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ORDINARY MEETING.*

THE PRESIDENT, SIR G. G. STOKES, BART., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Elections were announced :—

ASSOCIATES :—R. J. Snape, Esq., M.A., London ; Rev. Kenneth S. Macdonald, M.A., D.D., India.

The following paper was then read by the Author :—

ON THE COMPARISON OF ASIATIC LANGUAGES.

By Major C. R. CONDER, R.E., D.C.L., LL.D., M.R.A.S.

INTRODUCTORY.

SINCE the power of articulate speech is one of the most distinctive attributes of man, there is, perhaps, no more useful or fascinating study than that of the growth of language, nor any which is more likely to shed light on the difficult questions of prehistoric events and conditions. Yet the question which forms the subject of this paper is one of great difficulty, and which has often suffered from hasty treatment; and it is inevitable that an attempt to enquire into the ultimate relationship of different families of speech, should meet with objections not less formidable than were those encountered by the fathers of the true comparative study of the Aryan languages, who laid the basis of our present knowledge some fifty years since.

The main difficulty lies in the continual and sometimes rapid change of language from generation to generation, which is most marked among peoples who have no literature capable of maintaining a standard, and among scattered tribes holding little intercourse. I have been told that among

* 9th of 28th Session.

the Kaffres, when the absence of springs and streams separates the various settlements by great distances, the change in pronunciation is sometimes so rapid that, in the third or fourth generation, the members of an isolated group become unable to understand the speech of the parent tribe; and when we consider the lapse of many centuries, it may well seem impossible that the original words of such languages should be recoverable, even by the aid of a wide, comparative study. We are often told that the condition of primitive man is best illustrated by the study of the modern savage races of Africa and of America. Yet it seems to be in these cases assumed that those whom we now know as savages can never have existed in any other state, and this although, on the discovery of America, existing civilisations were encountered, which have since been destroyed, and traces of old past civilisations (including literature and monumental writing) in Central America, which had then already perished, leaving only the great ruins of former cities. Even in Africa, when it is considered that physical and other characteristics have been shown, by men of science, to connect the wild Bushman (distinguished for his love of drawing and power of dramatic imitation) with the ancient civilised Egyptian, we may well pause before concluding that the ancestors of the bushmen were as wild and uncultivated as are their present descendants.

It is not, then, among modern savages that we can expect to find, in recognisable condition, the original languages of the world. But if scholars be correct in classing the languages of America with the Turanian family of speech in Asia, and in suggesting an ultimate connection between Semitic and African speech, the latter (as regards Kaffre languages at least) being also connected with that of Australia, it would follow that in considering the most ancient languages of Asia, we are able to get at the very foundations of the speech of man as a whole.* The present

* The Mongolic character of Japanese is shown clearly by W. G. Aston ("Grammar of Japanese." Trübner, 1877). The American languages are classed as Turanian with the Euskaric and Esquimaux. They show the ordinary peculiarities of this family—agglutination, the use of post-positions, absence of gender, and formation of the verb by auxiliaries. The Berber languages show connection with Egyptian and Coptic in structure and in the pronouns. The Caucasian dialects, though much mixed and decayed, show inflection, and the case suffixes of Aryan speech. The languages of Melanesia are connected with the speech of the southern

paper is confined to the discussion of the main historic groups—Mongolic, Aryan, and Semitic—but it is generally admitted that the South Turanian dialects, and the Japanese, are ultimately connected with the Mongolic (or, as it is otherwise called, the Altaic), although the absence of early civilisation has resulted in the growth of so many dialects, that, in China alone they number nearly 400 in all, that which is generally called Chinese being radically the speech of the Mongolic immigrants from the West.

The races among whom the earliest civilisation is found—the Akkadians, the Babylonians and the Egyptians—possessed the art of writing so early that the disintegration of language proceeded among them much more slowly than among illiterate savages. The commonest words of daily life, which were no doubt at once the most ancient and the most widely used, were also, fortunately, the least subject to changes—from their simplicity and constant use. The language of the Akkadians can be traced to, at least, 2500 B.C., while monumental examples of Egyptian are equally ancient. The Aryans are the last to appear on the historic scene; yet, in Asia Minor, our knowledge is carried back to 800 B.C., in the case of Phrygian, and to 500 B.C., in Persia, while the oldest hymns of the Vedas are referred, by Max Müller, to 1500 B.C. Comparative study of later historic languages is thus, in the case of those under consideration, checked and assisted by the existence of monumental texts, of an antiquity which is equal to that of most of the prehistoric remains found in other parts of the world.

Each of the three great Asiatic groups is very distinct, and well separated by grammar, by pronunciation, and by vocabulary. Each has been, and still must be, separately studied, and internal comparisons instituted among its members, without reference to the study of the other groups. But the question now to be raised is whether we are not already able to perceive that a yet wider comparison, if based on safe principles, is possible between the ultimate

part of the Asiatic continent, and distinguished from those of Australia and Tasmania, which are said to compare with African speech. Mr. C. Bertin connects the Bushmen with the Egyptian race. As regards the Dravidian and Kolarian languages of India, they are classed by Professor Lacouperie as Himalaic-Turanian, and he even places the Andaman and Australian in the same group. The Thibeto-Burmese forms one family of the Kienlunic group to which he refers the Chinese and Anamese, being the next to the Turkic as a Turanian group. This practically exhausts the list of human languages all connected ultimately with Asia.

forms of the various main divisions. This enquiry has often been attempted in a fragmentary manner, and very remarkable results have been noted. Thus Egyptian has been seen to present similarities to both Aryan and Semitic speech. Chinese has been said to be comparable with both Mongolic and Aryan languages in some of its words. The identity of roots Aryan and Mongolic has been indicated by Tomaschek and Donner. The similarities between certain Aryan and Semitic roots were carefully (though not always correctly) recorded by Gesenius; the connection of Akkadian and Chinese was indicated by Lenormant, while others have seen in the Akkadian an Aryan element; and others, again (following Halévy), have denied that it is anything more than a Semitic language. Are we to suppose that in each case the scholars in question—who were all trained linguists, and not mere dabblers in language—have been misled by a few chance coincidences? or, may we not rather be led to suspect that some real connection does exist, binding together languages which, however different in structure, were once spoken in parts of Asia not far distant from each other?

Against such a view two main objections are raised. First that the resemblances are accidental, or due to the same causes leading to like results in independent cases. Secondly, that the similarities are due to the interchange of foreign, or “loan” words, between various and originally distinct languages. It is certain that an apparent similarity often disappears when we trace back the words to their oldest forms, and it is also certain that from a very early time the trading relations, which bound the various civilised peoples together, led to the interchange of many foreign words for foreign objects; but while these circumstances should render us very cautious in research, they do not suffice to dispose of the main question. It becomes a matter of careful study to ascertain how far these resemblances are traceable in the earliest radical forms of the oldest languages, and how far they are concerned with common objects and ideas, which it is not natural to suppose would have been expressed by foreign words. As regards independent adoption of like words, while it is easy to imagine that simple sounds—imitative of natural ones—might so appear in languages not really connected, the same cannot be said when more developed roots, and parts of speech, are found to be common to the various great stocks.

My only claim to speak on such a subject lies in the fact

that nearly half my life has been spent in foreign lands, and among primitive peoples, and that I have been forced by circumstances to acquire the speech of those with whom I dwelt—for eight years among Italian peasants, for six among Arabs and Turks, and for one year among Kaffres and Hottentots, in regions only since that time incorporated in our Empire. The study of antiquity, at the same time, has obliged me to enquire into the dead languages of Asia; and practical knowledge of the vulgar dialects has shown me, as it has shown others, that languages are older than their written grammars, and that the archaic speech of peasants is more nervous, more simple, and more symbolic, than are the polished phrases of literary authors, and of the later standard style. But at the same time the absolute importance of recognising the distinctions, in grammar and in sound, which now divide the great groups from each other, is only the more forcibly impressed on the mind by hearing the actual conversation of various races.

And first as regards sounds. The distinction of sounds nearly akin increases with increase of civilisation, and with increased delicacy of ear. The scientific alphabets of to-day distinguish no less than 86 sounds, including 27 vowels; but the oldest Semitic alphabets, rich as they are in sounds hardly distinguished by an European ear, are limited to 22 letters; and the oldest inscriptions in these take no note of the short vowel sounds. The Akkadian was only accustomed to mark 17 sounds in writing, and when the Greeks used the Cypriote syllabary they had to content themselves with 14 sounds. With this we may contrast the alphabets of their descendants, the Turks, having 32 letters against the 17 in Akkadian, the Arabs 28 against 22 in Hebrew, and the writers of Sanskrit no less than 50 against the 14 of the Cypriote syllabary. Nor was this small amount of distinction due to want of graphic power, for the symbols have decreased steadily in number, while the precision of distinction has increased, and the additional letters are very generally distinguished from the older only by an added dot or line. The distinctions are also, in very many cases, only marked in literature, and not clearly discernable in the speech of the ignorant, so that one of two kindred sounds becomes characteristic of one dialect, and another takes its place in a second dialect of the same language. It is on this peculiarity that the comparative study of European languages rests, as on a secure basis; and it has become more and

more apparent to scholars that we cannot really call one of such dialects older than the other, or point to any one of the oldest languages as the parent of all the others.

Broadly distinguishing the sounds into four great groups—*vowels*, *gutturals*, *dentals*, and *labials*, we find that sounds which are uttered by the same parts of the mouth have a tendency to pass into one another; and that certain of the more delicate distinctions are not traceable to the earliest period. The guttural comes from the throat, and passes into the palatal; the dental is sounded within the teeth; the labial by aid of the lips, and in each case there is a cross distinction, according as the letter is strong, weak, or nasalised. In all cases the dentals are the most numerous, and the labials furnish the fewest distinctions of sound. But different languages differ greatly in the proportionate use of the three classes of sound; so that while nine-tenths of a Bushman's words consist of gutturals with an added vowel, the soft and liquid speech of the Bechuana Kaffres consists mainly of palatals and labials with many vowels, such as seem natural to a thick-lipped people, who have, it may be observed, adopted none of those clicks which the Zulu borrows from the conquered Hottentot.

The sounds of our own language are co-extensive with the more broadly distinguishable sounds of speech in general, although as regards both vowels and consonants there are many well-known distinctions, which we do not mark in writing. As regards vowels the older systems do not distinguish more than three or four, though the early Aryans found it necessary to have a notation for at least ten (five long and five short), and their descendants in the east have made yet further distinction. The Hebrew letters *Aleph*, *Yod*, and *Vau*, though not regarded by grammarians as vowels, have in fact the sound of the three long vowels most commonly distinguished, while the *Ain* is a guttural vowel of which the sounds (for it represents several) can only be learned from Orientals, yet which (as we shall observe later) easily pass into that of the *Aleph* or of the *Vau*.

As regards the gutturals there is, I think, not one used in Semitic speech which is not also found in European speech. In Turkish and Mongol speech, although the gutturals are even more numerous than in Semitic languages, they are nevertheless freely interchanged in the various dialects, as Vambéry has shown. In the dialects of Palestine there is

also considerable difference in the pronunciation of the gutturals, and in some the *Koph* is not distinguished from the *Kaf*, while the *Jim* has a different sound in the Arabic of Syria and of Egypt.

This interchange is yet more remarkable in the more numerous dental sounds. T and D are interchanged in various dialects, and in others T becomes S. The Z sounds also merge into S on one side, and into Dh or D on the other. Thus the Hebrew Z becomes the Aramean D. The Palestine peasants pronounce the Th as S, and the Dh as Z, and they do not always distinguish the three forms of the sibilant, which are distinct in literary language. So also on the Moabite Stone, and on the Siloam inscription, we do not find the hard T (*Teth*), which occurs in later Phœnician texts, and in Hebrew we have cognate roots in the hard and soft T and in D, and also in D and Z. Another very weak letter is N, which is euphoniously changed into M, and also into L. In Semitic and in Aryan languages alike the N is often introduced into the middle of a root, which in other dialects exists without it. In the Cypriote Greek the N is often absent from words of which we are accustomed to regard it as a radical letter, as, for instance, *Anthropos*.

The L and R are of all letters those which appear to have been the latest to be specialised. In Egyptian there is no distinction between them. In Chinese there is no R, and no L in Japanese. In Mongolic languages they are both at times interchanged with T or D, and in Turkic the native roots never begin with L or with R. The L of the Finnic dialects becomes T in Turkic; thus the word *lil* "ghost" becomes *tit* in some dialects. The same is remarkable in the Bechuana language, which makes no distinction between L, R, and D.

The labials are equally liable to merge into one another. The Galileans and Samaritans appear to have been reproached with the confusion of these and of other letters. The Arabs have lost, or never possessed, the P sound, which they cannot distinguish from B. The Mongolic languages show us the interchange of P, B, and V, and the B becomes V in modern Greek. Aryan roots in B have also cognate roots in V or W, and in all languages to be considered this softening occurs, while M and V are also little distinguished, as we see, for instance, in the Cypriote syllabary.

These changes are due to euphonic laws, which arise from the attempt to render pronunciation easier, and which we

see well exemplified in Zend, when S becomes H* before *a*, and *Sh* before *i* and *u*, and where *T* and *D* become *S* before another *t*, and *Sh* before *é*. K is also softened to *é* before *t*, and *j* becomes *h* before *t*. If we wish to represent the most distinct sounds, of the many which shade into each other, they may be classified in a simple table of nine consonants, as follows:—

	Gutturals.		Dentals.		Labials.	
Strong	k	....	t (= r = l)	....	p.
Weak	g	....	s	....	v.
Nasal	ng	....	n	....	m.

and under these headings all the more ancient and widespread roots in the Asiatic languages might easily be classed.

Before considering the relationship of these languages we must briefly glance at each of the three groups in turn, and at the present condition of comparative study of their internal relationship; and in so doing it is convenient to begin with the Aryan, as the most carefully studied group. But a few words are necessary in the first place as to the distinction made between what is called "agglutination," and what is known as "inflection" in language generally.

If it be admitted (as is generally taught) that languages spring from certain roots, which contain ideas of actions, and that words are formed by the putting together of such roots, it will appear that what are called monosyllabic languages have no real existence. The oldest roots are monosyllables, probably in every language, but even Chinese is not really a language where these monosyllables stand alone. Its verbs are formed by the prefixes *ching* and *tso*, and its nouns in their oldest forms are seen to be built up from more than one syllable, though in modern Chinese they have been recontracted to a single sound, by the general decay of the language. In all Asiatic tongues we find words in various stages of decay, due to the natural attempt to make conversation easier and more rapid, which has for centuries tended so to wear them down. In some cases the combinations are easily resolved into distinct roots, in others the original form is difficult to perceive, or even lost. The first condition is *agglutinative*, or "glued together," the second is *inflexional*, or decayed agglutination. No language is entirely free from one or other form, but in

* The interchange of S and H also occurs in Semitic languages. The Assyrian and Hadramaut S (in the personal pronoun and voice of the verb) becomes H in Hebrew and in Himyarite.

Mongolic speech inflexion is little marked, and in Aryan or Semitic languages it has proceeded very far. In English and in Persian we find a yet further stage of advance, in which the old inflexions are discarded as cumbersome, and new agglutinations take their place as being simpler. For instance, the word "shepherd" is clearly soluble into *sheep* and *herd*, but the origin of "shearer" is forgotten, though the *er* comes from an old word for "man," and the compound was once understood to mean a "man who shears." The noun cases of the German have been relinquished in English, because the prepositions gave a simpler method (sufficient in itself) for the distinction of case, and the verb in like manner is for the most part easily aided by auxiliaries, and discards the old inflexions of tense and mood, which themselves arose from older auxiliary additions. Turkish is a language dear to the grammarian for its simplicity, due to the regularity with which its case suffixes (taking the place of prepositions) and its complete system of auxiliaries (for moods and tenses of the verb), are applied to every root; while in German we have an instance of inflections which have decayed and lost their original value, and which now form impediments rather than aids to speech, from which encumbrances the English language has set itself free. Such peculiarities, therefore, denote various stages of growth and decay, and of new growth; but they do not fix a barrier of complete distinction between the various great groups. The differences, in short, are differences of degree, and not of kind. Some languages stop short at a certain stage, or advance very slowly. The Egyptian is an instance in which inflexion never seems to have developed very completely; the Chinese is an instance of a language which has greatly decayed. It would seem that when races of one group came in contact with races, equally civilised, of another group, and remained in intercourse, the result was an advance in language; but that when the civilised race is isolated among more savage populations, speaking in archaic and varying dialects, the tendency is to decay. This is in our own times very remarkable in the degradation of the Dutch language in the Transvaal, where for several generations the descendants of civilised Europeans have been isolated among native tribes, Hottentot and Kaffre. The advance of language is, on the other hand, well marked in the case of the Finnic peoples, who have long dwelt in contact with the European Aryans.

ARYAN LANGUAGES.

The study of the comparison of Aryan languages was placed on a sure foundation, not much more than half a century ago, by the band of great scholars, among whose names those of Bopp and Grimm are perhaps the most widely famous. Of late years, however, great advance has been made in the true appreciation of their connection; and the name of J. Schmidt will be remembered as that of the writer who has substituted for the older idea of a genealogy of languages, that of a parallel growth of dialects, developing with the growth of the tribes of Europe, in their various centres. This change of method has two results. One that it requires a much less extended period of time to account for the variations of the dialects, and the other that it recognises in Aryan speech the same mode of development which had already been recognised in Semitic and Mongolic languages.

The fierce controversies (full of political *virus*), which raged of late as to the home of the Aryans, appear to have been laid at rest by the calm and moderate exposition of Dr. O. Schrader, whose interesting volume is remarkable for its bold confession of the uncertainties which still surround its subject. His conclusion that the cradle of the race (as a distinct stock) is to be sought on the Southern Steppes near the Volga, seems destined to be generally accepted; but it in no wise conflicts with the contention of Max Müller, that the parents of the race came from Asia. Although the various Aryan tongues form a complete chain, starting from the Volga, and meeting again in Armenia, yet a very marked division into two great groups—European and Asiatic—exists,* and the migrations from the Volga centre

* A certain number of Phrygian words are known, and are all Aryan, of the European section. Aryan words, given by Greek writers as Lydian and Carian, are also known. Armenian, though it has many Turanian and even some Semitic words, has been shown to be an Aryan language between Slavonic and Zendic; many Armenian words compare with Georgian. The language of Lycia, which I have specially studied, proves to be an Iranian language comparable with Zend and Sanskrit, but influenced by Greek (see "Journal Royal Asiatic Society," where I have treated the question at length). I believe the Vannic dialect to be clearly akin to Lycian and Persian. The names of Medes and other Asia Minor and Armenian chiefs, encountered by the Assyrians, are clearly Aryan, and belong to the Iranian group. Herodotus speaks, however, of a Phrygian colony in Armenia, whose language was no doubt the old form of the present Armenian.

were in two directions, westwards and eastwards, the ancestors of the Asiatics having, before their languages diverged, possessed a considerable amount of civilisation. Dr. Max Müller has shown that in the interval of less than 5,000 years, the whole growth of Aryan speech may have proceeded from the separation of the descendants of some two or three original families; and unless it is contended that these were first created on the banks of the Volga, there is no linguistic reason for denying that these families may have migrated thither from some Asiatic country. The condition of these original families has been very variously estimated, but the evidence is indisputable which shows that they already possessed a certain civilisation, being not only a pastoral people, but also growing grain, and probably travelling in rude waggons. They could count and could build, they acknowledged rulers and family relationships, though it would seem that they had no method of writing until they learnt the art from other races. However much their culture may have been over estimated, it is impossible to show that they were mere savage hunters, scarcely superior to the wild beasts that they encountered. Their condition was similar in short to that which has independently been established by linguistic evidence, for the early ancestors of the Semitic and Mongolic races.

The labours of such scholars as Fick, Curtius, and others, have reduced the Aryan languages to a list of about 450 original roots, but it has been perceived by Max Müller that this enumeration errs rather on the side of excess than of the reverse. In an interesting paper on the "Simplicity of Language," he claims that the list may be yet further condensed to an original enumeration of not more than 150 roots, which, by subsequent variation, and by the building up of words, has produced the enormous totals of modern vocabularies. It is inevitable that differences of opinion should exist as to the attribution to the true root of many difficult words; but the roots as a whole are so well established that they may safely be used for the purposes of a wider comparison; and many of the doubts and contradictions which are due to an exclusive study of Aryan speech will, in the future, be cleared away by such wider comparison with the other Asiatic languages.

The Aryan roots are of three kinds, namely: 1st, those consisting of a single consonant with a single vowel; 2nd, those with two consonants and one vowel; and 3rd, those

with three consonants forming two syllables. This last group is very generally recognised to represent the early building up of words, by the combination of two monosyllabic roots; but, as regards the second category, they have been variously looked upon as original efforts of speech, or as inflexions which result from an original combination of the first or simplest class of monosyllables. As regards this point it is remarkable that we have many series of roots having the same beginning, but ending in a guttural, a dental, or a labial; and they can therefore be arranged as species of a single genus, of which the original form is the simple syllable of the first category. As an instance we may cite the root BHA, "to shine," with the extended forms BHAK (guttural), BHAS (dental), and BHAN or BHAM (labial). From the first comes the Sanskrit *bhá*, "to shine"; from the second the Latin *fax*, "torch"; from the third the Sanskrit *bhas*, "to shine," or "appear," and from the last, the Greek *φαίειν* "to appear," the Irish *ban*, "white." The same extension of the root is very generally observable, as in WA, "to breathe," WAK, "speech," WAR, "speech:" or WA, "to weave," WADH, "to weave," and WABH, "to weave." From such instances we may perhaps conclude that the original roots are those of the first or simplest class.

When we come to consider these simplest roots we find that they also exist in several forms, according to the position and character of the vowel. Thus we have both AW and WA, "to breathe"; and both WA and WI, "to weave"; AR and RA, "to roar"; MA and MI, "to diminish." But what is still more remarkable, we have often the same idea conveyed by a guttural, a dental, or a labial, as DA, "to go," GA, "to go," and PA, "to go:" DA, "to say," KA, "to call," and BHA, "to speak." In some of these cases the extended form only is found in Aryan speech, but the simple form still survives in Mongolic languages. Such arrangement of the Aryan roots seems to show that the original speech of the race must have been extremely simple, and included very few sounds. The meaning was probably emphasised and assisted by the use of gestures, and of various tones of voice. This we notice among all primitive peoples. The gesticulations of an Italian peasant, or of an Arab, are so systematised as often to render speech quite unnecessary; and the dramatic powers of the Bushman are so remarkable as to be materially important in the explanation of the meaning conveyed by his very limited vocabulary. It is indeed to this imitative faculty in man

that we owe the early attempts at pictorial representation, whence proceeded picture-writing, and from it hieroglyphics, syllabaries, and alphabets; each stage rendered necessary by the growing power, volume, and complexity of speech.

It is not here proposed to enter into the question of the origin of these simple sounds. It is clear that many of them suggest the imitation of natural sounds, and not improbable that this is the true origin, wherever such an explanation is possible. The names of many animals are clearly imitative of their cries, and when we find in Egyptian the words *Ba*, for "sheep"; *Mau*, for "cat"; *fufu*, for "dog" (the old historic bow-wow); we are surely approaching very near to the origin of language. The word *Shu*, for "wind," is very suggestive of what we call the southing or sighing of the breeze. And when we turn to Chinese and discover *Maau* to be also the cat in that language, we see that it is quite as possible that it arose independently, as that it marks a connection of language at such a great distance in Asia. But this "bow-wow theory," though it is indisputably the explanation of many roots, encounters a difficulty when we come to consider certain ideas, like those of light, height, &c., which are unconnected with sound. Nor does the recent suggestion that certain acts were accompanied by certain sounds appear to recommend itself as a natural explanation.

To return to the Aryans: although the simplicity of the roots of their speech is so great, its advance had also been great in the earliest times to which we can trace them; and we shall find that they share not only the first and the second category of their roots with other Asiatics, but even in many cases the third. Before attempting to consider this important question, we must, however, turn to other groups of languages.

MONGOLIC LANGUAGES.

The Mongolic races are often depreciated as stolid and unimprovable. The civilisation of China and Japan is forgotten; and the adaptability of the Turkish race, as shown by the inclusion of many foreign words in their language, which in this respect resembles our own. The advance of knowledge shows that this conservative character is due, not to original barbarism whence the race has never emerged, but rather to the fact that the Mongolic peoples were the first to attain to civilisation of a very advanced type. They were the rulers of Asia, while the Hebrews were still shepherds,

and while the rude Aryans had as yet not appeared on the page of history. They were probably the first to use metals, and to possess weapons superior to the flint knives, hatchets, spears, and arrows, of other races. They were the teachers of Phœnicians and Babylonians, and probably the earliest artists of Italy and Syria.* Vambéry, whose career originated in the desire to trace the Hungarians to their home in Asia, has uttered an eloquent protest against the Aryan prejudice on this subject, and the discovery of the Akkadian language, by Sir Henry Rawlinson, has placed the question of Mongolic civilisation in a new and truer light. In speaking of Akkadian as Mongolic, I am aware that its vocabulary has been found to present very remarkable resemblances to both Aryan and Semitic speech; but it is by grammar rather than by vocabulary that languages are best classified, and judged by this test we must accept the conclusion of the great scholars who have followed Sir Henry Rawlinson, and the latest contributions of Lenormant and of Hommel to the question.

Three great divisions of this group of languages may be recognised (1), the Mongol proper, spoken over a wide extent of Asia; (2), the Turkic in the steppes of Central Asia; and (3), the Finnic and Ugric in Europe; but all these divisions are intimately connected, by vocabulary, by grammar, and by the identity of suffixes and pronouns; they are all remarkable for agglutination, and for the almost entire absence of inflexion, save when Aryan influence has tended to cause such an advance. The labours of Castren, Donner, Böhntling, and

* It is to this group that I refer the Hittite language. Since reading a paper on this subject to the Victoria Institute, a letter has been published from a Hittite Prince to Amenophis III. It proves, as I supposed, to be in a dialect closely akin to the Akkadian. Another long letter, by the King of Mitani, called Dusratta, to his relative, Amenophis III, is in a similar language. Its case endings are the same as in Turkish, and many of the words are Akkadian. Mitani was the country of the *Men*, a tribe who invaded Egypt in the Hyksos period, and they lived in Commagene, east of the Euphrates, close to the Hittite country. I think, also, that Dr. Isaac Taylor has proved by numerals and other words that the Etruscans were Mongols from Asia Minor, but the Umbrians, Oscans, and other early Italian tribes were Aryans, akin to the Latins and Celts. An even older race akin to the ancient Egyptians and Berbers is believed, in prehistoric times, to have existed in Italy, and on all the Mediterranean shores, in its islands, in France and Spain, and even on the south shores of England.

Vambéry, and of many other distinguished scholars, have established a comparative study of dialects and languages, reaching from Siberia to Hungary, which, though less perfect than that of the more-studied Aryan languages, is equally based on sound scholarship and research. The number of roots to which the vocabularies are reduced is even smaller than that of the Aryan system, because they are more easily divided from their added suffixes, and are found to be almost entirely monosyllabic. Vambéry enumerates about 200 roots for Turkic speech, and these recur in the other divisions of the group. The third category of Aryan roots, which are bisyllabic, appears to be almost entirely absent, and the distinction of letters and of vowels is much less perfect in Mongolic languages than in those of our own ancestors.

Another peculiarity which marks these languages, and which is distinctly traceable in Akkadian, is that of "vowel harmony," by which is meant that the vowel of the weaker root in a compound varies in accordance with that of the stronger root to which it is attached. We may, perhaps, conjecture that the same harmony once existed also in Aryan speech, and that it is still discoverable in the parallel instance of roots having the same meaning but different vowels (as in the case of WA and WI, "to weave," already cited); but if so it ceased at an early period to be a law of language.

The fact already cited that a simple root may be reversed, as in the case of AR and RA, is also important for comparative purposes. The modern Turkic dialects generally prefer, in such cases, to put the vowel first, as easiest of pronunciation; but in Akkadian we constantly meet with both forms. Among the peasantry of Palestine this inversion of the syllable is very clearly to be remarked. Thus, for instance, the word which means "wells" is at pleasure *Biyâr* or *Abiâr*; and in the same way the Hebrew *Ben*, "son," becomes *Ibn* in Arabic. It is well known that both Arabs and Hindoos find it difficult to begin some words with the letter S, so that, in the mouths of both, Mr. Smith invariably becomes *Esmî*.

We must touch in passing on the relation of Chinese to Mongolic speech, though the question is one full of special difficulties—Chinese being a very decayed language, in which sounds originally distinct have become much confused. Its vocabulary, however, still represents a recognisable connection with that of its western neighbours; and attempts have even been made to compare Chinese directly with Akkadian. We suffer, however from the fact that we have

no early information. The oldest inscriptions are not referred to a period older than the ninth century B.C.; and the ancient civilisation of China (in which Voltaire believed) has been shown by the labours of many scholars to be a baseless boast due to national vanity. The Cantonese dialect, which is said to spring direct from the oldest known Chinese, when compared with the Mandarin language, shows us how rapid the decay has been; and the *tones* which are now so important for the distinction of words of like sound, have been proved to be of comparatively late origin, and to have been gradually elaborated, increasing in number as time went on. This device is analogous to the Hottentot device of clicks, to distinguish the similar sounds of an African language. Among the great civilised races such systems of distinction have been unnecessary, since compound words present a sufficient variety for purposes of distinction. It is evident that great caution is necessary in the treatment of Chinese; and that the comparison of the existing sounds with those of such a language as the Akkadian, may sometimes be very misleading, unless the steps by which the modern word came to be formed can be traced to a sufficient antiquity.

SEMITIC LANGUAGES.

The Semitic languages form a very small and compact group of dialects spoken within a comparatively small area of Asia, bordering on Egypt; and they present many peculiarities, which unite them to each other so very closely, that they might almost still be regarded as dialects only.* It seems at the outset very improbable that so small a group can be independent of others; but the tendency of late has been to suppose that they are to be connected rather with African than with Asiatic speech. This appears to me to be a reversing of the true problem, for reasons to be presently

* The Marquess of Bute read a valuable paper on the "Language of Tenerife," to the British Association this year (published by Masters and Co., London), and on studying this I find that it was clearly an old Berber language. About 180 words of this ancient language are known. Some of the sentences of the Tenerife language are preserved, and are of great interest, such as their proverb: "May he live and feel the evils of fate." This subject I have also treated in full, in the *Scottish Review*, and have indicated the Semitic connection of the language. Inscriptions have been found in the Canaries, in an alphabet said to be similar to that of Carthage and Numidia. The Canary islanders had the interesting custom of making mummies, like the Egyptians, and used the same word, *Kha*, to express the "corpse" or "mummy" that was used in Egypt.

explained. Meantime the answer given to all who have attempted to compare Semitic and other Asiatic languages is, that a radical distinction exists in the structure of the Semitic languages, because they spring, not from monosyllabic, but from bisyllabic roots. When, however, we consider the number of very ancient monosyllabic words in Hebrew, such as *Ab*, "father"; *Ben*, "son"; *Gub*, "pit"; *Gu*, "middle," &c., &c., when we hear in ordinary Arab conversation that monosyllabic words play much the same part as in other languages; we may begin to doubt whether the strict insistence on trilateral roots is not rather a learned system, than a peculiar feature of the genius of the language. And this doubt continues when we inspect Hebrew grammars and dictionaries, and find that Semitic languages have indeed some monosyllabic roots, though these are treated as due to contraction.

A Hebrew dictionary contains nearly 1,500 roots, but out of these not a third in all are *perfect*, that is to say, consist of three consonants forming two syllables. The rest, called *quiescent*, *defective*, and *double*, are either formed with a vowel, or are monosyllabic in the imperative, which is the true root in every language. The perfect roots are similar to the third class of Aryan roots, and they represent an advanced stage in language, such as will not be denied to be that reached by Semitic speech. These perfect roots are, in some cases as we shall see, the same in sound and meaning found in Aryan languages; and in many cases they can be resolved into an original monosyllable with a suffix, much as in other languages. Thus we find *Bad*, "separate"; *Badâl*, "separate"; *Badûk*, "cleave"; where the suffixes *l* and *k* have evidently been attached to the old original root *Bad*, which may be compared with the Aryan root *Bhid*, "to divide." In other cases the roots are formed by prefixing *N*, which, however, disappears in the imperative, as for instance the verb *Nagash*, "to draw near," of which the imperative is *Gêsh*. This prefixed *N* occurs in parts of the verb in languages not Semitic, and forms the *Niphal* form in Hebrew, with passive signification, appearing to be an ancient auxiliary attached to the real root. Such indications, and others which need not now be detailed, may incline us to suppose that the original roots of Semitic languages were monosyllables, and that the present structure arises from the preference for secondary roots, as more distinctly conveying a special signification; and the fact that many of these secondary roots

occur also in Aryan speech seems to indicate a connection, which still existed when language had advanced from its most primitive stages.

But we are able perhaps still further to advance the study of the origin of Semitic languages, by a comparison with one of the oldest forms of human speech—namely, the Egyptian. The labours of Birch, Brugsch, Renouf, and Pierret, have furnished us with a very copious vocabulary, and a complete grammar of the Egyptian. It is indeed said that Coptic alone can be properly considered comparable with its immediate ancestor; and the classing of Egyptian with any one of the great Asiatic groups is still regarded with disfavour.* About 150 Egyptian words are very similar to the Akkadian, and a smaller number are very close to Aryan roots, and at least 200 are almost identical with Semitic words. Yet Dr. Birch, whose knowledge of Chinese and of Semitic languages gives great authority to his words, was, I believe, of opinion that Egyptian should be classed with Semitic languages. The same opinion was held very strongly by the late C. Bertin, who possessed a wide, linguistic knowledge, and the reasons given appear to me to be very strong ones: for not only the grammatical structure and syntax are similar, but the terminations of masculine and feminine, the pronouns, the prepositions, and other parts of speech, are almost identical. It is naturally objected that Egyptian is not an inflected language; but this seems to render the comparison the more valuable. The old language stopped short, while that of the early Semitic peoples advanced; and for this reason is the more capable of assisting our search.

So for instance, in both Aryan and Semitic speech, we find an *s* prefixed to the old root, and forming secondary roots. In Egyptian this *s*, which is an ancient auxiliary, is recognised as being the sign of the causative. In making such comparison it should be understood that I speak, not of the many nouns which seem to be loan words borrowed directly from Semitic peoples, but of the common roots of the language, concerned with the most ordinary human actions. In Egyptian and in Akkadian alike we find common words

* The Berber or Libyan languages, as Champollion perceived, are connected with ancient Egyptian, and many words indeed remain almost unchanged as well as the forms of pronouns and particles.

which recall in turn each of the three great Asiatic groups. The reason may be that these very ancient languages go back beyond the time of the special and separate growth of Mongol, Aryan, and Semitic speech. To compare the nouns of one language with those of another will generally be unconvincing, but when we are able to compare the roots, whence such nouns are formed, and from which the verbs and other parts of speech also spring, we are following a method safer, and more likely to lead to real conclusions. It is now therefore proposed to attempt such a comparison, and to draw such general deductions from it as may serve to cast a light (however dim) on the earliest conditions of the human race in Asia.

COMPARISON OF ROOTS.

The table appended to this paper may perhaps serve to call attention to the possibilities of such a method, though it cannot claim to be more than a preliminary sketch. It appears to me legitimate to suppose that changes in vowel sound, such as we find in all dialects, occur also in the roots of the three groups, and that the letters which we know to be only distinguished with difficulty are not original distinctions, but the result of a constant specialisation of sound, due to the increasing power of language in distinguishing shades of meaning. But it will not be found that any very ingenious process is necessary, since the comparisons are much easier than would at first be expected. Nor will it be found, I think, that I have been misled by foreign words, which have been carefully excluded from consideration as affording no evidence of the true connection.

About 170 roots, all connected with the most ordinary ideas of action, serve to connect together the various groups of Asiatic languages, and of these about 50 are still traceable throughout the entire number, that is to say in Akkadian, in Egyptian, in Aryan, in Semitic, and in Mongolic speech alike. It appears to me that the number alone is sufficient to prove that these resemblances are not accidental, and especially so, since the more advanced languages—the Aryan and Semitic—in a great many cases agree not only in the monosyllabic, but also in the derived bisyllabic roots. But beyond such a comparison of roots it is difficult, if not impossible, to proceed. In grammatical construction, in pronouns, and in syntax, the various groups are separated by cardinal differences which must not be overlooked. Two

great groups are thus distinguished; first, the languages which place the genitive before its nominative, and use the pronouns M "me" and T "thee," that is to say the Mongolic and the Aryan (the one agglutinative, the other advanced far in inflection); and second, the languages which place the genitive after the nominative and use the pronouns ANK "I" and ANT "thou," that is to say, the Egyptian and Semitic tongues (the one agglutinative, the other advanced far in inflection). This division does not indeed forbid us to suppose a remote common origin, such as the list of common roots indicates, but it forbids us to make such comparisons as that of Irish and Hebrew, which disregard the structure of the two languages; and it shows us that the separation of the northern and southern families of Asiatic man must have occurred at a very early period.

The personal pronouns are very distinct in the various languages under consideration, because (as we are usually taught) they grew out of old demonstratives, and were differently specialised among different peoples. These old demonstratives in turn grew out of yet older roots, which had the meaning of "being" or "moving," and from which various names for man were formed. In the same way the terminations of case, or the prepositions forming the same distinctions, had a similar origin. The roots and some of the demonstratives have the same value in all the languages under consideration; but the later use of these differs exceedingly. The commonest of all are MA, SA, and KA, which deserve a special notice. In Akkadian *ma* means "this" and "I," and in Aryan speech we have *ma*, "this," while in Assyrian *ma* is also a demonstrative. It probably comes from the old root MA or AM, "to be." In like manner SA, which means a "man" or "person" in Akkadian and Egyptian, becomes the demonstrative *sa*, "he," in Aryan speech, in Assyrian, in Egyptian, and in Mongolic. It probably comes from the old root AS, to "breathe." In some languages, like Greek, Zend, and Hebrew, the S becomes H, and thus we get the demonstrative *ó* "the," and the Hebrew *Ha*, "the"; *Hu*, "he"; and the English "he," all from the same root, SA or HA. The general meaning of the third root KA is "who" in all the languages under consideration. In Egyptian we may perhaps find its origin in *ka*, a "man" or "male." It is also remarkable that the pronoun ANK, "I," in Egyptian and Semitic speech, may be compared with the Akkadian *an-ag*, meaning "this same": and the second

pronoun, ANT, may have arisen in the same manner from the demonstrative *Te, Ze, Se*, which is common to Aryan and Mongolic speech, as meaning "thou."

The particles which form the cases of the noun, are in like manner very widely distributed with small variation of meaning, and their origin is traceable in Akkadian and Egyptian. The commonest come from the roots BU, "to be"; AL, "to rise"; RA, "to go"; NA, "to walk"; AN, "to breathe," to which the Aryan and Semitic, with the Egyptian, add the less common TAR, "to pass" or "reach." The particle AD, "to" or "at," whence the Assyrian *adi* and the Akkadian *ta*, may arise from the old root DA, "to move." On such simple foundations the system of particles, which form so material an element in civilised speech, appears gradually to have arisen, with innumerable modifications and changes in various languages. The early demonstratives alone enable us to see that such words do not of necessity involve a primary separation, but rather indicate a primary connection of all the great Asiatic groups.

There is, I believe, nothing very new or heretical in such a proposition. The method of development, which is the same throughout, has been separately followed by scholars in the various languages, and the similarities of both roots and particles has often been pointed out. Dr. Isaac Taylor has been the first boldly to claim an ultimate connection between Finnic and Aryan languages, and has given many cogent reasons for his view which have not been met. Quite recently, I believe, at the Oriental Congress of 1891, the similarities of Egyptian to Aryan and Semitic speech have again been pointed out, and though I have not had the advantage of reading what was then said, these comparisons are so evident that they must strike every enquirer. But what is more interesting is that Egyptian often supplies the link between words which might otherwise be thought to have no connection. Thus, for instance, MAR means "to die" in Aryan languages, but in Semitic speech the root is MAT. At an early period when R and T were not distinguished, these roots might be the same. In Egyptian we find both *mer* and *met* for "to die," and it is not conceivable that for such an idea a foreign word would be used. The root MAR means "to crumble" or "decay," and in this sense is not unknown in Semitic speech.

Dr. Isaac Taylor's proposition is, however, capable of greater development than that of his original publication.

Not only do the roots which he observes in Finnic languages, as well as in Aryan, exist also in Turkic and Mongol speech, when they are beyond suspicion of Aryan influence, but they are very often traceable also in Akkadian, back to at least 2000 B.C.; and as shown in the table of common roots, they can further be traced to Egyptian and Semitic vocabularies. In the same manner the comparisons which Gesenius hazarded, when as yet the comparative study of Aryan speech was in its infancy, are confirmed by that study, since the roots have been extended from the Greek, on which he mainly relied, to the whole circle of European speech. The Semitic languages are singularly rich in distinctions of meaning, and in the addition of new roots formed from the old, but those which remain clearly traceable to one old common form are so numerous as at once to reduce the vocabulary by considerably more than half, and in the end it would appear that the original roots are not more numerous in Semitic than those of other families of speech. The traditional pronunciation of Hebrew will often mislead us in such enquiry, since it is no more reliable than in our modern conventional pronunciation of Latin or Greek, but we are fortunately able to attain to some certainty as to the real pronunciation, by means of the Assyrian syllabary, as compared with the living languages of Syria and Arabia. The Hebrew points which now guide us were only invented in the sixth century A.D., but that it was possible to read without them is clearly shown by the existence of Hebrew, Moabite, and Phœnician unpointed inscriptions. The simple elements of the original Semitic grammar did not in fact depend on those distinctions which are now indicated by the points and diacritic signs.

In making such comparisons we may well feel astonished, not that such wide difference should have arisen, but rather that the original connection should remain so clearly traceable. It has been often said that the similarities of language are more valuable as evidence than are the dissimilarities. We do not doubt that our Aryan ancestors had mouths because we call it "mouth," while the Italian uses the word *bocca*; but when we turn from *bocca* to the French *bouche*, we at once recognise an original connection. Various words have been used by various sections of a people of common original vocabulary, and many old words have died out in various degrees among various peoples. It is remarkable that though the Aryans lived by rivers, their original word for "fish" has been lost, and in this manner the common

names for a flora and fauna are only valuable as regards *positive* results: the *negative* results cast little light on the subject, because in the course of migration the names of beasts, birds, and trees (once well known to their ancestors), may have been forgotten, in lands where they were not found, or transferred, as we know to have been the case to other animals in the new home. A curious instance of such renaming occurs in the case of the Boers in Africa, whose ideas were very limited and founded on second-hand information. Thus they called the giraffe "the camel," and the jackal, "the wolf," and the leopard "the tiger," in countries where neither camels, tigers, nor wolves really existed, while for the *gnu* they could find no name appropriate, and consequently called it only "the wild beast."

In this connection it is worth noticing also that the original distinction of various animals is very imperfect. Those which are useful to man, or those which are conspicuous or dangerous, are the first to be named; but many which interest the educated student are overlooked by the ignorant. Thus in Syria I found it almost impossible to collect the names of any of the smaller song birds, no agreement existing among my informants. Only a very few kinds of fish are distinguished, and plants and flowers are often unnoticed. The names for ox, sheep, camel, and other important animals are, on the other hand, remarkably numerous and distinctive.

Turning from such questions to consider the simple roots consisting of one consonant and one vowel, which run through all the Asiatic languages, and from which it would seem probable that the second and third classes of roots are built up, we find that they are easily arranged in seven classes, according as they refer to the sensations connected with various organs, 1st, life or breathing with the nose; 2nd, light, sight, and fire, with the eye; 3rd, sound, with ear; 4th, movement, with the leg; 5th, swallowing, eating and drinking with the mouth; 6th, holding and striking, with the hand; and 7th, work, which however is not very clearly distinguishable from the preceding class. A final class of roots which, with two exceptions, are secondary (having two consonants) refers to love and desire. In each class there is a cross division, according as the sound is a simple vowel, or a guttural, a dental, or a labial. The list which follows will be found to be supported by the results of the comparative table of nearly 200 common roots.

PRIMARY ROOTS.

Vowel.	Guttural.	Dental.	Labial.
CLASS I.—BREATHING.			
AW, "to blow" ...	GA, "to be born" ...	SU, "generate" ...	PU, "to generate."
WA, "to blow" ...	... ..	AS, "breathe" ...	BHU, "to breathe."
		AN, "to breathe" ...	MA, "to be."
CLASS II.—LIGHT.			
AJ, "bright" ...	AK, "to see" ...	DA, "see." ...	
	KU, "bright" ...	IS, "light"	BHA, "shine."
		US, "burn."	
		SAI, "see."	
		AR, "burn, shine."	
CLASS III.—SOUND.			
A, "ah"	KA, "cry"	RA RU, "roar" ...	BHA, "speak."
O, "oh"	GU, "cry"	NA, "speak"... ..	MU, "bellow."
CLASS IV.—MOVEMENT.			
YA, "go"... ..	AK, GA, "go" ...	DA, DU, "go" ...	PA, PAD, "go."
		SU, "blow."	
		SA, "go."	
		IS, "speed."	
		RI, LI, "flow."	
		RA RU, "go."	
		AL, "rise."	
		NA, "go."	
CLASS V.—SWALLOWING.			
YA, "go"... ..	GHA, "swallow" ...	AD, "eat"	PA, "feed."
	AG, "choke"... ..	AS, "eat"	PI, "drink."
CLASS VI.—TOUCHING. HITTING.			
YA, "go"... ..	... ..	TA, "beat."	
		AS, "throw."	
		DA, "put" "take."	
CLASS VII.—WORK.			
WA, "bind" ...	GA, "bend"	SU, "join"	AP, "join."
		AR, "join."	
		NA, "join."	
CLASS VIII.—DESIRE.			
AW, "love" ...	KAM, "love"	RA, "delight" ...	(BAS, "kiss"?)
WAN, "honor" ...	KUBH, "desire" ...	LAS, "desire."	
	NAD, "pleasure" ...	LUBH, "love."	

These very simple roots can, in many cases, be recognised as natural exclamations, or as imitations of animal and other natural sounds. Some remain in the nursery vocabularies of our own times, such as *Moo*, "to bellow." The word *puff puff*, for a train, has been created within the last half century from the old root PU, "to blow," and is an interesting instance

of the reduplication of a root representing continuous action. In many grammars, such as the Akkadian, Egyptian, or Sanskrit, the reduplication has such a force, and it appears to have been the very oldest way of expressing the plural. Many animals appear to us to utter cries, expressed by such sounds as *Mu* and *Mau*, *Ba*, &c., and the names for crows and similar birds are taken from their *caw*. A parrot can utter such sounds, and some we hear from a dog. But the great dividing line between human speech and animal cries seems to lie in the power, which no known animal has been proved to possess, of putting together, with an intelligible object, two distinct sounds, uttered with different parts of the mouth, and conventionally received as expressing a definite sense. And these double sounds we encounter in human speech in all the earliest languages to which we have access. Thus from *DU*, "to go," we obtain *DUK*, "to lead"; from *BHA*, "to shine," are formed *BHAS*, *BHAK*, *BHAN*; from *KA*, "to call," we obtain *KAR*, *KAK*, *KAL*, and *KAN*; from *RA*, "to roar," *RAG*, *RAS*, *RABH*; from *PA*, to "go," *PAD*, *PAR*, and *BHAG*. In some cases we can still trace the origin of the secondary root, as in *KAK*, to "cackle," which is a simple reduplication of *KA*, "to call." The Chinese method of joining two roots in what is called a "clamshell" word, for the greater distinction of the sense intended, seems to cast light on the formation of the secondary roots, so that *RAG*, for instance, might have been originally made up of *RA*, "to roar," and *KA*, "to cry." Whatever be the truth as to such speculation, it can, I think, hardly be doubted that the evidence will be found strongly in favour of an original community of true *speech* for Asiatic man.

We are often reminded that questions of race and of language must be separately treated, since changes of language have occurred in various parts of the world. But it cannot be forgotten that in Asia, as far as we are able to speak of either a pure language or a pure race, even in the earliest ages, the great families of speech are found to be co-extensive with the great races which have used them throughout the course of history. When languages change or die, it is usually because the old stock also changes or dies. When conquerors hold a country they do *not* succeed in imposing their speech on their more numerous subjects, but themselves absorb into that speech words from the vocabulary of the native. Thus English has grown out of the mingling of the Latin and Teutonic and Celtic races,

and has absorbed words from each vocabulary. The Anglo-Indian vocabulary absorbs Indian words, and the Kaffre language has contributed to the Boer vocabulary. In Syria, Greek was the official tongue for nearly a thousand years, yet the native language, though absorbing many Greek words, remained but little changed, when the Moslem conquest restored its predominance; and this tongue was always spoken side by side with Greek, throughout these thousand years.

When we go back to the dawn of history we find the same. Egyptian is full of foreign loan-words, so is Assyrian, so, too, are the early Aryan languages. The populations of Western Asia, from 2000 B.C., were much mingled, and intermarried, as we know from the history of Egyptian kings wedded to Babylonians and Hittites. It seems probable, therefore, that, even in very early times, it would have been difficult to point to a perfectly pure stock, and we are not astonished to find skulls of very various characters mingled together in prehistoric graveyards. If it be difficult in Eastern Europe to distinguish a type as that of the original speakers of Aryan dialects, it is not the less certain that Aryan and Mongol languages, from very early times, were spoken by the mingled populations of this region, as they still continue to be spoken. In Egypt itself we find both the round-headed and the long-headed man, as well as in Italy or Asia Minor. But on the complexity of such study of race it is not necessary to say more, since the publication of the cautious opinion of Professor Virchow in your "Transactions."

Taking, then, fully into account the difficulties so noticed, it still remains roughly the case that the speakers of Aryan and Semitic languages are long-headed, and those of Mongolic languages, round-headed. It is also remarkable that Aryan and Semitic speech has, in common, bisyllabic roots not found, as a rule, in Mongolic vocabularies. One would, therefore, be inclined to think that the Mongolic races were the first to separate from the rest of the great stock; but, as we shall see in the sequel, the Semitic peoples were in contact with Egypt much more closely than with any other group, and remained so in contact to a much later period of civilised development. The relations of the various races, seem, in short, to reproduce exactly the relationship of the Aryan dialects. There is no genealogy which can derive one class of languages from another, but rather a shading

into each other of dialects, in accordance with geographical situation—the Aryans to the North, the Turanians towards the East, the Semitic peoples on the West, joining on to the Egyptians.

GENERAL RESULTS.

The utmost variety of opinion exists as to the homes of the various stocks, showing that the linguistic argument is at best a weak one. The Aryan has been transferred from Central Asia to Norway, and brought back again from thence to the Volga. The Semitic ancestor has been placed in Central Asia, in Arabia, and in Egypt. The Mongol has been traced from the Oxus, or from the Medic highlands. In each case the argument is based exclusively on the study of one class of languages. But if it be really true that these have a common origin, it is to a common centre that we must seek to trace the Asiatics. To me it seems clear that the linguistic requirements would all be met by supposing that the original home was in the healthy highlands, near the source of the Euphrates, whence we may conceive the first Aryan family to have migrated to the Volga, the first Semitic family to have followed the great rivers towards Arabia, and the first Mongolic family to have gone eastwards towards Central Asia. At a later period the returning currents brought them again towards the centre. The Egyptian and the Semite came up from the South, the Akkadian Mongol poured down from the highlands into Chaldea and Syria.* The pure Aryan came from Persia, and from Greece, to meet in Asia Minor, and the mingling of the peoples (with exception of the Aryans) is traced from about 2500 B.C., and continued in Western Asia from that time forwards. But meantime the great classes of language had been formed, and no subsequent borrowing of words affected very materially the grammatical structure of the distinct groups, which had grown up at separate centres.

We are led, therefore, to inquire if any light is thrown by language on the condition of primitive Asiatics, and of the early races when they came again into contact, through the growth of population, from the various centres. The positive

* The Akkadians, as shown in Mr. Pinches' recent paper, had reached the Lebanon and Sinai in 2500 B.C., and the Egyptian mines in Sinai are equally ancient.

evidence is very small, and the negative is (as has been observed) not very reliable; but the subject is of such interest that an attempt to throw light upon it, however imperfectly, will perhaps be considered of value. The points to which attention is usually called by linguists, in such enquiry, concern the knowledge of metals and weapons, of animals and plants, of cattle and agriculture, of dress and food, of the computation of time, of dwellings, crafts, family, and religion. A few words may therefore be devoted to each in turn.

It will be generally allowed that the discovery of the use of metals was not made by primitive man. The Egyptians had native words for metals, and borrowed others from the Semitic traders. The early Aryans had their own words for gold, silver, and copper, and in later times the Armenians borrowed words of Mongol origin, and the Greeks used both Akkadian and Phœnician terms. The Semitic peoples also borrowed Mongol words, through intercourse with the civilised Akkadians, who knew not only gold, silver, and copper, but early distinguished lead and tin, and had iron and bronze at a very early historic period. There is no word for any of these metals that runs through all the languages, nor are there any common names for weapons; for even the bow, though its name in each case comes from a root meaning "to bend," is separately named in each class of language. It has been observed in Aryan speech that the word for knife, coming from the root SAK, to cut, is connected with the word for stone which is found in the Latin *saxum*, whence Schrader supposes that the early knives were of flint. This root is common to the other linguistic classes, and in each there is a word for stone which may perhaps be connected. In Mongol speech we find TAK and SIK, "to cut"; and in Akkadian TAK, "a stone," which becomes *Tash* in modern Turkic dialects. We also have the word *Sañ*. for "stone" in the same group. In Egyptian we find *Sekh*, "to cut," and *Sen*, "a stone." In Semitic speech we have *Shak*, "to divide," and *Suwân*, for a "flint stone." Possibly these indications may point to a common use of flint knives, such as we now find to have been known in Palestine and in Egypt as well as in Europe.

Turning to the question of the earliest animals named by man we find from the root LA, "to roar," the name of the lion which is the same in Semitic, in Aryan, and in Egyptian speech. It has been considered to be a loan word from the Semitic, but the root is apparently common to all the

languages, as well as the derivative. It occurs in the forms AR and RA, as well as LA and UL, meaning to "roar" or "howl," and from it are also formed the Akkadian *ur* for the dog and lion, the Semitic *Ari*, and the Mongol *ars-lan*, for "lion," the latter having a termination said to mean a "beast." The lion was widely spread over the west of Asia, and in Greece, but was unknown in colder countries. If it was known to the primitive Asiatics it would naturally be because their home was in Asia.*

For the dog there is a widely spread term which comes from the root HAN or KAN, "to make a noise." It is the Latin *canis*, the Greek *κων*, the Armenian *shoun*. In Egyptian we have the word *huns* for some kind of dog, and in Chinese *huen*, for "dog," which are not likely to be loan words. But in Mongol speech *kono*, is the "wolf," which becomes *komp* in Finnish. In Semitic languages the word *kelb*, for "dog," seems to be derived from another root which appears in the Aryan GALP, to "yelp." Such as it is the evidence points rather to the wild than to the domestic dog.

For the ox we have many terms which agree in being derived from roots meaning to "bellow," but it is remarkable that the Aryan *Taurus* is apparently the same as the Semitic *Thor*, and the Mongol *Shor*, which it is difficult to suppose was a loan word. The Egyptian *am*, for cattle, appears to be the Akkadian *am*, for the bull, and the Tartar words for the ox are derived from the root *oñg*, "to bellow." The word *car*, for a sheep, in Semitic speech recurs in the Greek *καρ*, and in the Finnic *Kari*; but the Mongol word is *Kos* or *Koch*. The former word seems to mean a "flock" or "herd," rather than a special animal, and may perhaps be compared with the Akkadian *Khar* and the Egyptian *Kher*, for "cattle." The Semitic name for the goat is *az*, which resembles the Egyptian *at*, and the Aryan *ais*, *aix*, and *aja*. According to Delitzsch there is also an Akkadian word *asi*, for an animal with horns, and another word *uz*, for "goat," is mentioned by Lenormant as belonging to the same language. The ass has also been supposed to bear the same name in Aryan, Semitic, and Tartar speech, the Latin *asinus*, Semitic *athon*, and Tartar *esek*, which has been compared with the Akkadian *anshu*. On the other

* I have not forgotten that the bones of men are found in the European caves with those of the lion, as well as of the mammoth, rhinoceros, bear, horse, and reindeer, but I doubt if man shared the cave with the lion, who had probably preceded him.

hand the names for the horse are very various, being, however, all derived from its speed. That the horse was tamed much later than the ass is too generally admitted to need any lengthy consideration.

Among birds the names for various kinds of crow are clearly taken from their croaking, and like that of the cookoo (which is the same in Aryan and Semitic speech), they give no true linguistic evidence. It is remarkable that the duck seems perhaps to have the same name in languages widely separated, as in the Semitic *but*, the Egyptian *apt*, and the Chinese *aap*; but as a rule the names of birds are very different in different languages. Fishes also are variously named, sometimes from roots meaning "to swim"; but the Egyptian *Kha*, "fish," is the same as in Akkadian, and perhaps connected with the Chinese *qu*, and the widely spread Mongol and Finnic word *Kala* or *Kol*, and the Chinese *kwan* for a "large fish."

The names of common trees do not assist our enquiry, except that the Aryan and Semitic words for a "forest tree," seem to come from the root *AL*, "to rise up," or to be "high." The Aryan *dru*, for "wood," may perhaps compare with the Akkadian *tir*, for "wood" or "tree," which again may be the same as the Finnic *tel*, "wood," and the Hungarian *derek*, for a "tree trunk." Another word, the Semitic *etz*, occurs as the Greek *oços*, "a bough," and the Finnic *oks*, for "wood."

Other words which may be suspected of being borrowed are the names for "camel" and for "wine." It is usually held that the first is of Semitic origin. It occurs in Egyptian, and was adopted in Aryan speech, but the curious fact remains that it is not traceable to a Semitic root. In Mongol speech we have the words *Kam*, "to be bent or humped," and *el*, for "a beast," and it appears possible that the true origin is here found, as being the "beast with a hump." The camel is not solely an Arabian animal, since it has from a very early period existed in Central Asia and in Asia Minor. If it be a borrowed word it would seem more probably to be of Akkadian than of Semitic origin. The word for wine, on the other hand, is derived by Gesenius from a root meaning "to ferment," in Semitic speech. It appears to have been borrowed from the northern Semites by the Aryans, but it is not co-extensive with the whole range of languages under consideration.

The question of agriculture is one of high interest, and on which perhaps language throws light. There is a widely distributed word for seed from the root *SA*, "to sow,"

found in the Akkadian *se*, the Egyptian *su*, "seed," Mongolic *is*, and the Aryan *sa*, "to sow." In addition to such indication the old root KAR, "to enclose," forms words for an enclosed field in a great number of languages, as in the English *acre*, the Akkadian *agar*, the Finnic *aker*, the Turkic *akyer*, the Sanskrit *ajra*, the Greek *'αργός*. The Egyptian however is *har*, "a field," and the Semitic *car*, "a pasture." From the same root, perhaps, words for "town" appear to be formed as mentioned in the list appended. It appears not unnatural to suppose that some sort of enclosure is connected in these words, either with the sowing of seed or with the pasturing of cattle.

The question as to the seasons and the computation of time is of importance, but not easily elucidated. The word for "cold," from the root GAL, appears to be common to all the Asiatic languages, which would indicate an original climate at least not tropical. In the Aryan languages we have SNIGH as a root for words meaning "snow," and in Semitic speech we have *Sheleg* (שֶׁלֶג), which might possibly be the same word. Again we have the Aryan PRUS, "to freeze" or be "frosty," and the Semitic *bârad* (בָּרַד), "to be cold," and "to hail." Both originally signify "to pour down," with reference to their atmospheric origin.

As regards time it is generally held that the measurement of the month by the moon is older than that of the year by the seasons. All Asiatic races have, from early times, used lunar months, and have called them from the moon. The name of the moon comes from a root to "shine," which is common to Aryan, Mongol, and Semitic speech; but the names for the sun are very various in the different early languages. The words for the "year" are equally variable, though there would seem to be some connection between the Semitic *Senneh*, or *Shanah*, and the Aryan *asan*, "harvest,"—whence the Latin *Annus*. "the year," according to Schrader. Another common root is SAR or SAL, whence various words for "year" are formed, such as the Zend *Saredah*, and the Turkic *Sal*. The meaning is apparently a "series," and the root occurs also in Semitic speech with the same signification, forming the name of the *Saros*, or Babylonian cycle.

Concerning dress it need only be remarked that the Aryan *su*, "to sew," is apparently the Finnic *sovo*, "to

weave," and compares with a Semitic root *sawa*, "to join," or "make equal." The root WABH, "to weave," appears also to be common to Egyptian, Aryan, and Semitic speech, and an early clothing of something more than the skins of beasts thus seems indicated in the primitive period. That fire was known is certain, and that it was used in cooking food appears also to be indicated by the root BAK, occurring in all the various groups with the meaning of "cooking" food. As the root TOK seems possibly to be an original one with the meaning of "daubing," or "moulding," it is possible that language indicates at this early period the use of some kind of pottery. Even in the European prehistoric cemeteries rude pottery is found, and the earliest vessels before the discovery of metals must have been of clay.

The question of the dwellings in which these primitive Asiatics lived, is one of very considerable interest, and there is perhaps some reason to suppose that in addition to caves and tents such as are still used by Oriental peasants and nomads, there may also have been huts in the primitive period.

In Egyptian we have the words *ab* and *bu* for a house, which appear to answer to the Mongolic *oba*, softened in some dialects to *ova* and *ev*. The meaning appears to be "a dwelling." In Sanskrit *Bhu* means "to build," or "dwell," whence *Bhavana*, "a building" or "habitation." In Akkadian we find *VA*, and in the Cognate Susian dialect *UA* for "abode," and in Hebrew we have *Bua* (בּוֹיָא), "to enter into a house," whence it is conceivable that the word *Beth*, "house," might originate. A second root connected with dwelling is found in the Assyrian *uru* or *alu* for a "town," which appears to be the same as the Akkadian *vuru*. It has been compared with the Hebrew words *er* for "city" (עִיר), and *ohel*, "tent" (אֹהֶל), and with the Tartar *aul*, for a "camp," the R and L being indistinguishable. This again is found in the Hungarian *varos*, "town," and in the Aryan *var*, "enclosure," and perhaps the Sanskrit *alaya*, "tent," the root in each case meaning some walled or enclosed dwelling. The third ancient word also having the meaning of an enclosed place is the Egyptian *atra*, a "house," which recalls the Latin *atrium*. In Semitic speech we have *Eder*, for "a fold," and *'atar*, "to surround." That such buildings or enclosures were roofed we might perhaps deduce from the

fact that the root DAG, "to cover" or "roof," is common to Aryan, Semitic, and Mongol speech.

On the question of family life all that can be said is that the roots PA and MA for "father" and "mother," are universally used in Asiatic speech, and recognisable also in Egyptian. For all other relationships the names are very various, though it is remarkable that the Hebrew *Akh*, "brother," is very like the Mongol *Aka*, "brother." This latter is connected with the common Mongolic word *og* for a "child" or "boy." The parental relationship meets us in the earliest languages; and such evidence tends at least to show that those who contend that marriage is one of the oldest of human institutions have more in their favour than those who suppose the "clan" to be older than the family.

The words used to denote deity are very various, the oldest perhaps being the Egyptian *Aas*, and the Mongolic *Es*, perhaps like the Aryan *Asura*, meaning a "living spirit." If Lenormant be right in supposing an Akkadian word *Elim*, for "Lord" or "exalted person," to exist, we might compare it with the Semitic *el* or *elohim*, "the mighty one," from a root common to all Asiatic languages. The evidence of language at least tends to show that the early believers did not regard their deities as being ghosts, since the word for ghost signifies in most cases what is "feeble,"—a shade or vapour—and not that which is strong and undying. In Egypt the "power" which was conceived to be the source of all life was hymned as early as 1400 B.C., and the name of Jehovah has the same significance that is to be remarked in the Aryan or Mongolic words for a deity. Many other titles, such as "the helper," the "life giver," the "eternal," or the "Lord," became specially used by different races, but the underlying conception is the same in all.

Briefly to sum up the possible results of our enquiry into the condition of the primitive Asiatics, we have noted that they appear to have lived in the pastoral condition, having perhaps a little corn and enclosures for their flocks. They possessed as yet no knowledge of metals, but hewed wood with flint instruments. They knew the ass, the ox, and the sheep, and possibly the camel and the dog, and were afraid of the lion. Their home was a cold or temperate climate, such as is best fitted for the development of the human race; and their simple arts of weaving, and moulding clay, enabled them to construct dwellings, either tents or huts covered

with roofs. The great discovery of fire was already made, but not applied to the melting of metals. The family already existed, and a belief in a spirit (or many spirits), not subject to the death which caused man to speak of himself as "mortal." It is a condition similar to that which scholars have independently concluded to have been the origin of the civilisation of each great stock, and similar to that of the prehistoric villages of Italy, as known by their remains. How long ago this primitive life was lived by the first ancestors of Asiatic races, we may judge by the fact that already at least as early as 2500 B.C., there were distinct civilisations and languages clearly divided into various groups; but of such life we have no evidence save that of speech, since writing was as yet unknown. Nevertheless there is some evidence that pictorial representation was already attempted, from which in time the great hieroglyphic systems were to arise. The word for "drawing" is common to Egyptian, Mongol and Semitic speech, in the root SUR or SAR, from which come the Mongol *Sor*, "to draw or write," the Egyptian *Serr*, and the Semitic *Sura*, "a drawing." The Aryans had a somewhat similar root SKRI, whence come words for sculpture and inscription. Nor must it be forgotten that the commonest signs denoting action are the same in all the hieroglyphic systems, and it is possible that even before the separation of Egyptians and Mongols some rude system existed for recording primitive events, by pictures such as the Red Indian still uses. The Aryans, however, did not apparently possess this art, and the Semitic peoples borrowed their written characters from the older Akkadians and Hittites, but even in 2500 B.C. (as shown by the statues of Tell Loh), there was already in Chaldea a system very fully organised, which has preserved for us the events of the days when the Akkadians ruled from the Persian Gulf to the Mediterranean, and cut down cedars in Lebanon.

In conclusion of the present paper it is proposed to say a few words as to the connection which exists between the civilisation of the Egyptians and of the Semitic race, in order to show more clearly that these people must have been in contact in a time subsequent to that of the original dispersion of the supposed primitive stock.

The grammatical connection between Egyptian and Semitic speech has been already mentioned, and the fact that some 220 words in the Egyptian dictionary are very closely similar to Semitic words of the same or similar meaning.

Out of this total it seems difficult in half the cases to suppose that we have to deal with loan words, because the terms are those belonging to very common objects or actions, and in many cases found also in Aryan and Mongolic speech. In about 80 cases they are bisyllabic words, agreeing in all the consonants with the Semitic. It is no doubt the case that when a Semitic population settled in the Delta, under the Shepherd Kings, a great many foreign words were added to the Egyptian vocabulary. Thus we have the Semitic *rasau*, "head," side by side with the old Egyptian word *ta*, for "head," and numerous nouns, such as the words for horse, chariot, iron, gold, well, enclosure, town, village, pool, chief, lord, noble, officer, acacia, honey, vineyard, tamarisk, cypress, unguent, butter, oil, pillar, wall, valley, river, bank, clay, son, daughter, and even for stick and salutation, appear to have been borrowed; while other terms seem to indicate possible borrowings from some people akin to the Akkadians. But there is another class of words—mainly verbs—which it is more difficult to suppose could have been so borrowed, and which connect the Semitic and Egyptian languages more closely than other Asiatic tongues.

Such are the words for think, hear, bind, envelop, embrace, walk, defend, lament, blow, pant, travel, kneel, work, avenge, understand, extend, glow, kindle, pull, shut, wall up, undress, and wander, also the nouns for water, lightning, finger, lip, and the words for hole, grief, and nakedness; one would scarcely expect such words to be borrowed unless the population was mainly Semitic, in which case the structure of the Egyptian language would have been no longer agglutinative. In some cases such nouns run into other languages as well, such as *Karn*, "a horn," which is Aryan as well as Semitic and Egyptian, or *au*, a "shore," which appears to be the Mongol *Yau*, and also occurs in Hebrew as *au* or *ai*.

The names of colours are very various in different languages, though their derivation is generally to be accounted for in the same way. Thus red is the colour of blood or of flame, white is the colour of light, black the colour of what is burnt, blue the colour of the sky, and yellow of the sun, while green and purple are little distinguished till later. Now, it is remarkable that the Egyptian and Semitic languages have in common words for white, black, and red, and that the Egyptian language also shows the derivation of these colour names from words meaning "light," "burning,"

and "blood." If we are to suppose that these words were borrowed, it would seem to follow that the Egyptians, who were so remarkable for their love of colour, had no native words to express black, white, or red. On the other hand these terms were widely used by Semitic peoples, since they occur in Arabic as well as in Hebrew. The Aryan words, and the Mongol names, for these colours, though of analogous origin, come from very different roots, and the names of colours give perhaps as good evidence of connection between languages as can be found. In this case we see that not only the simplest words, but others which denote a considerable advance in thought, serve to connect the Egyptian and the Semitic tongues.

Having thus briefly sketched out the results which seem to me to arise from a study of ancient languages, which has occupied many years of my spare time—results which presented themselves from time to time without at first suggesting any general principle, or appearing to me to be more than fortuitous resemblances—I have only to add, in asking for a merciful treatment of my imperfect attempts, that the present paper was not penned with any ulterior object, to support any particular theory as to the origin of mankind, but merely grew up out of the constant inspection of various grammars and dictionaries, undertaken for quite other purposes. I have been gradually led, however, to the belief that the evidence of language favours the supposition that Asiatic man as a whole was descended from a single original stock; and if what we hear stated as to other languages be provable, it would seem that from Asiatic man sprang the entire population of the modern world.

COMPARATIVE LIST OF COMMON ROOTS.

N.B.—Akk., *Akkadian*. Egt., *Egyptian*. Ar., *Aryan*. Heb., *Hebrew*. Ass., *Assyrian*. Arab., *Arabic*. Tk., *Turkic*. Fn., *Finnic-Ugric*. Mon., *Mongol*. Ch., *Cantonese, dialect of Chinese*. Med., *Proto-Medic*. Sus., *Susian*.

CLASS I.—BREATHING.

1. AW. Egt., *aw*, "to blow." Ar., *aw, wa*, "blow," "breathe"; *aw*, "desire." Ass., *aw*, "wind." Arab., *hawa*, "breeze." Tk., *oi*, "fancy." Ch., *oi*, "love."

2. GA, GAN. Akkad., *gan, gin*, "exist," "be"; *gun*, "grow." Egt. *kha, khe*, "to be born." Ar., *ga, gan*, "beget," "produce" *gi*, "live." Heb., *cun*. Ar., *can*, "exist." Tk., *kin*, "to do" *kil*, "to make." Ch., *ching*, "to make." Mong., *ke, khe*, "make."
3. NAS. Eg., *nesai*, "ill." Ar., *nak, nas*, "perish." Heb., *násas* "sick."
4. AS. Eg., *us*, "create"; *aas*, "spirit." Ar., *as*, "breathe." Tk., *is* "blow"; *es*, "spirit."
5. ISH. Ak., *us*, "man." Ar., *ish*, "vigorous." Heb., *esh*, "man." Tk., *is*, "live."
6. SU. Ak., *sak*, "son." Ar., *su*, "generate." Finn., *sakko*, "offspring." Cf. SA, "man," Egt., Akk. (p. 49).
7. PU. Akk., *ba*, "create." Med., *Pe*, "make." Eg., *pu*, "to be"; *fua*, "child"; *fau*, "beget." Ar., *pu*, "beget"; *bhu*, "be," "dwell." Heb., *Pah*, "blow." Arab., *Fah*, "exhale." Tk., *bot*, "to be." Finn., *puu*, "child." Hung., *fu*, "son."
8. PAR. Eg., *per*, "sprout"; *fer*, "pregnant." Ar., *par*, "produce"; *bhar*, "bear." Heb., *bar*, "son." Ass., *ablu*, "son." Heb., *Párah*, "to be fruitful," "to bear"; *Párahk*, "sprouts," "offspring."
9. MA, MAK, MAGH. Sumer., *men*. Susian, *en*, "to be." Akk., *umma, ana*, "mother"; *makh*, "great." Egt., *men*, "create." Aryan, *ma*, "measure"; *ma-tar*, "mother"; *mak*, "be able," "make"; *magh*, "great." Heb., *am*, "mother"; *'am*, "people"; *makh*, "fat," "noble." Arab., *mukh*, "fat," "marrow." Assy., *makhkhu*, "great." Tk., *am, an*, "to be"; *am, an*, "mother"; *aim*, "people," "tribe"; *makh*, "high," "noble." Fn., *aim*, "family." Mon., *aimak, aiman*, "tribe." Ch., *mu*, "mother." Tunguse, *ama*, "father"; *eme*, "mother." Hung., *anya, mama*, "mother." Basque, *ama*, "mother."
10. DUR. Akk., *tur*, "remain." Egt., *tera*, "time." Ar., *dur*, "to endure, last." Heb., *dor*, "age," "generation"; *dur*, "abide," "dwell." Arab., *dar*, "dwelling." Tk., *tur*, "habitation," "tribe." Fn., *tar*, "abode"; *tur*, "tribe." Mongol., *turu*, "village."
11. LUD. Egt., *tut*, "flourish." Ar., *ludh*, "grow." Hebr., *Yálad*, "to bring forth." Ass., *littu*, "offspring." Arab., *weled*, "a boy."

CLASS II.—LIGHT AND FIRE.

12. AI, YA. Akkad., *i*, "bright"; *ya*, "glorious"; *ai*, "moon." Egt., *aah*, "moon." Heb., Arab., *ain*, "eye." Tk., *ai*, "moon." Ch., *yueh*, "moon."
13. AK. Egt., *ka*, "see." Ar., *ak*, "see." Heb., *ha*, "behold." Arab. *ha*, "behold." Tk., *ak*, "bright," "white."
14. KU. Akk., *ku*, "bright," "precious." Egt., *kha khu*, "shine." Ar., *kwi*, "shine." Heb., *cavah*, "burn." Arab., *cui*, "burn." Tk., *kui, kov*, "to burn," "gleam," "shine." Fn., *koi*, "bright." Ch., *kau*, "bright."

15. KAR, KIL.* Akk., *khil*, "splendour." Egt., *hru*, "day." Ar., *kar*, *ghar*, *gla*, "burn," "shine," "glow." Heb., *khārāh kharr*, "burn." Arab., *harr*, "burn." Tk., *kar*, "to see," "shew"; *kara*, "burnt," "dry," "scorched," "black"; *kil*, "bright." Mong., *kara*, "to see," "to shine"; *gal*, "fire"; *hair*, "gleam"; *kalun*, "hot." Fn., *kar*, "burn"; *kaila*, "flame"; *kil*, "shine."
16. KAM KAN. Egt., *khemt*, "fire"; *kem*, "black." Ak., *gun*, "bright," "red." Heb., *kānā*, "very red." Arab., *kana*, "bright red." Heb., *khamah*, "warmth"; *khamm*, "hot"; *kham*, "black." Arab., *hammah*, "heat"; *hamm*, "to heat"; *hamm*, "black." Assy., *camu*, "burn." Tk., *kun*, *gun*, "brightness," "daylight," "sun," "fire." Ch., *kan*, "sun-rise."
17. KIZ. Ar., *kit*, "perceive." Heb., *khāzāh*, "behold." Turk., *köz*, *khiz*, "burn," "shine."
18. DI, DIK, TIN. Akk., *te*, "flame." Egt., *tai*, "burn." Ar., *di*, "shine"; *idh*, "kindle"; *tith*, "burn." Egt., *teka*, "perceive." Ar., *dik*, "shew." Heb., *dik*, "perceive," "observe." Akk., *tin*, "life." Turk., *tin*, "life"; *dini*, "day"; *it ot*, "hot," "fire"; *tañ*, "light"; *din*, "brightness." Ch., *tim*, "light."
19. IS, SI. Akk., *is*, "bright"; *si*, "see." Medic, *siya*, "see." Ar., *us*, "burn"; *was*, "shine"; *si*, "see"; *skaw*, "perceive." Egt., *sai*, "see." Heb., *esh*, "fire"; *shah*, "behold." Fin., *azo*, "see"; *si-n*, "eye." Hung., *se-m*, "eye." Siberian, *saen*, "eye." Turk., *yas*, *yis*, *is*, "light," "sunshine." Mordvin, *si*, "sun."
20. SUT, TUT. Egt., *sut*, "fire"; *tset*, "to roast." Ar., *sus*, "dry"; *tith*, "burn." Heb., *tsūth*, "burn"; *yatsath*, "to kindle." Ostiak, *tut*, "fire." Hung., *sut*, "bake."
21. AR, UR. Akk., *ur*, "burn," "light," "heat." Egt., *ra*, "sun"; *aur*, "eye." Ar., *ar*, *ur*, *war*, *wal*, "to burn," "to be hot." Heb., *ur*, "light"; *rah*, "see." Assy., *urra*, "light." Arab., *awar*, "to kindle"; *raa*, "to see." Turk., *al*, "to burn," "to be bright, red, golden." Akk., *el*, "bright," "pure"; *ri*, "bright." Turk., *or*, "to be bright," "hot"; *ver*, "red." Fn., *ver*; Hung., *veres*, "red."
22. RUK, LUK. Akk., *lakh*, "bright," "pure." Egt., *lekhru*, *rekhru*, "fire." Ar., *luk*, *ruk*, "light," "shine"; *luna*, "moon." Heb., *lavakh*, "to shine." Arab., *lah*, "to shine." Heb., *yarakh*, "to shine"; *yerekh*, "the moon," "month."
23. SAR, SAL. Akk., *tsir*, "light." Egt., *tsar*, "to see." Ar., *swar*, "shine." Heb., *shārāh*, "to shine," "glitter." Tk., *zil*, *cil*, *yii*, "to shine," "to be warm." Mong., *sar*, *sel*, "clear"; *sara*, "gold." Fn., *sar*, "white"; *sel*, "shine."
24. MAR, MIL. Akk., *mil*, "shine." Ar., *mar*, "shine" (cf. AR). Assy., *amar*, "see."

* Ar., *gal*, Heb., *karr*, Turk., *kar* means "cold" (cf. KAR, "scrape," Class VII). Probably GAL, "to fall," is connected and KAR, KUL, "to hurt," or "be evil," and "to die."

25. BA. Egt., *ba*, "illumine." Ar., *bha*, "shine." Heb., *yapha*, "to shine."
26. BAK. Egt., *bak*, "see." Ar., *bhak*, "shine." Heb., *bāhak*, "to be white." Turk., *bak*, *bek*, "to see," "shew."
27. BAS. Egt., *aps*, "shine"; *abs*, "white." Ar., *bhas*, "shine." Heb. *bavatz*, "to be white"; *abetz*, "white." Arab., *bad*, "to be white"; *abiad*, "white." (Arab., *d* = *ts*.)
28. BAR. Akk., *bar*, "bright." Egt., *berber*, "heat." Ar., *bhur*, "to burn." Heb., *bāhur*, "to shine"; *pavar*, "to be hot." Arab., *bahar*, "to shine"; *far*, "to be hot." Tk., *bor*, "white," "yellow." Akk., *bil*, "fire." Mong., *bulan*, "hot." (Ar. *bkalg*; Heb., *balag*, "shine.")*

CLASS III.—SOUND.

29. A. A cry of joy or grief in all languages.
30. O. A cry of grief. (See A.W.)
31. KA, GU. Akk., *ka*, "mouth"; *gu*, "speak," "word." Egt., *ka*, "cry"; *ka*, "bull." Ar., *agh*, "speak"; *gu*, "bellow"; *kau*, "bull," "cow"; *kak*, "call." Heb., *akh*, "alas"; *akhh*, "to cry." Ar., *aḥah*, "to cry out." Heb., *ga'h*, "to bellow"; *goah*, "bellowing, lowing"; *cakhah*, "pant." Turk., *aikh*, *haikh*, "to call." Mon., *agui*, "mouth"; *ge*, "to say." Fin., *kak*, "to cackle," "call"; *kai*, "cry"; *ki*, "speech." Ch., *kiu*, "call."
32. KAN. Egt., *kmaṣ*, "singer." Ar., *kan*, "sound," "sing," "bark." Heb., *kon*, *kin*, "sing." Arab., *kin*, "sing." Tk., *kiung*, "to make a hollow sound." Ch., *cheung*, "to sing."
34. KAR, KAL. Akk., *kir*, "word." Ar., *kar*, *kal*, "call"; *klu*, "hear"; *krus*, "proclaim"; *skal*, "sing." Heb., *kārā*, "to cry," "call"; *kol*, "call," "voice"; *ceraz*, "proclaim." Arabic, *kera*, "call"; *kal*, "say"; *karaz*, "preach." Assyr., *karā*, "invoke." Tk., *kur*, "sound"; *kar*, "answer"; *khol*, "hear." Mong., *kur*, "word"; *kele*, "speak." Fn., *kar*, "call"; *kal*, *kol*, *kil*, "noise"; *kur*, "ear." (Hung., *nires*, "a herald," perhaps a loan word.)
35. DHAN. Akk., *tun*, "strike." Egt., *ten*, "hear." Aryan, *dhan*, "strike"; *tan*, *stan*, "thunder." Heb., *uzzen*, "ear"; *azan*, "listen." Ass., *uznu*, "ear." Arab., *adhan*, "hear"; *alen idhen*, *izn*, "ear."
36. DHUP, DUM. Akk., *tum*, "dark." Egt., *tem*, "to shut." Ar., *dhup*, "to make dark, dim, deaf, and dumb." Heb., *dom*, "silent." Tk., *tum*, "dark."
37. SAK (cf. KAK). Ar., *sak*, "say." Heb., *shikh*, "to speak, sing." Tk., *lag*, *zig*, "call," "noise"; *sav*, "call"; *soz*, "words." Finnic, *sau*, "say."

* The Aryan, *bhram*; Heb., *baram*, "to burn," and the name of the *pramantha*, or "fire-stick," may tend to shew that BAR means fire by rubbing.

38. SUR. Ar., *swar*, "speak"; *sru*, "hear." Heb., *shir*, "song." Tk., *sur*, "speech," "word." Hung., *söl*, "speak," "call."
39. SIB. Egt., *seb*, "flute." Ar., *sib*, "whistle," "hiss"; *spu*, "spit." Heb., *tsáphaph*, "to twitter"; *tzephá*, "serpent." Arab., *shifán*, "snake."
40. AR, RA, UL, LA, RU. Akk., *ur*, "dog"; *ur-makh*, "great dog lion." Egt., *labu*, "lion." Ar., *ar*, *ra*, *ru*, "roar"; *ul*, "howl"; *leo*, "lion." Heb., *rád*, "to roar"; *ari*, "lion"; *labi*, "lion." Turk., *ars-lan*, "lion"; *al*, "savage"; *er*, "mighty." Mongol., *ule*, "howl." Basque, *or*, "dog."
41. RAS, RAK, RUG, LAK, LUG. Ar., "rage, roar, croak, speak, cry." Heb., *laissh*, "lion"; *rag*, "stammer"; *rágá*, "terrify"; *rágash*, "rage"; *ruk*, "wind." Arab., *rág*, *ráj*, "tremble," *ruh*, "wind."
42. RABH, RAMBH. Ar., *rabh*, "rage," "roar"; *rambh*, "bellow." Heb., *rám*, "to make a noise," "to thunder."
43. NA (see MU). Med., *na*, "say." Egt., *nas*, "say." Ar., *nam*, "count." Heb., *nám*, "murmur." Arab., *nám*, "murmur." Tk., *oñg* "bellow."
44. BHA, BHAN (cf. PU, Class I). Egt., *ba*, "sheep." Aryan, *bha*, "speak"; *bhal*, "resound"; *bhan*, "speak." Heb., *peh*, "mouth"; *pih*, "speak." Arab., *fih*, "mouth"; *fáh*, "speak." Tk., *bañk*, "voice."
45. BUK, MU, MUG. Akk., *mu*, "call," "name"; *am*, "brill." Egt., *am*, "cry"; *am*, "cattle." Aryan, *mu*, *mug*, "bellow," "low," "mutter"; *buk*, "bellow," "snort"; *bos*, "bull"; *bok*, "mouth"; *hum*, "hum"; *muk*, "mock." Heb., *mok*, "mock"; *hámáh*, "to hum." Arab., *mak*, "mock"; *hamham*, "mutter lament." Tk., *on oñg*, "groan," "bellow"; *enek*, "cow." Mong., *aner*, "sound"; *uncñ*, "cow" (cf. AN AM); *buku*, "bull." Akkad., *am im*, "wind." Egt., *un*, "breathe," "exist." Aryan, *an*, "breathe." Heb., *ánan*, "lament"; *ána*, "speak"; *ánáh*, "mourn," "sing." Arab., *an*, "groan"; *ána*, "sing" (cf. MA, Class I, "to breathe").
46. MAR (cf. AR). Ar., *mar*, "speak." Heb., *ámar*, "to say," "command."

CLASS IV.—MOVEMENT.

47. YA. Egt., *i*, "go"; Ar., *i ya*, "go" (see YAL).
48. AK. Akkad., *aka*, "raise." Egt., *akha*, "raise." Heb., *gáh*, "exalt." Tk., *akh*, *ag*, "high." Mong., *ike*, "great." Ch., *ki*, "upright"; *kue*, "elevate." Perhaps Ar., *ak*, "sharp"; *ki*, "sharpen."
50. GA, GAM. Akk., *ga*, "send"; *gi*, "return." Med., *ça*, "go." Egt., *ga*, "remove." Ar., *ga*, *gam*, "come"; *ak*, "haste," "drive." Heb., *aga*, "flee." Arab., *aga*, *aja*, "flee." Tk., *khom khim*, "move."
51. KAR, KAL, YAL. Ak., *khar khir*, "round" (cf. Class VII). Egt., *ker*, "circle." Ar., *gar*, "assemble"; *agar*, "collect"; *kar*, "to roll," "be round," "to run." Heb., *gor*, "turn aside"; *gálat*, "roll"; *khol*, "circle"; *cárar*, "to go round." Arab.,

- kâr*, "to turn." Akk., *kar*, "speed"; *khal*, "swift"; *gal*, "go"; *kurra*, "horse"; *kharran*, "road." Egt., *her*, "road." Ar. *kar*, *kal*, "move," "run." Heb., *agal*, "to skip"; *agal*, "to flow together." Arab., *agl*, "to hasten, hurry." Tk., *kir*, "pass by"; *kel*, "come near." Mong., *kar*, "go out"; *kara*, "gallop," "spring." Finn., *kal*, "go," "flow"; *kars*, "spring," "run"; *korna*, "road"; *kar*, "circle." Tk., *yel*, *sal*, "swift."
52. KUR. Akk., *kur*, "mountain"; *kar*, "fortress"; *khir*, "strong," "enclosed"; *kal*, "strong"; *gal*, "to rise"; *gal*, "great." Ar., *kar*, *kal*, "rise," "top," "hill." Heb., *kariah*, "city"; *khelon*, "strong." Tk., *kar*, *kur*, *kol*, "might," "hand"; *kor gur*, "make strong," "fasten"; *kal*, "great." Fn., *kor*, "to be high"; *kul*, "hill"; *kal*, "high." Basque, *kora*, "high."
53. KUK. Akk., *kuga*, "high." Ar., *kuk*, "bend," "bow out." Tk., *koch*, "mighty"; *kokkuz*, "the breast." Fn., *kukka*, "long"; *kok*, "high," "proud," "bent." Hence, Egt., *kes*; Heb., *kush*; Arab., *kos*, "the bow"; Gr., *yávros*, "bent"; and Tk., *kueuk*, "the vault of heaven," whence "blue." Akk., *kuk*, "blue."
54. KAS. Akkad., *kazinna*, "hare." Egt., *khes*, "speed"; *hes*, "go." Ar., *kas*, "speed"; *kazen*, "hare"; perhaps also *kwas*, "pant." Heb., *khâsâh*, "flee"; *khosh*, *khish*, "to haste." Arab., *khâsh*, "flee"; *hazz*, "speed." Tk., *kec*, "to go forward." Fn., *kos*, "to run."
55. KAD. Akkad., *gid*, "go," "distant." Egt., *hat*, "hasten." Ar., *kad*, "go," "fall." Heb., *khâtâh*, "stray," "stumble." Ar., *khata*, "stray." Tk., *ket*, "to go," "go away."
56. GID. Ar., *ghid*, "skip"; *kid*, a "kid." Heb., *gedi*, "kid." Ar., *jedi*, "kid."
57. DU. Ak., *du*, "go." Egt., *tu*, "go." Ar., *du*, "go." Heb., *tâah*, "to wander"; *ddah*, "to go by." Arab., *taghi*, *tii*, "wander"; *dda*, "go forth," "attack." Tk., *ot*, "to stride."
58. TAK (see LIK). Akk., *tak*, "to fail." Ar., *tak*, "to flow," "melt," "pine." Heb., *dâg*, "to be afraid." Tk., *takh*, "to slide," "be shallow."
59. TAR, TAL. Akk., *tal*, "pass," "rise"; *tur*, "enter." Egt., *ter*, "the end"; *tara*, "door." Ar., *tar*, "stretch," "pass over," "reach," "enter" (hence "door"). Heb., *thor*, "travel"; *terâ*, "gate." Arab., *tar*, "travel"; *turdh*, "gate." Ar., *tal tol*, "rise," "fall," "balance." Heb., *tâlâl*, "rise"; *tell*, "heap"; *tâlâh*, "hang"; *tâlâh*, "extend"; *dâlâh*, "hang down." Arab., *tall*, "rise"; *tala*, "hang"; *dela*, "hang down" (hence *delu*, "bucket"); *talâh*, "ascend." Egt., *ter*, "to drive." Ar., *dra*, *dram*, "run." Tk., *tal*, "go down"; *tal*, *sal*, "toss," "hang"; *tur*, "to be high"; *ter*, "to be swift" (derivative, Akkad., *dara darag*, "deer." Heb., *dalag*, "to spring." Mong., *turgun*, "swift"). Fn., *tar*, "high." Mong., *darga*, "chief."
60. TARP, DRAP. Egt., *terf*, "dance." Ar., *tarp*, "dance." Ar., *drap*, "run," "flow," "drip," "drip." Heb., *dâlaph*, "drop," "drip." Ar., *delef*, "drip." Heb., *talaph*, "to perish." Ar., *talaf*, "to perish."
61. TOP. Egt., *tep*, "top." Ar., *topa*, "top." Heb., *tebar*, "to be

- lofty." Tk., *tob*, "hump"; *tepe*, "hill." Fin., *tup*, "high"; *tüppüra*, "hill." Mong., *do*, "hill" (*cf.* TAB, Class VI).
62. SAD. Akk., *sud*, "extend." Egt., *sati*, "go out." Ar., *sad*, "travel." Heb., *tsäd*, "step," "go," "mount up" (hence Egt., *sati*, "mountain country." Assy., *sadu*, "mountain." Arab., *säddän*, *sidd*, "mountain"). Tk., *sat*, "to lounge." *Cf.* SAT, STA. Egt., *set*, "establish"; *set*, "a bank." Ar., *sat*, "fill up"; *sta*, "stop," "stand," "set"; *sad*, "sit." Heb., *sit*, "place," "erect." Arab., *sidd*, "bank."
63. SA. Akkad., *se*, "seed." Egt., *su*, "seed." Ar., *sa*, "to strew seed." Turk., *as*, "seed." Mong., *sasa*, "to sow" (*cf.*, SU, Class I). Perhaps Heb., *yatzä*, "to spread out."
64. SU. Akk., *sa*. Medic, *ça*, "go." Egt., *tse*, "go"; *sau*, "drink"; *shu*, "wind." Ar., *swa*, "to sway." Heb., *shh*, "to run"; *yatzä*, "to issue." Arabic, *shäi*, "to run," "rush" (of water and wind). Tk., *su*, "flow," "river," "water." Mong., *oso*, "water." Ch., *shui*, "water."
65. IS. Egt., *as*, "speed." Ar., *is*, "speed." Heb., *auts*, "to hasten." Tk., *as*, *es*, "to stride."
66. SAG. Egt., *skhen*, "to settle." Ar., *sag sank*, "to sink." Heb., *sacan*, "to settle." Arab., *sacan*, "settle."
67. SUK. Akk., *suk*, "swamp." Egt., *sekh*, "go." Ar., *sug*, "flow"; *swag*, *skag*, "sway," "shake." Heb., *shavak*, "run"; *shok*, "leg." Arab., *sak*, "leg." Mongol., *sokoï*, "swamp." Ch., *tsuuk*, "foot."
68. SUR. Akk., *sur*, "flow." Egt., *sert*, "flood"; *sura*, "drink." Ar., *sar*, *sru*, "flow"; *swal*, "swell." Heb., *shavar*, "to go." Arab., *setl*, "a stream." Fn., *zer*, "to rain." Tk., *sil sal*, "wind," "rain," "winter." Deriv., SARB. Aryan, *swarbh*, "to drink." Heb., *säraph*, "to drink." Arab., *sharab*, "to drink."
69. SUB. Akkad., *sub*, "flow." Egt., *sabu*, "drink"; *sefi*, "damp." Ar., *swap*, "to move swiftly"; *swam*, "swim." Heb., *tsavaph*, "to overflow," "to make swim." Tk., *sub*, "flow." Ch., *shaap*, "damp." Fn., *sup*, "to drown."
70. SAB. Akk., *sibir*, "gathering," "harvest"; *sub*, "to collect." Egt., *sap*, "gather." Ar., *swip*, "to sweep." Heb., *äsaph*, "to collect." Fn., *sap*, "to gather."
71. SALP. Ar., *sarp salp*, "slip." Heb., *zalaph*, *dalaph*, "slip," "drop" (*cf.* TAL).
72. RA. Akk., *ru*, "go." Egt., *rer*, "go." Ar., *ra*, "go." Sansk., *ru*, "go." Arab., *ruh*, "go." Turk., *ora*, "foot." Mong., *ire*, "come"; *ula*, "foot."
73. AR, AL.* Akkad., *il*, "rise." Egt., *ar*, "go up." Ar., *ar*, *al*, "go," "go up." Heb., *äl*, "high"; *el*, "strong." Arab., *älä*,

* Hence probably Akk., *er*, "man"; Armen., *ayr*, "man"; Ar., *arya*, "man," "noble"; Tk., *er*, "man": meaning "erect," "tall," "strong," *i.e.*, full grown man.

- "high." Tk., *al, ol*, "high," "great"; *ar*, "strong"; *or*, "high." Mong., *alut*, "over."
74. RI, LI, LIK. Akk., *raa*, "irrigate"; *ari*, "flow." Egt., *aru*, "river." Ar., *ri, li*, "go," "flow"; *lik*, "pour," "melt." Heb., *yar*, "river"; *ruh*, "drink"; *ruk*, "pour"; *lakh*, "moist." Tk., *ir*, "flow." Mong., *ilu*, "overflow." Fn., *yur*, "flood." Ch., *lau*, "flow."
75. RAS. Egt., *rsau*, "head." Sk., *rij*, "stretch." Heb., *rosh*. Arab., *rás*, "head." (Akkad., *rikkh*, "to rise.")
76. RAG. Akk., *rakh*, "walk." Egt., *rehen*, "move." Ar., *rag, rangh*, "run." Heb., *arakh*, "go." Arab., *ruh*, "go." Heb., *yalak*, "to walk."
77. RAD. Akk., *radu*, "go." Ar., *radh, ladh*, "to quit." Heb., *yárad*, "to go down"; *ravad*, "to wander." Arab., *rád*, "to ramble." (Aryan, *lad*, "to let go.")
78. LAG. Ar., *lak*, "depress"; *lagh*, "lie down"; *lag*, "lax"; *lik, rik*, "to go away," "leave." Egt., *lakai*, "soft." Heb., *lag*, "cavity." Arab., *lagg, lajj*, "to be deep" (of water).
79. LIG (cf. LIK). Ar., *ligh*, "lick." Heb., *lákak*, "to lick." Arab., *laklak*, "tongue." (Akk., *lakh*, "pure." Egt., *lekh*, "wash.")
80. LAB. Aryan, *lab*, "droop." Heb., *ráph*, "to drop water." Arab., *ráf*, "shed." Ar., *lap*, "to lap." Heb., *láhab*, "to lick" (cf. lambent flame); *lab*, "to thirst." Arab., *lahab*, "to burn."
81. NA. Akkad., *na*, "go forward." Egt., *na*, "go." Ar., *nas*, "go to"; *nak*, "reach." Heb., *nága*, "reach to," "come to."
82. NAB.* Egt., *nef*, "wind"; *nebi*, "lord"; *nebab*, "inundate." Ar., *nabh*, "to swell" (hence "clouds"), "to burst." Heb., *nib*, "sprout"; *nábá*, "to swell up," "bubble"; *nábá*, "gush out." Arab., *neba*, "a spring." (Hence perhaps also *anf*, "the nose." Cf. Latin, *nupta*, "made pregnant." Heb., *nabi*, "inspired.") Ch., *nup*, "grain." (Egt., *nefr*, "prosperous"; *nepra*, "corn"?)
83. PA, PAD. Medic, *putta*, "to go." Egt., *bu*, "go"; *peh*, "arrive"; *pet*, "foot"; *bes*, "go." Ar., *pad*, "go." Heb., *báz*, "to be swift"; *abad*, "to wander." Arab., *báid*, "far." Tk., *pa*, "foot"; *but*, "foot." Akk., *pu*, "long." Egt., *buai*, "height." Heb., *buá*, "enter." Tk., *boi*, "long."
84. PAT. Egt., *pet, ptah*, "spread," "open"; *peses petes*, "extend." Ar., *pat*, "spread," "flat." Heb., *bát*, "trample," "tread." (Akk., *bat*, "to die.") Egt., *pet*, "to fly"; *betes*, "to fall." Ar., *pat*, "fly," "fall." Heb., *abad*, "perish." Arab., *bád*, "perish." Heb., *pásas*, "to end," "pass." Tk., *bat*, "to go down." Ch., *foot*, "broad."
85. PAR. Med., *pori*, "go." Ar., *par*, "travel." Heb., *ábar*, "to mount up." Tk., *bar*, "walk."

* The Egt. *nub*, "gold," compares with the Akkad., *nap*, "light," and Mongol., *nup*, "sun," as meaning "yellow."

86. PAL, PLU. Akk., *bela*, "completion"; *bur*, "river." Ar., *pal*, "fill up"; *pru*, *plu*, "jump," "fly," "flow," "swim"; *bhla*, "flow," "blow." Heb., *párd*, "to run"; *áphal*, "to swell." Tk., *bar*, "completion"; *ber*, "pour"; *bar*, "cover"; *ber*, "rain." Mong., *huri*, "all." Heb., *bálal*, "to pour." Arab., *bel*, "wet."
87. BAG. Egt., *beka*, "fly"; *beha*, "flee." Ar., *bhag*, "to flee"; *bhug*, "to wave about." Heb., *bavac*, "to turn about"; *pavak*, "to move to and fro"; *bakak*, "to pour out."
88. MU. Egt., *mu*, "water"; *iuma*, "the sea." Ar., *mu*, "move"; *mi*, "go." Heb., *mí*, *mu*, "water"; *yam*, "the sea." Arab., *ma*, *moia*, "water." Heb., *máh*, "flow down."
89. UD. Ar., *ud*, "to be wet" (cf. *wal*, "to roll.") Heb., *ad*, "vapour"; *avad*, "to turn." Arab., *ad*, "to bend" (cf. *aval*, "to roll"; *dval*, "to turn away"). Cf. AW, Class I; WA, WAD, Class VI.
90. UP. Ar., *wip*, "to vibrate." Heb., *áuph*, "to fly."
91. MAR, MUT. Egt., *mer*, *met*, "die." Ar., *mar*, *mal*, "dissolve," "crumble," "melt," "die." Heb., *maveth*, "death." Arab., *maut*, "death."

CLASS V.—SWALLOWING.

92. GA. Ak., *ka*, "mouth"; *gu*, "door"; *ku*, "eat"; *ge*, "abyss." Egt., *hu*, "food"; *kha*, "corpse." Ar., *gha*, "gape." Heb., *gavd*, "expire"; *garu*, "inside." Tk., *ag*, "open," *agui*, "hole." Ch., *hau*, "mouth."
93. AG. Ar., *ang*, "to choke." Heb., *anak*, "to compress"; *koa*, "vomit." Ch., *au*, "vomit"; *ang*, "press."
94. GAB, KUB. Ak., *gab*, "open." Egt., *kab*, "vault." Heb., *gob*, "pit"; *gavaph*, "to be hollow." Arab., *gab*, *jab*, "hollow." Heb., *kábab*, "to be hollow," "vaulted." Arab., *kabu*, "vault." Tk., *kab*, *kub*, "hollow." Fin., *kap*, "valley," "hollow."
95. GAR. Akk., *gar*, "food." Ar., *gar*, "swallow." Heb., *acal*, "eat." Arab., *acal*, "eat." Mong., *karu*, "greedy."
96. AD, AS. Ar., *ad*, "eat." Tk., *í*, *as*, *is*, "eat."
- 96A. DA, DAD. Egt., *tet*, "suckle." Ar., *dha*, "suck," $\Theta\eta\lambda\acute{\eta}$, *dud*, "teat." Heb., *dad*, "breast."
97. PA, PI. Ak., *abba*, "water"; *bi*, "drink." Egt., *af*, "food." Heb., *pek*, "mouth" (cf. BHA, Class III). Ar., *pa*, "feed"; *pi*, "drink"; *ap*, "water." Tk., *ab*, "water."
98. PAS. Egt., *pes*, "bite." Ar., *bhag*, "eat." Tk., *bis*, "cut" (see PIS, Class VII). Cf. Ital., *bocca*, "mouth."

CLASS VI.—TOUCHING, HITTING.

99. AD, AS. Egt., *ut*, "fling"; *aas*, "javelin." Aryan, *as*, "throw." Tk., *at*, *it*, "throw," "sling" (cf. IS, "speed," Class IV).
100. TA. Akk., *ta*, "drive"; *de*, "beat." Egt., *ta*, "beat." Ch., *ta*, "beat."

- 100A. TAK. Akk., *dugga*, "make." Egt., *takh*, "beat"; *tekes*, "cut." Ar., *tak*, *taks*, "hew," "make," "produce." Heb., *dakkak*, "break in pieces." Arab., *dakk*, "pound." Tk., *takh*, *tik*, "cut." Fn., *tak*, "strike" "make." (Ar., *dak*, "bite," is probably connected.)
101. DA. Akk., *ti*, "take." Egt., *tu*, "give." Ar., *da*, "give." Heb., *yad*, "hand." Ass., *idu*, "lay." Mong., *te*, "lay."
102. DAK. Akk., *tuk*, "have." Ar., *dak*, "hold." Tk., *tag*, "touch."
103. TAR. Akk., *tar*, "split." Egt., *ter*, "split," "beat." Ar., *tar*, "penetrate." Tk., *tir*, "break." Mong., *tar*, "cut." Fn., *tar*, "divide."
104. DAN (see DHAN, Class III). Akk., *tun*, "strike." Egt., *athen*, "strike"; *aten*, "pierce"; *ten*, "cut." Ar., *tan*, "cut." Heb., *azen*, "weapon"; *ʔan*, "pierce."
105. TAM. Egt., *tem*, "cut." Ar., *tam*, "cut," "gnaw." Heb., *tám*, "eat." Fn., *tam*, "stamp."
106. TEP. Egt., *tep*, "drum." Greek, *τύπος*, "blow." Sansk., *tup*, "hurt." Heb., *taphaph*, "strike"; *toph*, "drum." Arab., *daff*, "strike." Tk., *tep*, "kick." Fn., *tap*, "strike."
107. SAP. Egt., *aspu*, "cut." Sk., *shap*, "grind." Heb., *šáph*, "divide." Tk., *sap*, "hew." Mong., *saba*, "beat." Fn., *sap*, "hew."
108. SAR, SKAR. Egt., *sker*, "cut"; *serr*, "engrave." (Akk., *sar*, "write.") Ar., *skar*, *skri*, "shear," "write." Heb., *shár*, "cleave." Arab., *sura*, "a drawing." M., *sor*; Tk., *ser*, "to write or draw." Fn., *sor sal*, "split." (Aryan, *skarp skarbh*, "cut." Heb., *shálab*, "to notch.")
109. RAP. Egt., *arf*, "seize." Ar., *rap*, "snatch"; *rip*, "rend." Heb., *áraph*, "seize."
110. RUP. Ar., *rup*, "break." Heb., *ruph*, "pound."
111. RIK. Egt., *rega*, "separate." Ar., *rik*, "tear"; *rug*, "rend." Heb., *rákak*, "separate," "spread."
112. LIP. Ar., *lip*, "adhere." Assyr., *libu*, "cleave to."
114. KAR. Akk., *gir*, "split"; *kur*, "to separate." Egt., *kher*, "enemy"; *herpu*, "sword." Ar., *krit*, "cut"; *gar*, "grind"; *kar*, "destroy"; *ghar*, "grasp" (cf. Medic, *kar*, "hand"). Heb., *garar*, "scrape"; *cur*, "dig." Arab., *kur*, "dig"; *jur*, "hollowed out." Tk., *kir kil*, "break." Mong., *kiro*, "saw"; *kure*, "file."
115. KAT, KAS. Akk., *kut*, "cut"; *chas*, "split." Egt., *het*, "sword." Ar., *ghas*, "strike," "wound." Sk., *chid*, "slay." Heb., *gadar*, "cut"; *kadad*, "cleave." Arab., *jedd* and *kadd*. Tk., *kes*, "cut." Mong., *kadur*, "sickle"; *kazi*, "bite." Fin., *kat*, "cut"; *kas*, "divide." Ch., *kat*, "pierce"; *koht*, "cut"; *kwut*, "dig."
116. KAT. Akk., *kat*, "hand." Egt., *khet*, "to close." Ar., *kat* "close"; *ghad*, "grasp." Heb., *akhad*, "take"; *khatah*, "seize." Arab., *akhadh*, "take." Tk., *kat*, "join." Fn., *kat*, "fasten." (N.B., Mongol., *gar*, "hand," see preceding root.)
117. KAN. Ar., *ghan*, "strike." Heb., *kin*, "strike." Tk., *sun*, "hew."
118. KAP. Akk., *gub*, "fix," "hand." Egt., *khefa*, "seize"; *kheb*, "fist."

- Ar., *kap*, "hold." Heb., *cap̄h*, "hollow of hand." Arab. *kaff*. Tk., *kap*, "grip." Chin., *chup*, "hold"; *kup*, "cover."
119. PAR. Ar., *par*, "give." Heb., *phāl*; Arab., *fāl*, "make." Tk., *ber*, "give."
120. BAR, BAL. Akk., *bar*, "cut"; *pal*, "cleave." Egt., *berk*, "open." Ar., *bhar*, "cut," "bore"; *bhrag*, "break." Heb., *bar*, *par*, "dig," "bore"; *parakh*, "burst"; *parak*, "break." Tk., *bal*, "split." Mong., *balta*, "axe." Fn., *pel*, "divide"; *pir*, "split."
121. BAD. Akk., *bad*, "open." Egt., *pit*, *fut*, "divide." Ar., *bhid*, "cleave," "bite." Heb., *badad*, "divide"; *padad*, "cut up." Arab., *badd*, *fadd*, "separate." Tk., *bit*, "cut."

CLASS VII.—WORK.

122. WA, WI. Ar., *wa*, *wi*, "wind," "bend," "bind." Heb., *avah*, "inflect." Arab., *awa*. (Ch., *wai*, "fence" ?)
123. WAR. Egt., "war," "cord." Ar., *war*, *wal*, "wind," "roll." Heb., *awal*, "distort." Arab., *dal*, "turn." Tk., *al*, "grip"; *el*, "hand"; *or*, "rope."
124. WAB. Ar., *wabh*, "weave." Heb., *avb*, "wrap." Tk., *ip*, "bind."
125. AK ANK. Ar., *ak ank*, "bend"; *ag ang*, "choke" (cf. AG, Class V). Egt., *ki*, "choke"; *ag*, "cord." Heb., *avug*; Arab., *avj*, "bend." Tk., *eg*, "bend." Ch., *hav*, "hook."
126. KAK KUK (see KUK, Class IV). Ar., *kak*, "bend," "surround." Heb., *khagag*; Arab., *hajj*, "to go round." Fn., *kak*, "bowed."
127. KAR. Akk., *gar*, "make" (see KAR, Class VI). Egt., *ger*, *kher*, "have." Ar., *kar*, "make," "act," "work," "produce"; *ghar*, "seize." Heb., *avara*; Arab., *cara*, "dig." Tk., *kar*, "hand," "power"; *kil*, "to do," "make." Ar., *karp*, Heb., *garaph* "grab."
128. KAT. Akk., *kat*, "gather," "shut." Egt., *huta*, "cover." Ar., *kat*, "cover," "gather." Heb., *akhad*, "unite"; *casah*, "cover." Tk., *kat*, "fasten." Fn., *kat*, *kant*, "cover" (hence "house," as in Aryan); *kat*, "hide."
129. KAS. Ar., *gas*, "heap up." Heb., *kashash*; Arab., *kashsh*, "gather." Tk., *kot kos*, "heap up." (Egt., *hesb*; Heb., *khashab*; Arab., *hasab*, "to add up," "calculate," "think.")
130. KAM. Ak., *gam*, "bend," "subdue." Egt., *hams*, "bend." Ar., *kam*, "bend" (Heb., *kamāh*; Arab., *kama*, "to collect" ?). Tk., *kom*, "round," "humpy." Ch., *kuung*, "bow."
131. KAP, KUP. Akkad., *gab*, "breast." Egt., *kab khab*, "bent," "crooked." Ar., *kap kamp*, "bend," "vibrate"; *kubh*, "bend," "vibrate," "swell up." Heb., *gabā*, "swell up round"; *kabab*, "round and hollow"; *guph*, "hollow" (Arab., *jaba*, *kabb*, and *jūf*). Tk., *kob*, *kab*, *kou*, "hollow." (Cf. Aryan, *ku*, "hollow." Heb., *gu*; Arab., *ju*, "interior.") Finn., *kap*, "hill," "valley," "sphere." Mong., *gube*, "hill" (cf. GAB, Class V, "to gape.")

132. DAG, STAK. Egt., *steka*, "to cover." Ar., *tag*, *stag*, "to roof or thatch." Heb., *degah*, Arab., *daja*, "to cover." Tk., *tag*, "cover"; *tuk*, "stretch," "sew."
133. DAG, TOG. Akk., *dag*, "to make." Egt., *takh*, "beat." Ar., *dhigh*, "mould," "form," "knead," "smear." Heb., *tavakh*, "daub." Arab., *takh*, "smear." Tk., *tog*, "smooth" (Akk., *tag*, "turn." Ar., *tak*, "weave").
134. TU, DU. Akk., *du*, "make." Ar., *du*, "toil." Heb., *tuah*, "to spin" (Arab., *tui*). Fn., *tu*, "to make."
135. TA, TAN. Ar., *ta*, *tan*, "stretch." Heb., *tana*, "to weave." Tk., *ton*, "to cover." Ch., *taai*, "band."
136. TAK, TANG. Akk., *tuk*, "to have." Ar., *dak*, *tang*, "take hold." Tk., *tak*, "touch." Fin., *tan*, "hand."
137. TAR (see Class VI). Akk., *til*, "to complete"; *tar*, "fix." Ar., *dar*, "to do," "effect"; *tar*, "to turn," "rub," "bore" (Ar., *drap*, "beat." Heb., *darab*, Arab., *darab*, "beat"). Akk., *tur*, "settle," "abide." Egt., *atr*, "stop," "prevent." Ar., *dhar*, "hold," "maintain." Heb., *davar*. Arab., *dur*, "remain," "abide." Tk., *tur*, "dwell." Fin., *tar*, "abide." Mong., *turu*, "village."
138. DAM, TAM. Akk., *dim*, "cord"; *tum*, "fear." Ar., *dam*, "tame;" *daman*, "rope"; *tam*, "fear," "choke"; *tank*, "squeeze." Heb., *atam*, "shut," "stop." Tk., *tam*, "to seal."
139. DAM. Akk., *dim*, "create" (Egt., *tem*, "building"?). Ar., *dam*, "to build." Heb., *tamam*, Arab., *thumm*, "to complete." Tk., *tam*, "to build."
140. TAB. Akk., *tab*, "to form," "establish." Ar., *stap*, *stabh*, "to make firm." Heb., *dabab*; Arab., *dabb*, "to tread." Tk., *tab*, "basis." Ch., *taap*, "to tread."
141. SAR. Akk., *sar*, "period." Egt., *tsar*, "calculation." Ar., *sar*, *swar*, "to arrange in order," "to string." Heb., *sardh*, "to put in a row"; *asher*, "straight." Arab., *sar*, "to set in order." (Egt., *sar*, "chief." Heb., *sar*. Ass., *saru*, Akk., *sar*? "chief," "arranger.") Zend, *çareda*, "year." Tk., *sal*, "year." Medic, *karata*, "time." Tk., *ser*, "to arrange," "rule."
142. SAD, SAT (See SAD, Class IV). Egt., *set*, "establish"; *saat*, "throne." Aryan, *sad*, "sit"; *sta*, "stand"; *sat*, "full." Heb., *sâd*, "prop up"; *shadad*, "strengthen." Arab., *shidd*, "pull"; *shaddîd*, "strong." Tk., *süz*, "to stand still."
143. SAM (cf. DHUP, Class III). Egt., *sam*, "dark"; *sem*, "butter," "grease." Ar., *sma*, "to smear." Ass., *sama*, "dark." Heb., *shaman*, "fat." Arab., *semen*, "butter." Fin., *ham*, *sam*, "dark," "cloud." The idea is "to cover or smear over." Hence, Heb., *shema*, *shemim*, "the sky," "the clouds."
144. SU. Akk., *su*, "tie." Ar., *su siv*, "sew." Heb., *shava*, "to make level, equal, or fit," "to put." Arab., *sawa*, "equally joined." Fn., *sovo*, "to weave."
145. NAG. Egt., *nuh*, "cord." Ar., *nagh*, "to bind."

146. RA, AR, LU. Akk., *ra*, "take"; *ru*, "make," "found"; *ur*, "foundation"; *lu*, "yoke." Egt., *ra ar*, "make"; *ar*, "foundation"; *lai*, "bend." Ar., *ar*, "to fit," "to acquire"; *ra*, "to fit"; *lu*, "to acquire." Heb., *alal*, "to join," "bind"; *arah*, "take," "pluck"; "collect," "gather." Arab., *ghal*, "to put in," "to yoke" (*gh* in Arabic = *d* in Hebrew, always). Heb., *lavah*, "to be joined." Tk., *al*, "hold"; *el*, "bind"; *or*, "cord." (Heb., *er*. Assyr., *uru*, "city," *i.e.*, "foundation.") Ch., *lau*, "keep"; *laam*, "rope."
147. AP (*cf.* WAB). Akk., *pa*, "fibre." Egt., *abti*, "net," "spin"; *naf*, "squeeze." Ar., *ap*, "bind," "hold," "work." Heb., *aphaph*, "to surround." Tk., *ip*, "gather," "bind," "string." Ch., *pau*, "bundle"; *ipi*, "clothes."
148. PAK. Ar., *pak*, "fix." Heb., *aphak*, "hold fast." Tk., *bag*, "bind." (Hence Medic, *pikti*, "to aid." Tk., *pokti*, "to strengthen," "support.")
149. PAS. Egt., *pes*, "cook." Ar., *pak*, "cook." Heb., *aphah*. Arab., *aft*, "cook." Tk., *bis*, "cook."
150. PIS, PIK, PUK. Egt., *fekau*, "cut"; *basa*, "cut." Ar., *pik*, "prick"; "cut," *puk*, "pierce," "prick," "strike." Heb., *bakah*, "cleave"; *pagah*, "strike." Tk., *bis*, "cut" (*cf.* BAD, Class VI).
151. PARD. Ar., *pard*, "explode." Heb., *parad*, "to crack," "expand." Arab., *fered*, "crack."
152. BUG. Akk., *bav*, "bow." Ar., *bhugh*, "to bow," "bend." Heb., *bavac*, "turn," "roll"; *pavak*, "to move to and fro"; *pavac*, "to wave" (hence *fucus*, "seaweed." Heb., *pac*).
153. BAD, BAND. Akk., *bat*, "a walled town." Egt., *bant*, "to bind"; *pet*, "bow." Ar., *bhad*, *bhid*, *bhand*, "to bind"; *banda*, "fortress" (Sk., *pid*, "to hinder, vex." Heb., *peed*, "calamity.") Heb., *abad*, "to incline" ?; *bada*, "to fashion," "mould." Tk., *bot*, "enclosure," "fortress." (The radical meaning is bend and bind.)
154. MAR. Ar., *mar*, "to grind" (*cf.* MAR, Class IV), "to rub"; *mare*, "the sea." Heb., *marar*, "to be bitter" (*i.e.*, "to sting"); *malakh*, "to be salt." (Ar., *mark*, *malg*, "to rub." Heb., *marah*, "to rub.") Ar., *mar*, "to make dirty." Heb., *mahal*, "to spoil."

CLASS VIII.—LOVE, DESIRE, THOUGHT.

155. AW (*see* AW, Class I). Ar., *aw*, "desire." Tk., *oi*, "fancy." Ch., *oi*, "love."
156. WAN (*cf.* AN, "to breathe," pp. 37-40). Ar., *wan*, "honor," "success," "desire" (hence *Venus*). Heb., *awn*, "ability," "power," "wealth." Tk., *on*, "power" (*cf.* Akk., *un en*, "lord." Assyr., *enu*, "lord.") Ch., *uen*, "desire."
157. KAM. Akk., *gaam*, "grace," "kindness" (*cf.* KAM, "bend," Class VII). Egt., *khemt*, "desire," "inclination." Ar., *kam*, "love." Heb., *camah*, "to long." Arab., *jamā*, "to embrace." Fn., *yem*, "good."

158. KAB, KUB. Akk., *kab*, "honor." Ar., *kubh*, "to wish," "covet." Heb., *khbab*, "to love," "be friendly." Tk., *keb*, "fancy."
159. NAD. Ar., *nad*, *nud*, "profit," "enjoy." Heb., *nid*, "comfort."
160. SAL. Ar., *sal*, "save," "keep." Heb., *shalah*, "to be safe," "secure."
161. RA, RAS. Ar., *ra*, *ras*, "rest," "love." Heb., *rai*, Arab., *rai*, "a friend." Heb., *arash*, "to long for"; *aras*, "to espouse," Arab., *warash*, "to long for"; *arús*, "a bride."
162. LAG. Egt., *lakai*, "soft." Ar., *lag*, "lax"; *lagh*, "lie down." Heb., *leah*, "exhausted," "weary." Arab., *rah*, "rest."
163. LAS. Ar., *las*, "lust," and *layyos*. Heb., *lékhen*, "to be greedy," "to lust" (cf. LIG, Class IV).
164. LUB. Akk., *lib*, "interior." Ar., *libh*, *lubh*, "love." Heb., *leb*. Arab., *lub*, "the heart." Tk., *lap*, "good." (Heb., *alaph*, Arab., *alf*, "to be familiar." Heb., *aláph*, "a friend.")
165. MAN. Akk., *munu*, "beneficent." Ar., *man*, "to think," "to heal." Heb., *mán*; Arabic, *mán*, "to think," "purpose."
166. BHID (cf. BAD, Class VII). Ar., *bhidh*, "to trust." Tk., *böt*, "to trust"; the original meaning being "to bind," "make firm."
167. BAS (cf. PAS, Class V). Ar., *bus*, "to kiss." Arab., *bás*, "a kiss"; probably connected with *boc*, "mouth." It is not an universal custom to kiss.
168. DIK, DA (cf. DI, Class II). Akk., *da*, "say"; *dik*, "word"; *dug*, "order"; *dil*, "speech"; *tuk*, "know." Egt., *teka*, "perceive"; *ta*, "head." Ar., *da*, "know"; *dak*, *dik*, *dig*, "shew," "teach," "deceive." Sk., *dhi*, "intellect." Heb., *dák*, "knowledge"; *dál*, "observe," "look out"; *din*, "judgment." Tk., *til*, "speech"; *tan*, "learn." Mong., *tane*, "know." Fn., *tan*, "learn."
169. MA, NA, NU, negative. Akk., *na*, *nu*, "not." Egt., *em*, *an*, "not." Ar., *nu*, "not." Heb., *ma*, *an*, "not," "lest"; *la*, "not." Tk., *neh*, "nor." Ch., *mo*, "not."
170. MA. Akk., *ma*, "this." Egt., *ma*, "of." Ar., *ma*, "this." Assyr., *ma*, "this." Heb. and Arab., *m*, "that which." Tk., *m*, "my."
171. SA. Akkad., *sa*, "man." Egt., *saa*, "man"; *su*, "he." Ar., *sa*, "this"; *sama*, "same." Ass., *su*, "he"; *summa*, "like." (Heb., *ha*, "the"; *hu*, "he." Arab., *a*, "the"; *hu*, "he"; like Greek *ho*, "the": *h* for *s*.)
172. KA. Akk., *khu*, "man"; *ka*, "who." Egt., *akh*, "who." Ar., *ka*, *ki*, "who." Heb., *ci*, "who"; *c*, "as." Tk., *ki*, "that which." (Fn., *ku*, *khu*, "man.")

AUTHORITIES CONSULTED.

- AKKADIAN AND MEDITERRANEAN.—Chossat, "Répertoire Sumerien," 1882. Oppert, "Les Médes," 1879. Hommel, "Zeitschrift für Keilschrift," 1882-4. "Proc. Bib. Arch. Soc.," 1890-91. Bertin, "Lang. Cuneif. Inscript.," 1888. Lenormant, "Études Accadiennes," 1873-80.
- EGYPTIAN.—Pierret, "Vocabulaire," 1876. Renouf, "Grammar," 1875.
- ARYAN.—Max Müller, "Sanskrit Grammar," 1870. Bopp, "Compar. Grammar," 1846. "Haug. Essays," 1862. O. Schrader, "Prehistoric Ant. Aryan Nations," 1890. Skeat's "List of Aryan Roots, Etym. Dict.," 1888. Brand, "Armenian Dictionary," 1868.
- SEMITIC.—Gesenius, "Lexicon," 1846. Buxtorff, "Lex. Chal.," 1640. Freytag, "Lex. Arab.," 1837. Sayce, "Assyr. Gram.," 1875. Menant, "Grammaire Assyrienne," 1868.
- TURKIC.—Vambéry, "Etymol. Wörterbuch," 1878. Böhtlingk, "Die Sprache der Yakuten," 1851. Redhouse, "Turkish Grammar," 1884.
- FINNO-UGRIC.—Donner, "Vergleichendes Wörterbuch," 1874. Bizonfy, "Hung. Dictionary," 1886.
- MONGOL.—Castren's "Burjätischen Sprachlehre," 1857.
- CHINESE.—Eitel, "Cantonese Dictionary" 1877. Chalmer's "Cantonese Dictionary," 1878. (Fifth Edition.) Doolittle, "Mandarin Dictionary," 1872.
- JAPANESE.—Aston, "Grammar," 1877.
- GEORGIAN.—Brosset, "Elements," 1837.
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The PRESIDENT (Sir G. G. STOKES, Bart.).—Our thanks are certainly due to the author of this elaborate paper, but I may say you have anticipated me by your applause. Perhaps Dr. Legge will kindly open the discussion.

Professor J. LEGGE, D.D. (Oxford).—I understand the President desires that I should say something on the admirable paper that we have just heard. I am hardly prepared to do so; not from want of attention to the subject, because it is one that for many years has been very much in my thoughts and at my heart; and although, unfortunately, as years have gone on, I have become less capable of catching the language that has been used or spoken, yet I have had the privilege, through the kindness of the Honorary Secretary, of being in possession of the printed paper, and I must say I have read it many times over and tried to comprehend it, tried to learn from it, and tried if it would help me to focus many of the ideas that at different times have flitted through my mind: yet when I have tried to come to definite conclusions concerning the points that the author has endeavoured with so much pains, and often with so much success, to bring before us, I have found it is very difficult to arrive at any definite conclusion.

We have much in the paper about a great many different languages with some of which I am, or have been at different times of my life, tolerably familiar, and one of which has been the great study—shall I say bugbear?—of my life for about sixty years. I mean the Chinese. What the author has said about the Chinese has interested me. Sometimes he has astonished me. It is not the first time that I have heard that Chinese is a very decayed language, and I have never been able to understand what is meant by thus characterising it. Does it mean that it is a very broken down language? Well, it has never admitted of much breaking down, because in all the thousands of years of its existence it has never been but a monosyllabic language, and it seems to me to be very difficult to break down monosyllables and to speak of them as falling into decay. The language, moreover, as it is written at the present day, is very much as it was written and in construction about 1900 years before the Christian era, and it really places me in a difficulty to understand what philologists mean when they speak of the decayed language that has been cultivated in China for so many thousand years and which has as many writers in it at the present day as many of our alphabetic

tongues, and an acquaintance with which has been and is the passport to distinction in the Empire, introducing to all positions of general culture and official rank.

Now with regard to the conclusions to which the author comes, I am happy to agree with him to a very great extent. There are the different families of languages to which Major Conder has referred: the Semitic languages, the Aryan languages, and the Mongolian languages; and that there is a close connection between the individual languages constituting those different families there is no doubt. Their affinities are many and they may be derived from one source, and one centre; the Semitic speech, the Aryan speech, and the Mongolian speech; but, when we advance further than that and say that all the varieties of human speech belong to these families, and that other divisions of the human race are from one source connected together by links which we hope by-and-by to understand, there I am unable to follow. There I am left as much in the mist, behind the shadow of the mystery, as ever I was; and the fact is that I have often resolved to have done with the study of languages: but then there has come in this thought, that all the treasures of human thought—all whereby man has endeavoured to enunciate what he is capable of—are only to be ascertained by a study of them. Suppose the Aryan languages of all kinds to be blotted out of the world, how poor it would be; so with the Semitic languages, and so, in a less degree, with the Mongolian languages; and shall I say so, also, of the Chinese language? But it so happened, when I was quite a young man, some sixty years ago and more, my attention was directed to the study of Chinese and, as I said, that has been my recourse and mental food, and very often my bugbear, all through life. So let men give their time and energy to the study of all those languages that have a literature, and are capable of instructing other races, and bringing out treasures that in time, in their own language, or in other languages, shall be unfolded to the study of other races; and I conceive that by-and-by, through these philological studies, we shall come to a better understanding of one another all over the world, and possess more of brotherly feeling, more of mutual consideration, more of mutual helpfulness and co-operation in what is good, than ever we have yet attained to, and we shall gradually, perhaps, find that ultimately we have one race of human beings in the world bound together by the com-

monest and closest ties of mutual consideration, deference, and love.

In one word let me thank Major Conder for all the information that he has brought together, and, by-and-by, if we meet again before a great many years, I hope we shall find ourselves nearer to a common view in regard to the curious points to which he has directed our attention this evening. (Applause.)

MR. THEO. G. PINCHES.—I must say that, after listening to what Dr. Legge has said, I feel very diffident in speaking; for I have not had his wide reading, being, in fact, very much of a specialist, and bound down to that speciality by routine work. I have listened with a great deal of pleasure to Major Conder's very instructive paper. I was unable to read it right through before I came here, and, consequently, I have not so perfect a knowledge of its contents as I should desire. On reading such a paper as this a great many isolated points naturally occur to one, and among them there are such questions as this: why is it that the Akkadians, when speaking of the precious metals, generally say "gold and silver," whilst the Assyrians and Babylonians, amongst whom they lived, always say "silver and gold?" Then there is a very interesting point in connection with another word—the name of a well-known animal, the horse—why do the Akkadians write the name of that animal with three characters rather than with one? They call him, apparently, "the animal of the country"—(the words have been translated "the animal of the East," but that I do not believe to be the correct rendering). Then, again, among other questions, there is that of the Akkadian name for God. This, in that language, is a word of two syllables, namely, *Dingir*, of which the Sumerian form is *Dimmer*. Some time ago I formed the opinion that the first syllable, *din* or *dim*, was none other than the word for *spirit*, and *gir* or *mer*, means, in Akkadian, *strong*. Therefore it would seem as if the Akkadians regarded the greater Gods as "the strong spirits." In this connection I may mention that the greater part of the polytheism of the Assyrians and Babylonians seems to have been of Akkadian origin, and that is a question that I hope to have the pleasure of touching upon before this Institute. It is one of considerable importance and worthy of a certain amount of research. Of course, in a great many other isolated points in this paper, I have seen things with which I could hardly agree, and which seem to me to want improvement. But

still, on the whole, it is exceedingly good, and it falls in, in fact, with what was stated at the late congress of Orientalists, by Professor Hommel, the Rev. C. J. Ball, and others (who spoke on that occasion in the Semitic or Babylonian sections), viz.: the connection that must have existed between ancient China, Egypt and Babylonia. I think we may regard this connection as exceedingly probable, and further researches will, no doubt, give us more light upon the subject. I hope that Major Conder will continue his interesting researches and will give us some further information from his wide experience at some future time.

Rev. KENNETH S. MACDONALD, D.D.—I cannot speak with authority upon this subject; but there is one little point I should like to receive light upon, or throw a little light upon, if I can. It is with regard to the question of vowel harmony (treated on in the section on Mongolic languages). Major Conder, in his most admirable paper, is not able to throw any light on the subject as far as the Aryan languages are concerned. Now Max Müller tells us in his Gifford Lectures of 1890, that there is a law in accordance with which the vowels of every word must be changed and modulated so as to harmonize with the keynote struck by its chief vowel; he finds this law pervading the Tungusic, Mongolic, Turkic, Samoyedic, and Finnic classes of languages, and even in dialects where it is disappearing it has often left traces of its former existence behind—nay, more, “the same law has been traced in the Tamulic languages also, particularly in Telugu, and in these languages it is not only the radical vowel that determines the vowels of the suffixes, but the vowel of a suffix also may react on the radical vowel.” But he adds: “No Aryan or Semitic language has preserved a similar freedom in the harmonic arrangements of its vowels, while traces of it have been found among the most distant of the Turanian family.” Such is Professor Max Müller’s opinion.

Now all scholars are agreed that Gaelic, the Celtic language of the Highlands of Scotland, and Irish, the language of our fellow subjects in the Emerald Isle, are Aryan, indeed the oldest branches of the family. Here are extracts from two or three of the Gaelic grammars accessible to me:—

1. Forbes, at p. 9 of his grammar, gives two rules on the spelling of Gaelic words, a knowledge of which, he says, makes Gaelic orthography extremely easy:—“1. When the last vowel in

the preceding syllable of a word is a broad, the first vowel in the following syllable of the same word must be a broad." "2. When the last vowel in the preceding syllable is a small, the first in the following syllable of the same word must be a small also."

2. Stewart, in his Gaelic grammar, p. 30, speaks to the same effect, but briefer:—"The rule has long obtained in Gaelic orthography, that in polysyllables the last vowel of one syllable and the first vowel of the subsequent syllable must both be of the same quality." In Gaelic "Leathan ri leathan is coal ri coal." To the same effect are the words of

3. Armstrong. "Though to the ordinary English reader they be unintelligible, such and such words are more commonly written so and so to 'preserve the rule *coal ri coal is leathan ri leathan*,' " which means simply "broad to broad and small to small." It will be observed that Gaelic grammarians do not say which vowel acts, and which is acted on, but the rule is emphatic—there must be a "vowel harmony" in every case. So this is another link in common between the Aryan and non-Aryan languages tending to prove that they have "descended from a single original stock."

Rev. S. W. KOELLE, Ph.D.—Perhaps in connection with the last speaker's remarks I may mention that what the learned author has called "the harmony of vowels" is properly a harmony of sounds generally. In the Tartar languages, of which Turkish is the chief representative, this law of harmony or euphony exists; but it is not restricted to vowels, for it extends equally to consonants. I will give you an instance. The roots of the language are either hard or soft roots; e.g., *bul* is hard, *bil* is soft. The former as Imperative means: find! the latter: know! Now their respective Infinitives are: *bul-mag* (to find), *bil-mek* (to know); their future Participles: *bul-adjag* (going to find), *bil-edjek* (going to know), &c. So you see the law of harmony in Turkish regulates both the vocal and consonantal character of all the formative additions. According as the root is either hard or soft all the affixes must likewise be either hard or soft. You therefore have here a symphony of sounds affecting not only the vowels but the consonants as well.

The AUTHOR.—I thank you for the reception given to my paper, and shall not detain you more than five minutes. I consider myself very fortunate to have been treated so kindly by those

who have spoken on my paper and who are all known to have more experience in philological subjects than I possess, and especially I feel honoured by the presence of Professor Legge, who is so well known to us as one of the most distinguished Chinese scholars in England, and whose Chinese translations I have had occasion to read. There are two points in his remarks that I should like to mention: one is in regard to the decayed, broken down condition of Chinese. I intended to refer to the vocabulary, not the idiom, or construction of the language, which is most distinctive. But I think, comparing the oldest known Chinese dialect (Cantonese) with the Mandarin dialect, any scholar would allow that a considerable abrasion has gone on in the vocabulary of the Chinese.

The other point is the question of the single origin of language. That is exactly the question I wished to raise; but I do not consider myself capable of settling it—I only wished to raise a discussion on the subject. It appears to me that as the Asiatic peoples are supposed by all scholars to have lived, originally, within a comparatively short distance of each other—not more than 500 or 1,000 miles apart, there is nothing *primâ facie* improbable in the theory of their having been, originally, a single stock and their languages having an extremely remote common origin.

With regard to Mr. Pinches, he always treats me with kindness, and I have confidence in him as an Akkadian scholar, for I regard him as the safest we have in England. There are one or two remarks that he made as to Chinese in regard to the works of Mr. Ball, to which he referred, and which I have read with great interest. His conclusions would go in favour of my conclusions. As to the word *kurrd* for *horse*, in the Mongolian language, it simply means a galloping animal. As to the word *dingir* I am of Mr. Pinches' opinion, that it means *spirit* and comes from a root which means to live or breathe or be alive.

Mr. Macdonald's remarks were of great interest to me because I know nothing of Gaelic, though I am aware that the Celtic Latin group is, perhaps, the oldest of all Aryan groups of language, and the discovery of vowel harmony in that group goes still further towards the observation of the general law which to a great extent has died out in many languages and survived in others.

Dr. Koelle's remarks on the harmony of consonants are of great value. I have noticed in the Turkish that what he has said to-

night is observable, and I have to a certain extent mentioned it in the paper at page 210 in regard to the Aryan languages in which vowel harmony exists to a certain extent, and it is also supplemented by the consonantal harmony which is found to exist in the Tartar and Zend languages.

The meeting was then adjourned.

REMARKS ON THE FOREGOING PAPER.

The Rev. R. COLLINS,* M.A., writes:—

After the long study and care bestowed by Major Conder on the subject of this most interesting paper, it seems almost an impertinence on the part of one who has comparatively little time for such study to say a word. Nor am I able to refer to all the vocabularies that have been used by Major Conder. I would, however, venture to suggest a doubt whether all language can be traced ultimately to simple monosyllables. Is there not evidence of some further law of sympathy between sounds (especially consonants and combination of consonants), and the impressions produced by actions, or feelings, which carries us along beyond merely so simple a syllabic origin as here suggested? However correct the illustrations at the close of this paper be, are there not many cases left thus incapable of explanation?

Take a class of words in which k, s, p (with sometimes r) are the backbone. For instance, there is the remarkable word used for the first description of the "manna" (Ex. xvi. 14). Leaving the vowels out of the question, it is *khasaph*, or *khasap*, the root meaning being to "peel," or "scale"; so that it seems to mean a "scrap," or, as our Revisers put it in the margin, a "flake." Another form of the same word seems to be *sakhaph*, to "scrape," or "sweep." Gesenius, no doubt correctly, compares it with the Gr. *skaptein*, to "hoe," or "dig," whence we get *skaphos* (scraped out, or dug out), *skiff*, *ship*; *khasap* and *sakap* both occur in Arabic, also conveying the same idea, as in the Hebrew, of "scraping." I do not recall a parallel in Sanscrit, or the South Indian languages. But in our own German and Latin, we have *scab*, *schaben*, *scabere*, and (perhaps) *shave*; probably *scoop* belongs to the same family. With a later addition of r (a point Major Conder notes) we get *scrape*, *scrap*, *scramble*, *scrabble*, *scrub*; and as s is apt to be lost before k (as between Sanscrit and Pāli) we may

* Late principal of Cottayam College.

get *grub*. We have here similar combinations of the same, or allied, consonants, and the same idea implied. But we do not seem able to trace the words back to any simple monosyllable. On the contrary the apparently oldest form is found to be dissyllabic. Of course the Hebrew form is far from the original; already the word exists in two forms in that language, and in Arabic, the position of the letters being transposed. It strikes one that, could we get no further back than *ship* and *shave*, we should be entirely in the dark about their antecedents. May not, then, some of the apparently simple roots have some very different origin from what is supposed? even in some cases less simple than they themselves seem to be? Imitative sounds no doubt count for a good deal; but is there not a further sympathy between *sound* and *feeling*, that is probably capable of at least some amount of investigation?

The study of the growth of language is extremely fascinating, and Major Conder's paper is a most valuable contribution. But perhaps, after all, the evidences as to the unity of the human race is the most interesting and important point brought out by these studies of language.

THE AUTHOR'S REPLY.

The three roots to which Mr. Collins refers are, I believe, secondary and tertiary roots. The prefixed S in both Semitic and Aryan speech (a degradation of the root *AS* "to be") has the force of a causative verb. In Assyrian and Sabean it forms the *Shaphel* voice of the verb which is causative. The earlier roots I, therefore, suppose to have been *Kap* and *Karp*. The first root which occurs in all languages has the meaning to "be hollow," hence "Ship" and "Scoop" would mean "hollowed out." The root *Karp* in Aryan and in Semitic speech means to "cut off," and in the former class is regarded as a secondary root from *Kur* which means to "cut" in all three classes of Asiatic speech. These roots may, therefore, I think, be easily reduced to monosyllables. The Hebrew root *Sakhap* would come from *Kap*, but *Khasap* is a distinct secondary root, from *Khas* which, in all three classes, means to "split." The *p* is a common termination in in Mongolic and Aryan speech, for words derived from monosyllabic roots, and none of the words quoted seem to me to run counter to my system.

As regards the unity of the human race, those who follow Darwin's theory of variation should find no difficulty in accepting it. Darwin has shown how species tend, under altered conditions, to become black and white in colour. White men are found near the poles, and black men near the equator, so that the influence of the sun on colour may be suspected. The difference between the long head of Aryans, Semitic peoples, and negroes, and the short head of Mongolic peoples, may also have developed within historic times; for, as Dr. Beddoe has noticed, the prehistoric heads, in countries where short heads now prevail, have been found to be longer than at present. The Akkadians, both in feature and in vocabulary, present resemblance to both Aryan and Turanian peoples: the oldest Aryan languages (Lett and Teutonic) belong to peoples with medium heads; and such evidence as we possess seems to indicate an original type brown in colour, and medial in measurement of the head, whence the various races have diverged. The ancient Egyptians give the medium character.

INTERMEDIATE MEETING.*

D. HOWARD, ESQ., D.L., IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed, and the following Elections were announced:—

MEMBER:—Francis G. Smart, Esq., M.A., M.B., F.L.S., F.R.G.S., F.S.A., Kent.

LIFE ASSOCIATE:—Major A. W. Bell, Ind. S.C., India.

ASSOCIATES:—Robert P. Greg, Esq., F.S.A., F.G.S., Herts; S. McCracken, Esq., A.B., Ireland; Rev. J. E. Kittredge, D.D., United States; Hugh Shrewsbury, Esq., M.A., New Zealand.

A LECTURE entitled "Notes of a Visit to Tel-el-Amarna," was given by Mr. W. St. C. Boscawen, M.R.H.S. A discussion of a general character ensued.

* 11th of 28th Session.