limbed, and more powerful than any other. The Swedes, their purest representatives, are the tallest race in Europe, averaging 5 feet 7½ inches in height. The Stængenæs man reached 5 feet 10 inches. The Scandinavian skeleton found at Aspatria in Cumberland must have been 7 feet in stature. Sidonius Apollinaris also describes the gigantic Burgundians as 7 feet high. But the skull is of a low type. The index of the Engis skull is 70.52, of the Hohberg type, which represents the Burgundian conquerors of Switzerland, 70.7, of the Row Grave type, 71.3; while the descendants of the Frisians have a lower cranial vault than any other European race.

The pure Teuton is phlegmatic in temperament, and somewhat dull of intellect; but is brave, warlike, and given to field sports and athletic exercises. He is a tall, flaxen-haired, large-limbed giant, fat and stupid, like the Goths and Burgundians whom the Roman provincials regarded with fear, mingled with contempt.

It is a result of Teutonic conquest that the landed gentry of Europe are largely descended from this race—Goths, Lombards, Normans, Franks, Saxons, Angles—and they preserve with singular persistency the physical characteristics and the mode of life of their remote ancestors. It is, as an acute writer has remarked, “a strange result of the wealth and intelligence of the modern world to give the upper classes the pursuits of the savage, without the necessity which is the excuse for them. They are barbarians armed with the complicated appliances of civilisation.” Their greatest glory is to have killed a large quantity of big wild beasts.” “Field sports

are good for keeping up the energy of semi-barbarous aristocracies."<sup>1</sup>

Matthew Arnold's fair-haired "young barbarians," cricketers, deer-stalkers, or fox-hunters, but destitute of intellectual tastes, are noble types of the Teutonic race, but they are not the "children of light." Owing to their strength, bravery, and stature, the Teutons have been a great conquering race, but the Goths and their kinsmen had not the genius to rule the kingdoms they had won. The Saxons, the Angles, the Goths, developed no high civilisation of their own. The Scandinavians and Frisians have little intellectual culture. The genius of Germany comes from the other race, to which Luther and Goethe both belonged. "Philippus Zachdarm, Zachdarmi Comes, qui quinquies mille perdrices plumbo confecit," was a representative of one race, Teufelsdröckh and his biographer of the other.

The qualities which have enabled the Teutonic races to play their wonderful part in the history of Europe are well displayed in the twelve valiant sons of Tancred of Hauteville—William Iron Arm, Robert Guiscard, Roger, and the rest—who carved out kingdoms for themselves in Apulia and Sicily. They were a vigorous race, large of limb, stout of heart, tenacious in will, with abundant physical energy, taking their pleasure in drinking and hunting. They had broad shoulders, fair hair, and blue eyes, as we see from Anna Comnena's portrait of the son of Robert Guiscard, Bohemond, Prince of Tarentum, who was "a cubit taller than the tallest man known, fair, with blue eyes, his cheeks tinted with vermillion."

The energy, the self-will, the fondness for adventure,

<sup>1</sup> Hamerton, *French and English*, pp. 61, 265.

and the love of combat which have enabled the Teutonic peoples to extend their rule over the world, come from the dolichocephalic race ; but the intellect and genius of Europe, the great writers, and more especially the men of science, belong rather to the brachycephalic race which has so profoundly modified the physical type in Germany, France, Italy, and England.

Posche and Penka<sup>1</sup> have drawn attention to the curious fact that though the lines of linguistic demarcation in Europe have small relation to race, the religious division adheres very closely to the racial frontiers. The reason they assign is that religion depends more intimately than language on the fundamental ethical character of the race. No European nation is Mahomedan, or even any Aryan nation, except to some extent the Persians, and in Persia we find only the Shiah sect, which has altogether transformed the innermost tenets of Islam. The Shiah is essentially mystic, and they have found themselves able to read into the Koran doctrines which approximate very curiously to those of Swedenborg, Tauler, and other Teutonic mystics.

The Jews speak everywhere the language of the land in which they sojourn, but everywhere they have clung tenaciously to the doctrines of their Oriental faith. And so the Christianity of the New Testament, with its peacefulness, its submissiveness, and its resignation, in which it agrees with Islam and other Oriental faiths, was contrary to the inner genius of the Teutonic race, with its inde-

<sup>1</sup> The following pages are little more than a summary of the somewhat speculative remarks of these writers. See Posche, *Die Arier*, p. 210 ; Penka, *Origines Aryanæ*, p. 115.

pendence, its self-will, its free life, and its contentiousness. Hence the Teutonic races, in which these Aryan characteristics are the most strongly developed, were the last to submit to the yoke of the Gospel. It was only when the Goths had settled within the bounds of the Roman empire that they were converted, and when they were converted it was to a rationalistic form of Christianity; it was Arianism and not Catholicism which they were willing to accept.

And now that Christianity has spread over Europe, it is divided into two opposed camps—the Catholic and the Protestant, the Church of Authority and the Church of Reason, the line of division coinciding very closely with the line which separates the two great races of Aryan speech. The dolichocephalic Teutonic race is Protestant, the brachycephalic Celto-Slavic race is either Roman Catholic or Greek Orthodox. In the first, individualism, wilfulness, self-reliance, independence, are strongly developed; the second is submissive to authority and conservative in instincts. To the Teutonic races Latin Christianity was never congenial, and they have now converted it into something very different from what it was at first, or from what it became in the hands of Latin and Greek doctors. The Teutonic peoples are averse to sacerdotalism, and have shaken off priestly guidance and developed individualism. Protestantism was a revolt against a religion imposed by the South upon the North, but which had never been congenial to the Northern mind. The German princes, who were of purer Teutonic blood than their subjects, were the leaders of the ecclesiastical revolt. Scandinavia is more purely Teutonic than Germany,

and Scandinavia is Protestant to the backbone. The Lowland Scotch, who are more purely Teutonic than the English, have given the freest development to the genius of Protestantism. Those Scotch clans which have clung to the old faith have the smallest admixture of Teutonic blood. Ulster, the most Teutonic province of Ireland, is the most firmly Protestant. The case of the Belgians and the Dutch is very striking. The line of religious division became the line of political separation, and is conterminous with the two racial provinces. The mean cephalic index of the Dutch is 75.3, which is nearly that of the Swedes and the North Germans; the mean index of the Belgians is 79, which is that of the Parisians. The Burgundian Cantons of Switzerland, which possess the largest proportion of Teutonic blood, are Protestant, while the brachycephalic Cantons in the East and South are the stronghold of Catholicism. South Germany, which is brachycephalic, is Catholic; North Germany, which is dolichocephalic, is Protestant. Hanover, which is Protestant, has a considerably lower index than Cologne, which is Catholic. The Thirty Years' War was a war of race as well as of religion, and the peace of Westphalia drew the line of religious demarcation with tolerable precision along the ethnic frontier.

Wherever the Teutonic blood is purest—in North Germany, Sweden, Norway, Iceland, Ulster, the Orkneys, the Lothians, Yorkshire, East Anglia—Protestantism found easy entrance, and has retained its hold, often in some exaggerated form. In Bohemia, France, Belgium, Alsace, it has been trodden out. In Galway and Kerry it has no footing. The Welsh and the Cornishmen, who



became Protestants by political accident, have transformed Protestantism into an emotional religion, which has inner affinities with the emotional faith of Ireland and Italy. Even now Protestantism gains no converts in the South of Europe, or Catholicism in the North. Roman Catholicism, or the cognate creed of the Greek and Russian orthodox churches, is dominant in all those lands where the brachycephalic race prevails; Protestantism is confined to the dolichocephalic Teutonic region. The neighbourhood of Toulouse, which was the headquarters of the Albigenses, is more dolichocephalic than any other part of Southern France, and Toulouse was the Visigothic capital. In no city of France were the Huguenots so numerous as at Nîmes, another stronghold of the Visigoths, and Nîmes is still largely Protestant in creed. England, which is orthocephalic, is neither Catholic nor Protestant, but Anglican. It is not to be supposed, however, that religious belief is a function of the shape of the skull, but that the shape of the skull is one of the surest indications of race.

Those who are curious in such matters may refer to Cæsar's contrast between the religions of the Germans and of the Gauls.<sup>1</sup> The same essential contrast in the religious genius of the two races prevailed then as it does now. The Gauls had a Pope. "His autem omnibus Druidibus præest unus, qui summam inter eos habet auctoritatem." The priests are judges in public and private concerns, and disobedience to their decrees is followed by an interdict. "Si qui aut privatus aut publicus eorum decreto non stetit, sacrificiis interdicunt. Hæc poena apud eos est

<sup>1</sup> Cæsar, *B. G.*, Bk. vi., cap. 13 and 21.

gravissima. Quibus ita est interdictum, ii numero impiorum ac sceleratorum habentur; iis omnes decedunt; aditum eorum sermonemque defugiunt: ne quid ex contagione incommodi accipiant; neque iis petentibus jus redditur, neque honos ullus communicatur."

This might be taken as a picture of a Roman interdict in the Middle Ages, or even of modern boycotting in Ireland.

With this we may compare the picture of the religion of the Germans—"Germani multum ab hac consuetudine (Gallorum) differunt; nam neque Druides habent, qui rebus divinis præsint, neque sacrificiis student."

## CHAPTER V.

### THE EVOLUTION OF ARYAN SPEECH.

#### § 1. *The Aryan Languages.*

FORTY years ago it was believed that relationship of language implied relationship of blood, and it was the fashion to talk of the Aryan family and the Aryan race.<sup>1</sup> The pendulum then swung in the opposite direction, and Oppert lays it down that "there are Aryan languages, but there is no Aryan race." It may be questioned whether the reaction has not gone too far. It may be admitted that the word "Aryan" should be primarily regarded as a linguistic rather than as an ethnic term, and that though the Aryan languages may be traced to a common source, the speakers of those languages have for the most part no community of blood. But since Aryan speech must have originated with some one of the races among which it now prevails, it is legitimate to inquire by which of them it was probably evolved.

The undivided Aryans doubtless roamed as nomad hunters and herdsmen over a considerable territory, gradually multiplying in number and incorporating other tribes. The modifications of the primitive

<sup>1</sup> See p. 3, *supra*.

speech are believed to be largely due to the acquirement of Aryan speech by these non-Aryan races.

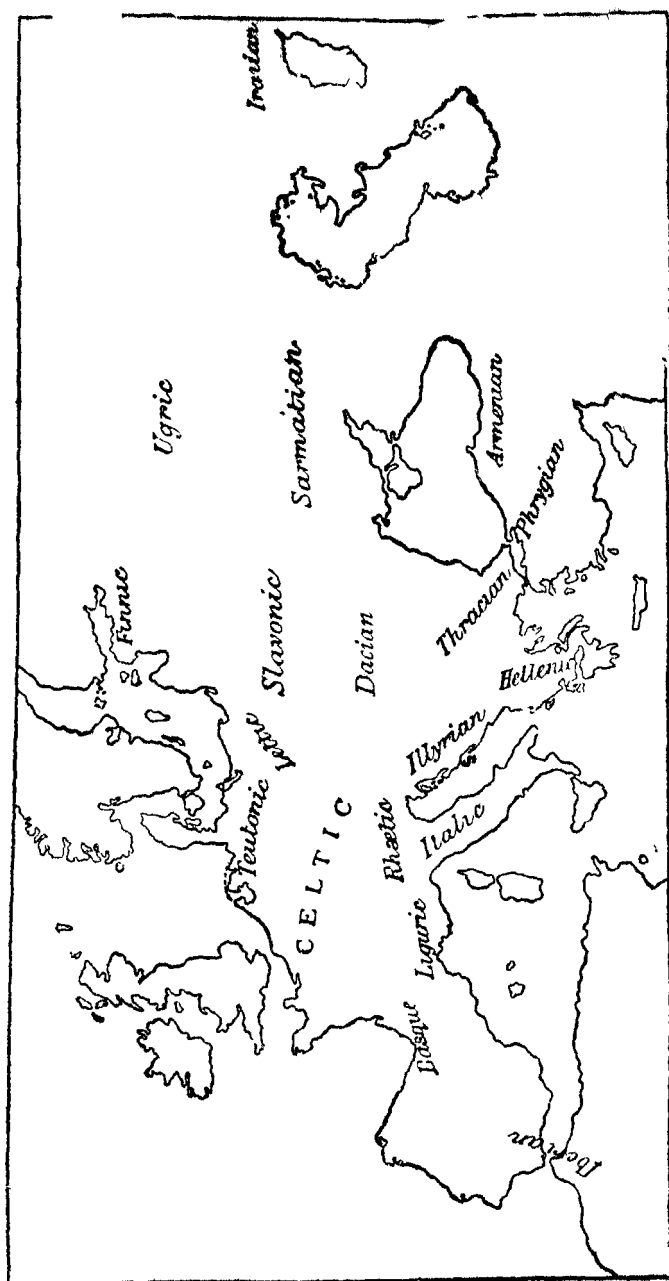
From anthropological and archæological considerations we have seen that of the four neolithic races of Europe two must be excluded from any claim to represent the primitive Aryans, and that of the remaining two the balance of evidence inclines in favour of the brachycephalic race of Central Europe. The linguistic evidence has now to be taken into account, and we have to consider the mutual relations of the Aryan languages, to ask how they became differentiated, how the primitive Aryan speech could have been evolved, and whether it could have been the speech of that race which, on other grounds, seems to have the best claim to represent the primitive Aryan stock.

There are nine existing families of Aryan speech—the Indian, the Iranian, the Armenian, the Hellenic, the Italic, the Celtic, the Teutonic, the Lithuanian or Lettic, and the Slavic. Besides these there are several which have become extinct, such as the Phrygian, the Dacian, and the Thracian.

Some of the more closely-related families may be grouped together, giving six families instead of nine—the Indo-Iranian, the Armenian, the Hellenic, the Celto-Italic, the Teutonic, the Letto-Slavic

Zend and Sanskrit are so closely allied that we may postulate the existence of a common mother-tongue for both, which, for convenience, we may call the Indo-Iranian. In like manner, Lithuanian is closely related to Slavonic on the one hand, and less closely to Teutonic on the other.

The old traditions of classical philology, dating from a time when only two ancient Aryan literatures were



known, gave rise to a belief that the two classical tongues, Greek and Latin, were sister languages, very closely allied; but this opinion has now given place to the belief that the closest affinities of the Italic languages are with Celtic, and those of Greek with Indo-Iranian and Armenian.

Schmidt catalogues ninety-nine words which occur only in Greek and Indo-Iranian, and one hundred and thirty-two which are found only in Greek and Latin. Some of these, however, are culture words, or the names of animals and plants, which may probably not be primitive. Of more importance is the fact that the augment and the reduplicated aorist are confined to Greek and Indo-Iranian, while they also possess peculiar forms of the infinitive. The names of six Greek deities can be explained from Sanskrit, while only three are common to Greek and Latin.

We have seen<sup>1</sup> that while certain words relating to the pastoral life, and to rudimentary agriculture, are common to Greek and Latin, the names of weapons differ, the Greek names agreeing for the most part with Sanskrit, and the Latin names with Celtic. The relative dates of the linguistic separations are also indicated by the numerals. The undivided Aryans could only count up to a hundred. The word for a thousand is common to Greek and Indo-Iranian, but is not shared by Latin. Latin and Celtic have the same word for a thousand, and so have Lithuanian and German. We conclude, therefore, that the separation of Greek and Latin, and of Latin and Lithuanian, was comparatively early; but that the separation of Latin and Celtic, of Greek and Indo-Iranian, of Lithuanian and German, was comparatively late.

<sup>1</sup> See p. 194, *supra*.

On other grounds it appears that the Italic languages are much more intimately related to Celtic than to Greek. The Umbrians, the northernmost of the Italic peoples, were in geographical contact with the Celts, but must have been separated from the Hellenes by the Illyrians. The Thracian and Dacian languages, which are lost, probably formed links between Greek and Celtic.

Bacmeister,<sup>1</sup> by the aid of local names, has traced the ancient domain of Celtic speech. It included the valleys of the Rhine, the Main, and the upper Danube, together with Belgium, Britain, and portions of Switzerland and France. Celtic territory formed the great central region of Aryan speech. It extended on the east to the frontiers of Dacia, if indeed Dacian was not itself a member of the Celtic group.

Lugdunum, a characteristic Celtic name, is found at Laon, at Leyden on the lower Rhine, at Lyons on the Rhone, and on the upper Garonne at the foot of the Pyrenees. We find Batavodurum at the mouth of the Rhine, and Boiodurum at the junction of the Danube and the Inn.

That Southern Germany, before it was Teutonised by northern conquerors, was occupied by the Celts is proved by the Celtic names in the valley of the Danube and even of the Save.<sup>2</sup> Through Carniola, the great highway by which so many of the invaders of Italy have passed, the Umbrians, a people whose language is intimately related to the Celtic, may have reached the plains of Northern Italy.

<sup>1</sup> Bacmeister, *Allemannischen Wanderungen* (Stuttgart, 1867).

<sup>2</sup> The theory that the Celts extended themselves at a comparatively recent period from Gaul down the valley of the Danube is now very generally abandoned.

Some of the oldest and deepest morphological changes in Aryan speech are those which affect the Celto-Italic languages. Such are the formation of a new passive, a new future, and a new perfect. Hence it is believed that the Celto-Italic languages may have separated from the rest while the other Aryan languages remained united. The Celto-Italic union is less apparent than the Indo-Iranian or the Slavo-Lettic because it dates from an earlier period.

The relations of Celtic with Teutonic are less profound than those with Latin. They affect the culture words rather than the morphological structure, and point to late political supremacy and geographical contact rather than to primitive organic unity.

The relations of the Teutonic family to the Slavo-Lettic are more deep and continuous, as they affect not only the culture words but the grammar. The final separation of the Slaves and Teutons must have been comparatively late. The Slavic and Teutonic languages agree largely in metallurgic terms, but differ in the words relating to weapons, agriculture, and navigation. An intimate connection between Slavo-Lettic and Teutonic is also indicated by the fact that they agree in changing a primitive *bh* to *m* in certain case endings, a change which is not found in the other Aryan languages. On the other hand, a connection between Indo-Iranian and Slavo-Lettic is shown by the fact that in some sixteen words they agree in permuting a primitive *k* to *s*, a change which has not occurred in Teutonic. The Iranian name, *bhaga*, for the supreme deity, is also common to the Slaves and Phrygians, but is not found in either Greek or Latin. Hence the Slavo-Lettic family forms a link between the Iranian



and the Teutonic, while the relations of Greek are with Indo-Iranian on the one hand and with Italic on the other.

It is now generally admitted that the European languages are not less archaic than the Asiatic, due allowance being made for the fact that the literary monuments of Sanskrit reach back to an earlier time than those of the European tongues. 'Zend, as we have it, may date from the sixth century B.C., and Sanskrit from the tenth. But modern Persian preserves less of the primitive Aryan grammar than any other Aryan language except English. It has got rid of declension altogether, and though it has preserved some of the personal suffixes of the verb, it has lost the old tenses. The neo-Hindu languages, which arose out of the Prakrits, or vernacular dialects, about the tenth century A.D., have lost most of the archaic features which distinguish Sanskrit. The neuter gender has disappeared, a new plural and new case endings have been substituted for the old forms, and the inflexions of tense have been replaced by new forms derived from the participles. It cannot be doubted that this destruction of old forms has been accelerated, if not altogether caused, by the acquirement of Aryan speech in India by non-Aryan tribes.

Among the Lithuanians the opposite has been the case. The language has not extended itself, and those who now speak Lithuanian are probably the direct descendants of those who spoke it two or possibly three thousand years ago. Hence there has been less destruction of grammatical forms than in any other existing Aryan language. Alone among existing languages it has preserved the dual and the

old declension. Its phonetic system is inferior only to Sanskrit, and is in some respects even more archaic, despite the fact that the Sanskrit literature is older by nearly 3000 years than the Lithuanic, which dates only from the beginning of the eighteenth century.

On the whole the Latin, Celtic, and Lithuanian have kept most closely to the primitive system of consonants. The Slavonic and Indo-Iranian languages have developed numerous sibilants and fricatives. The primitive Aryan speech had only one sibilant and two nasals, but the Sanskrit has four sibilants and five nasals. The cerebrals or linguals which are peculiar to the Indian languages are believed to be due to early Dravidian influences. It was formerly thought that the primitive Aryan had only one sound for *r* or *l*, but it is now believed that there were two, the European languages in this respect being more primitive than the Asiatic. In like manner, it was formerly considered that the Indian vowel system was more primitive than the European, but the opposite opinion now finds favour with scholars. Greek has preserved the old tenses better than Latin, and retained the dual. Sanskrit has normally replaced by the genitive the old ablative, which is seen in the Latin *senatu-d* and the Oscan *fructu-d*, and which has disappeared from all the other Aryan languages except Zend. Latin, however, has formed three new tenses—the future in *-bo*, the imperfect in *-bam*, and the perfect in *-vi*, which we have in *amabo*, *amabam*, and *amavi*. The Italic languages, like the Celtic and the Lithuanian, have also created a new middle voice, which afterwards became a passive.

In the retention of the old intransitive voice, of the dual, and of ancient tenses and declensions, Greek is more archaic than Latin. The Doric and Æolic dialects are more archaic than classic Greek, doubtless because the Ionian Greeks were less purely Aryan by race. The loss of the digamma and the tendency to Zetacism among the Ionians may be due to an admixture with the pre-Aryan population from which the Dorians were free. Latin, however, was more faithful than Greek to the primitive consonantal system. Thus Latin has kept the primitive guttural which Greek often changes to *p* or *t*. Thus while Latin has *quis* and *quinque*, Greek has *τίς* and *πέντε* or *πέμπε*. Again Latin keeps the initial sibilant which in Greek lapses into an aspirate. Thus Latin has *sex*, *septem*, and *socer*, while Greek has *ἕξ*, *ἑπτά*, and *ἐκκύρος*.

We find the same change of *qv* to *p* in Welsh and Gaulish, but not in Irish or Latin. Thus the Latin *quatuor* is *cethir* in Irish, and *pedwar* in Welsh. The change also occurs in Oscan and Umbrian, as in *pan* for *quam* and *pis* for *quis*. Latin also preserves the old semi-vowel *y* (represented by *j*), which Greek changes into *h* or *z*. Thus we find *jecur* and *jugum* instead of *ἥπαρ* and *ζυγόν*.

Hence, in spite of the greater antiquity of the Sanskrit literature, it would appear that some of the European languages in their morphological structure, and still more in their phonetic system, are as archaic as the Asiatic.

On the whole, the Lettic languages have changed the least, and the Teutonic the most. In almost every respect the languages of the brachycephalic people of Central Europe—Lithuanian, Slavonic,

Celtic, Umbrian, Latin, and Doric Greek—have adhered more closely to the primitive type than Teutonic, the language of the dolichocephalic people of the Baltic coast. Thus it would seem that the Lithuanians have the best claim to represent the primitive Aryan race, as their language exhibits fewer of those phonetic changes, and of those grammatical losses which are consequent on the acquirement of a foreign speech.

## § 2. *Dialect and Language.*

The origin of the Aryan languages is veiled in the remote past, and the causes which gave rise to their divergences must be to a great extent a matter for conjecture. But the unknown can often be explained by the known, and the genesis of modern dialects throws considerable light on the obscure genesis of ancient languages.

The method which Darwin has used to explain the origin of species may be applied to explain the origin of languages. Darwin began by showing the origin of varieties—a process which is now in progress in the case of pigeons, dogs, and rabbits. He then argued that species may have arisen out of varieties, and genera out of species. Species became distinct owing to the survival of the fittest, and the extinction of intermediate varieties in the struggle for existence. The families of Aryan speech are analogous to genera, the individual languages to species, and dialects to varieties. Of the origin of languages, as well as of the origin of species, we have no direct knowledge, while the origin of dialects, like the origin of varieties, is less obscure. Hence the study

of the origin of dialects can hardly fail to throw light on the origin of languages.

The causes which have led to the formation of dialects can be well studied in the case of Germany. The dialects of German have already become so diverse that a Swiss is unintelligible to a Holsteiner, or a Frisian to a Transylvanian; yet they all speak German. All these dialects are connected by a series of intermediate links—Swabian, Bavarian, Austrian, Hessian, Franconian,—affording a continuous passage from one extreme to the other. If these had been extinguished, we should call the speech of Uri, Holstein, and Transylvania separate languages; as it is, we call them dialects of German. No German dialect is altogether isolated. Each agrees in some respects with one or more of its immediate neighbours, and differs in other respects. The Franconian or central dialects, for instance, share certain phonetic peculiarities with the Low German dialects to the north of them, and others with the High German dialects on the south. The East Franconian differs from the Alemannic more than it does from the Bavarian.

A probable cause can be assigned for some of these dialectic variations. We know that within the historic period German has extended its domain over large districts which are not Teutonic by blood. By race the north-west region of German speech is largely Teutonic, the eastern Lithuanian and Slavonic, the central region is Celtic, and the southern is Ligurian. When toward the close of the second century of our era, the Goths, the Burgundians, and other Teutonic tribes began to move southwards to the Danube, and thence into Italy, Gaul, and Spain, the

Slaves pressed forward from the East into the lands which had been left vacant, and took possession of the valleys of the Vistula, the Oder, the Elbe, the Saale, the upper Main, and the middle and lower Danube. In the sixth century, as the local names clearly testify, Oldenburg, Mecklenburg, Saxony, Lauenburg, Pomerania, Silesia, the south-eastern part of Hanover, and the Altmark were peopled by Slaves. Slavonic dialects were spoken at Kiel, Lubeck, Magdeburg, Halle, Berlin, Leipzig, Dresden, Salzburg, and Vienna.

During the last thousand years German speech has been slowly winning back its lost provinces, but without displacement of population. The Slavic tribes have not been expelled, but only Teutonised, and the brachycephalic Slavic type remains.

In like manner Eastern Prussia, which is Lithuanian by blood, was Germanised by the Teutonic Knights. The Celtic lands of central Bavaria, the land of the Boii, as well as Württemberg, Baden, and Hesse, were Germanised in the fourth century by Alemannic, Suevic, and Frankish tribes. In several Swiss cantons the blood is Rhætian but the speech Burgundian. It is therefore no matter for surprise that in all these regions the Low German speech of the conquerors was modified when it was acquired by the native tribes. The primitive Low German dialects are only spoken in those Frisian and Dutch districts which are Teutonic in blood as well as speech.

We may next go a step further and examine the case of the neo-Latin dialects which have now become languages. French, Spanish, and Italian are called languages, but they arose out of dialects; and if the connecting dialects be taken into account, the

sharp line of separation which divides the literary languages disappears in the case of the vernacular speech.

Beginning at the North, and excluding the literary languages, we find a series of mutually intelligible dialects of the *Langue d'oïl*, such as Walloon, Picard, Norman, Burgundian, and Savoyard, which shade off gradually into the dialects of the *Langue d'oc*, such as Limousin, Auvergnat, Gascon, and Provençal; and these again into Catalan, Navarrais, Castilian, and Andalusian, while Savoyard forms the transition to Piedmontese, through which we successively arrive at Lombard, Venetian, Tuscan, Corsican, Neapolitan, Calabrese, Sicilian, and Maltese, Sardinian forming a link between Spanish and Italian.

Owing mainly to political causes, the Tuscan, Castilian, and Parisian dialects have become literary languages, and with the spread of education are rapidly extinguishing the provincial vernaculars. If it had so happened that all the intermediate dialects between Walloon and Sicilian had been extinguished, the speech of France and Italy would be almost as different as Sanskrit and Zend. In the case of the Aryan languages there has been an extensive extinction of intermediate dialects. Instead of an inclined plane of speech, such as that which extends from Uri to Holstein, or from Picardy to Calabria, we have, as it were, a staircase—the inclined plane has been broken up into irregular and disconnected steps.

The process by which the primitive Aryan speech first became extended over a vast region, and then broke up into dialects which became the parents of the Aryan languages, must be analogous to the

process by which in historic times the Latin language, the dialect of one city, Rome, spread over the whole Roman empire, and then broke up into the neo-Latin languages. The neo-Latin languages arose out of the local vernacular dialects, which existed side by side with the literary Latin. These dialects owe their origin to the fact that the Latin of the legionaries was acquired by the conquered races, whose languages were extinguished, but left their mark on the acquired speech.

Thus the Latin speech when acquired by Ligurians gave rise to the *Langue d'oc*, by Gauls to the *Langue d'oïl*, by "Celts" to Castilian, by Iberians to Portuguese, by Celtiberians to Aragonese. In the Alps there are three Ladino dialects which may owe their peculiarities to the influence of the old Rætian language on the acquired Latin speech. Roumanian has doubtless been infected by the speech of the ancient Dacians, among whom the Roman colonists lived. In several cases the vowels have acquired a nasal sound, or have been converted into diphthongs. The article has become a suffix; we have, for instance, *omu-l* (*homo ille*), the man. The fact that this peculiarity is found also in Bulgarian, a Slavonic language, as well as in Albanian, makes it probable that this usage may have been derived from the old Illyrian family of speech to which Dacian probably belonged.

Italian is nearer to Latin than Provençal, and Provençal than French, because there was a smaller foreign element in Italy than in Southern Gaul, and in the south of Gaul than in the north. The change of speech is phonetic rather than lexical, and largely due to the foreign accent with which Latin was



spoken by those to whom it was an acquired language.

The dialect of the Isle de France has become the literary language of France owing to the accident that the Capets came to fix their capital at Paris. Umbrian, Oscan, and Messapian gave place to Latin because the Roman republic subdued the rest of Italy. Because Athens was the intellectual centre of the Hellenic world, because Castilian was spoken at Madrid, because Mahommed was born at Mecca, the local dialects of Attica, Castile, and Mecca have become the literary languages which we call Greek, Spanish, and Arabic.

When a literary language has been established, local dialects tend to disappear. Owing probably to political causes, the dialects which must once have bridged over the gulf between Slavonic and Iranian, Armenian and Greek, Latin and Celtic, have been extinguished. It is thus that we must explain the growth of local dialects into languages, and the extinction of intermediate varieties.

It has often happened that the dialect which has succeeded in the struggle for existence has been one which has incorporated the most numerous foreign elements. Latin was by no means the purest of the Italiq̃ dialects. Attic Greek was further from the primitive Hellenic speech than Doric or Æolic. Literary English is the mixed language of the Danelagh, rather than the pure Saxon speech of Wessex or the pure Anglian of Northumbria, and Frisian is nearer to the primitive Teutonic speech than literary German.

§ 3. *The Lost Aryan Languages.*

The tendency of vernacular dialects to disappear, thus accentuating the distinctions between those which survive, will help to explain the extinction of linguistic families which must formerly have been the missing links between existing languages.

In some cases we are able to form probable conjectures as to the nature of the languages which have been exterminated, and which might have bridged over the gulf between divided families of Aryan speech.

The Armenians are believed to have been an eastern extension of the Phrygians, who themselves have been identified with the Briges of Thrace. Thus of the few Phrygian words which we possess, *Bayaios*, the Phrygian name of the supreme God, is the Iranian *Bhaga*, and the Slavonic *Bogu*.<sup>1</sup> Hence we may conjecture that Phrygian and Thracian might supply some of the missing links between Greek, Armenian, Slavonic, and Iranian. Between the last two Sarmatian and Scythian were probably interposed. There can be little doubt that several Iranian languages have disappeared. The existing Iranian languages—Pushtu, Persian, Kurd, and Baluchi—resemble the patches of Bagshot sand which crown the heights near London, remnants of a once continuous formation now extensively destroyed by denudation.

The ancient Dacian, our only knowledge of which is derived from geographical names and a few plant names preserved by Dioscorides, was conterminous,

<sup>1</sup> Renan, *Langues Sémitiques*, p. 47.

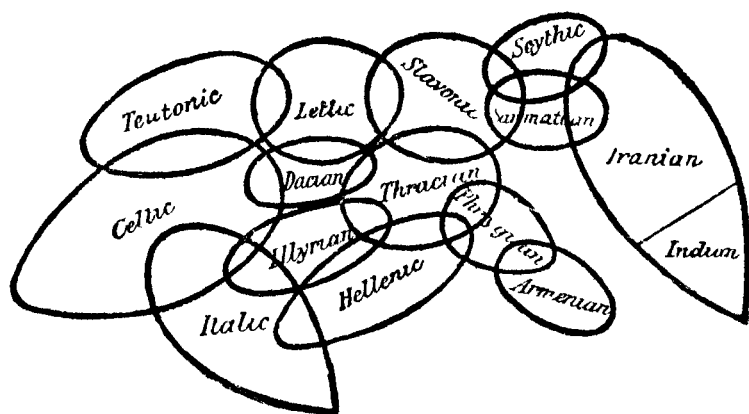
or nearly so, with Celtic, Illyrian, Thracian, and Lithuanian. The Dacian name of the cinquefoil, *propedula*, reminds us of the Celtic *pempedula*. Dacian probably belonged to the Thraco-Illyrian family, and if it had come down to us would doubtless have supplied a valuable link between Celtic, Albanian, Greek, and Lithuanian. Albanian again is the descendant of the old Illyrian. Its linguistic position is doubtful. Hehn thinks it approaches most nearly to Greek, Blau believes it was nearer to Iranian; but as Greek has closer relations with Indo-Iranian than with any other family, the old Illyrian, if it had been known to us, might have helped to bridge over the existing gulf. Illyrian, however, has left its mark in the region which it once occupied. Albanian, as we have seen,<sup>1</sup> like Roumanian and Bulgarian, possesses a definite declension, obtained by means of a suffixed article, a peculiarity probably derived from the old Illyrian, which may have been a link between the Italic, Hellenic, and Lettic languages.

Thus it would appear that three links—the Dacian, Illyrian, and Thracian—are wanting between the European languages. The Dacian and the Thracian might have formed the transition between the Slavonic to the East, the Celtic to the West, and the Greek to the South. Phrygian and Thracian might have bridged the gulf between Armenian and Greek; Sarmatian between Slavonic and Iranian.

The destruction of so many of the central links may help to explain why the northern and southern languages of Europe have so little in common. If

<sup>1</sup> See p. 263, *supra*.

the lost languages had survived, the probable connections between the Aryan languages might be represented by the following diagram.



#### § 4. *The Wave Theory.*

Reason has been shown for believing that the Aryan languages were evolved out of dialects, much in the same way that the Teutonic dialects or the neo-Latin languages have been formed.

The probability that the Aryan languages were evolved, so to speak, *in situ*, has been demonstrated by Schmidt in a tract to which reference has already been made.<sup>1</sup> Schmidt's "wave theory" has, however, so important a bearing on the question of the region where Aryan speech originated that a few pages must be devoted to setting it forth in greater detail.

Relying on certain words and forms which are confined to the European Aryans, Fick and Schleicher had maintained that there was an early and fundamental separation between the European and Asiatic

<sup>1</sup> See p. 35, *supra*

Aryans ; while Grassmann, Pauli, Sonne, and Spiegel contended that Greek was nearer to the Asiatic languages than to Latin or Teutonic ; and Bopp and Pott in like manner urged the close phonological resemblances between the Slavonic and the Indo-Iranian languages.

Schmidt showed that all the Aryan languages formed links in a chain, that Slavonic can be severed neither from German on the one side nor from Iranian on the other, while Greek forms the connecting link between Sanskrit and Latin.

Assuming the close connection of Zend and Sanskrit, which is admitted by all scholars, and regarding them as sister languages, Schmidt showed that the three Baltic families—Teutonic, Lettic, and Slavic—are united by 143 verbal links, all three being joined together by 59 links, Teutonic and Slavic by 50, and Teutonic and Lettic by 34. He then showed that the Indo-Iranian, or Eastern group, is united to the Baltic, or Northern group, by 90 links, of which 61 specially connect it with the Slavo-Lettic family, and only 15 with the Teutonic. While the intimate connection of the three Baltic families is evidenced by 143 links, there are nearly as many, 132, which unite the two Mediterranean families—Italic and Hellenic ; the Asiatic group being united with the Mediterranean by 123 links, of which 99 connect it with the Hellenic family, only 20 with the Italic, and 4 with both. There are also 10 links uniting the Slavo-Lettic, Indo-Iranian, and Hellenic families.

These links are only in the vocabulary, but there are others in the grammatical structure. Thus Teutonic and Slavo-Lettic agree not only in the words for silver, rye, wheat, beer, and thousand, but in the

change of a primitive *bh* to *m* in certain case endings. Lettic and Teutonic replace *d* by *l* in the numerals eleven and twelve. Slavo-Lettic agrees with Indo-Iranian in the designation of the supreme deity, Bogu, in the word for marriage, and in several numerals; and also in two cases of the noun, four forms of the verb, and certain forms of the pronoun. Greek shares one form of the verb (the *futurum exactum*) with Latin, and three with Indo-Iranian. Iranian, Greek, and Slavonic change *s* into *h* between two vowels, and Iranian and Greek replace an initial *s* by *h*. In many culture words and in several grammatical forms Latin is nearer the Northern languages than it is to Greek. The close agreement of Latin with Celtic has already been pointed out. They have both formed a new passive and three new tenses in the same way. The morphological peculiarities of Lithuanian are shared partly with the European, and partly with the Asiatic languages. Thus in the word *melzu*, "I milk," the *e* is European, the *z* Asiatic. In *des-ina-mus*, a dative plural feminine, the vowel of the root is distinctively European, the stem suffix is Indo-Iranian, and the case suffix distinctively Slavo-Teutonic. Hence we see that the great families of Aryan speech, Indo-Iranian, Hellenic, Celto-Italic, Teutonic, and Slavo-Lettic, are indissolubly bound together. Slavo-Lettic can be no more torn from its connection with Teutonic on the one side than from Iranian on the other. Greek is linked with Sanskrit as closely as with Latin.

The way the Aryan languages are interlinked seems to prove that there could have been no successive migrations from Asia.<sup>1</sup> The European

<sup>1</sup> See the diagram on p. 22, *supra*.

languages could only have arisen in Europe, at a time when the Aryan nations occupied much the same relative positions as in the historic period. The Slaves, for instance, must from the first have been between the Iranians and the Germans, and the Greeks between the Latins and the Indo-Iranians. The more remote languages are from each other, geographically, the fewer are the peculiarities which they share in common. Thus Schmidt has shown that the connection of Indo-Iranian with Slavonic is closer than its connection with Teutonic in the proportion of more than 10 to 3. In like manner, the connection of Indo-Iranian with Greek is closer than its connection with Latin in the proportion of nearly 5 to 1.

Schmidt maintains that the Aryan linguistic area was at one time homogeneous. In various portions of this domain he supposes that tendencies to variation arose, and spread like undulations from the centre of disturbance. Thus in one spot a tendency may have arisen to change the primitive guttural tenuis into a sibilant, a tendency which affected the regions occupied by the forefathers of the Indo-Iranians, the Armenians, and the Letto-Slaves, so that the Greek *ἑκατόν*, which is *cét* in old Irish, *centum* in Latin, and *hund-* (= *kunt*) in Gothic, corresponds to *çata-m* in Sanskrit, *sate-m* in Iranian, *suto* in old Slavonic, and *szimtas* in Lithuanian.

At some other time and in some other region we may suppose that there was a tendency to change the primitive *bh* in the case endings *-bhi*, *-bhis*, *-bhya(m)s*, to *m*, a tendency which only extended to the ancestors of the Slaves and Teutons, so that in place of the old Irish *fera-ib* and the Latin *hosti-bus* we get *vulfa-m* in Gothic, and *viluko-mu* in old Slavonic.

At a third point a new passive was formed, which extended to the Celtic and Italic languages, and perhaps more remotely to the Lithuanian, giving us the old Irish *bera-r* and the Latin *fero-r*. In the same way, Celtic and Teutonic were possibly affected by a tendency to denote past time by prefixes. Other changes affected the whole European region and included the Armenian, others merely the Italo-Hellenic domain.<sup>1</sup>

In like manner, we find certain primitive worships extending over contiguous regions. Bhaga, as the name of the supreme deity, is found among Iranians, Slaves, and Phrygians; Woden only among Celts and Teutons; Juno and Vesta are confined to Greeks and Latins; Uranus to Greeks and Indians; Mithra to Indians and Iranians.

These facts are clearly inconsistent with any theory of the migration of the Aryans from Asia to Europe at any time subsequent to the period of linguistic unity. The Aryan languages must have originated when the Aryan nations occupied much the same relative positions which they now hold.

### § 5. *Language and Race.*

The intimate interlinking of the Aryan languages which Schmidt has established proves that the linguistic separation must have taken place at a time when the Aryan races occupied nearly the same relative positions as at the beginning of the historical period. But Schmidt assigned no cause for the local dialectical disturbances or tendencies to variation which he assumed to have taken place.

<sup>1</sup> Schmidt, *Verwandschaftsverhältnisse*, p. 17.



This has been done by the anthropologists—more especially by Penka. We have already seen that Aryan languages are spoken by at least four European races, only one of which could have been Aryan by blood. The others must have exchanged their primitive tongue for Aryan speech. The evidence adduced by Penka and Posche to prove the mutability of speech and the comparative stability of race has also been summarised. We have also seen that the peculiarities which distinguish the neo-Latin languages may be due to the acquirement of Latin speech by Iberians, Gauls, Rhætians, or Dacians. The origin of the dialects of ancient Italy and Greece, and of the modern provincial dialects of France, Spain, Germany, and England, may to some extent be explained in the same way.

We are therefore entitled to extend this principle as a *vera causa*, which may account for the origin of the dialects out of which grew the Aryan families of speech. In other words, we may attribute many, if not all, of the differences which distinguish the Aryan languages to the Aryanisation of non-Aryan races.

In some cases the influence of a foreign idiom can be definitely traced. Thus Spiegel has shown the influence of Semitic grammar on Persian, and of Dravidian grammar on Sanskrit. It is the same with Sanskrit phonology; the linguals and cerebro-dentals, which are so characteristic of Sanskrit, belonged to the tongue of the subjugated Dravidians, and have infected Aryan speech in India, but in no other land.

It is not impossible that some of these phonetic changes may be due to causes purely organic. Duncan Gibb has proved that in extreme types, such

as the negro and the European, there are actual differences in the structure of the larynx, which may suffice to explain why negroes find it is so difficult to utter certain sounds which come easily to ourselves. A negro finds it almost impossible to pronounce the English *th*, which he transforms into *d*, while a Swiss turns it regularly into *z*. A Russian, on the other hand, turns it into *f*, the name Theodore, for instance, becoming Feodor. We have a similar change in Latin, *fumus* answering to *θυμός*, and *rusus* to *ἐρυθρός*.

There are many such phonetic tests of race. On the night of the Sicilian Vespers the French fugitives, with the sword at their throats, were bidden to say the word *ciciri*, and if the *c* was pronounced as *s*, and not like our *ch*—if they said *sisiri* instead of *chichiri*—they were recognised as Frenchmen, and killed.

Again, when the Mamelukes in Egypt exterminated the Arabs of the Said they made them say the word *dakik* (flour), in order to ascertain whether the guttural was pronounced as a *k* or a *g*.

The men of Gilead said *shibboleth*, but the men of Ephraim "could not frame to pronounce it right, and said Sibboleth," and were slain at the fords of Jordan (Judges vii. 6).

The Polynesians are unable to say "Mary," which they change to *Mali*. The Chinese have turned Benares into *Po-lo-nai*, Brahma into *Fan*, and Christ into *Ki-li-ssé-tu*. The Caffres of the Cape pronounce the word "gold" as *igolide*, and "sugar" as *isugile*, while they are able to catch some of the difficult Hottentot clicks which an Englishman finds impossible, even after long practice, *—experto crede*. These

are extreme cases, but we may take it as an axiom that whenever a new language is acquired by foreigners or by subject races there will be certain classes of sounds which will be pronounced with difficulty, and will therefore as a rule be evaded or be inaccurately reproduced. This is especially the case with the soft and aspirated mutes. Thus when Aristophanes brings barbarians on the stage he makes them replace the difficult sounds of the Greek aspirated tennues,  $\phi$ ,  $\theta$ ,  $\chi$ , by the simple tennues  $\pi$ ,  $\tau$ ,  $\kappa$ . The same difficulty was felt by the Goths—Ulphilas represents the Greek  $\chi$  by  $k$ . The Ugians find the soft mutes  $b$ ,  $g$ ,  $d$ , difficult to pronounce, and change them to  $p$ ,  $k$ ,  $t$ . Thus a Magyar speaking German says *pinter* instead of *bruder*, *puk* instead of *beck*, and *pleh* instead of *blech*. Shakespeare's foreigners do the same. Fluellen in "Henry V," and Sir John Evans, the Welsh parson in the "Merry Wives of Windsor," substitute  $p$  for  $b$ ,  $t$  for  $d$ , and  $f$  for  $v$ , and introduce peculiar idioms and a simplified form of English grammar. "Pragging knave, Pistol, which you and yourself and all the world know to be no petter than a fellow, look you now, of no merits: he is come to me, and prings me pread and sault yesterday, look you, and bid me eat my leek." "It is that ferry person for all the 'orld." "The tevil and his tam." Dr. Cuius, the Frenchman, is unable to pronounce our *th* and *w*. Mrs Stowe's negroes, Mr. Black's Highlanders, and Lever's Irishmen encounter similar difficulties, phonetic and grammatical, when they speak English. The pidgin-English of a Chinaman differs from that of a Malay or a Chinook.

It may therefore be regarded as probable that racial tendencies may explain, to some extent, the

differentiation of the Aryan languages. This hypothesis derives support from the existence of similar phonetic tendencies in French and Welsh. Two Aryan languages, Latin and old Celtic, have been modified in similar ways. The French, like the Welsh, find a difficulty in pronouncing the initial double consonants *sc*, *sm*, *sp*, *st*, and in both cases the difficulty is overcome in the same way by prefixing a vowel. The Welsh have made the Latin *schola* into *yscol*, *spiritus* into *yspryd*, and *sutum* into *ysgwyd*. Similarly the Latin *schola* became *escole* in old French and *école* in modern French; *spiritus* became *esprit*; *sperare* became *espérer*; *species* became *espèce* and *épice*; *spada* became *épée* and then *épée*; *scabellum* became *escabeau*; *scala* became *eschelle* and then *échelle*.<sup>1</sup> We find other regular phonetic changes, such as *n* for *m*, *r* for *l*, and *ch* for *c*, as in *rien* from *rem*, *sente* from *semita*, *orme* from *ulmus*, *chef* from *caput*.

In some of these words we see another characteristic common to French and Welsh. This is the Celtic tendency to the mutilation of unaccented syllables. The accented syllable is preserved, the short atonic syllables are suppressed. Thus the Latin words *pórticus*, *áinus*, *septimánā*, *liberáre*, and *régula* have become in modern French *porche*, *âne*, *semaine*, *livrer*, and *regle*, and *semetipsissimūm* has become *même*. In like manner the Latin *benedictio*, *papilio*, and *córpus* became *benditt*, *pabell*, and *corff* in Welsh, and *Caerleon* represents *Castra Legionum*.

In French as well as in Welsh this tendency to contraction has played havoc with the declensions. In Welsh there are hardly any remains of the old

<sup>1</sup> See Max Müller, *Lectures*, vol. ii. pp. 195, 196.

suffixes which indicated case, and prepositions have to be used instead. French has in like manner lost its cases, which have been replaced by the same device as in Welsh, and we have to say *à la femme*, *de la femme*, *pour la femme*. Similar ethnic tendencies produce similar results on language. If we were ignorant of the history of the French language we might probably be led to connect it too closely with Welsh, owing to the superficial resemblance due to these common tendencies.

In certain words the aspirated *tenues* in Greek, Sanskrit, and German answer in Latin, Celtic, and Lithuanian to the corresponding unaspirated *tenues*, and it is found that the Slaves and Roumanians, who also belong to the brachycephalic race, make the same change when they speak German. In South Germany and Switzerland, which were originally Celtic, and where the Celtic skull-type has reasserted itself, we find that the North German *kh*, *th*, and *ph* are frequently changed to *k*, *t*, and *p*.

During the historic period Aryan speech has been extending itself over Finnic territory. Scattered over the valley of the Volga, the linguistic map of Russia<sup>1</sup> shows sporadic settlements of Finns—Mordwins, Wotiaks, and Tscheremiss—who are gradually acquiring Slavonic speech. Moscow in the tenth century lay in Finnic territory; it is now the heart of Russia. In the seventh century the whole valley of the Dvina was Finnic; it is now almost wholly Slave. Over one-half of Russia the blood is probably Finnic, and we may therefore expect to find peculiarities of Ugro-Finnic phonology in Russia. Now Anderson

<sup>1</sup> See the map in the *Suomalais-Ugrilainen Seuran Aikakauskirja*, part i. (Helsingfors, 1886.)

has collected a number of instances of the tendency in the Finno-Ugric languages to change a guttural into a sibilant.<sup>1</sup> It is worthy of note that this change is found also in the Slavo-Lettic languages, which are spoken by races which come nearer than any other Aryans to the physical type of the Ugro-Finns. The same sibilation of gutturals is found also among the Indo-Iranians. This may be explained by the hypothesis of Penka that the Indo-Iranians were originally Aryanised Ugrians. But while the Indo-Iranian languages share in common this peculiarity of the Finno-Ugric phonology, the Italian languages, which are so closely related to the Indian, are entirely free from the characteristic Dravidian sounds, the cerebrals, and linguo-dentals, which are found in no Aryan language except Sanskrit. These peculiarities in the phonology of Sanskrit are indications of its migration from Finno-Ugric to Dravidian territory.

Anderson has also collected instances of the Ugric fondness for inserting a parasitic *j* or *v* after explosives,<sup>2</sup> owing to which *k* becomes *č*, *t*, or *t'*. We may detect similar tendencies among the brachycephalic Aryans, which may explain the equivalence of *kis*, *quis*, *tis*, and *pis*; of *keturi*, *quatuor* and *petuar*, and of *pankan*, *quinque*, and *pimp*.

From the foregoing instances it may be concluded that when the language of conquerors is acquired by subject races the more difficult sounds will be more or less modified. In such a case there will also be a difficulty in learning the more elaborate grammatical inflexions, which are not easy to catch and remember. A destruction of grammatical forms will ensue, new formations will be developed, and the simplified

<sup>1</sup> Anderson, *Studien*, p. 184.

<sup>2</sup> *Ibid.*, p. 185.

grammar will ultimately be adopted by the conquerors in their intercourse with their more numerous subjects.

Of this process we have actual instances. Mr. Kington Oliphant has shown the result of the Danish Conquest in breaking up the old Anglian inflexions. He has shown how, except in the case of a few plurals like *oxen*, the genitive and plural in *es* swallowed up the old genitives and plurals in *an*, and uncoupled the preposition from the verb.<sup>1</sup> The grammar was simplified and made more easy to acquire. Mr. Oliphant has also shown the influence of the Norman Conquest in causing certain French prefixes and suffixes to be tacked on to the English stems.<sup>2</sup>

The Teutonic conquest of Gaul had a similar result. As early as the fifth century four of the six cases of the noun were lost, and replaced by prepositions. A new future was formed from *habeo*. Instead of *amabo* we find *j'aimer-ai*, equivalent to *ego amare habeo*, the pronoun being prefixed to make the new formation intelligible, and then, when this had become familiar, a more emphatic form, *jé vais aimer*, was invented.<sup>3</sup> But even *amabo* was not the old Aryan future. In Umbrian, Oscan, and Celtic the old future in *s* was altogether lost, and there are only faint traces of it in Latin.<sup>4</sup> The new future in *bo* was formed from the auxiliary verb *fuo*; so that *ama-bo* is "I am to love."

In the Slavo-Lettic languages the old perfect has disappeared without a trace, and it is nearly lost in

<sup>1</sup> Oliphant, *Standard English*, pp. 47-52.

<sup>2</sup> *Ibid.*, pp. 241, 247.

<sup>3</sup> Sayce, *Principles*, p. 29.

<sup>4</sup> Schleicher, *Compendium*, pp. 821, 822.

the old Irish.<sup>1</sup> In Bulgarian, a Slavonic language acquired by a Turkic tribe from the conquered Slaves, very few of the old grammatical forms have been retained, while the Servians and Croats, who are more purely Slave in blood, have kept the old aorists and imperfects. But even the Old Church Slavonic, which has kept the aorist and the present, has lost the primitive imperfect and the reduplicated perfect. It has acquired three new sibilants and two nasals, it prefixes a euphonic *y* to words beginning with a vowel, it has lost the final consonants, and has changed the primitive diphthongs into simple vowels. In like manner Bulgarian, Roumanian, and Albanian have acquired, probably from the old Illyrian or Dacian, a suffixed article.

The Celts, when they invaded Britain, found the country in possession of the Silurian race, whose descendants can be traced in Denbighshire and Kerry. Professor Rhys believes that he has detected the influence of this race on the Celtic tongues. He thinks that the incorporation of the pronouns between the Irish verb and its prefixes and the inflexion of the Welsh prepositions, as *erof* "for me," *erot* "for thee," *erddo* "for him," is due to the influence on Celtic speech of a pre-Aryan population.<sup>2</sup>

Hence it seems probable that many of the phonetic and grammatical distinctions which differentiate the Aryan languages are due to the fact, with which the researches of the anthropologists have already made us familiar, that the Aryan-speaking nations belong not to one race but to several, who have in remote times abandoned their primitive speech for that of Aryan conquerors.

<sup>1</sup> Schleicher, *Compendium*, p. 746.      Penka, *Origines Ariace*, p. 212.



### § 6. *The Genesis of Aryan Speech.*

Many years ago Professor Max Müller affirmed his belief that "in the grammar of the Aryan and Semitic languages we can discover the stamp of one powerful mind, once impressed on the floating materials of speech, at the very beginning of their growth, and never to be obliterated again in the course of centuries."<sup>1</sup>

The doctrine of evolution, which has so profoundly affected the physical sciences, has now been applied to the science of language, and it is more in accordance with modern scientific principles to suppose that language has been slowly developed during the lapse of innumerable ages, and that the Aryan inflexions, instead of being invented by "one powerful mind," were unconsciously evolved out of some ruder form of speech.

What this form was can only be matter for conjecture, but we may legitimately examine the non-Aryan languages with the object of discovering which of them approaches most closely to the primitive Aryan, and whether any probable hypothesis can be formed as to the nature of the mother-speech from which the Aryan languages were evolved.

The Aryan territory is circumscribed by three other linguistic families—the Hamitic, the Semitic, and the Ural-Altaic. Among these its nearest congener must be sought, all other families of speech being too remote, both geographically and structurally.

The Iberians, as we have seen, were probably non-Aryan by race and language. Their physical type

<sup>1</sup> Max Müller, *Survey of Languages*, p. 86.

was that of the North African tribes, who spoke Numidian dialects belonging to the Hamitic family, and remotely akin to the old Egyptian.

Many philologists of repute are of opinion that the inflexional Semitic languages were evolved out of some tongue of the Hamitic class,<sup>1</sup> and they have pointed out striking grammatical agreements between the Semitic and the old Egyptian.

But all attempts to connect Aryan and Semitic speech have conspicuously failed. Both, it is true, are inflexional, but the inflexion is of a wholly different character. The verbal roots are also different, the formative elements are different, and are employed in a different manner. There is an impassable abyss between the Semitic and Aryan languages. It is impossible to conceive that the one could have been evolved out of the other.

There are no white races except the Ural-Altaic and the Semitic from which the white Aryan race could have originated. In physical character the Mediterranean dolichocephalic Aryan-speaking race resembles the Semites; while the Central European brachycephalic race agrees with the Finno-Ugric type. But there is no such impassable gulf between Ural-Altaic and Aryan speech as there is between Aryan and Semitic.

The Semitic languages have prefixes and infixes, whereas the Aryan and Ugro-Finnic languages possess only suffixes. Hence there is an agreement in their fundamental structure. It is true that the Ugro-Finnic languages are agglutinative, but in some

<sup>1</sup> F. Müller, *Allgemeine Ethnographie*, pp. 32, 527; Sayce, *Introduction to the Science of Language*, vol. ii. p. 178; Hovelacque, *Science of Language*, pp. 152, 174.

of them, as in the West Finnic class, the agglutination has almost reached the inflexional stage, differing little from the primitive stage of flexion which we discover in the more archaic Aryan languages. There is no absolute line to be drawn between agglutination and inflexion. Isolating languages tend to become agglutinative, agglutinative languages to become inflexional; inflexional languages tend ultimately to lose their flexions, and become analytic. Chinese is monosyllabic; Tibetan shows a tendency to agglutination. The Ural-Altaic languages are in the agglutinating stage; but Finnic, the most advanced of this class, has almost reached the stage of inflexion. Aryan languages are inflexional, but in Persian, French, and English the inflexions have almost disappeared, and the analytic stage has been nearly reached.

The farther we go back into the history of Aryan speech the more agglutinative and less inflexional is the character of the grammar. The more archaic Aryan languages, such as the Lithuanian, approach the most closely to the transparent Ugro-Finnic grammar, which is simple and logical; while in other Aryan languages the grammatical forms are degraded and obscure. On the other hand, the more developed Finnic languages have become less agglutinative and more inflexional. Professor Max Muller admits that in the Finnic grammar we find a closer approximation to the Aryan than can be elsewhere discovered. He goes so far as to say that "we might almost doubt whether the grammar of this language (Finnic) had not left the agglutinative stage and entered into the current of inflexion with Greek and Sanskrit."<sup>1</sup> Dr.

<sup>1</sup> Max Muller, *Lectures*, vol. i. p. 319.

Schrader admits that it cannot be denied that the Aryan languages exhibit traces which show that they have emerged from a lower stage of development, nearer to that of the Ural-Altaic languages.

The Finnic, which is the most advanced of the Ural-Altaic languages, also approaches the Aryan languages in requiring the adjective to agree with the substantive in number and case. Moreover, in the Finnic and Aryan languages the ultimate verbal roots are largely the same in sound and meaning, the pronominal and other formative elements are largely the same, and are used in the same way, and with the same import.

There has been a constant tendency to assimilate the forms of the Aryan cases and to obliterate the distinction of the grammatical forms, while the recuperative power of producing new forms seems to be now lost. At the same time, while cases and tenses have disappeared, there has been a tendency to multiply declensions and conjugations. But primitive Aryan speech possessed only two forms of declension and conjugation, those belonging to the vocalic and consonantal stems, and these probably are ultimately reducible to one. In this it agreed with the primitive Ural-Altaic speech, which primarily possessed only one form of declension and one of conjugation.

The Altaic languages still possess the power of developing cases with great readiness, a power which Aryan speech must have once possessed but has now lost. The primitive Aryan speech was rich in cases, which were formed by agglutinated postpositions. Latin kept five, the mediæval langue d'oïl kept two, modern French has lost them all. As these cases fell into disuse it became necessary to supply the defect

by prepositions. In the proto-Aryan speech there were certainly seven and probably nine cases—a genitive, a dative, and an accusative, two locatives, two instrumentals, and two ablatives. With them we may compare the nine cases in Yakut and the fourteen in Finnic, which possesses illative, prosecutive, and mutative cases. We have seen that some Aryan languages, such as Sanskrit and South Slavonic, have developed numerous consonants which the primitive speech did not possess. The Ugro-Altaic phonetic system seems to be a simple stage out of which the Aryan system might have been evolved. It possesses only one guttural, *k*, while the Aryan has six; one dental, *t*, while the Aryan has three; and one labial, *p*, while the Aryan has three.

It is however alleged that there are three radical distinctions which separate the Aryan and Finnic languages. They are gender, the formation of the plural, and the law of vocalic harmony.

The vocalic harmony, which is such a characteristic feature of the Ural-Altaic languages, has been adduced as the most fundamental difference by which they are distinguished from Aryan languages. But some of them, as the Tscheremiss and the Wotiak, possess only faint traces of it. M. Adam supposes that they have lost it. If so, the Aryan languages might have lost it also. M. Hovelacque, on the other hand, believes that the vocalic harmony is of comparatively recent origin, and that the Tscheremiss and Wotiak have only imperfectly acquired it.

The next great difference is in the formation of the plural. The Aryan and Ural-Altaic languages have three numbers—singular, dual, and plural. In this they agree, but we have to face the formidable difficulty

that though the dual is formed in the same way, the structure of the plural is altogether different. In the Finnic languages the sign of the plural is inserted between the stem and the pronominal or postpositional suffixes, whereas in Aryan languages the sign of the plural comes last. But this difference, fundamental as it may seem, may rather be regarded as a sign of primitive unity. Professor Sayce has shown reasons for believing that in the primitive Aryan speech there was no plural, but only the singular and the dual. "Nothing," he says, "seems to us more natural, nay, more necessary, than the existence of the plural; we might suppose that its roots go deep down into the very beginnings of language, and yet there are two facts which militate most clearly and decisively against such an opinion."<sup>1</sup> One is the occasional survival of the dual, which would have been needless if the plural had been in existence, as we see by the fact that the existence of the plural has caused the dual to be dropped. "The dual," he says elsewhere, "was older than the plural, and, after the development of the latter, survived only as a useless encumbrance, which most of the Aryan languages contrived to get rid of."<sup>2</sup> The same was the case in the Finnic languages, which originally had a dual, as is proved by its survival in Ostiak, Lapp, and Samoyed, while in the more cultured languages it has disappeared. The second fact is that many families of speech possess a dual, but have not yet developed a plural. The Accadian and Basque possess the plural only in an imperfect and rudimentary form. That the plural was a late formation in the

<sup>1</sup> Sayce, *Principles*, p. 258.

<sup>2</sup> Sayce, Article "Grammar" in the *Encyclopædia Britannica*.

Ural-Altaic languages is proved by the fact that they have not all adopted the same plural suffix. It is *t* in Finnic, *k* in Magyar, *lar* in Turkic, and *nar* in Mongolic.<sup>1</sup> The Aryan and Finnic languages form the dual in the same way. In both the dual suffix follows the case ending or the pronominal suffix. The dual suffix is also believed to be identical in its origin, having been constructed out of the same pronominal elements in Samoyed, Lapp, and Ostiak as in those Aryan languages which have retained the dual.

But while the formation of the dual is the same in the Aryan and Finnic languages, that of the plural is different. In the Aryan languages it was formed on the model of the dual, the plural suffix simply taking the place of the dual suffix. In the Finnic languages it is formed by a plural suffix, *t*, inserted before the pronominal or postpositional suffixes, just as in English we tack on the sign of the genitive in such words as *man* and *men*, and say "the man's boots" or "the men's boots," a formation which corresponds to that in the Finnic languages; whereas in primitive Aryan speech the sign of case comes first, as in the word *nobis*, where *bi* is the sign of the case, and *s* of the plural. In a Finnic language the order of these suffixes would be reversed.

Hence from the agreement in the formation of the dual, and the disagreement in that of the plural, we see that Aryan speech might have been evolved out of a language of the Finnic class at a time when both were still in the stage which Professor Sayce assigns to the primitive Aryan speech, that is when,

<sup>1</sup> Kellgren, *Die Grundzüge der Finnischen Sprachen*, p. 59.

like the Hamitic languages, they possessed only the singular and the dual.

The third difference between Aryan and Finnic languages which has been thought fundamental is that the Finnic languages, like the rest of the Ural-Altaic class, are destitute of gender. Dr. Schrader considers that the absence of gender is the point in which the Ural-Altaic languages are most decisively distinguished from both the Aryan and Semitic. But here again Professor Sayce maintains the probability that the primitive Aryan speech agreed with Finnic in the absence of gender. He considers gender a later formation, "the product partly of analogy, and partly of phonetic decay." "There are many indications," he continues, "that the parent Aryan at an early stage of its existence had no gender at all." "The terminations of father and mother, *pater* and *mater*, for example, are exactly the same." Feminines like *humus*, or masculines like *advena*, "show that there was a time when these stems indicated no particular gender, but owed their subsequent adaption, the one to mark the masculine, and the other to mark the feminine, to the influence of analogy."<sup>1</sup>

We therefore conclude that the language out of which Aryan speech was evolved must have agreed with the Ural-Altaic in being destitute of gender.

It appears, therefore, that none of the differences which have been adduced as fundamental distinctions between the Aryan and Ural-Altaic languages are really primitive. Aryan inflexion arose out of agglutination, and it must at one time have been more simple and more regular; the Aryan cases must originally have been more numerous; the genders and the plural are

<sup>1</sup> Sayce, Article "Grammar" in the *Encyclopædia Britannica*.



new formations; and in the Ural-Altaic languages the vocalic harmony cannot be regarded as an essential law. Thus while the differences which distinguish the Aryan and the Semitic languages go down to the very foundations of speech, those which divide the Aryan from the Ural-Altaic languages are not radical. They are all neologisms—new formations which in the course of many millenniums might be expected to arise.

On the other hand, there are points of structural agreement which can only be explained as due to a primitive unity. These have been set forth by Diefenbach, Cuno, Anderson, and above all by Weske,<sup>1</sup> and the conclusions of these scholars must now be briefly set before the reader.

The agreements in the vocabulary are numerous, but as a rule are not primitive. They are largely, as has been shown by Thomsen, Ahlqvist, and Schrader,<sup>2</sup> culture words borrowed from the Swedish, Slavonic, and Iranian languages.

But when we penetrate deeper, and come to the verbal roots out of which the vocabulary has been framed, we find, as Anderson and Cuno have shown, that the roots are to a large extent identical, and that these verbal roots have been built up into word-stems by the same processes, and by aid of identical

<sup>1</sup> Diefenbach, *Origines Europææ* (Frankfort, 1861); Cuno, *Forschungen im Gebiete der Allen Völkerkunde* (Berlin, 1871); Anderson, *Studien zur Vergleichung der Indo-Germanischen und Finnisch-Ugrischen Sprachen* (Dorpat, 1879); Weske, *Ueber die historische Entwicklung der Finnischen Sprachen im Vergleich mit der Indo-Germanischen* (Dorpat, 1875).

<sup>2</sup> Thomsen, *Ueber den Einfluss der Germanischen Sprachen auf die Finnisch-Lappischen* (Halle, 1870); Ahlqvist, *Die Kulturwörter der West Finnischen Sprachen* (Helsingfors, 1875); Schrader, *Sprachvergleichung und Urgeschichte*.

formatives. To take an example, we have both in Aryan and Finnic the verbal root *kar*, to run, to move. From this we get in Finnic the word *ker-ap*, a carriage, and in English the word *char-iot*. Here, from the same root, words of similar meaning have been independently constructed.

These identical verbal roots are numerous. To give a few instances, we have both in Aryan and Finnic languages the verbal root, *kad*, to fall; *kak*, to bend, with the secondary meaning to excrete; *kap*, to hold; *kam*, to bend; *kar*, to work, to do, with the secondary meaning to work evil or injure; *kas*, to praise; *kal*, to be cold; *ku*, to swell out; not to speak of certain resemblances in the roots of the numerals, which have been set forth by Cuno.<sup>1</sup>

In the next place, both in Aryan and Finnic, identical formative suffixes are attached to the verbal roots to form stems. Thus the formative *ma* is employed in the same way both in Aryan and Finnic for the construction of verbal nouns.<sup>2</sup> In Finnic, combined with the verbal root *san*, to say, it gives *san-o-ma*, a message; combined with the root *juo*, to drink, it gives *juo-ma*, drink; with the root *tek*, to do, it gives *tek-e-ma*, a deed; and many similar words, such as *luke-ma*, reading, and *laulo-ma*, song. In Aryan languages this formative is identically employed. Thus from the root *ghar*, to burn, we have in Sanskrit *ghar-ma*, warmth; and from *dhu*, to move, we have *dhu-ma*, smoke. In Lithuanian, from *vaz*, to carry, we have *vaz-ma*, carriage; from *aud*, to weave, we have *aud-i-ma*, a web. In Latin, from *fa*, to say (*fa-ri*), we have *fa-ma*, a report; and in Greek such

<sup>1</sup> Cuno, *Forschungen*, p. 52.

<sup>2</sup> Weske, *Entwicklung*, p. 5; Anderson, *Studien*, p. 108.

words as *τιμη* and *γνώμη*. The comparison might be extended to other formative suffixes which are employed both in the Aryan and Finnic languages, such as *na*, *ja*, *va*, *la*, *ka*, *ta*, and *mine*. To take a few instances, we have in Finnic the formative *na*, which combined with the verbal root *koh*, to drink, gives *koh-i-na*, drunken. In Sanskrit this suffix combined with the verbal root *svap*, to sleep, gives *svap-na*, sleep, and *sap-na*, sleep, in Lithuanian. In like manner the formative *ja* gives in Finnic *lug-e-ja*, a reader, from the root *lug*, to read; *laulo-ja*, a singer; *kakarda-ja*, a dipper while in Lithuanian it gives *zyn-ja*, a magician, from the root *zin*, to know, and *sta-ja*, a position or place, from the root *sta*, to stand.<sup>1</sup>

When the stems have thus been built up by means of roots and formatives which are largely identical, and used in precisely the same way, conjugation and declension are effected by the same processes, declension by suffixed prepositions, and conjugation by tense signs attached to the stem, and followed by pronominal suffixes.

Some of the tense stems are the same. Thus both in Aryan and Finnic we have tense stems formed by *sk* and *ja*, and perfect stems by *s*.

The identity of the pronominal suffixes is still more important. For the first person the pronominal suffix was originally *ma*, which means "I" or "me," both in Aryan and Finnic. In modern languages, both Aryan and Finnic, this has become *m* or *n*, or has disappeared altogether. Thus from the verbal root *bhar*, to bear, we have in Sanskrit *a-bh-ir-am*, I bore,

<sup>1</sup> For other instances see Anderson, *Studien zur Vergleichung der Indo-Germanische mit Finnisch-Ugrischen Sprachen*, pp. 107-109.

and in Greek ἐ-φερ-ov. The Old High German *tuō-m*, I do, and *ga-m*, I go, have become *thu-e* and *geli-e* in New High German. In Finnic the same pronominal suffix *ma* has undergone the same changes. Thus in Tscheremiss "I come" is *tola-m*, in Suomi it is *tule-n*, and in Esthonian *tul-e*. "I live" is *ale-m* in Lapp, *ale-n* in Suomi, and *el-a* in Esthonian. The first person singular present from *lukea*, to read, is *luge-n* in Veps, *luga-n* in Lapp, *luda-m* in Tscheremiss, and in Wotiak *lugo*, where the pronominal suffix has disappeared as completely as in the Latin *lego*. The pronominal suffix for the second person is *ta* in Finnic, which becomes *ti* and *t*; while in Aryan it is *tva*, which becomes *ta*, *tha*, *ti*, and *s*. Thus in Suomi we have *tule-t*, thou comest, and in Sanskrit *dadi-tha* (Latin *dedis-ti*), thou hast given.<sup>1</sup>

In the plural, as has already been explained, the order of the suffixes has been reversed, but their identity in Aryan and Finnic can be recognised. Thus in Finnic the suffix of the second person plural is *t-te*, as in *tule-t-te*, ye come. Here *t*, the plural sign, is followed by *te* (= *ta*), the pronoun of the second person. In Aryan, the order being reversed, the suffix of the second person plural was *ta-si*, where *ta* is the pronoun, and *si* the sign of the plural. Thus in the Latin *ama-ti-s*, ye love, *ti* is the pronoun, and *s* the plural sign, the Finnic plural suffix *t* being probably the archaic form of the Aryan plural suffix *s*.

Thus the verb is conjugated in the same way in the Aryan and Ural-Altaic languages, the formation in both being, stem + tense + personal suffix ;

<sup>1</sup> Weske, *Entwicklung der Finnischen Sprache*, p. 7; Papillon, *Comparative Philology*, p. 161.)

the Sanskrit future of the first person, *dat-as-mi*, giver-am-I, being constructed in the same way as the Ostiak future, *pan-de-m*, or the Turkic *yaz-ar-im*.

It is the same with the declension of the nouns. The case signs in Finnic arose out of suffixed prepositions, as in the Aryan languages. Thus we have a Finnic ablative in *ta* or *t*,<sup>1</sup> which corresponds to the Aryan ablative in *at* or *t*; a Finnic locative in *ti*,<sup>2</sup> which corresponds to the Aryan locative in *dhi*; and a Finnic genitive in *n*, of which there are traces in Aryan genitives in *n* and *m*; and a Finnic accusative in *am* or *m*,<sup>3</sup> which is identical with the Aryan accusative. Thus in Tscheremiss we have the accusative *vida-m* from the stem *vida*, water, and in Sanskrit the accusative *pati-m*, master, from the stem *pati*.

These deep-seated structural agreements between the Aryan and Finnic languages are, as Penka admits, too profound to be explained by geographical contiguity, commercial intercourse, inroads, wars, or political supremacy. Penka accounts for them<sup>4</sup> by the supposition that Finnic is a mixed speech which has been influenced by Aryan in much the same way that English has been influenced by Norman-French. But this hypothesis will hardly suffice to account for the fundamental agreement in the pronouns, the declensions, the conjugations, and the formatives. An explanation at once more simple and more satisfactory would seem to be that the Finnic languages

<sup>1</sup> Donner, *Die gegenseitige Verwandtschaft der Finnisch-Ugrischen Sprachen*, p. 62.

<sup>2</sup> *Ibid.*, p. 93.

<sup>3</sup> *Ibid.*, p. 73; Weske, *Untersuchungen zur Vergleichenden Grammatik des Finnischen Sprachstammes*, p. 39.

<sup>4</sup> Penka, *Origines Ariæ*, p. 68.

exhibit a survival of the primitive form of speech out of which the Aryan languages were developed; the archaic semi-agglutinative Lithuanian approaching most closely to the Finnic, which is semi-inflexional.

Of the four neolithic European races one only can have been the primitive Aryan race. Two of them, the Slavo-Celtic and the Ligurian, are, like the Ugro-Finnic race, brachycephalic.

On archæological grounds we have arrived at the conclusion that the culture of the Slavo-Celtic race, as exhibited in the round barrows of Britain, and the pile dwellings of Central Europe, comes nearest to that of the primitive Aryans as disclosed by linguistic palæontology. We have also seen that, anthropologically, this race belongs to the same type as the Finno-Ugric tribes of Eastern Europe and of Central Asia<sup>1</sup>. This conclusion is also in accord with the philological tests, which make it possible that Aryan speech may have been evolved out of a language of the Ural-Altaic class; the grammatical resemblances pointing to a primitive unity of speech, just as the physical resemblances point to a primitive unity of race. There must have been some ruder form of speech out of which the elaborate Aryan inflexion was evolved, and there is no other known form of speech, except the Ural-Altaic, which can possibly be regarded as the germ out of which the Aryan languages may have sprung.

One possibility remains to be considered. Since the colour of the hair and eyes are more variable than the shape of the skull, some anthropologists of repute, as we have already seen, are inclined to believe that the two brachycephalic races, the short, dark Ligurians, and

<sup>1</sup> See p. 91, *supra*.

the fair Celto-Slavic race, may be ultimately identified. We have also seen that the Basque probably represents the primitive speech of the former, and that it is also believed to belong ultimately to the Ural-Altaic family. We have also come to the conclusion that the Celto-Slavic race best represents the primitive Aryans, whose speech may have been evolved out of a language of the Ural-Altaic class. We may therefore conjecture that at the close of the reindeer age a Finnic people appeared in Western Europe, whose speech, remaining stationary, is represented by the agglutinative Basque, and that much later, at the beginning of the pastoral age, when the ox had been tamed, a taller and more powerful Finno-Ugric people developed in Central Europe the inflective Aryan speech. By this hypothesis many difficulties would be reconciled.

Ahlqvist has constructed a picture of the civilisation of the undivided Finnic race by first eliminating the culture words which have been borrowed from the Aryans, and then distinguishing those which belonged to the Finns before their separation, by the test of their being the common possessions of the Western or Baltic Finns, and the Eastern Finns of the Ural and the Volga. "His reconstruction of the primitive Finnic civilisation does not differ greatly from that which, on linguistic and archæological grounds, has been assigned to the undivided Aryans.

He comes to the conclusion that the undivided Finns were in much the same stage of culture as the Woguls, or the Ostiaks on the Obi, as described by modern travellers. They were nomad hunters and fishers, whose chief domesticated animal was the dog. The cow was not altogether unknown, but the art of

making butter and cheese had not been acquired. The domestication of the sheep, the goat, and the pig was later than the contact with the Aryans. The name of the horse is an Aryan loan-word. Tillage was merely sporadic, a patch of forest may have been cleared by fire, and a crop of barley grown. The dwelling, *sauna*, was a pit dug in the earth and roofed over, or a conical hut, *kota*, made of poles leaning against each other, or supported by a tree, and covered in winter by skins. These dwellings had a door, and a hole in the roof, through which the smoke escaped. The fire was built on a few loose stones in the middle of the hut, but there was no flooring and no window, light entering through the door or the smoke-hole in the roof. The women, with bone needles, made clothing from the skins of animals, and spun thread with spindles from the fibres of plants, while the men fabricated canoes, snow-shoes, and implements for hunting and fishing. If they had any knowledge of metals it must have been confined to native copper.

It was only after the separation of the Eastern and Western Finns that they became acquainted with the sheep, and the art of preparing yarn from its wool. They had no towns, or judges,\* or hereditary chiefs.<sup>1</sup>

It will be seen that Ahlqvist's picture of the civilisation of the undivided Finno-Ugric race, as derived from linguistic materials, differs little from that which Schrader has drawn of the culture of the undivided Aryans.<sup>2</sup>

According to Vambéry, the culture of the un-

<sup>1</sup> Ahlqvist, *Kulturwörter der West Finnischen Sprachen*, p. 264.

<sup>2</sup> See p. 188, *supra*.



divided Turko-Tartaric family was higher than that of the undivided Finns, but we must remember that the separation was much later. They knew the horse, the ox, the ass, the camel, and the sheep, as well as the dog, and they cultivated wheat and millet as well as barley.

## CHAPTER VI.

### THE ARYAN MYTHOLOGY.

NOT less remarkable than the silent revolution which has overthrown the once universally accepted hypothesis as to the successive migration of the Aryan nations from Central Asia, is the general abandonment of the expectation which was at one time entertained that India would interpret for us the meaning of the Teutonic, Roman, and Greek mythologies. We were told that "the Veda is the real theogony of the Aryan nations,"<sup>1</sup> and that "the mythology of the Veda is to comparative mythology what Sanskrit has been to comparative grammar." It was confidently proclaimed that the discovery of "the common origin of Greek and Sanskrit mythology" had already been made. It was compared to "the discovery of a new world;" and it was predicted that "the science of comparative mythology will soon rise to the same importance as that of comparative philology."<sup>2</sup>

The Sanskritists confidently produced their identifications. Aphrodite, Eurydice, Athena, Daphne, and Brynhild were all pronounced to be dawn maidens, and were identified with Urvashi; Heracles, Ares, Achilles, Meleager, Orpheus, Balder, and Sigurd were solar heroes, and identified with Pururavas; the

<sup>1</sup> Max Muller, *Essays*, vol. ii. p. 381.      <sup>2</sup> *Ibid.*, p. 449.

Greek Charites were the Indian Harits; and the Indian Maruts became the Roman Mars.<sup>1</sup>

No importance was attached to the objection that the Harits, the nine horses of Indra, did not in number, sex, form, or function bear any resemblance to the three Graces, the Charites of Greek mythology. Helen, a dawn maiden stolen by Paris was identified with the Vedic Sarama, who, instead of being himself stolen, recovers for Indra his stolen cows, which are the clouds of heaven. Professor Max Muller actually suggests that Achilles, a bright solar hero, is the Indian Ahalya, who is the goddess of the night beloved and destroyed by Indra.<sup>2</sup>

All such difficulties were overlooked, and we were told that the riddle of Aryan mythology had at last been solved. But these confident expectations have been doomed to be disappointed. Scholars were not more agreed as to the explanations from Sanskrit sources of the names of the Greek divinities than as to the order in which the Aryan nations started on their march from Central Asia. The explorations of neolithic graves, followed by the pamphlet of Johannes Schmidt, rendered untenable the hypothesis of the successive westward migrations of Aryan tribes; and in like manner George Smith's discovery of certain cuneiform tablets in the mounds of Nineveh upset the conclusions of the comparative mythologists, and falsified the confident prophecies which had been adventured by the too eager Sanskritists.

The key to the Greek mythology has indeed been found, but it has been discovered, not as was anti-

<sup>1</sup> Cox, *Mythology of the Aryan Nations*, vol. i. pp. 32, 395 445.

<sup>2</sup> Mahaffy, *Prelegomena to Ancient History*, p. 51.

cipated, on the banks of the Ganges, but on those of the Tigris. Much of the mythology of ancient Greece, instead of having a common origin with that of India, proves to be essentially non-Aryan, and must have been obtained from Babylonia through Phœnician channels. As might have been expected, the greater part of the Greek mythology proves to have been derived from the same source as the first elements of Greek culture. The rude barbarians of Hellas obtained their knowledge of gold and bronze, of weights and measures, of textile fabrics, spices, and jewellery, of the art of writing, and of the alphabet itself, from the Phœnician merchants who visited their shores; and in like manner, we now find that they obtained many of their deities and a considerable portion of their mythologic tales from the more cultured Semites. Mythologists were unable to explain why, if so many of the Greek myths were, as they affirmed, the common heritage of the Aryan race, so few of them could be traced in Italy or Germany. This riddle is now solved. They were not, as was supposed, a part of the common Aryan inheritance, but merely a foreign importation, at a comparatively late date, and confined to those portions of the Aryan territory which were frequented by Phœnician traders.

The clue, once obtained, has been followed up with marvellous success.

The great Semitic goddess Istar, primarily the moon, and afterwards the planet Venus, bore two characters, the chaste warrior-maiden, and the voluptuous deity of love. The Phœnician mariners brought her, in the latter character, and under the name of Astarte or Ashteroth, to Cyprus, whence as the sea-

born Aphrodite, her worship spread among the Greeks; while, probably by the land trade route through Asia Minor, the Babylonian Istar came to Ephesus as Artemis. Thus Aphrodite, instead of being an Indian dawn maiden rising from the sea, is now found to be the Babylonian moon goddess brought in Phœnician ships to Cythera and Cyprus.

When once the identity of Istar with Aphrodite and Artemis was established, it became easy, with the help of the Babylonian epic of the descent of Istar, recovered from the clay tablets of the library of Assur-banipal, to explain the significance of a considerable number of obscure Greek myths. The Phrygian myth of Atys and Cybele, and the corresponding Greek myth of Adonis and Aphrodite, was recognised as a mere Western version of the Phœnician myth of Tammuz and Astarte, the story of the moon mourning over the death of her lost spouse, the sun, and the name of Adonis was seen to be merely the Semitic Adonai, the "lord" of heaven. And when Artemis was also identified with Istar, the Greek Amazons were seen to be the priestesses of the Asiatic goddess, the Galli were her eunuch priests, Istar being represented in Assyrian art with a quiver and a bow, just as Artemis is represented in the art of Greece.<sup>1</sup>

The bull, whose form was assumed by Zeus in order to carry off Europa, a Phœnician damsel, was seen to be the bull of Anu, the Semitic Heaven god, the same bull which we recognise in the constellation Taurus, and Europa, the "broad-faced" maiden, is only another form of Istar, the broad-faced moon, instead of being identical with Urvashi, the Vedic

<sup>1</sup> Sayce, *Hibbert Lectures*, p. 271.

dawn maiden.<sup>1</sup> The identity of the names was maintained on the ground that a Sanskrit *s* occasionally corresponds to a Greek *p*, though a suspicion that the Europa myth was of Phœnician and not of Indian origin might have been aroused by the fact that Europa is called the daughter of Phœnix—only another way of saying that the myth was derived from the Phœnicians.

Another myth, seemingly so diverse—the story of the slaying of the dragon by Perseus and the rescue of Andromeda—was localised by the Greeks on the Phœnician coast. It proves to be a lunar eclipse myth, ultimately Babylonian, a Greek translation of the Phœnician version of the combat of Bel Merodach with the dragon Tiamat, and the rescue of the moon goddess Istar from the black dragon who threatened to devour her.<sup>2</sup>

Another Tiamat myth is preserved in the Greek legend of the mutilation of Uranus by his son Cronus. This myth, which seems to us so repulsive, is merely a misunderstood translation from the Babylonian cosmogony, which represents Bel Merodach, the Semitic sun-god, cutting asunder his parent Tiamat, the primordial chaos from which he had sprung.

Ares, the warrior-god of the Greeks, has been identified by Professor Sayce<sup>3</sup> with Uras, the warrior-god of the Babylonians, whose title, "the lord of the pig," helps to explain an obscure Greek myth which tells us that Ares slew Adonis by taking the form of a wild boar, the sun-god being slain by the tusk of winter.

<sup>1</sup> Max Müller, *Essays*, vol. i. p. 406.

<sup>2</sup> See Sayce, *Hilbert Lectures*, p. 107.

<sup>3</sup> *Ibid.*, p. 153.

The bold attempt of the Sanskritists to identify Mars (stem, *mart*) with the Vedic Maruts, who are the winds, presented the difficulty that the name of Mars was unknown to the Greeks, and even to the Iranians. It is, at all events, less plausible than the new explanation which identifies him with Mātu or Martu, the Babylonian god who ruled the tempest, and was worshipped as Rimmon by the Syrians.

The theory of the Indian origin of the great Dionysiac myth was shaken by Lenormant's comparison of Dionysus with the Assyrian sun-god who bore the name of Dianisu; and this was confirmed by Dr. Neubauer's identification of his mother Semele, daughter of Cadmus the Phœnician, with the Phœnician goddess Semlath, and with the Edomite "Semlah of the Vineland."

One of the greatest reproaches which the Sanskrit school of Comparative Mythologists had to bear was that in the Vedic hymns no trace could be found of Apollo, the great Hellenic sun-god, a deity revered more than any other by the Greeks. None of the myths of Apollo resembled the myths of any of the Indian sun-gods, and no explanation of the name was forthcoming from the resources of Aryan philology. If the Greek and Indian mythologies were parts of the common inheritance of the Aryan nations, it was strange that the name and worship of Apollo should be confined to those lands which were visited by the Phœnicians. But these mysteries have been at last explained. The oldest epigraphic form of the name of Apollo is Aplu, which corresponds to the Semitic Ablu, the "son" of heaven, which was one of the titles of Tammuz the Syrian sun-god. Heracles, again, is the Semitic sun-god under another aspect. His

twelve labours are the twelve labours of Isdhubar, the Accadian hero, whose story may be read in the fragments of the great Chaldean epic which was redacted into a single whole many centuries before the Vedic hymns were first composed. The name of Heracles is of Greek invention, but Melicertes, the name which he bore in the Phœnician settlement at Corinth, is merely a Greek transliteration of the name of Melcarth, the Phœnician sun-god.

The very foundations of the Sanskritic school of interpretation being thus rudely shaken, scholars began to question other explanations which had been received with general acquiescence. Professor Max Müller, for instance, had identified Athena, the great deity of the Ionian Greeks, with the Vedic *dahana*, the "dawn" creeping over the sky. The philological difficulty was considerable, and scholars are now inclined to believe that Athena was not the dawn but the lightning. Even the identification of the Centaurs with the Vedic Gandharvas has been questioned, owing to the discovery of Centaurs sculptured on Babylonian monuments.

Perhaps the greatest of the difficulties which beset the attempt to explain the Aryan mythology from Vedic sources was the almost complete discordance between the names of Greek and Roman deities. Juno and Hera, Venus and Aphrodite, Mars and Ares, Mercury and Hermes, Diana and Artemis, Neptune and Poseidon, Ceres and Demeter, are plainly unrelated names. If the Rig Veda explains so insignificant a portion of the mythology of the Greeks, whose language approaches Sanskrit much more closely than Latin does, it could hardly be expected that the mythology of Italy could be explained by that of India.



But it is now seen that many of the myths which were formerly supposed to prove the common origin of the Greek and Roman mythology are merely late and arbitrary transferences of mythic stories to wholly unrelated deities. Thus the adventures of Heracles, the Greek solar-hero, which, as we have seen, are merely the borrowed adventures of the Babylonian Isdhubar, were assigned to Hercules, the old Italic god of enclosures, who has nothing in common with Heracles except an accidental phonetic resemblance of the name,<sup>1</sup> while Saturnus, the Italic god of agriculture, was identified with Cronus, merely because his emblem, the sickle of the husbandman, resembled somewhat the sickle of Cronus, which is the curved scimitar with which Bel Mero-dach, the prototype of Cronus, combats the powers of darkness.

In like manner, the Greek myths relating to Aphrodite, which are mainly of Semitic origin, were boldly transferred by Ovid and other adapters to Venus, a purely Italic deity, of whose existence no trace can be discovered in Homer, Hesiod, the Avesta, or the Rig Veda, although the mere name can be explained as Aryan by help of the Sanskrit word *vanas*, which denotes that which is pleasant, especially pleasant drink,<sup>2</sup> and also sexual desire. Greek myths relating to Poseidon were also transferred to Neptune, whose name can be explained by help of the Iranian word *napat*, water. In old Irish we have the word *triath*, which means the sea, and helps to explain the Greek Triton, the Sanskrit *trita*, and the Zend *thritha*. In all these cases the linguistic

<sup>1</sup> Sayce, *Science of Language*, vol. ii. p. 262.

<sup>2</sup> Mommsen, *Römische Geschichte*, vol. i. p. 16.

elements of the later mythologic names are primitive, but not the mythology itself.

These examples may serve to show that while there was a common inheritance of language, any inheritance of a common mythology must be reduced to very small proportions. The names of the Aryan deities may be primitive words, but the mythological conceptions must be referred to a period later than the linguistic separation.

Setting aside the great Indian triad of Brahma, Siva, and Vishnu as being manifestly of late date, we find the Vedic gods of the first rank are Indra and Agni, after whom come Varuna and Mitra, Ushas and Surya. The great Hellenic gods are Zeus, Apollo, and Athena, followed by Poseidon, Hera, Aphrodite, Artemis, Hermes, Ares, Heracles, Demeter, and Dionysus. The great Italic deities are Jupiter, Juno, Mars, Minerva, Janus, Neptune, Diana, Pluto, Vulcan, Mercury, Venus, Hercules, Bacchus, and Ceres. The Teutonic deities were Thor, Odin, Freya, Baldr, Tiu or Tyr, the god of war, and Frigga the Earth, who is the wife of Woden the Heaven. Among the Celts we have Ogma, Maponos, Segomo, Camulos, Toutates, Taranucos, Esus, Taranis, Cernunnos, and Nuada. The Letto-Slavic deities were Bogu, Perkunas, Perunu, Rade-gast, Swantowit, Potrimpos, and Picullas.

The diversity of these names is very striking, especially when we consider that they are all elemental. The Aryan nations, and many which are not Aryan, have personified the Heaven and the Earth and the Ocean, the Sun and the Moon, the Storm, the Thunder, the Lightning, the Dawn, the Fire, and the Wind. For these phenomena of Nature

there were common names in the primitive Aryan speech, and hence the real matter for surprise is not that there is here and there a resemblance in the divine names of the different nations, but that the diversity should be so great.

They all revered and personified as the supreme deity the protecting vault of Heaven, but it was worshipped under different names, by the Indians as Varuna, by the Greeks as Zeus, by the Celts as Camulos, and by the Teutons as Woden. They all revered Mother Earth, the spouse of Heaven, but she was called Prithivi by the Indians, Gæa or Demeter by the Greeks, and Nerthus, Frigga, or Jörðh by the Teutonic nations.

There is not a single power of Nature which can be proved to have been worshipped under the same primeval name by all the Aryan peoples.

The mythologists who affirm that the Greek and Indian mythologies have "a common origin," and that "the Veda is the real theogony of the Aryan nations," are encountered by two great difficulties. The first, as we have seen, is the fact that the mythologic names in Greek and Latin, and Latin and Celtic do not agree; the second is that though the connection of the Indians and Iranians is very close, the mythologic conceptions supposed to be common to the Indians and the Greeks are not also common to the Greeks and the Iranians.

As a rule the Celtic divine names are confined to the Celts, the Latin names to Italy, the Slavonic names to the Slaves. Words relating to religion have a more restricted currency than those which refer to cattle, agriculture, and weapons. This leads to the presumption that the Aryans before their

separation did not possess what can properly be called any common system of mythology. But this result is in accordance with the probabilities of the case. It has been shown that the primitive Aryans were not, as was formerly supposed, a semi-civilised race who, in the bronze period, some fifteen centuries B.C., migrated from Asia into Europe, but that they were rather the lineal descendants of the neolithic people who had occupied Europe for unnumbered ages. Can it be supposed that these rude barbarians, clad in skins, ignorant of agriculture and metals, unable to count above a hundred, who practised human sacrifice, were capable of elaborating a complex and beautiful mythology? or if they had invented it, is it likely that the names and adventures of dawn maidens and solar heroes could have been handed down orally in recognisable form through so many millenniums during which the art of writing was unknown? It is a question if there was any idolatry properly so called among the primitive Aryans. On the earliest monuments of the Egyptians and Babylonians we find sculptured representations of the gods. But there is no word for "idol" common to the Aryan languages, and no idols or objects of worship have been found in neolithic tombs,<sup>1</sup> or in the Swiss and Italian pile dwellings,<sup>2</sup> and even the Scandinavians had originally no images of their gods.<sup>3</sup>

The Greeks owed to the Phœnicians the notion of representing the gods under human form,<sup>4</sup> and images

<sup>1</sup> See, however, De Baye, *L'Archéologie Préhistorique*, p. 95.

<sup>2</sup> Hefbig, *Die Völker in der Poebene*, p. 24.

<sup>3</sup> *Corpus Poeticum Boreale*, vol. i. p. 405.

<sup>4</sup> Di Cesnola, *Cyprus*, Plate, vi.

of the gods at Rome were first made by Etruscan artists. The earliest objects of Aryan worship seem to have been fetishes, such as sacred trees, belemnites, or meteoric stones.<sup>1</sup> The Jupiter Lapis of the Fetials at Rome was probably a belemnite. Artemis was worshipped at Ephesus as the stone which fell from heaven, and the many-breasted representations of the goddess may have been suggested by the bosses found on meteoric stones. Zeus Cassius is represented as a stone on coins of Seleucia in Syria and the Paphian Venus appears under the form of a conical stone on coins struck in Cyprus.<sup>2</sup>

The earliest shrine of Greek worship was at Dodona, and here the object of worship was an oak, on whose branches charms and talismans were hung, and the whisperings of the wind in the leaves were regarded as the oracular voice of heaven. It is plain that the culture of the undivided Aryans has been immensely overrated by the mythologists who have endeavoured to prove that the theological conceptions of the Vedas, of the Edda, and of the Homeric poems were handed down from a pre-ethnic source.

The hypothesis of common traditions transmitted from the holoethnic period is not necessary to explain such resemblances as may exist in the mythological conceptions of the Aryan nations. It is more probable that somewhat similar myths were independently evolved as explanations of recurring natural phenomena. In all countries the day succeeds the night, the sky hangs over the earth, the sun and the moon pursue each other through the heavens, and the

<sup>1</sup> Lang, *Myth, Ritual, and Religion*, vol. ii. pp. 219, 235; *Custom and Myth*, p. 223.

<sup>2</sup> Evans, *Ancient Stone Implements*, p. 9.

uprising of the sun is heralded by the tender dawn. Hence in all mythologies the day and the night, the heaven and the earth, the sun and the moon, the sun and the dawn, are represented as man and woman, either as lovers, or as husband and wife, or as brother and sister.

It is natural to represent the sun as a bridegroom coming out of his chamber in the east, and the dawn as a blushing maiden. Hence few mythologies are altogether free from the loves of solar heroes and dawn maidens. But it is not necessary to suppose that such myths are primitive.

The Indian *Ushas*, the Iranian *Ushanh*, the Greek *ἠώς*, the Latin *Aurora*, and the Lithuanian *Ausra*, all denote etymologically the glow of the rosy dawn, which was personified by Greeks and Romans, and deified by the Indians, but there are no common myths. The Vedic *Surya*, the spouse of *Ushas*, is etymologically the same as the Greek *Helios*, the Latin *Sol*, and the Welsh *Heul* (Howel), but *Eos* is associated in Greek myth with *Kephalos* and *Tithonus*, and not with *Helios*. The connection is merely linguistic, not mythologic, and the solar heroes and dawn maidens were plainly evolved after the Aryan separation.

The divine names which go back to the primitive period are all names of the powers of nature, and in dealing with such early words it is impossible to say whether the names may not have referred merely to the phenomena of nature rather than to any divine personifications, which may have arisen independently at later periods.

\* Scanty as are the mythologic names common to any two of the Aryan families of speech, the signi-

ficance of these few agreements tends to disappear on closer examination. Indra and Agni are the deities who occupy the highest places in the oldest Indian mythology. This is evident from the fact that of the most ancient hymns in the Rig Veda 265 are addressed to Indra, and 233 to Agni, and not more than 60 to any other god.<sup>1</sup> But supreme as is the position of these two deities in the most ancient records of Aryan religion, their worship is practically confined to India. In the European mythologies their place is taken by Zeus and Woden, Apollo, Thor, and Balder. In the Avesta there is barely a vestige of the great name of Indra, nor can it be traced in any of the European languages.

In the Vedic hymns Agni is second only to Indra in importance, and much has been made of the etymological identification of the name of Agni with the Latin *ignis* and the Lithuanian *ugnis*; but this amounts to very little. It merely proves that the undivided Aryans were acquainted with fire, but it does not prove that fire was an object of worship. The inference is rather that the worship of the sacred fire arose after the separation of the Aryans. We find that in India Agni was a chief object of worship at the earliest time of which we have any cognisance of Aryan religion, but there is no reason to believe that fire was ever worshipped under this name by Latins or Lithuanians.

The presumption is rather the other way, since the Roman fire-worship was addressed to Vesta, the tribal fire of the domestic hearth, while Agni among the Indians was quite another thing—the sacrificial or celestial fire.

<sup>1</sup> Keary, *Outlines of Primitive Belief*, p. 126.

The Greek Hestia, it is true, agrees in name and function with the Latin Vesta,<sup>1</sup> and this is the most striking of all the correspondencies between Roman and Greek mythology, more especially since there is reason to believe that Vesta was the oldest of the deities of Rome. But there is no trace of this venerable worship in India. In Sanskrit the name only exists as *vastu*, which merely means the house or dwelling place.

The very fact that the Vesta worship is the most indubitable of the correspondencies between the Greek and Roman mythologies is itself a proof of the rudimentary nature of their common civilisation. Only among the rudest of existing savage tribes, such as the Australians, is it held a duty to keep alight the fire of the tribe, which if extinguished has to be obtained from some neighbouring tribe, as they are ignorant of the means of rekindling it. The Chippeways and Natchez Indians had an institution for keeping alight the tribal fire, certain persons being set aside and devoted to this occupation;<sup>2</sup> and the incorporation and endowment of the Vestal Virgins at Rome seems to be a survival of a similar practice, the social duty, originally devolving on the daughters of the house, obtaining a religious sanction as the service of the perpetual flame.

The name of Prometheus, who, according to the Greek myth, brought fire from heaven to mortals, may be explained by the Sanskrit *pramantha*; but this word did not become a mythological term among the Indians, but merely denoted the

<sup>1</sup> Preller, *Griechische Mythologie*, vol. i. pp. 227-333; *Römische Mythologie*, p. 532.

<sup>2</sup> Lubbock, *Prehistoric Times*, pp. 464, 537.



drill by which fire was obtained by friction. Here clearly the mythological conception is later than the separation of Greeks and Indians, and we are only entitled to conclude that the fire-drill was known before the linguistic separation. Hence the whole of the evidence tends to the belief that the most primitive of all worships—that of fire—does not belong to the earliest period, but was independently evolved among the Eastern and Western Aryans.

The gulf between the Teutonic and Celtic languages is much wider than that between Indian and Iranian; but, as has been already shown, the culture words prove that the relations of the Celts and Teutons were those of later geographical contact and political supremacy. There are reasons for supposing that a considerable portion of the Teutonic mythology may have been obtained from Celtic sources, as that of the Greeks was obtained from the Semites. Professor Rhys believes that the myths relating to Woden, the great Teutonic sky-god, may be traced to a Celtic origin, and he compares the name of Woden with the Celtic Gwydion.<sup>1</sup> But as no parallel name and no parallel myths are to be found among the Italic races, who stand in a much closer linguistic relation to the Celts than the Celts do to the Teutons, these myths probably date not from the time of the Celto-Teutonic unity, but from the much later period when the Teutons lived under the political supremacy of the Celts.

Thor or Dunar, the Teutonic thunder-god, may also be compared with the Celtic thunder-god Taranucus (Welsh *taran*, thunder), and Professor Rhys

<sup>1</sup> Rhys, *Hibbert Lectures*, p. 283.

finds Toutiorix, the Gaulish Apollo, in the legends of the German solar hero Theodoric, and he connects the Gaulish Esus with the Teutonic Anses and the Norse *æsir*, a word which is applied to the gods generally, and may be etymologically explained by the Sanskrit *asus*, the breath of life. He also compares the Teutonic Mann, Tiu, the "glorious" or splendid one, with Llud (King Lud), who is Nuada of the silver hand under another name. The name Nuada, originally Nodens, may be compared with the Italic Neptune, which is written Nethuns on an early mirror. The Celtic heaven-god Camulos corresponds etymologically to the Teutonic Himmel, and his functions are those of the Greek Uranus, but Heaven was worshipped by the Teutons as Woden and not as Himmel.

Kuhn thinks that Sarama, the messenger of Indra, was the wind; Professor Max Muller, with less reason, claims him as the dawn; and he may perhaps be identified, at least etymologically, with the Greek Hermes, the messenger of Zeus. The Vedic Ushas, the morning red, is etymologically the Greek Eos and the Latin Aurora, and the Vedic Surya is etymologically the Latin Sol.

Other suggested identifications between mythological beings in Greece and India are between Phlegyas and Bhrgu, Trita and Triton, Phoxoneus and Bhuranyu, the Centaurs and the Gandharvas, and between the lovely Saranyus, who is the morning dawn, and the gloomy Erinyes, the implacable Furies of the Greeks.

But some of these identifications are etymological rather than mythological, and others are rejected by the best scholars. It is possible, however, that

there may be a connection between Janus and Ζάν, Juno and Διώνη.

Professor Max Muller has attempted to identify the Indian Maruts with the Roman Mars. But in the Greek mythology, or even in the Iranian, which is so much closer than the Latin to that of the Indians, we have no trace of Mars or Maruts, and we are driven to conclude that the evolution of the Maruts was subsequent to the separation of the Indians and the Iranians, and indefinitely later than the separation of the Italic and Indian races, and the identification of Mars (Martis) with the Babylonian storm-god, Mātu or Martu, is, to say the least, as probable as is any connection with the Indian Maruts. Not only the Maruts, but Rudra and the other Indian deities associated with Indra are unknown in the Avesta. Brahma, who afterwards replaced Indra as the supreme Indian god, appears in the Rig Veda, and so also does Vishnu; but Siva and Kali, who now occupy such a prominent position in Indian worship, are unknown, and are probably of Dravidian origin.

When we have diligently read all the bulky volumes which have been written with the object\* of identifying the deities of India and Europe, it is surprising to find how scanty are the actual results which are accepted by all scholars. This has been well put by Mr Lang,<sup>1</sup> who says that Mannhardt, after having been <sup>sc</sup>a disciple of the Sanskritist school, has been obliged to confess that comparative mythology has not borne the fruit that was at one time expected, and that those gains of the science which may be considered certain, reduce themselves to the scantiest list of parallels—namely, the Indian Varuna and the

<sup>1</sup> Lang, *Myth, Ritual, and Religion*, vol. i. p. 23.

Greek Uranus, the Indian Bhaga and the Slavonic Bogu, the Indian Parjanya and the Lithuanian Perkunas, and finally, the Indian Dyaus and the Greek Zeus. Mannhardt adds that a number of other equations, such as Sâramêya and Hermeias, Saranyus and Erinys, Gandharvas and Kentauros, will not stand criticism, so that these ingenious guesses will prove mere *jeux d'esprit* rather than actual conclusions of science.

But even the four identifications which Mannhardt believes to be actually established are more or less illusory. If Varuna, Bhaga, Parjanya, and Dyaus were deities worshipped by the undivided Aryans, we should expect to find these names in the whole circle of the Aryan languages, just as we find the names for mother, wife, and daughter, for dog, cow, waggon, and wheel, for five and ten. But this we do not find. Dyaus is the only name which is at all widely spread, and even in the case of Dyaus, the strongest of all, there are reasons which may make us doubt whether he can ever have been the supreme god of the undivided Aryans.

The case of the Sanskritists rests on these four Indian names, Bhaga, Parjanya, Varuna, and Dyaus. The real significance of these four names will therefore have to be examined more closely.

The Norse Fjorgyn was identified by Grimm<sup>1</sup> with the Lithuanian thunder-god Perkunas, and probably with the old Slavonic Perunu; but Professor Riys considers as futile the attempt to connect them with the Sanskrit Parjanya, the god of rain and thunder. The Mordwin thunder-god Porguini is doubtless the same as Perkunas; and this may be set down as a case of

mythological borrowing, and there is no trace of such a deity in Greek or Latin.

In the Slavonic languages Bogu denotes the supreme deity. The word is found in the Rig Veda as *bhaga*, which means the distributor of gifts, especially of food, and is used as an epithet of the gods, and also, seemingly, as the name of a subordinate deity. In the Avesta the word has attained a larger significance, and is applied as an epithet to Mithra, and also to Ahura-Mazda, who is called Bhaga-Bhaganam, god of gods.<sup>1</sup> The word only became the name of the supreme deity among the Slaves, and among the closely-related Phrygians, with whom, according to Hesychius, the word *Βαγαῖος* was the equivalent of Zeus. The inscription, *Jovi Baginatti*, inscribed on a Gaulish altar found in the Department of the Isère, was probably a dedication by Persian or Phrygian mercenaries, as there is no other indication that such a name belonged to the Celtic Pantheon.<sup>2</sup>

Bogu and Perkunas must therefore be set aside as divine names which had only a limited geographical currency, and may be ranged with other culture words of late date which are common to the Iranian and Slavo-Lettic languages.<sup>3</sup>

The comparative mythologists who assert that the undivided Aryans were in possession of a common mythology before their separation have therefore to rest their case on two equations—that of the Indian *Vāruna* and the Greek *Uranus*, and of the Indian *Dyaus* with the Greek *Zeus*, the Latin *Jupiter*, and

<sup>1</sup> See Cook, *Origins of Language and Religion*, p. 69.

<sup>2</sup> Rhys, *Albert Lectures*, p. 54.

<sup>3</sup> See p. 195, *supra*.

the Teutonic Tiu.<sup>1</sup> The identification of Varuna and Uranus, although from an etymological point of view it leaves nothing to be desired, fails to prove the contention, because it is confined to Sanskrit and Greek, and we have already seen that the Greeks and Indians share late culture words, such as those for certain weapons, and for implements of tillage, which are not found in other Aryan languages—an indication of a geographical contact posterior to the linguistic separation of the Aryans. But there is this great difference, that while the Indo-Greek culture words are found also in Iranian, the Indo-Greek mythologic names are significantly wanting. This defect in the Iranian record is the more specially significant because the separation of the Indians and Iranians was later than that of any of the other Aryan families, and also because the religious ideas of the Rig Veda agree in so many minute particulars with those of the Avesta. The Indians and Iranians, as we have already seen,<sup>2</sup> had a common religious ritual, they had common names for priests, sacrifices, sacred chants, for the soma drink, and for religious aspergation—a clear proof that an organised system of worship had been developed before the separation. There are no such ritualistic agreements between any of the other Aryan families.\* The agreement in the mythologic system is also so close and striking that if we find mythologic names in Greek and Sanskrit but not in Iranian, it is difficult to believe they are really primitive, and not evolved independently by Greeks and Indians.

<sup>1</sup> See, for instance, Max Müller's article on "The Lesson of Jupiter" in the *Ninth Century*.

<sup>2</sup> See p. 190, *supra*.

To give a few instances, we find that in the Avesta Mithra's club is called Vazra, while in the Veda Indra's club is Vajra. The cloud demon slain by Indra is Vritra, the demon slain in the Avesta is Verethra. In the Avesta, Vayu, the wind, rides in a golden chariot; in the Veda, Vayu is Indra's charioteer. Azhi-dahaka, the biting serpent of the Avesta, is the serpent Ahi of the Veda. The Thritha and Thraetona of the Avesta are the Trita and Traitana of the Veda.<sup>1</sup> The mighty warriors and far-ruling kings of the Avesta are in the Veda the ancient spirits of the sky.<sup>2</sup> Yama, who was originally merely the setting sun, is, like the Egyptian Tum, exalted in the Veda to be the king of the dead, while in the Avesta he has become the first legendary Iranian monarch. The Indian sun-god Mitra became among the Iranians the gracious Mithra, the "friend" of mankind. Mitra is associated with Varuna as Mithra is with Ahura. Ahri man, the destructive spirit, appears in the Veda as well as in the Avesta.

Asura and Mazda are titles given in the Veda to Varuna, but in the Avesta these two titles are combined as the proper name of the supreme God, and we have the magnificent conception of Ahura Mazda (Ormuzd), the "Lord Omniscient," whose all-seeing eye is the glowing orb of day, whose son is the fire, while the robe which clothes him is represented as the vast starry firmament, which also is the arment of the Indian Varuna.

It is plain that while the lower mythological ideas of the Indians and Iranians agree, the higher religious conceptions, involving the name of the king all

<sup>1</sup> Duncker, *History of Antiquity*, vol. v. p. 111.

<sup>2</sup> *Ibid.*, p. 64.

glorious above, "whose robe is the light, whose canopy space," were the creations of a later time, when Indians and Iranians had separately advanced out of the earlier barbarism to a higher and nobler intellectual culture.

But 'Ahura Mazda, the supreme deity of the Iranians, was not the supreme deity of the Indians, though they gave the corresponding title Asura Medha to more than one god of light.<sup>1</sup> The supreme Indian deities were Indra and Varuna, of whom there is hardly a trace in the Avesta, a tolerably sure proof that the Indian worship of Varuna—the mighty Heaven—was evolved after the separation of the Indians and Iranians.

That this was the case is confirmed by the fact that the agreements between the Indian and Greek mythology, of which so much has been made, are nominal rather than real.

Both in India and Greece we have the common linguistic germs of the later mythological conceptions, but the mythology itself is plainly a later growth. The names of Uranus and Varuna are etymologically identical, as are those of Zeus and Dyaus, but this is all that can be affirmed. Indra and Varuna in the Vedic hymns completely take the place and offices of Zeus in the Homeric poems. Varuna is the mighty deity who rules the universe, who listens to human prayers, who does the right, and decides the destinies of men; while Indra, like Zeus, is the wielder of the thunderbolt. Nor does the Greek Uranus correspond more closely to Varuna. As Ludwig has observed, such Homeric phrases as οὐρανὸς ἀστερόεις show that in the oldest literature of the Greeks the word Uranus



designated only the physical vault of heaven, and it is not before the time of Hesiod that Uranus is personified, and becomes the spouse of the Earth and the ancestor of Zeus; whereas in India, at a much earlier time, Varuna has become the supreme administrator of the universe, and is never identified with physical phenomena.<sup>1</sup> Dyaus, however, in the Veda is still what Uranus was in Homer, and has not yet become what Zeus was among the Greeks.

It is true that the Indian Dyaus is the same word as the Greek Zeus, while the Latin Ju-piter, the Teutonic Tiu or Ziu, and the Celtic *diw* are names of kindred origin. Hence by far the strongest case is that of Zeus, since this is the only divine name which is found in any considerable number of Aryan languages. But even this wide-spread appellation is not universal. It is not found among the Iranians and the Slaves, and where it is found the mythologic equivalence is questionable.

In the first place, if Dyaus had been recognised as the highest god, or even recognised as a god at all, by the undivided Aryans, or if he had occupied among the Indians the supreme position which Zeus held among the Greeks, it is difficult to understand how every trace of the worship of such a mighty being should have disappeared among the Iranians, whose separation from the Indians was so late, and who agree with them so closely in their religious observances and their mythological beliefs.

While the name of Dyaus does not even appear in the *Avesta*, in the *Rig Veda* he occupies a wholly subordinate position, completely overshadowed by Varuna. Indeed he can hardly be called a god; he

<sup>1</sup> See Cook, *Origins of Religion and Language*, p. 63.

is little more than the sky, the physical germ of a mythological conception, just as Uranus was at first among the Greeks. Indra is called a son of Dyaus, a child of heaven, in the same way that Zeus is said to have been one of the grandchildren of Uranus; but Dyaus can hardly be said to have been an object of worship among the Indians any more than Uranus was among the Homeric Greeks. Far less can Dyaus be claimed as the supreme Heaven god, which Zeus was among the Greeks.

It is easier to believe that Zeus was elevated by the Greeks themselves to his exalted position, and that the personification of Dyaus was later than the separation of Indians and Iranians, than to hold with Professor Max Müller and others that the lofty Greek conception had belonged to the half-savage Aryans before the linguistic separation, and that this great primeval faith had almost died out in India, and that in Persia it had altogether disappeared.

But if we once admit that before the separation of the Aryans they had a common name for the sky, as well as for the water and earth, all the difficulty disappears. Not only did the word *dyaus* mean little more among the Indians than the mere physical sky, but even among the Greeks and Romans there are linguistic survivals which prove that the development of the mythological idea was still comparatively recent. When the Greeks said *Zeús ōu*, "the sky pours down rain," there was still an evident consciousness in the ancient phrase that the word *zeús* had once meant the physical sky and nothing more. That the same was the case among the Romans is shown, among other instances, by the well-known line of Horace, "Manet sub jove frigido

venator" (the huntsman abides under the chill sky). Plainly among both Greeks and Romans Zeus and Jove had not altogether ceased to be regarded, like the Indian Dyaus, as the over-arching heaven.

All therefore that we can safely conclude is that before their linguistic separation the Greeks and Indians had common names for the sky, Dyaus and Varuna, and that the mythologic significance of these names may date from a later period, and have been independently evolved.<sup>1</sup>

There is a further difficulty in supposing that Zeus was the god of the undivided Aryans. Not only is the name wanting in the Iranian and Slavo-Lettic languages, but in Celtic, which is so closely related to the Latin, we find only the germ from which such a conception might have been developed. In the Celtic languages no god bears this name, but we find words derived from the same root, *div*, to "shine," from which we get the Sanskrit *diva* and *divasa*, day; the Armenian *div*, "day"; the Latin *dies*; and the Celtic *diu*, *dieu*, and *dyw*, "day." This root is also the source of the Latin *divus* and *deus*, and of the Celtic *duw* and *dia*, a god.<sup>2</sup> To the same source we may attribute the Iranian *daeva*, which denoted a demon or evil spirit.

The fortunes of this word in the Teutonic languages are of more importance. So much has been made of the supposed identity of the Sanskrit Dyaus and the Teutonic Tiu or Ziu, and the identity, if it

<sup>1</sup> In like manner, when in the later Greek mythology Uranus had been at last personified, the Iranian *asman*, the heaven, became among the Greeks *Ἀκμων*, the father of Uranus.

<sup>2</sup> Rhys, *Hibbert Lectures*, p. 119, maintains that the Celtic word never acquired the force of a proper name.

could be established, would have such far-reaching consequences in its bearing on the primitive culture of the undivided Aryans, that the question must be examined in some detail.

Of the German mythology we know little, but the mythologic lore of the Scandinavians has come down to us in considerable amplitude, and since the Low German Tiu and the High German Ziu was undoubtedly the same deity as the Scandinavian Týr, it will suffice to inquire whether Tyr can be identified with Zeus, or whether he was an independent mythological creation.

Now, in the earliest Scandinavian literature *tyr* (plural *tívar*) is only a divine appellation, meaning simply "a god." Thus Thor is called Reidi-tyr, the car-god, Odin is Hanga-tyr, the gallows-god, or Farma-tyr, the cargo-god. In the plural we have Sig-tivar, the gods of victory, and Val-tivar, the gods of those slain in battle. The word *tívar*, remotely related to the Latin *deus*, means properly "the glorious ones," being formed from a root denoting splendour, glory, fame (proto-Aryan *div*, to shine), which is seen in the word *äsc-tir*, spear-fame, or renown in battle.<sup>1</sup>

In the later Scandinavian mythology we find this word appropriated as the proper name of a secondary deity, represented as a somewhat comic personage, whose arm was bitten off by the wolf Fenris, whose wife was unfaithful to him, and who is mocked for his misfortunes by the other gods, like Hephæstus in the Greek mythology.<sup>2</sup> He is simply the glorious one,

<sup>1</sup> Kemble, *The Saxons in England*, vol. i. p. 353.

<sup>2</sup> See the "Loka-Senna" in Vissnesson and Powell's *Cortus Proterum Borcalis* vol. i. p. 106.

the one-armed god of victory, in no way corresponding in his place or functions to the Greek Zeus, but rather to Mars or Ares. That he was thus identified by our forefathers is shown by the fact that the Teutonic Tues-day is not *Jeudi*, *Dies Jovis*, but *Mardi*, *Dies Martis*. The Teutonic Tiu may have a remote linguistic relation to Zeus, but mythologically he corresponds to Ares. In the Teutonic mythology the true analogue to Zeus or Varuna is not Tiu or Tyr, but Woden or Odin,<sup>1</sup> who is the supreme Heaven god, the blessed Father, the Lord of Earth, the All-Father of god's and men, whose consort is Jörðh, the Earth, whose all-seeing eye is the sun, the round orb which is also the eye of Ahura Mazda and Varuna, beholding all things upon earth.

Thor, the thunderer, is not the son of Tyr, but *Odins sonr* and *Jardhar sonr*, the son of Heaven and Earth, just as Indra, who answers to Thor, is the son of Varuna. The Anglo-Saxon royal families trace their descent from Woden, not from Tiu, just as noble Greek families did from Zeus. And Frigg, the Mother Earth, is the spouse of Woden, not of Tiu.

If Tiu or Tyr had been mythologically related to Zeus he would in all these aspects have taken the place of Odin. The Baltic tribes possessed the obvious mythological conception of Father Heaven and Mother Earth, but it was wholly independent of the Jupiter and the Demeter of the Mediterranean nations. The mythologists have been led astray by the similarity of the names to infer an identity of Tiu and Zeus which in reality has no existence.

<sup>1</sup> See *Corpus Poeticum Boreale*, vol. ii. pp. 459, 460.

The real "Lesson of Jupiter" is the lesson that philology by itself may be a misleading guide.

But though the All-Father of our Teutonic ancestors was Woden and not Tiu, it has been urged in the article to which reference has just been made that the identification of Zeus and Dyaus is made complete, since we find Dyaus designated as Dyaush-pitar in the Veda, which corresponds to the Latin Diespiter, or Jupiter, and to the Greek Ζεύς πατήρ (vocative Ζεῦ πάτερ). This doubtless is plausible and tempting, but it is by no means certain that such designations belong to the primitive period, and may not have arisen independently. We have no trace of such a compound appellation as Dyaush-pitar or Jupiter among Celts, Lithuanians, Iranians, Slaves, or Teutons; whereas, granting that Dyaus or Zeus was a primitive name of the sky, the notion of regarding Heaven and Earth as the parents of gods and men is so obvious and universal that there is no difficulty in supposing that it may have arisen independently among Indians, Greeks, and Latins. In fact we find the same idea in almost all mythologies. In New Zealand the Maoris regard Rangi the Heaven, and Papa, the Earth, as the universal parents of all things.<sup>1</sup> The Peruvians, the Caribs, the Aztecs, the Red Indians, the Finns, the Lapps and the Anglo-Saxons all spoke of Mother Earth and sometimes the Sun, or more usually the Sky was regarded as her spouse. Among the Finns Ukko and Akka are the names given to Father Heaven and Mother Earth.<sup>2</sup> Among the Greeks it was sometimes Uranus and Gæa, sometimes, Ze-

<sup>1</sup> Tylor, *Primitive Culture*, vol. i. p. 290; Lang, *Customs as Myths*, p. 48.

<sup>2</sup> Castrén, *Finnische Mythologie*, pp. 32, 86.

and Demeter who were so regarded. So also in the Rig Veda, Dyaus, who is the physical heaven, is called Dyaush-pitar, Father Sky, who with Prithivi-matar, Mother Earth, are the parents of the supreme god, the mighty Indra.

It may, therefore, be questioned whether Dyaus was ever the supreme heaven god of the undivided Aryans. They clearly had two words for the sky—the bright sky of day was called Dyaus “the shining,” and the over-arching canopy of night was called Varuna, the “coverer” or “concealer.” From these physical conceptions the names of the supreme deities may well have been independently evolved. In the dark West and the cold North the daylight sky was revered as the supreme source of good; in the burning and torrid Eastern lands the covering sky of night, and Indra the lord of rain, were rather looked up to and invoked as the blessers of mankind.

In India and in Greece, just as among Red Indians and Maoris, Father Heaven and Mother Earth were regarded as the primeval parents of all things, or the sun and moon were looked upon as brother and sister, or as a wedded pair; or the sun would be pictured as an ardent youth, chasing a fair maiden, the flying dawn. The chariot of the sun, the winds—the visible messengers of heaven—would be images occurring independently to the poets of both nations; and since the words denoting the sky, and the dawn, and the heavenly bodies would be related words, the few coincidences in mythological names may be explained without the hypothesis of a primitive Aryan mythology, invented in remote neolithic times, and handed down in recognisable form from

the far distant period when the Aryan peoples parted.

But though the common origin of the Greek and Indian mythology, once so confidently asserted, has wholly, or in great part, to be surrendered, we are able to see more clearly what it was that was really common to Greeks and Indians. In India, as in Greece, there was the same over-arching sky, the sun and the moon and the stars, the storm-clouds and the wind, the same succession of day and night, of summer and winter, and all the mysterious phenomena of nature. And there were the elements of a common speech; there were men calling all these things by related names, thinking the same thoughts, speculating in the same way as to celestial phenomena, so that as culture progressed among Indians and Greeks, Teutons, Celts, and Latins, nature myths, with features essentially the same, but underived, were independently evolved, as an attempt to explain the aspects of the world.

But if the Aryans started without mythological beliefs, and merely with common words for day, sky, and brightness, it is easy to see how these words should have independently become the names of the supreme heaven-gods. From the root *div* or *dya*, to shine, we obtain a whole series of Aryan words, denoting day, and noon, and sky, heavenly and divine, god and goddess; and finally the names of specific deities were evolved. Such are, in Greek and Latin, the names *Δαίμη* and *Διώνη*, Divania and Diana; Djanus and Janus, Djovis and Jovis, Zeus; and such words as *hora meri-diana*, *jove diano*, *sub dio*, *ἐν δῖος*, at noon, *deus*, *divus*, *δῖος*, divine; in Welsh *dyw*, a day, and *duw*, a god: in Irish *diu*, a



day, *dia*, a god, and *de*, a goddess ; and in Armenian *div*, day.<sup>1</sup>

But even if we admit the identification of the Greek Zeus with the Indian Dyaus—and this is by far the strongest case—we may affirm with Professor Rhys that the so-called Science of Aryan Comparative Mythology which started so long ago with this identification cannot, in all these years, be said to have advanced much further, and it seems doubtful whether even this identification is of the genuine mythologic order, and not merely linguistic.

It is surely easier to believe that rude, uncultured nomads, still in the stone age, should not have risen to the conception of the Hellenic Zeus than that such a conception, if it had existed, should, as they rose in culture, have been degraded to the mere physical conception ; and it is equally difficult to understand how the name and worship of the supreme heaven-god should have been lost utterly among the Iranians and the Slaves.

As Professor Rhys remarks—"If the Aryans had attained to the idea of so transcendent a god . . . there would be a difficulty in understanding how, as the Dyaus of Sanskrit literature, he should have become comparatively a lay figure, that as Tiu he should have been superseded by Woden and Thor among the Teutons, and that among the Gauls his pre-eminence should at any time have been threatened by a Mercury"<sup>2</sup> Ideas may be the same, and language may be identical, but we cannot affirm that the undivided Aryans were in possession of a common mythology. It is more probable that out of

<sup>1</sup> See Rhys, *Herbert Lectures*, p. 116

<sup>2</sup> *Ibid.* p. 110.

the same common words, and the same thoughts, the Aryan nations, after their separation, constructed separate mythic tales, whose resemblances are apparent rather than real.

Another factor has also to be taken into account. Much of the culture formerly attributed to the undivided Aryans is due, as we have seen, merely to borrowing, and so also it is probable that there has been an extensive migration of myths from tribe to tribe. In many cases this has been proved to be the case. We know that a large portion of the Greek mythic tales were in reality derived from Semitic sources, that the Latin poets transferred Greek myths to unrelated Italic deities, that the Teutons appropriated Celtic deities, while even the mythology of the Edda turns out to be largely infected with ideas which can be traced to Christian sources, and supposed Hottentot traditions of a universal deluge prove to have been obtained from the dimly-remembered teaching of Christian missionaries.

Religious myths, like folk-tales and popular fables, have an astonishing faculty for migration. Sacred legends of the Buddhist priests found their way from India to Bagdad, from Bagdad to Cairo, from Cairo to Cordova, and are now enshrined in the pages of La Fontaine, having been translated by wandering professional story-tellers from Pali into Pehlevi, from Pehlevi into Arabic, from Arabic into Spanish, from Spanish into French and English.

It is more probable that any divine myths which may ultimately be identified in the Aryan languages may have thus migrated at some early time, than that, as the Comparative Mythologists assume, they formed part of the common Aryan heritage in the

barbarous and immensely remote period before the linguistic separation. In any case it is clear that the sweeping conclusions which were in vogue thirty years ago as to the nature and extent of the primitive Aryan mythology are based upon assumptions as unwarranted as the theories of the successive migration of the Aryan nations from the East

The work of the last ten years has been mainly destructive. The work of the previous half-century has been revised, and ingenious but baseless theories have been extensively demolished, and the ground cleared for the erection of more solid structures.

While on the one hand science has been specialised, on the other it has been shown that the correlation of the prehistoric sciences is as intimate as the correlation of the physical sciences. The whilom tyranny of the Sanskritists is happily overpast, and it is seen that hasty philological deductions require to be systematically checked by the conclusions of prehistoric archæology, craniology, anthropology, geology, and common sense.

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A calculation of the rate at which the lake is being filled up with sediment shows that this settlement must have begun before 1500 B.C.<sup>1</sup>

M. Morlot considers that the age of the oldest neolithic lake dwellings in Switzerland may be from 6000 to 7000 years. Dr. Keller thinks this is too much, and prefers 3000 to 4000 years as a safer estimate.<sup>2</sup> But these structures belong to a comparatively late part of the neolithic period. Some of the pile dwellings in Southern Germany belong to an earlier period in which there were no domestic animals, and when even the rudiments of agriculture were unknown.

From the growth of the cone of the delta of the Tinière, a small stream which falls into the Lake of Geneva near Chillon, a calculation has been made by M. Morlot, which, making every probable deduction, would show that about 6400 years ago Switzerland was inhabited by people who used implements of polished stone, while for the stratum in which bronze implements were found we have a probable antiquity of about 3800 years. Hence in Switzerland the epoch of bronze must almost certainly be as old as 1000 B.C., and may possibly be older by another thousand years.

This estimate agrees essentially with that obtained from the pile dwellings in the valley of the Po, which began in the neolithic age, but, as Helbig has shown,<sup>3</sup> had reached the bronze age when they were destroyed by the invasion of the Etruscans, which must have been earlier—how much earlier we do not know—than the middle of the eleventh century B.C. The

<sup>1</sup> G. de Mortillet, *Le Préhistorique*, p. 618.

<sup>2</sup> Keller, *Lake Dwellings*, pp. 526-528.

<sup>3</sup> Helbig, *Die Italiker in der Poebene*, p. 100.

connected with masonry are loan-words from foreign tongues. They had common words to designate law and rights, family and tribe, but none for inheritance or property—an indication that the land and all connected with it still belonged to the undivided house-family or *mir*.<sup>1</sup>

The relation between the Celts and Germans is peculiar. Linguistically they are far apart, proving that the separation dates from a very early period; but there are numerous culture words of an advanced character which seem to show that at some period subsequent to the original separation they were in geographical contact, the Celts, as the more civilised race, exercising a political supremacy over some of the Teutonic tribes. The line of contact, as has already been suggested, was probably the range of mountainous forest which separates the basins of the Elbe and the Oder from the basin of the Danube.

The connection of the Celtic and Italic languages is structural. It is much deeper than that of Celts and Teutons, and goes back to an earlier epoch. Celts and Latins must have dwelt together as an undivided people in the valley of the Danube, and it must have been at a much later time—after the Umbrians and Latins had crossed the Alps—that the contact of Celts and Teutons came about.

We have already seen that the Teutons got their knowledge of iron from the Celts, and it will be shown in the sixth chapter that Woden, the great Teutonic deity, may be identified with the Celtic Gwydion. The words for law and king are the same in the Celtic and Teutonic languages. Another indication of an early supremacy exercised by the Celts

<sup>1</sup> Schrader, *Urgeschichte*, pp. 90-93.